**Environmental Resources Management**

One Beacon Street, 5th Floor
Boston, MA 02108
+1 617 646 7800
+1 617 267 6447 (fax)

www.erm.com

16 May 2014
Reference: 0237233

Massachusetts Department of Environmental Protection
Northeast Regional Office
Bureau of Waste Site Cleanup
205B Lowell Street
Wilmington, MA 01887

Re: Remedy Operation Status Submittal
November 2014 through April 2014
Former Raytheon Facility
Wayland, Massachusetts
Release Tracking Nos. 3-13302 and 3-22408
Tier IB Permit Nos. 133939 and W045278

Dear Sir or Madam:

On behalf of Raytheon Company (Raytheon), Environmental Resources Management (ERM) has prepared this Remedy Operation Status (ROS) Submittal for the Former Raytheon Facility located at 430 Boston Post Road in Wayland, Massachusetts (Site; Figure 1). This report discusses groundwater remediation and monitoring activities conducted at the Site during the reporting period from 1 November 2014 to 30 April 2014 and is intended to satisfy the requirements of the Massachusetts Contingency Plan (MCP) at 310 CMR 40.0893.

## *BACKGROUND*

This submittal incorporates the ongoing bioremediation activities in the Northern Area of the Site (Figure 2) with the ongoing Southern Area in situ chemical oxidation (ISCO) program. Northern Area Response Actions were formerly tracked under Release Tracking Number (RTN) 3-22408. These RTNs were linked under 3-13302 in a letter submitted to MassDEP on 9 June 2009.

### *RTN 3-13302*

A Phase IV Completion Report was submitted for RTN 3-13302 on 24 November 2004 to MassDEP for portions of the approximately 83-acre property (Figure 2). The Phase IV Completion Report documented

wetland remediation activities conducted from October 2003 through October 2004, and groundwater remediation activities conducted from May through July 2004. Since completion of Phase IV activities and the Site entering into ROS, ROS reports were submitted to MassDEP on a semi-annual basis.

*RTN 3-22408*

A Phase IV Completion Report was submitted for RTN 3-22408 on 23 December 2008 for the chlorinated volatile organic compound (CVOC) impacts to Northern Area soil and groundwater. Beginning with the 9 June 2009 report, activities formerly conducted under this RTN have been summarized jointly with those under RTN 3-13302 in the ROS submittals described above.

*Current Property Conditions*

The property is currently under redevelopment by the property owner. All pre-existing buildings have been razed, the Site has been graded, and new buildings are under construction or are now completed and occupied. Most of the Southern Area monitoring wells were decommissioned prior to the redevelopment, an effort that was described in previous ROS submittals. Details regarding the newly installed monitoring well network were reported in the 15 May 2013 ROS report. A site plan showing the newly installed monitoring wells in the Southern Area is included as Figure 3.

## *NORTHERN AREA BIOREMEDIATION ACTIVITIES*

Northern Area bioremediation Response Actions were conducted by Innovative Engineering Solutions, Inc. of Walpole, Massachusetts (IESI) during this reporting period. Response actions during this reporting period included operation of the Enhanced Anaerobic Dechlorination (EAD) system. Appendix A includes a memorandum prepared by IESI to document those activities.

## *NORTHERN AREA GROUNDWATER SAMPLING*

Quarterly groundwater sampling in the Northern Area was conducted by IESI in January and April 2014. Groundwater sampling results are summarized in Appendix A.

## *SOUTHERN AREA GROUNDWATER SAMPLING*

Semi-annual groundwater sampling in the Southern Area was conducted by ERM in March 2014. Groundwater monitoring activities in the Southern area included:

- Collection of groundwater samples via passive diffusion bags (PDBs) and hydrasleeves for laboratory analyses; and

- Groundwater gauging.

In March 2014, passive diffusion bags and hydrasleeves were used to sample groundwater samples at the site for analysis of VOCs. PDBs are constructed of a semi-permeable membrane that allows groundwater to pass through the membrane and into the PDB, thereby allowing collection of a sample from the aquifer at equilibrium conditions. PDBs were installed in the middle of each well screen and were allowed to equilibrate with the surrounding groundwater for at least 14 days before they were sampled. Grab samples for 1,4-dioxane were collected using hydrasleeves. Hydrasleeves are a no-purge sampling method that allows for sampling discrete intervals without causing mixing of the water column in the well during sampling. The hydrasleeves were deployed after the PDBs were sampled and were opened three days after they were deployed in order to collect a representative grab sample from the middle of the well-screen.

Groundwater samples were analyzed for VOCs by USEPA Method 8260C and 1,4-dioxane by USEPA Method 8260C-SIM or USEPA Method 522 by Test America, of Buffalo, NY. Groundwater gauging data for the March 2014 sampling event is included in Table 1, and a groundwater contour map for the Southern Area is included as Figure 4. A summary of the laboratory analytical data from the Southern Area monitoring wells is included in Table 2. Groundwater laboratory analytical reports are provided in Appendix B.

Results of the groundwater gauging in the Southern Area indicate that groundwater is generally flowing to the southwest toward the Sudbury River (Figure 4).

Groundwater monitoring results indicate that several of the Southern Area monitoring wells exceeded the Massachusetts Contingency Plan (MCP) GW-1 criteria for trichloroethene (TCE). There were no other exceedences of the MCP GW-1 criteria detected in groundwater during this sampling event. Concentrations of TCE in the Southern area continue to decrease over time and concentrations in select monitoring wells are below or approaching the MCP GW-1 criteria. Figure 5 summarizes TCE detections in the Southern Area monitoring wells during the March 2014 sampling event.

The Massachusetts Department of Environmental Protection (MassDEP) ROS transmittal form (BWSC 108) and Remedial Monitoring Reports (RMRs) were filed electronically via eDEP. Copies of the BWSC forms are included in Appendix C.

If you have any questions or comments in regard to this submittal please contact the undersigned at (617) 646-7800.

Sincerely,

John C. Drobinski, P.G., LSP
*Principal–in-Charge*

Lyndsey Colburn, P.G.
*Project Manager*

encl:

| | |
|---|---|
| Table 1 | Summary of Groundwater Gauging Data – Southern Area |
| Table 2 | Summary of Groundwater Analytical Data – Southern Area |
| Figure 1 | Site Locus Map |
| Figure 2 | Remediation Site Plan |
| Figure 3 | Monitoring Well Locations – Southern Area |
| Figure 4 | Upper Potentiometric Surface Map – Southern Area |
| Figure 5 | March 2014 TCE Concentrations in Groundwater – Southern Area |
| Appendix A | IESI Memorandum |
| Appendix B | Laboratory Analytical Reports |
| Appendix C | BWSC Transmittal Forms |

cc: Jonathan Hone, Raytheon
Benson Gould, CMG Environmental
Brian Monahan, Town of Wayland Conservation Commission
Anthony DeLuca, Koffler Group
Richard Gass, Wayland Meadows
Nancy Roberts, Roberts Consulting
Sami Fam, IESI
Public Repositories

*Tables*

*Table 1*
*Summary of Groundwater Gauging Data - Southern Area*
*Former Raytheon Facility*
*430 Boston Post Road*
*Wayland, Massachusetts*

| Well | Measurement Date | Historical Reference Elevation | Depth to Water | Groundwater Elevation |
|---|---|---|---|---|
| MW-1001B | 01-Oct-13 | 135.11 | 16.37 | 118.74 |
| MW-1001M | 01-Oct-13 | 135.06 | 15.45 | 119.61 |
| | 27-Mar-14 | | 14.9 | 120.16 |
| MW-1002B | 01-Oct-13 | 135.44 | 16.78 | 118.66 |
| | 27-Mar-14 | | 15.9 | 119.54 |
| MW-1003 | 01-Oct-13 | 132.53 | 13.11 | 119.42 |
| | 27-Mar-14 | | 12.3 | 120.23 |
| MW-1004 | 01-Oct-13 | 134.61 | 16.1 | 118.51 |
| | 27-Mar-14 | | 14.96 | 119.65 |
| MW-1005 | 01-Oct-13 | 134.28 | 15.56 | 118.72 |
| | 27-Mar-14 | | 14.7 | 119.58 |
| MW-1006 | 01-Oct-13 | 135.21 | 15.11 | 120.1 |
| | 27-Mar-14 | | 15.48 | 119.73 |
| MW-1008 | 01-Oct-13 | 134.84 | 16.38 | 118.46 |
| | 27-Mar-14 | | 14.51 | 120.33 |
| MW-1009 | 01-Oct-13 | 134.66 | 17.9 | 116.76 |
| | 27-Mar-14 | | 16.6 | 118.06 |
| MW-1010D | 01-Oct-13 | 133.4 | 17.42 | 115.98 |
| | 27-Mar-14 | | 15.9 | 117.5 |
| MW-1010M | 01-Oct-13 | 133.43 | 15.62 | 117.81 |
| | 27-Mar-14 | | 16 | 117.43 |
| MW-1011 | 02-Oct-13 | 133.18 | 16.56 | 116.62 |
| | 27-Mar-14 | | 15.35 | 117.83 |
| MW-1013 | 01-Oct-13 | 133.26 | 14.63 | 118.63 |
| | 27-Mar-14 | | 14.83 | 118.43 |
| MW-1014 | 01-Oct-13 | 133.37 | 16.81 | 116.56 |
| MW-1015D | 01-Oct-13 | 133.61 | 18.24 | 115.37 |
| | 27-Mar-14 | | 16.53 | 117.08 |
| MW-1016D | 01-Oct-13 | 133.4 | 18.01 | 115.39 |
| | 27-Mar-14 | | 16.35 | 117.05 |
| MW-1017D | 01-Oct-13 | 133.15 | 17.71 | 115.44 |
| | 27-Mar-14 | | 16.1 | 117.05 |
| MW-1018 | 01-Oct-13 | 133.55 | 18.36 | 115.19 |
| | 27-Mar-14 | | 16.88 | 116.67 |
| MW-1019B | 01-Oct-13 | 131.51 | 16.13 | 115.38 |
| | 27-Mar-14 | | 14.6 | 116.91 |
| MW-1020 | 01-Oct-13 | 132.92 | 18.41 | 114.51 |
| | 27-Mar-14 | | 16.7 | 116.22 |

*Table 1*
*Summary of Groundwater Gauging Data - Southern Area*
*Former Raytheon Facility*
*430 Boston Post Road*
*Wayland, Massachusetts*

| | | | | |
|---|---|---|---|---|
| MW-1022 | 01-Oct-13 | 132.22 | 18.36 | 113.86 |
| | 27-Mar-14 | | 16.32 | 115.9 |
| MW-1023 | 01-Oct-13 | 131.76 | 17.92 | 113.84 |
| | 27-Mar-14 | | 15.89 | 115.87 |
| MW-1024D | 01-Oct-13 | 130.66 | 15.98 | 114.68 |
| | 27-Mar-14 | | 14.14 | 116.52 |
| MW-1025D | 01-Oct-13 | 130.92 | 16.1 | 114.82 |
| | 27-Mar-14 | | 14.32 | 116.6 |
| MW-1025M | 01-Oct-13 | 130.75 | 16.88 | 113.87 |
| | 27-Mar-14 | | 14.86 | 115.89 |
| MW-1026D | 01-Oct-13 | 131.55 | 16.54 | 115.01 |
| MW-1027 | 01-Oct-13 | 126.87 | 13.22 | 113.65 |
| | 27-Mar-14 | | 11.01 | 115.86 |
| MW-1028 | 01-Oct-13 | 127.99 | 14.44 | 113.55 |
| | 27-Mar-14 | | 12.25 | 115.74 |
| MW-1030 | 01-Oct-13 | 131.51 | 17.78 | 113.73 |
| | 27-Mar-14 | | 15.63 | 115.88 |
| MW-1031 | 01-Oct-13 | 130.56 | 16.87 | 113.69 |
| | 27-Mar-14 | | 14.72 | 115.84 |
| MW-1032 | 01-Oct-13 | 130.08 | 16.55 | 113.53 |
| | 27-Mar-14 | | 14.41 | 115.67 |
| MW-1033 | 01-Oct-13 | 119.99 | 6.62 | 113.37 |
| | 27-Mar-14 | | 4.71 | 115.28 |
| MW-1034 | 01-Oct-13 | 123.2 | 9.85 | 113.35 |
| | 27-Mar-14 | | 8.45 | 114.75 |
| MW-217D | 01-Oct-13 | 129.87 | 14.96 | 114.91 |
| | 27-Mar-14 | | 13.19 | 116.68 |
| MW-217M | 01-Oct-13 | 130.21 | 15.61 | 114.6 |
| | 27-Mar-14 | | 13.78 | 116.43 |
| MW-217S | 01-Oct-13 | 129.83 | 14.98 | 114.85 |
| | 27-Mar-14 | | 13.27 | 116.56 |

Notes:
All measurements are in feet

*Table 2*
*Summary of Groundwater Analytical Data - Southern Area*
*Former Raytheon Facility*
*Wayland, Massachusetts*

| | Location ID | MW-1001B |
|---|---|---|
| | Sample Date | 21-Mar-13 |
| | Sample Type | N |
| **Analyte** | **MA-GW-1** | |
| **Method EPA522, µg/L** | | |
| 1,4-Dioxane | **3** | |
| **Method SW8260B_SIM, µg/L** | | |
| 1,4-Dioxane | **3** | |
| **Method SW8260C, µg/L** | | |
| 1,1,1-Trichloroethane | 200 | *< 1.0* |
| 1,1-Dichloroethane | 70 | *< 1.0* |
| 1,1-Dichloroethene | **7** | *< 1.0* |
| 1,2,4-Trimethylbenzene | NS | *< 1.0* |
| 1,2-Dichlorobenzene | 600 | *< 1.0* |
| 1,3,5-Trimethylbenzene | NS | *< 1.0* |
| 1,4-Dichlorobenzene | 5 | *< 1.0* |
| 1,4-Dioxane | **3** | ***< 50*** |
| Acetone | 6300 | *< 50* |
| Benzene | 5 | *< 1.0* |
| Carbon disulfide | NS | *< 10* |
| Chlorobenzene | 100 | *< 1.0* |
| Chloroform | 70 | *< 1.0* |
| cis-1,2-Dichloroethene | 70 | *< 1.0* |
| Cymene | NS | *< 1.0* |
| Freon 11 | NS | *< 1.0* |
| Methyl tert-butyl ether | **70** | *< 1.0* |
| Naphthalene | 140 | *< 5.0* |
| tert-Amyl Methyl Ether | NS | *< 5.0* |
| Tetrachloroethene | 5 | *< 1.0* |
| trans-1,2-Dichloroethene | 100 | *< 1.0* |
| Trichloroethene | **5** | *< 1.0* |
| **Method SW8260C_SIM, µg/L** | | |
| 1,4-Dioxane | **3** | |

Notes:
< = Compound not detected. Reportable detection limit shown.
Italics = Reporting limt exceeds GW-1 Standard
Empty cells = Not analyzed
NS = No Standard
N = Normal Environmental Sample
FD = Field Duplicate Sample
Units are in µg/L = micrograms per liter
MA-GW1 = Massachusetts Contingency Plan, 310 CMR 40, Method 1 Groundwater Standards, Category GW-1

*Table 2*
*Summary of Groundwater Analytical Data - Southern Area*
*Former Raytheon Facility*
*Wayland, Massachusetts*

| | Location ID | MW-1001M |
|---|---|---|
| | Sample Date | 21-Mar-13 |
| | Sample Type | N |
| **Analyte** | **MA-GW-1** | |
| **Method EPA522, µg/L** | | |
| 1,4-Dioxane | **3** | |
| **Method SW8260B_SIM, µg/L** | | |
| 1,4-Dioxane | **3** | |
| **Method SW8260C, µg/L** | | |
| 1,1,1-Trichloroethane | 200 | *< 1.0* |
| 1,1-Dichloroethane | 70 | *< 1.0* |
| 1,1-Dichloroethene | **7** | *< 1.0* |
| 1,2,4-Trimethylbenzene | NS | *< 1.0* |
| 1,2-Dichlorobenzene | 600 | *< 1.0* |
| 1,3,5-Trimethylbenzene | NS | *< 1.0* |
| 1,4-Dichlorobenzene | 5 | *< 1.0* |
| 1,4-Dioxane | **3** | ***< 50*** |
| Acetone | 6300 | *< 50* |
| Benzene | 5 | *< 1.0* |
| Carbon disulfide | NS | *< 10* |
| Chlorobenzene | 100 | *< 1.0* |
| Chloroform | 70 | *< 1.0* |
| cis-1,2-Dichloroethene | 70 | 11 |
| Cymene | NS | *< 1.0* |
| Freon 11 | NS | *< 1.0* |
| Methyl tert-butyl ether | **70** | *< 1.0* |
| Naphthalene | 140 | *< 5.0* |
| tert-Amyl Methyl Ether | NS | *< 5.0* |
| Tetrachloroethene | 5 | *< 1.0* |
| trans-1,2-Dichloroethene | 100 | *< 1.0* |
| Trichloroethene | **5** | **8.2** |
| **Method SW8260C_SIM, µg/L** | | |
| 1,4-Dioxane | **3** | |

Notes:
< = Compound not detected. Reportable detection limit showr
Italics = Reporting limt exceeds GW-1 Standard
Empty cells = Not analyzed
NS = No Standard
N = Normal Environmental Sample
FD = Field Duplicate Sample
Units are in µg/L = micrograms per liter
MA-GW1 = Massachusetts Contingency Plan, 310 CMR 40, Method 1 Groundwater Standards, Category GW-1

*Table 2*
*Summary of Groundwater Analytical Data -*
*Southern Area*
*Former Raytheon Facility*
*Wayland, Massachusetts*

| | Location ID | MW-1002B | MW-1002B |
|---|---|---|---|
| | Sample Date | 22-Mar-13 | 10-Apr-14 |
| | Sample Type | N | N |
| **Analyte** | **MA-GW-1** | | |
| **Method EPA522, µg/L** | | | |
| 1,4-Dioxane | **3** | | |
| **Method SW8260B_SIM, µg/L** | | | |
| 1,4-Dioxane | **3** | | |
| **Method SW8260C, µg/L** | | | |
| 1,1,1-Trichloroethane | 200 | *< 1.0* | *< 1.0* |
| 1,1-Dichloroethane | 70 | *< 1.0* | *< 1.0* |
| 1,1-Dichloroethene | **7** | *< 1.0* | *< 1.0* |
| 1,2,4-Trimethylbenzene | NS | *< 1.0* | *< 1.0* |
| 1,2-Dichlorobenzene | 600 | *< 1.0* | *< 1.0* |
| 1,3,5-Trimethylbenzene | NS | *< 1.0* | *< 1.0* |
| 1,4-Dichlorobenzene | 5 | *< 1.0* | *< 1.0* |
| 1,4-Dioxane | **3** | ***< 50*** | ***< 50*** |
| Acetone | 6300 | *< 50* | 87 |
| Benzene | 5 | *< 1.0* | *< 1.0* |
| Carbon disulfide | NS | *< 10* | *< 10* |
| Chlorobenzene | 100 | *< 1.0* | *< 1.0* |
| Chloroform | 70 | *< 1.0* | *< 1.0* |
| cis-1,2-Dichloroethene | 70 | *< 1.0* | *< 1.0* |
| Cymene | NS | *< 1.0* | *< 1.0* |
| Freon 11 | NS | *< 1.0* | *< 1.0* |
| Methyl tert-butyl ether | **70** | *< 1.0* | *< 1.0* |
| Naphthalene | 140 | *< 5.0* | *< 5.0* |
| tert-Amyl Methyl Ether | NS | *< 5.0* | *< 5.0* |
| Tetrachloroethene | 5 | *< 1.0* | *< 1.0* |
| trans-1,2-Dichloroethene | 100 | *< 1.0* | *< 1.0* |
| Trichloroethene | **5** | *< 1.0* | *< 1.0* |
| **Method SW8260C_SIM, µg/L** | | | |
| 1,4-Dioxane | **3** | | |

Notes:
< = Compound not detected. Reportable detection limit showr
Italics = Reporting limt exceeds GW-1 Standard
Empty cells = Not analyzed
NS = No Standard
N = Normal Environmental Sample
FD = Field Duplicate Sample
Units are in µg/L = micrograms per liter
MA-GW1 = Massachusetts Contingency Plan, 310 CMR 40,
Method 1 Groundwater Standards, Category GW-1

*Table 2*
*Summary of Groundwater Analytical Data -*
*Southern Area*
*Former Raytheon Facility*
*Wayland, Massachusetts*

| | Location ID | MW-1002M | MW-1002M |
|---|---|---|---|
| | Sample Date | 22-Mar-13 | 02-Oct-13 |
| | Sample Type | N | N |
| **Analyte** | **MA-GW-1** | | |
| **Method EPA522, µg/L** | | | |
| 1,4-Dioxane | **3** | | |
| **Method SW8260B_SIM, µg/L** | | | |
| 1,4-Dioxane | **3** | | |
| **Method SW8260C, µg/L** | | | |
| 1,1,1-Trichloroethane | 200 | *< 1.0* | *< 1.0* |
| 1,1-Dichloroethane | 70 | *< 1.0* | *< 1.0* |
| 1,1-Dichloroethene | **7** | *< 1.0* | *< 1.0* |
| 1,2,4-Trimethylbenzene | NS | *< 1.0* | *< 1.0* |
| 1,2-Dichlorobenzene | 600 | *< 1.0* | *< 1.0* |
| 1,3,5-Trimethylbenzene | NS | *< 1.0* | *< 1.0* |
| 1,4-Dichlorobenzene | 5 | *< 1.0* | *< 1.0* |
| 1,4-Dioxane | **3** | ***< 50*** | ***< 50*** |
| Acetone | 6300 | *< 50* | *< 50* |
| Benzene | 5 | *< 1.0* | *< 1.0* |
| Carbon disulfide | NS | *< 10* | *< 10* |
| Chlorobenzene | 100 | *< 1.0* | *< 1.0* |
| Chloroform | 70 | *< 1.0* | *< 1.0* |
| cis-1,2-Dichloroethene | 70 | *< 1.0* | *< 1.0* |
| Cymene | NS | *< 1.0* | *< 1.0* |
| Freon 11 | NS | *< 1.0* | *< 1.0* |
| Methyl tert-butyl ether | **70** | *< 1.0* | *< 1.0* |
| Naphthalene | 140 | *< 5.0* | *< 5.0* |
| tert-Amyl Methyl Ether | NS | *< 5.0* | *< 5.0* |
| Tetrachloroethene | 5 | *< 1.0* | *< 1.0* |
| trans-1,2-Dichloroethene | 100 | *< 1.0* | *< 1.0* |
| Trichloroethene | **5** | *< 1.0* | *< 1.0* |
| **Method SW8260C_SIM, µg/L** | | | |
| 1,4-Dioxane | **3** | | |

Notes:
< = Compound not detected. Reportable detection limit showr
Italics = Reporting limt exceeds GW-1 Standard
Empty cells = Not analyzed
NS = No Standard
N = Normal Environmental Sample
FD = Field Duplicate Sample
Units are in µg/L = micrograms per liter
MA-GW1 = Massachusetts Contingency Plan, 310 CMR 40,
Method 1 Groundwater Standards, Category GW-1

*Table 2*
*Summary of Groundwater Analytical Data -*
*Southern Area*
*Former Raytheon Facility*
*Wayland, Massachusetts*

| Analyte | Location ID<br>Sample Date<br>Sample Type<br>MA-GW-1 | MW-1003<br>22-Mar-13<br>N | MW-1003<br>03-Oct-13<br>N | MW-1003<br>10-Apr-14<br>N |
|---|---|---|---|---|
| **Method EPA522, µg/L** | | | | |
| 1,4-Dioxane | **3** | | | |
| **Method SW8260B_SIM, µg/L** | | | | |
| 1,4-Dioxane | **3** | | | |
| **Method SW8260C, µg/L** | | | | |
| 1,1,1-Trichloroethane | 200 | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,1-Dichloroethane | 70 | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,1-Dichloroethene | **7** | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,2,4-Trimethylbenzene | NS | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,2-Dichlorobenzene | 600 | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,3,5-Trimethylbenzene | NS | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,4-Dichlorobenzene | 5 | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,4-Dioxane | **3** | *< 50* | *< 50* | *< 50* |
| Acetone | 6300 | *< 50* | *< 50* | 80 |
| Benzene | 5 | *< 1.0* | *< 1.0* | *< 1.0* |
| Carbon disulfide | NS | *< 10* | *< 10* | *< 10* |
| Chlorobenzene | 100 | *< 1.0* | *< 1.0* | *< 1.0* |
| Chloroform | 70 | *< 1.0* | *< 1.0* | *< 1.0* |
| cis-1,2-Dichloroethene | 70 | 3.2 | 3.4 | 3.3 |
| Cymene | NS | *< 1.0* | *< 1.0* | *< 1.0* |
| Freon 11 | NS | *< 1.0* | *< 1.0* | *< 1.0* |
| Methyl tert-butyl ether | **70** | *< 1.0* | *< 1.0* | *< 1.0* |
| Naphthalene | 140 | *< 5.0* | *< 5.0* | *< 5.0* |
| tert-Amyl Methyl Ether | NS | *< 5.0* | *< 5.0* | *< 5.0* |
| Tetrachloroethene | 5 | *< 1.0* | *< 1.0* | *< 1.0* |
| trans-1,2-Dichloroethene | 100 | *< 1.0* | *< 1.0* | *< 1.0* |
| Trichloroethene | **5** | 4.4 | 3.8 | **5.2** |
| **Method SW8260C_SIM, µg/L** | | | | |
| 1,4-Dioxane | **3** | | | |

Notes:
< = Compound not detected. Reportable detection limit showr
Italics = Reporting limt exceeds GW-1 Standard
Empty cells = Not analyzed
NS = No Standard
N = Normal Environmental Sample
FD = Field Duplicate Sample
Units are in µg/L = micrograms per liter
MA-GW1 = Massachusetts Contingency Plan, 310 CMR 40,
Method 1 Groundwater Standards, Category GW-1

*Table 2*
*Summary of Groundwater Analytical Data -*
*Southern Area*
*Former Raytheon Facility*
*Wayland, Massachusetts*

| | Location ID | MW-1004 | MW-1004 | MW-1004 |
|---|---|---|---|---|
| | Sample Date | 21-Mar-13 | 02-Oct-13 | 10-Apr-14 |
| | Sample Type | N | N | N |
| **Analyte** | **MA-GW-1** | | | |
| **Method EPA522, µg/L** | | | | |
| 1,4-Dioxane | **3** | | | |
| **Method SW8260B_SIM, µg/L** | | | | |
| 1,4-Dioxane | **3** | | | |
| **Method SW8260C, µg/L** | | | | |
| 1,1,1-Trichloroethane | 200 | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,1-Dichloroethane | 70 | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,1-Dichloroethene | **7** | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,2,4-Trimethylbenzene | NS | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,2-Dichlorobenzene | 600 | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,3,5-Trimethylbenzene | NS | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,4-Dichlorobenzene | 5 | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,4-Dioxane | **3** | *< 50* | *< 50* | *< 50* |
| Acetone | 6300 | *< 50* | *< 50* | 82 |
| Benzene | 5 | *< 1.0* | *< 1.0* | *< 1.0* |
| Carbon disulfide | NS | *< 10* | *< 10* | *< 10* |
| Chlorobenzene | 100 | *< 1.0* | *< 1.0* | *< 1.0* |
| Chloroform | 70 | *< 1.0* | *< 1.0* | *< 1.0* |
| cis-1,2-Dichloroethene | 70 | *< 1.0* | *< 1.0* | *< 1.0* |
| Cymene | NS | *< 1.0* | *< 1.0* | *< 1.0* |
| Freon 11 | NS | *< 1.0* | *< 1.0* | *< 1.0* |
| Methyl tert-butyl ether | **70** | *< 1.0* | *< 1.0* | *< 1.0* |
| Naphthalene | 140 | *< 5.0* | *< 5.0* | *< 5.0* |
| tert-Amyl Methyl Ether | NS | *< 5.0* | *< 5.0* | *< 5.0* |
| Tetrachloroethene | 5 | *< 1.0* | *< 1.0* | *< 1.0* |
| trans-1,2-Dichloroethene | 100 | *< 1.0* | *< 1.0* | *< 1.0* |
| Trichloroethene | **5** | *< 1.0* | *< 1.0* | *< 1.0* |
| **Method SW8260C_SIM, µg/L** | | | | |
| 1,4-Dioxane | **3** | | | |

Notes:
< = Compound not detected. Reportable detection limit showr
Italics = Reporting limt exceeds GW-1 Standard
Empty cells = Not analyzed
NS = No Standard
N = Normal Environmental Sample
FD = Field Duplicate Sample
Units are in µg/L = micrograms per liter
MA-GW1 = Massachusetts Contingency Plan, 310 CMR 40,
Method 1 Groundwater Standards, Category GW-1

*Table 2*
*Summary of Groundwater Analytical Data -*
*Southern Area*
*Former Raytheon Facility*
*Wayland, Massachusetts*

| | Location ID | MW-1005 | MW-1005 | MW-1005 | MW-1005 |
|---|---|---|---|---|---|
| | Sample Date | 19-Mar-13 | 01-Oct-13 | 10-Apr-14 | 10-Apr-14 |
| | Sample Type | N | N | N | FD |
| **Analyte** | **MA-GW-1** | | | | |
| **Method EPA522, µg/L** | | | | | |
| 1,4-Dioxane | **3** | | | | |
| **Method SW8260B_SIM, µg/L** | | | | | |
| 1,4-Dioxane | **3** | | | | |
| **Method SW8260C, µg/L** | | | | | |
| 1,1,1-Trichloroethane | 200 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,1-Dichloroethane | 70 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,1-Dichloroethene | **7** | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,2,4-Trimethylbenzene | NS | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,2-Dichlorobenzene | 600 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,3,5-Trimethylbenzene | NS | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,4-Dichlorobenzene | 5 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,4-Dioxane | **3** | *< 50* | *< 50* | *< 50* | *< 50* |
| Acetone | 6300 | *< 50* | *< 50* | 84 | 83 |
| Benzene | 5 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| Carbon disulfide | NS | *< 10* | *< 10* | *< 10* | *< 10* |
| Chlorobenzene | 100 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| Chloroform | 70 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| cis-1,2-Dichloroethene | 70 | 3.2 | 12 | 3.6 | 3.6 |
| Cymene | NS | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| Freon 11 | NS | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| Methyl tert-butyl ether | **70** | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| Naphthalene | 140 | *< 5.0* | *< 5.0* | *< 5.0* | *< 5.0* |
| tert-Amyl Methyl Ether | NS | *< 5.0* | *< 5.0* | *< 5.0* | *< 5.0* |
| Tetrachloroethene | 5 | 1.2 | *< 1.0* | *< 1.0* | *< 1.0* |
| trans-1,2-Dichloroethene | 100 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| Trichloroethene | **5** | **17** | **14** | **13** | **12** |
| **Method SW8260C_SIM, µg/L** | | | | | |
| 1,4-Dioxane | **3** | | | | |

Notes:
< = Compound not detected. Reportable detection limit showr
Italics = Reporting limt exceeds GW-1 Standard
Empty cells = Not analyzed
NS = No Standard
N = Normal Environmental Sample
FD = Field Duplicate Sample
Units are in µg/L = micrograms per liter
MA-GW1 = Massachusetts Contingency Plan, 310 CMR 40,
Method 1 Groundwater Standards, Category GW-1

*Table 2*
*Summary of Groundwater Analytical Data -*
*Southern Area*
*Former Raytheon Facility*
*Wayland, Massachusetts*

| | Location ID | MW-1006 | MW-1006 | MW-1006 |
|---|---|---|---|---|
| | Sample Date | 20-Mar-13 | 02-Oct-13 | 10-Apr-14 |
| | Sample Type | N | N | N |
| **Analyte** | **MA-GW-1** | | | |
| **Method EPA522, µg/L** | | | | |
| 1,4-Dioxane | **3** | | | |
| **Method SW8260B_SIM, µg/L** | | | | |
| 1,4-Dioxane | **3** | | | |
| **Method SW8260C, µg/L** | | | | |
| 1,1,1-Trichloroethane | 200 | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,1-Dichloroethane | 70 | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,1-Dichloroethene | **7** | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,2,4-Trimethylbenzene | NS | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,2-Dichlorobenzene | 600 | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,3,5-Trimethylbenzene | NS | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,4-Dichlorobenzene | 5 | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,4-Dioxane | **3** | *< 50* | *< 50 ** | *< 50* |
| Acetone | 6300 | *< 50* | *< 50* | 84 |
| Benzene | 5 | *< 1.0* | *< 1.0* | *< 1.0* |
| Carbon disulfide | NS | *< 10* | *< 10* | *< 10* |
| Chlorobenzene | 100 | *< 1.0* | *< 1.0* | *< 1.0* |
| Chloroform | 70 | *< 1.0* | *< 1.0* | *< 1.0* |
| cis-1,2-Dichloroethene | 70 | *< 1.0* | *< 1.0* | *< 1.0* |
| Cymene | NS | *< 1.0* | *< 1.0* | *< 1.0* |
| Freon 11 | NS | *< 1.0* | *< 1.0* | *< 1.0* |
| Methyl tert-butyl ether | **70** | *< 1.0* | *< 1.0* | *< 1.0* |
| Naphthalene | 140 | *< 5.0* | *< 5.0* | *< 5.0* |
| tert-Amyl Methyl Ether | NS | *< 5.0* | *< 5.0* | *< 5.0* |
| Tetrachloroethene | 5 | *< 1.0* | *< 1.0* | *< 1.0* |
| trans-1,2-Dichloroethene | 100 | *< 1.0* | *< 1.0* | *< 1.0* |
| Trichloroethene | **5** | *< 1.0* | 1.1 | *< 1.0* |
| **Method SW8260C_SIM, µg/L** | | | | |
| 1,4-Dioxane | **3** | | | |

Notes:
< = Compound not detected. Reportable detection limit showr
Italics = Reporting limt exceeds GW-1 Standard
Empty cells = Not analyzed
NS = No Standard
N = Normal Environmental Sample
FD = Field Duplicate Sample
Units are in µg/L = micrograms per liter
MA-GW1 = Massachusetts Contingency Plan, 310 CMR 40,
Method 1 Groundwater Standards, Category GW-1

*Table 2*
*Summary of Groundwater Analytical Data -*
*Southern Area*
*Former Raytheon Facility*
*Wayland, Massachusetts*

| Analyte | Location ID<br>Sample Date<br>Sample Type<br>MA-GW-1 | MW-1008<br>19-Mar-13<br>N | MW-1008<br>03-Oct-13<br>N | MW-1008<br>10-Apr-14<br>N |
|---|---|---|---|---|
| **Method EPA522, µg/L** | | | | |
| 1,4-Dioxane | **3** | | | |
| **Method SW8260B_SIM, µg/L** | | | | |
| 1,4-Dioxane | **3** | | | |
| **Method SW8260C, µg/L** | | | | |
| 1,1,1-Trichloroethane | 200 | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,1-Dichloroethane | 70 | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,1-Dichloroethene | **7** | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,2,4-Trimethylbenzene | NS | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,2-Dichlorobenzene | 600 | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,3,5-Trimethylbenzene | NS | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,4-Dichlorobenzene | 5 | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,4-Dioxane | **3** | ***< 50*** | ***< 50*** | ***< 50*** |
| Acetone | 6300 | *< 50* | *< 50* | 83 |
| Benzene | 5 | *< 1.0* | *< 1.0* | *< 1.0* |
| Carbon disulfide | NS | *< 10* | *< 10* | *< 10* |
| Chlorobenzene | 100 | *< 1.0* | *< 1.0* | *< 1.0* |
| Chloroform | 70 | *< 1.0* | *< 1.0* | *< 1.0* |
| cis-1,2-Dichloroethene | 70 | *< 1.0* | *< 1.0* | *< 1.0* |
| Cymene | NS | *< 1.0* | *< 1.0* | *< 1.0* |
| Freon 11 | NS | *< 1.0* | *< 1.0* | *< 1.0* |
| Methyl tert-butyl ether | **70** | *< 1.0* | *< 1.0* | *< 1.0* |
| Naphthalene | 140 | *< 5.0* | *< 5.0* | *< 5.0* |
| tert-Amyl Methyl Ether | NS | *< 5.0* | *< 5.0* | *< 5.0* |
| Tetrachloroethene | 5 | *< 1.0* | *< 1.0* | *< 1.0* |
| trans-1,2-Dichloroethene | 100 | *< 1.0* | *< 1.0* | *< 1.0* |
| Trichloroethene | **5** | 4.0 | 3.4 | 3.1 |
| **Method SW8260C_SIM, µg/L** | | | | |
| 1,4-Dioxane | **3** | | | |

Notes:
< = Compound not detected. Reportable detection limit showr
Italics = Reporting limt exceeds GW-1 Standard
Empty cells = Not analyzed
NS = No Standard
N = Normal Environmental Sample
FD = Field Duplicate Sample
Units are in µg/L = micrograms per liter
MA-GW1 = Massachusetts Contingency Plan, 310 CMR 40,
Method 1 Groundwater Standards, Category GW-1

*Table 2*
*Summary of Groundwater Analytical Data -*
*Southern Area*
*Former Raytheon Facility*
*Wayland, Massachusetts*

| | Location ID | MW-1009 | MW-1009 | MW-1009 |
|---|---|---|---|---|
| | Sample Date | 21-Mar-13 | 02-Oct-13 | 10-Apr-14 |
| | Sample Type | N | N | N |
| **Analyte** | **MA-GW-1** | | | |
| **Method EPA522, µg/L** | | | | |
| 1,4-Dioxane | **3** | | | |
| **Method SW8260B_SIM, µg/L** | | | | |
| 1,4-Dioxane | **3** | | | |
| **Method SW8260C, µg/L** | | | | |
| 1,1,1-Trichloroethane | 200 | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,1-Dichloroethane | 70 | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,1-Dichloroethene | **7** | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,2,4-Trimethylbenzene | NS | *< 1.0* | 4.2 | *< 1.0* |
| 1,2-Dichlorobenzene | 600 | 2.0 | *< 1.0* | *< 1.0* |
| 1,3,5-Trimethylbenzene | NS | *< 1.0* | 1.6 | *< 1.0* |
| 1,4-Dichlorobenzene | 5 | 1.0 | *< 1.0* | *< 1.0* |
| 1,4-Dioxane | **3** | *< 50* | *< 50* | *< 50* |
| Acetone | 6300 | *< 50* | *< 50* | 83 |
| Benzene | 5 | 1.5 | *< 1.0* | *< 1.0* |
| Carbon disulfide | NS | *< 10* | *< 10* | *< 10* |
| Chlorobenzene | 100 | *< 1.0* | *< 1.0* | *< 1.0* |
| Chloroform | 70 | *< 1.0* | *< 1.0* | *< 1.0* |
| cis-1,2-Dichloroethene | 70 | 2.2 | *< 1.0* | *< 1.0* |
| Cymene | NS | *< 1.0* | *< 1.0* | *< 1.0* |
| Freon 11 | NS | *< 1.0* | 1.0 | 1.2 |
| Methyl tert-butyl ether | **70** | *< 1.0* | *< 1.0* | *< 1.0* |
| Naphthalene | 140 | *< 5.0* | 5.2 | *< 5.0* |
| tert-Amyl Methyl Ether | NS | *< 5.0* | *< 5.0* | *< 5.0* |
| Tetrachloroethene | 5 | *< 1.0* | *< 1.0* | *< 1.0* |
| trans-1,2-Dichloroethene | 100 | *< 1.0* | *< 1.0* | *< 1.0* |
| Trichloroethene | **5** | 1.9 | 1.3 | *< 1.0* |
| **Method SW8260C_SIM, µg/L** | | | | |
| 1,4-Dioxane | **3** | | | |

Notes:
< = Compound not detected. Reportable detection limit showr
Italics = Reporting limt exceeds GW-1 Standard
Empty cells = Not analyzed
NS = No Standard
N = Normal Environmental Sample
FD = Field Duplicate Sample
Units are in µg/L = micrograms per liter
MA-GW1 = Massachusetts Contingency Plan, 310 CMR 40,
Method 1 Groundwater Standards, Category GW-1

*Table 2*
*Summary of Groundwater Analytical Data -*
*Southern Area*
*Former Raytheon Facility*
*Wayland, Massachusetts*

| Analyte | Location ID<br>Sample Date<br>Sample Type<br>MA-GW-1 | MW-217D<br>21-Mar-13<br>N | MW-217D<br>21-Mar-13<br>FD | MW-217D<br>03-Oct-13<br>N | MW-217D<br>10-Apr-14<br>N |
|---|---|---|---|---|---|
| **Method EPA522, µg/L** | | | | | |
| 1,4-Dioxane | **3** | | | | |
| **Method SW8260B_SIM, µg/L** | | | | | |
| 1,4-Dioxane | **3** | | | | |
| **Method SW8260C, µg/L** | | | | | |
| 1,1,1-Trichloroethane | 200 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,1-Dichloroethane | 70 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,1-Dichloroethene | **7** | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,2,4-Trimethylbenzene | NS | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,2-Dichlorobenzene | 600 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,3,5-Trimethylbenzene | NS | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,4-Dichlorobenzene | 5 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,4-Dioxane | **3** | *< 50* | *< 50* | *< 50* | *< 50* |
| Acetone | 6300 | *< 50* | *< 50* | *< 50* | *< 50* |
| Benzene | 5 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| Carbon disulfide | NS | *< 10* | *< 10* | *< 10* | *< 10* |
| Chlorobenzene | 100 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| Chloroform | 70 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| cis-1,2-Dichloroethene | 70 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| Cymene | NS | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| Freon 11 | NS | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| Methyl tert-butyl ether | **70** | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| Naphthalene | 140 | *< 5.0* | *< 5.0* | *< 5.0* | *< 5.0* |
| tert-Amyl Methyl Ether | NS | *< 5.0* | *< 5.0* | *< 5.0* | *< 5.0* |
| Tetrachloroethene | 5 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| trans-1,2-Dichloroethene | 100 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| Trichloroethene | **5** | 1.9 | 1.9 | 3.0 | *< 1.0* |
| **Method SW8260C_SIM, µg/L** | | | | | |
| 1,4-Dioxane | **3** | | | | |

Notes:
< = Compound not detected. Reportable detection limit showr
Italics = Reporting limt exceeds GW-1 Standard
Empty cells = Not analyzed
NS = No Standard
N = Normal Environmental Sample
FD = Field Duplicate Sample
Units are in µg/L = micrograms per liter
MA-GW1 = Massachusetts Contingency Plan, 310 CMR 40,
Method 1 Groundwater Standards, Category GW-1

*Table 2*
*Summary of Groundwater Analytical Data -*
*Southern Area*
*Former Raytheon Facility*
*Wayland, Massachusetts*

| | Location ID | MW-217M | MW-217M | MW-217M |
|---|---|---|---|---|
| | Sample Date | 21-Mar-13 | 03-Oct-13 | 10-Apr-14 |
| | Sample Type | N | N | N |
| **Analyte** | **MA-GW-1** | | | |
| **Method EPA522, µg/L** | | | | |
| 1,4-Dioxane | **3** | | | |
| **Method SW8260B_SIM, µg/L** | | | | |
| 1,4-Dioxane | **3** | | | |
| **Method SW8260C, µg/L** | | | | |
| 1,1,1-Trichloroethane | 200 | *< 1.0* | *< 4.0* | *< 1.0* |
| 1,1-Dichloroethane | 70 | 2.0 | *< 4.0* | 2.6 |
| 1,1-Dichloroethene | **7** | *< 1.0* | *< 4.0* | *< 1.0* |
| 1,2,4-Trimethylbenzene | NS | *< 1.0* | *< 4.0* | *< 1.0* |
| 1,2-Dichlorobenzene | 600 | 1.4 | *< 4.0* | 1.8 |
| 1,3,5-Trimethylbenzene | NS | *< 1.0* | *< 4.0* | *< 1.0* |
| 1,4-Dichlorobenzene | 5 | *< 1.0* | *< 4.0* | *< 1.0* |
| 1,4-Dioxane | **3** | ***< 50*** | ***< 200*** | ***< 50*** |
| Acetone | 6300 | *< 50* | *< 200* | *< 50* |
| Benzene | 5 | *< 1.0* | *< 4.0* | *< 1.0* |
| Carbon disulfide | NS | *< 10* | *< 40* | *< 10* |
| Chlorobenzene | 100 | *< 1.0* | *< 4.0* | *< 1.0* |
| Chloroform | 70 | *< 1.0* | *< 4.0* | *< 1.0* |
| cis-1,2-Dichloroethene | 70 | *< 1.0* | *< 4.0* | 1.1 |
| Cymene | NS | *< 1.0* | *< 4.0* | *< 1.0* |
| Freon 11 | NS | *< 1.0* | *< 4.0* | *< 1.0* |
| Methyl tert-butyl ether | **70** | **250** | **250** | 10 |
| Naphthalene | 140 | *< 5.0* | *< 20* | *< 5.0* |
| tert-Amyl Methyl Ether | NS | 86 | 76 | 5.6 |
| Tetrachloroethene | 5 | *< 1.0* | *< 4.0* | *< 1.0* |
| trans-1,2-Dichloroethene | 100 | *< 1.0* | *< 4.0* | *< 1.0* |
| Trichloroethene | **5** | **6.4** | **5.1** | **8.9** |
| **Method SW8260C_SIM, µg/L** | | | | |
| 1,4-Dioxane | **3** | | | |

Notes:
< = Compound not detected. Reportable detection limit showr
Italics = Reporting limt exceeds GW-1 Standard
Empty cells = Not analyzed
NS = No Standard
N = Normal Environmental Sample
FD = Field Duplicate Sample
Units are in µg/L = micrograms per liter
MA-GW1 = Massachusetts Contingency Plan, 310 CMR 40,
Method 1 Groundwater Standards, Category GW-1

*Table 2*
*Summary of Groundwater Analytical Data -*
*Southern Area*
*Former Raytheon Facility*
*Wayland, Massachusetts*

| Analyte | Location ID<br>Sample Date<br>Sample Type<br>MA-GW-1 | MW-217S<br>21-Mar-13<br>N | MW-217S<br>03-Oct-13<br>N | MW-217S<br>03-Oct-13<br>FD | MW-217S<br>10-Apr-14<br>N |
|---|---|---|---|---|---|
| **Method EPA522, µg/L** | | | | | |
| 1,4-Dioxane | **3** | | | | |
| **Method SW8260B_SIM, µg/L** | | | | | |
| 1,4-Dioxane | **3** | | | | |
| **Method SW8260C, µg/L** | | | | | |
| 1,1,1-Trichloroethane | 200 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,1-Dichloroethane | 70 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,1-Dichloroethene | **7** | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,2,4-Trimethylbenzene | NS | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,2-Dichlorobenzene | 600 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,3,5-Trimethylbenzene | NS | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,4-Dichlorobenzene | 5 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,4-Dioxane | **3** | *< 50* | *< 50* | *< 50* | *< 50* |
| Acetone | 6300 | *< 50* | *< 50* | *< 50* | 70 |
| Benzene | 5 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| Carbon disulfide | NS | *< 10* | *< 10* | *< 10* | *< 10* |
| Chlorobenzene | 100 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| Chloroform | 70 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| cis-1,2-Dichloroethene | 70 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| Cymene | NS | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| Freon 11 | NS | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| Methyl tert-butyl ether | **70** | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| Naphthalene | 140 | *< 5.0* | *< 5.0* | *< 5.0* | *< 5.0* |
| tert-Amyl Methyl Ether | NS | *< 5.0* | *< 5.0* | *< 5.0* | *< 5.0* |
| Tetrachloroethene | 5 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| trans-1,2-Dichloroethene | 100 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| Trichloroethene | **5** | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| **Method SW8260C_SIM, µg/L** | | | | | |
| 1,4-Dioxane | **3** | | | | |

Notes:
< = Compound not detected. Reportable detection limit showr
Italics = Reporting limt exceeds GW-1 Standard
Empty cells = Not analyzed
NS = No Standard
N = Normal Environmental Sample
FD = Field Duplicate Sample
Units are in µg/L = micrograms per liter
MA-GW1 = Massachusetts Contingency Plan, 310 CMR 40,
Method 1 Groundwater Standards, Category GW-1

*Table 2*
*Summary of Groundwater Analytical Data -*
*Southern Area*
*Former Raytheon Facility*
*Wayland, Massachusetts*

| Analyte | Location ID<br>Sample Date<br>Sample Type<br>MA-GW-1 | MW-1010D<br>20-Mar-13<br>N | MW-1010D<br>02-Oct-13<br>N | MW-1010D<br>02-Oct-13<br>FD | MW-1010D<br>10-Apr-14<br>N |
|---|---|---|---|---|---|
| **Method EPA522, µg/L** | | | | | |
| 1,4-Dioxane | **3** | | | | |
| **Method SW8260B_SIM, µg/L** | | | | | |
| 1,4-Dioxane | **3** | | | | |
| **Method SW8260C, µg/L** | | | | | |
| 1,1,1-Trichloroethane | 200 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,1-Dichloroethane | 70 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,1-Dichloroethene | **7** | *< 1.0* | 1.4 | 1.4 | *< 1.0* |
| 1,2,4-Trimethylbenzene | NS | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,2-Dichlorobenzene | 600 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,3,5-Trimethylbenzene | NS | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,4-Dichlorobenzene | 5 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,4-Dioxane | **3** | *< 50* | *< 50* | *< 50* | *< 50* |
| Acetone | 6300 | *< 50* | *< 50* | *< 50* | 83 |
| Benzene | 5 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| Carbon disulfide | NS | *< 10* | *< 10* | *< 10* | *< 10* |
| Chlorobenzene | 100 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| Chloroform | 70 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| cis-1,2-Dichloroethene | 70 | 1.1 | 3.4 | 3.4 | 1.3 |
| Cymene | NS | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| Freon 11 | NS | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| Methyl tert-butyl ether | **70** | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| Naphthalene | 140 | *< 5.0* | *< 5.0* | *< 5.0* | *< 5.0* |
| tert-Amyl Methyl Ether | NS | *< 5.0* | *< 5.0* | *< 5.0* | *< 5.0* |
| Tetrachloroethene | 5 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| trans-1,2-Dichloroethene | 100 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| Trichloroethene | **5** | **7.1** | **34** | **32** | **5.3** |
| **Method SW8260C_SIM, µg/L** | | | | | |
| 1,4-Dioxane | **3** | | | | |

Notes:
< = Compound not detected. Reportable detection limit showr
Italics = Reporting limt exceeds GW-1 Standard
Empty cells = Not analyzed
NS = No Standard
N = Normal Environmental Sample
FD = Field Duplicate Sample
Units are in µg/L = micrograms per liter
MA-GW1 = Massachusetts Contingency Plan, 310 CMR 40,
Method 1 Groundwater Standards, Category GW-1

*Table 2*
*Summary of Groundwater Analytical Data -*
*Southern Area*
*Former Raytheon Facility*
*Wayland, Massachusetts*

| Analyte | Location ID<br>Sample Date<br>Sample Type<br>MA-GW-1 | MW-1010M<br>20-Mar-13<br>N | MW-1010M<br>02-Oct-13<br>N | MW-1010M<br>10-Apr-14<br>N |
|---|---|---|---|---|
| **Method EPA522, µg/L** | | | | |
| 1,4-Dioxane | **3** | | | |
| **Method SW8260B_SIM, µg/L** | | | | |
| 1,4-Dioxane | **3** | | | |
| **Method SW8260C, µg/L** | | | | |
| 1,1,1-Trichloroethane | 200 | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,1-Dichloroethane | 70 | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,1-Dichloroethene | **7** | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,2,4-Trimethylbenzene | NS | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,2-Dichlorobenzene | 600 | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,3,5-Trimethylbenzene | NS | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,4-Dichlorobenzene | 5 | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,4-Dioxane | **3** | *< 50* | *< 50* | *< 50* |
| Acetone | 6300 | *< 50* | *< 50* | *77* |
| Benzene | 5 | *< 1.0* | *< 1.0* | *< 1.0* |
| Carbon disulfide | NS | *< 10* | *< 10* | *< 10* |
| Chlorobenzene | 100 | *< 1.0* | *< 1.0* | *< 1.0* |
| Chloroform | 70 | *< 1.0* | *< 1.0* | *< 1.0* |
| cis-1,2-Dichloroethene | 70 | *< 1.0* | *< 1.0* | *< 1.0* |
| Cymene | NS | *< 1.0* | *< 1.0* | *< 1.0* |
| Freon 11 | NS | *< 1.0* | *< 1.0* | *< 1.0* |
| Methyl tert-butyl ether | **70** | *< 1.0* | *< 1.0* | *< 1.0* |
| Naphthalene | 140 | *< 5.0* | *< 5.0* | *< 5.0* |
| tert-Amyl Methyl Ether | NS | *< 5.0* | *< 5.0* | *< 5.0* |
| Tetrachloroethene | 5 | *< 1.0* | *< 1.0* | *< 1.0* |
| trans-1,2-Dichloroethene | 100 | *< 1.0* | *< 1.0* | *< 1.0* |
| Trichloroethene | **5** | *< 1.0* | 1.1 | *< 1.0* |
| **Method SW8260C_SIM, µg/L** | | | | |
| 1,4-Dioxane | **3** | | | |

Notes:
< = Compound not detected. Reportable detection limit showr
Italics = Reporting limt exceeds GW-1 Standard
Empty cells = Not analyzed
NS = No Standard
N = Normal Environmental Sample
FD = Field Duplicate Sample
Units are in µg/L = micrograms per liter
MA-GW1 = Massachusetts Contingency Plan, 310 CMR 40,
Method 1 Groundwater Standards, Category GW-1

*Table 2*
*Summary of Groundwater Analytical Data -*
*Southern Area*
*Former Raytheon Facility*
*Wayland, Massachusetts*

| | Location ID | MW-1011 | MW-1011 | MW-1011 |
|---|---|---|---|---|
| | Sample Date | 02-Oct-13 | 10-Apr-14 | 14-Apr-14 |
| | Sample Type | N | N | N |
| **Analyte** | **MA-GW-1** | | | |
| **Method EPA522, µg/L** | | | | |
| 1,4-Dioxane | **3** | 0.20 | | 0.22 |
| **Method SW8260B_SIM, µg/L** | | | | |
| 1,4-Dioxane | **3** | | | |
| **Method SW8260C, µg/L** | | | | |
| 1,1,1-Trichloroethane | 200 | *< 1.0* | *< 1.0* | |
| 1,1-Dichloroethane | 70 | *< 1.0* | *< 1.0* | |
| 1,1-Dichloroethene | **7** | *< 1.0* | *< 1.0* | |
| 1,2,4-Trimethylbenzene | NS | *< 1.0* | *< 1.0* | |
| 1,2-Dichlorobenzene | 600 | *< 1.0* | *< 1.0* | |
| 1,3,5-Trimethylbenzene | NS | *< 1.0* | *< 1.0* | |
| 1,4-Dichlorobenzene | 5 | *< 1.0* | *< 1.0* | |
| 1,4-Dioxane | **3** | ***< 50*** | ***< 50*** | *< 1.6* |
| Acetone | 6300 | *< 50* | 80 | |
| Benzene | 5 | *< 1.0* | *< 1.0* | |
| Carbon disulfide | NS | *< 10* | *< 10* | |
| Chlorobenzene | 100 | *< 1.0* | *< 1.0* | |
| Chloroform | 70 | *< 1.0* | *< 1.0* | |
| cis-1,2-Dichloroethene | 70 | 4.0 | 12 | |
| Cymene | NS | *< 1.0* | *< 1.0* | |
| Freon 11 | NS | *< 1.0* | *< 1.0* | |
| Methyl tert-butyl ether | **70** | *< 1.0* | *< 1.0* | |
| Naphthalene | 140 | *< 5.0* | *< 5.0* | |
| tert-Amyl Methyl Ether | NS | *< 5.0* | *< 5.0* | |
| Tetrachloroethene | 5 | *< 1.0* | *< 1.0* | |
| trans-1,2-Dichloroethene | 100 | *< 1.0* | *< 1.0* | |
| Trichloroethene | **5** | **12** | **22** | |
| **Method SW8260C_SIM, µg/L** | | | | |
| 1,4-Dioxane | **3** | | | |

Notes:
< = Compound not detected. Reportable detection limit showr
Italics = Reporting limt exceeds GW-1 Standard
Empty cells = Not analyzed
NS = No Standard
N = Normal Environmental Sample
FD = Field Duplicate Sample
Units are in µg/L = micrograms per liter
MA-GW1 = Massachusetts Contingency Plan, 310 CMR 40,
Method 1 Groundwater Standards, Category GW-1

*Table 2*
*Summary of Groundwater Analytical Data -*
*Southern Area*
*Former Raytheon Facility*
*Wayland, Massachusetts*

| Analyte | Location ID<br>Sample Date<br>Sample Type<br>MA-GW-1 | MW-1013<br>22-Mar-13<br>N | MW-1013<br>03-Oct-13<br>N | MW-1013<br>10-Apr-14<br>N |
|---|---|---|---|---|
| **Method EPA522, µg/L** | | | | |
| 1,4-Dioxane | **3** | | | |
| **Method SW8260B_SIM, µg/L** | | | | |
| 1,4-Dioxane | **3** | | | |
| **Method SW8260C, µg/L** | | | | |
| 1,1,1-Trichloroethane | 200 | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,1-Dichloroethane | 70 | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,1-Dichloroethene | **7** | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,2,4-Trimethylbenzene | NS | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,2-Dichlorobenzene | 600 | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,3,5-Trimethylbenzene | NS | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,4-Dichlorobenzene | 5 | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,4-Dioxane | **3** | *< 50* | *< 50* | *< 50* |
| Acetone | 6300 | *< 50* | *< 50* | 87 |
| Benzene | 5 | *< 1.0* | *< 1.0* | *< 1.0* |
| Carbon disulfide | NS | *< 10* | *< 10* | *< 10* |
| Chlorobenzene | 100 | *< 1.0* | *< 1.0* | *< 1.0* |
| Chloroform | 70 | *< 1.0* | *< 1.0* | *< 1.0* |
| cis-1,2-Dichloroethene | 70 | *< 1.0* | *< 1.0* | *< 1.0* |
| Cymene | NS | *< 1.0* | *< 1.0* | *< 1.0* |
| Freon 11 | NS | *< 1.0* | *< 1.0* | *< 1.0* |
| Methyl tert-butyl ether | **70** | *< 1.0* | *< 1.0* | *< 1.0* |
| Naphthalene | 140 | *< 5.0* | *< 5.0* | *< 5.0* |
| tert-Amyl Methyl Ether | NS | *< 5.0* | *< 5.0* | *< 5.0* |
| Tetrachloroethene | 5 | *< 1.0* | *< 1.0* | *< 1.0* |
| trans-1,2-Dichloroethene | 100 | *< 1.0* | *< 1.0* | *< 1.0* |
| Trichloroethene | **5** | *< 1.0* | *< 1.0* | *< 1.0* |
| **Method SW8260C_SIM, µg/L** | | | | |
| 1,4-Dioxane | **3** | | | |

Notes:
< = Compound not detected. Reportable detection limit showr
Italics = Reporting limt exceeds GW-1 Standard
Empty cells = Not analyzed
NS = No Standard
N = Normal Environmental Sample
FD = Field Duplicate Sample
Units are in µg/L = micrograms per liter
MA-GW1 = Massachusetts Contingency Plan, 310 CMR 40,
Method 1 Groundwater Standards, Category GW-1

*Table 2*
*Summary of Groundwater Analytical Data -*
*Southern Area*
*Former Raytheon Facility*
*Wayland, Massachusetts*

| | Location ID | MW-1014 | MW-1014 |
|---|---|---|---|
| | Sample Date | 22-Mar-13 | 03-Oct-13 |
| | Sample Type | N | N |
| **Analyte** | **MA-GW-1** | | |
| **Method EPA522, µg/L** | | | |
| 1,4-Dioxane | **3** | | |
| **Method SW8260B_SIM, µg/L** | | | |
| 1,4-Dioxane | **3** | | |
| **Method SW8260C, µg/L** | | | |
| 1,1,1-Trichloroethane | 200 | *< 1.0* | *< 1.0* |
| 1,1-Dichloroethane | 70 | *< 1.0* | *< 1.0* |
| 1,1-Dichloroethene | **7** | *< 1.0* | *< 1.0* |
| 1,2,4-Trimethylbenzene | NS | *< 1.0* | *< 1.0* |
| 1,2-Dichlorobenzene | 600 | *< 1.0* | *< 1.0* |
| 1,3,5-Trimethylbenzene | NS | *< 1.0* | *< 1.0* |
| 1,4-Dichlorobenzene | 5 | *< 1.0* | *< 1.0* |
| 1,4-Dioxane | **3** | ***< 50*** | ***< 50*** |
| Acetone | 6300 | *< 50* | *< 50* |
| Benzene | 5 | *< 1.0* | *< 1.0* |
| Carbon disulfide | NS | *< 10* | *< 10* |
| Chlorobenzene | 100 | *< 1.0* | *< 1.0* |
| Chloroform | 70 | *< 1.0* | *< 1.0* |
| cis-1,2-Dichloroethene | 70 | *< 1.0* | 1.4 |
| Cymene | NS | *< 1.0* | *< 1.0* |
| Freon 11 | NS | *< 1.0* | *< 1.0* |
| Methyl tert-butyl ether | **70** | *< 1.0* | *< 1.0* |
| Naphthalene | 140 | *< 5.0* | *< 5.0* |
| tert-Amyl Methyl Ether | NS | *< 5.0* | *< 5.0* |
| Tetrachloroethene | 5 | *< 1.0* | *< 1.0* |
| trans-1,2-Dichloroethene | 100 | *< 1.0* | *< 1.0* |
| Trichloroethene | **5** | 4.0 | **21** |
| **Method SW8260C_SIM, µg/L** | | | |
| 1,4-Dioxane | **3** | | |

Notes:
< = Compound not detected. Reportable detection limit showr
Italics = Reporting limt exceeds GW-1 Standard
Empty cells = Not analyzed
NS = No Standard
N = Normal Environmental Sample
FD = Field Duplicate Sample
Units are in µg/L = micrograms per liter
MA-GW1 = Massachusetts Contingency Plan, 310 CMR 40,
Method 1 Groundwater Standards, Category GW-1

*Table 2*
*Summary of Groundwater Analytical Data -*
*Southern Area*
*Former Raytheon Facility*
*Wayland, Massachusetts*

| Analyte | Location ID<br>Sample Date<br>Sample Type<br>MA-GW-1 | MW-1015D<br>20-Mar-13<br>N | MW-1015D<br>02-Oct-13<br>N | MW-1015D<br>02-Oct-13<br>FD | MW-1015D<br>10-Apr-14<br>N |
|---|---|---|---|---|---|
| **Method EPA522, µg/L** | | | | | |
| 1,4-Dioxane | **3** | | | | |
| **Method SW8260B_SIM, µg/L** | | | | | |
| 1,4-Dioxane | **3** | | | | |
| **Method SW8260C, µg/L** | | | | | |
| 1,1,1-Trichloroethane | 200 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,1-Dichloroethane | 70 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,1-Dichloroethene | **7** | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,2,4-Trimethylbenzene | NS | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,2-Dichlorobenzene | 600 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,3,5-Trimethylbenzene | NS | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,4-Dichlorobenzene | 5 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,4-Dioxane | **3** | *< 50* | *< 50 ** | *< 50 ** | *< 50* |
| Acetone | 6300 | *< 50* | *< 50* | *< 50* | 82 |
| Benzene | 5 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| Carbon disulfide | NS | *< 10* | *< 10* | *< 10* | *< 10* |
| Chlorobenzene | 100 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| Chloroform | 70 | 1.5 | 1.5 | 1.4 | *< 1.0* |
| cis-1,2-Dichloroethene | 70 | 2.0 | 1.8 | 1.8 | 1.9 |
| Cymene | NS | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| Freon 11 | NS | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| Methyl tert-butyl ether | **70** | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| Naphthalene | 140 | *< 5.0* | *< 5.0* | *< 5.0* | *< 5.0* |
| tert-Amyl Methyl Ether | NS | *< 5.0* | *< 5.0* | *< 5.0* | *< 5.0* |
| Tetrachloroethene | 5 | 3.4 | 3.3 | 3.1 | 2.0 |
| trans-1,2-Dichloroethene | 100 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| Trichloroethene | **5** | **34** | **33** | **33** | **23** |
| **Method SW8260C_SIM, µg/L** | | | | | |
| 1,4-Dioxane | **3** | | | | |

Notes:
< = Compound not detected. Reportable detection limit showr
Italics = Reporting limt exceeds GW-1 Standard
Empty cells = Not analyzed
NS = No Standard
N = Normal Environmental Sample
FD = Field Duplicate Sample
Units are in µg/L = micrograms per liter
MA-GW1 = Massachusetts Contingency Plan, 310 CMR 40,
Method 1 Groundwater Standards, Category GW-1

*Table 2*
*Summary of Groundwater Analytical Data -*
*Southern Area*
*Former Raytheon Facility*
*Wayland, Massachusetts*

| Analyte | Location ID<br>Sample Date<br>Sample Type<br>MA-GW-1 | MW-1016D<br>22-Mar-13<br>N | MW-1016D<br>03-Oct-13<br>N | MW-1016D<br>10-Apr-14<br>N | MW-1016D<br>10-Apr-14<br>FD |
|---|---|---|---|---|---|
| **Method EPA522, µg/L** | | | | | |
| 1,4-Dioxane | **3** | | | | |
| **Method SW8260B_SIM, µg/L** | | | | | |
| 1,4-Dioxane | **3** | | | | |
| **Method SW8260C, µg/L** | | | | | |
| 1,1,1-Trichloroethane | 200 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,1-Dichloroethane | 70 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,1-Dichloroethene | **7** | *< 1.0* | 2.2 | 1.5 | 1.5 |
| 1,2,4-Trimethylbenzene | NS | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,2-Dichlorobenzene | 600 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,3,5-Trimethylbenzene | NS | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,4-Dichlorobenzene | 5 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,4-Dioxane | **3** | *< 50* | *< 50* | *< 50* | *< 50* |
| Acetone | 6300 | *< 50* | *< 50* | 80 | 75 |
| Benzene | 5 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| Carbon disulfide | NS | *< 10* | *< 10* | *< 10* | *< 10* |
| Chlorobenzene | 100 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| Chloroform | 70 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| cis-1,2-Dichloroethene | 70 | 4.1 | 18 | 42 | 41 |
| Cymene | NS | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| Freon 11 | NS | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| Methyl tert-butyl ether | **70** | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| Naphthalene | 140 | *< 5.0* | *< 5.0* | *< 5.0* | *< 5.0* |
| tert-Amyl Methyl Ether | NS | *< 5.0* | *< 5.0* | *< 5.0* | *< 5.0* |
| Tetrachloroethene | 5 | *< 1.0* | 1.4 | *< 1.0* | *< 1.0* |
| trans-1,2-Dichloroethene | 100 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| Trichloroethene | **5** | **28** | **35** | 1.1 | 1.0 |
| **Method SW8260C_SIM, µg/L** | | | | | |
| 1,4-Dioxane | **3** | | | | |

Notes:
< = Compound not detected. Reportable detection limit showr
Italics = Reporting limt exceeds GW-1 Standard
Empty cells = Not analyzed
NS = No Standard
N = Normal Environmental Sample
FD = Field Duplicate Sample
Units are in µg/L = micrograms per liter
MA-GW1 = Massachusetts Contingency Plan, 310 CMR 40,
Method 1 Groundwater Standards, Category GW-1

*Table 2*
*Summary of Groundwater Analytical Data -*
*Southern Area*
*Former Raytheon Facility*
*Wayland, Massachusetts*

| | Location ID | MW-1017D | MW-1017D | MW-1017D |
|---|---|---|---|---|
| | Sample Date | 19-Mar-13 | 01-Oct-13 | 10-Apr-14 |
| | Sample Type | N | N | N |
| **Analyte** | **MA-GW-1** | | | |
| **Method EPA522, µg/L** | | | | |
| 1,4-Dioxane | **3** | | | |
| **Method SW8260B_SIM, µg/L** | | | | |
| 1,4-Dioxane | **3** | | | |
| **Method SW8260C, µg/L** | | | | |
| 1,1,1-Trichloroethane | 200 | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,1-Dichloroethane | 70 | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,1-Dichloroethene | **7** | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,2,4-Trimethylbenzene | NS | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,2-Dichlorobenzene | 600 | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,3,5-Trimethylbenzene | NS | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,4-Dichlorobenzene | 5 | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,4-Dioxane | **3** | ***< 50*** | ***< 50*** | ***< 50*** |
| Acetone | 6300 | *< 50* | *< 50* | 78 |
| Benzene | 5 | *< 1.0* | *< 1.0* | *< 1.0* |
| Carbon disulfide | NS | *< 10* | *< 10* | *< 10* |
| Chlorobenzene | 100 | *< 1.0* | *< 1.0* | *< 1.0* |
| Chloroform | 70 | *< 1.0* | *< 1.0* | *< 1.0* |
| cis-1,2-Dichloroethene | 70 | 8.1 | 19 | 11 |
| Cymene | NS | *< 1.0* | *< 1.0* | *< 1.0* |
| Freon 11 | NS | *< 1.0* | *< 1.0* | *< 1.0* |
| Methyl tert-butyl ether | **70** | *< 1.0* | *< 1.0* | *< 1.0* |
| Naphthalene | 140 | *< 5.0* | *< 5.0* | *< 5.0* |
| tert-Amyl Methyl Ether | NS | *< 5.0* | *< 5.0* | *< 5.0* |
| Tetrachloroethene | 5 | *< 1.0* | *< 1.0* | *< 1.0* |
| trans-1,2-Dichloroethene | 100 | *< 1.0* | *< 1.0* | *< 1.0* |
| Trichloroethene | **5** | **41** | **53** | **29** |
| **Method SW8260C_SIM, µg/L** | | | | |
| 1,4-Dioxane | **3** | | | |

Notes:
< = Compound not detected. Reportable detection limit showr
Italics = Reporting limt exceeds GW-1 Standard
Empty cells = Not analyzed
NS = No Standard
N = Normal Environmental Sample
FD = Field Duplicate Sample
Units are in µg/L = micrograms per liter
MA-GW1 = Massachusetts Contingency Plan, 310 CMR 40,
Method 1 Groundwater Standards, Category GW-1

*Table 2*
*Summary of Groundwater Analytical Data -*
*Southern Area*
*Former Raytheon Facility*
*Wayland, Massachusetts*

| Analyte | Location ID<br>Sample Date<br>Sample Type<br>MA-GW-1 | MW-1018<br>19-Mar-13<br>N | MW-1018<br>02-Oct-13<br>N | MW-1018<br>17-Oct-13<br>N | MW-1018<br>10-Apr-14<br>N |
|---|---|---|---|---|---|
| **Method EPA522, µg/L** | | | | | |
| 1,4-Dioxane | **3** | | | | |
| **Method SW8260B_SIM, µg/L** | | | | | |
| 1,4-Dioxane | **3** | | | | |
| **Method SW8260C, µg/L** | | | | | |
| 1,1,1-Trichloroethane | 200 | 94 | 17 | *< 1.0* | 42 |
| 1,1-Dichloroethane | 70 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,1-Dichloroethene | **7** | **7.3** | 1.0 | *< 1.0* | 3.7 |
| 1,2,4-Trimethylbenzene | NS | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,2-Dichlorobenzene | 600 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,3,5-Trimethylbenzene | NS | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,4-Dichlorobenzene | 5 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,4-Dioxane | **3** | *< 50* | *< 50* | *< 50* | *< 50* |
| Acetone | 6300 | *< 50* | *< 50* | *< 50* | 81 |
| Benzene | 5 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| Carbon disulfide | NS | *< 10* | *< 10* | *< 10* | *< 10* |
| Chlorobenzene | 100 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| Chloroform | 70 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| cis-1,2-Dichloroethene | 70 | 1.5 | *< 1.0* | *< 1.0* | *< 1.0* |
| Cymene | NS | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| Freon 11 | NS | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| Methyl tert-butyl ether | **70** | 7.6 | 10 | *< 1.0* | *< 1.0* |
| Naphthalene | 140 | *< 5.0* | *< 5.0* | *< 5.0* | *< 5.0* |
| tert-Amyl Methyl Ether | NS | *< 5.0* | *< 5.0* | *< 5.0* | *< 5.0* |
| Tetrachloroethene | 5 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| trans-1,2-Dichloroethene | 100 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| Trichloroethene | **5** | **300** | **59** | *< 1.0* | **170** |
| **Method SW8260C_SIM, µg/L** | | | | | |
| 1,4-Dioxane | **3** | | | | |

Notes:
< = Compound not detected. Reportable detection limit showr
Italics = Reporting limt exceeds GW-1 Standard
Empty cells = Not analyzed
NS = No Standard
N = Normal Environmental Sample
FD = Field Duplicate Sample
Units are in µg/L = micrograms per liter
MA-GW1 = Massachusetts Contingency Plan, 310 CMR 40,
Method 1 Groundwater Standards, Category GW-1

*Table 2*
*Summary of Groundwater Analytical Data -*
*Southern Area*
*Former Raytheon Facility*
*Wayland, Massachusetts*

| | Location ID | MW-1019B | MW-1019B | MW-1019B |
|---|---|---|---|---|
| | Sample Date | 19-Mar-13 | 01-Oct-13 | 10-Apr-14 |
| | Sample Type | N | N | N |
| **Analyte** | **MA-GW-1** | | | |
| **Method EPA522, µg/L** | | | | |
| 1,4-Dioxane | **3** | | | |
| **Method SW8260B_SIM, µg/L** | | | | |
| 1,4-Dioxane | **3** | | | |
| **Method SW8260C, µg/L** | | | | |
| 1,1,1-Trichloroethane | 200 | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,1-Dichloroethane | 70 | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,1-Dichloroethene | **7** | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,2,4-Trimethylbenzene | NS | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,2-Dichlorobenzene | 600 | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,3,5-Trimethylbenzene | NS | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,4-Dichlorobenzene | 5 | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,4-Dioxane | **3** | *< 50* | *< 50* | *< 50* |
| Acetone | 6300 | *< 50* | *< 50* | 79 |
| Benzene | 5 | *< 1.0* | *< 1.0* | *< 1.0* |
| Carbon disulfide | NS | *< 10* | *< 10* | *< 10* |
| Chlorobenzene | 100 | *< 1.0* | *< 1.0* | *< 1.0* |
| Chloroform | 70 | *< 1.0* | *< 1.0* | *< 1.0* |
| cis-1,2-Dichloroethene | 70 | 5.9 | *< 1.0* | *< 1.0* |
| Cymene | NS | *< 1.0* | *< 1.0* | *< 1.0* |
| Freon 11 | NS | *< 1.0* | *< 1.0* | *< 1.0* |
| Methyl tert-butyl ether | **70** | *< 1.0* | *< 1.0* | *< 1.0* |
| Naphthalene | 140 | *< 5.0* | *< 5.0* | *< 5.0* |
| tert-Amyl Methyl Ether | NS | *< 5.0* | *< 5.0* | *< 5.0* |
| Tetrachloroethene | 5 | *< 1.0* | *< 1.0* | *< 1.0* |
| trans-1,2-Dichloroethene | 100 | *< 1.0* | *< 1.0* | *< 1.0* |
| Trichloroethene | **5** | **26** | *< 1.0* | 2.1 |
| **Method SW8260C_SIM, µg/L** | | | | |
| 1,4-Dioxane | **3** | | | |

Notes:
< = Compound not detected. Reportable detection limit showr
Italics = Reporting limt exceeds GW-1 Standard
Empty cells = Not analyzed
NS = No Standard
N = Normal Environmental Sample
FD = Field Duplicate Sample
Units are in µg/L = micrograms per liter
MA-GW1 = Massachusetts Contingency Plan, 310 CMR 40,
Method 1 Groundwater Standards, Category GW-1

*Table 2*
*Summary of Groundwater Analytical Data -*
*Southern Area*
*Former Raytheon Facility*
*Wayland, Massachusetts*

| | Location ID | MW-1020 | MW-1020 | MW-1020 | MW-1020 | MW-1020 |
|---|---|---|---|---|---|---|
| | Sample Date | 19-Mar-13 | 01-Oct-13 | 01-Oct-13 | 10-Apr-14 | 14-Apr-14 |
| | Sample Type | N | N | FD | N | N |
| **Analyte** | **MA-GW-1** | | | | | |
| **Method EPA522, µg/L** | | | | | | |
| 1,4-Dioxane | **3** | 0.60 | 0.46 | | | 0.53 |
| **Method SW8260B_SIM, µg/L** | | | | | | |
| 1,4-Dioxane | **3** | | | | | |
| **Method SW8260C, µg/L** | | | | | | |
| 1,1,1-Trichloroethane | 200 | 2.1 | 67 | 68 | 1.6 | |
| 1,1-Dichloroethane | 70 | *< 1.0* | 2.1 | 2.2 | 1.0 | |
| 1,1-Dichloroethene | **7** | *< 1.0* | 4.7 | 4.8 | *< 1.0* | |
| 1,2,4-Trimethylbenzene | NS | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | |
| 1,2-Dichlorobenzene | 600 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | |
| 1,3,5-Trimethylbenzene | NS | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | |
| 1,4-Dichlorobenzene | 5 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | |
| 1,4-Dioxane | **3** | *< 50* | *< 50* | *< 50* | *< 50* | *< 1.6* |
| Acetone | 6300 | *< 50* | *< 50* | *< 50* | 81 | |
| Benzene | 5 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | |
| Carbon disulfide | NS | *< 10* | *< 10* | *< 10* | *< 10* | |
| Chlorobenzene | 100 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | |
| Chloroform | 70 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | |
| cis-1,2-Dichloroethene | 70 | *< 1.0* | 1.3 | 1.4 | *< 1.0* | |
| Cymene | NS | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | |
| Freon 11 | NS | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | |
| Methyl tert-butyl ether | **70** | 11 | 2.0 | 2.0 | *< 1.0* | |
| Naphthalene | 140 | *< 5.0* | *< 5.0* | *< 5.0* | *< 5.0* | |
| tert-Amyl Methyl Ether | NS | *< 5.0* | *< 5.0* | *< 5.0* | *< 5.0* | |
| Tetrachloroethene | 5 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | |
| trans-1,2-Dichloroethene | 100 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | |
| Trichloroethene | **5** | **16** | **280** | **270** | **21** | |
| **Method SW8260C_SIM, µg/L** | | | | | | |
| 1,4-Dioxane | **3** | | | | | |

Notes:
< = Compound not detected. Reportable detection limit showr
Italics = Reporting limt exceeds GW-1 Standard
Empty cells = Not analyzed
NS = No Standard
N = Normal Environmental Sample
FD = Field Duplicate Sample
Units are in µg/L = micrograms per liter
MA-GW1 = Massachusetts Contingency Plan, 310 CMR 40,
Method 1 Groundwater Standards, Category GW-1

*Table 2*
*Summary of Groundwater Analytical Data -*
*Southern Area*
*Former Raytheon Facility*
*Wayland, Massachusetts*

| Analyte | Location ID<br>Sample Date<br>Sample Type<br>MA-GW-1 | MW-1022<br>20-Mar-13<br>N | MW-1022<br>20-Mar-13<br>FD | MW-1022<br>01-Oct-13<br>N | MW-1022<br>10-Apr-14<br>N | MW-1022<br>14-Apr-14<br>N |
|---|---|---|---|---|---|---|
| **Method EPA522, µg/L** | | | | | | |
| 1,4-Dioxane | **3** | *< 0.20* | | *< 0.20* | | *< 0.20* |
| **Method SW8260B_SIM, µg/L** | | | | | | |
| 1,4-Dioxane | **3** | *< 1.6* | | | | |
| **Method SW8260C, µg/L** | | | | | | |
| 1,1,1-Trichloroethane | 200 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | |
| 1,1-Dichloroethane | 70 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | |
| 1,1-Dichloroethene | **7** | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | |
| 1,2,4-Trimethylbenzene | NS | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | |
| 1,2-Dichlorobenzene | 600 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | |
| 1,3,5-Trimethylbenzene | NS | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | |
| 1,4-Dichlorobenzene | 5 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | |
| 1,4-Dioxane | **3** | *< 50* | *< 50* | *< 50* | *< 50* | *< 1.6* |
| Acetone | 6300 | *< 50* | *< 50* | *< 50* | 79 | |
| Benzene | 5 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | |
| Carbon disulfide | NS | *< 10* | *< 10* | *< 10* | *< 10* | |
| Chlorobenzene | 100 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | |
| Chloroform | 70 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | |
| cis-1,2-Dichloroethene | 70 | 1.0 | 1.1 | *< 1.0* | *< 1.0* | |
| Cymene | NS | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | |
| Freon 11 | NS | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | |
| Methyl tert-butyl ether | **70** | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | |
| Naphthalene | 140 | *< 5.0* | *< 5.0* | *< 5.0* | *< 5.0* | |
| tert-Amyl Methyl Ether | NS | *< 5.0* | *< 5.0* | *< 5.0* | *< 5.0* | |
| Tetrachloroethene | 5 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | |
| trans-1,2-Dichloroethene | 100 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | |
| Trichloroethene | **5** | 2.7 | 2.9 | 3.1 | 3.0 | |
| **Method SW8260C_SIM, µg/L** | | | | | | |
| 1,4-Dioxane | **3** | | | | | |

Notes:
< = Compound not detected. Reportable detection limit showr
Italics = Reporting limt exceeds GW-1 Standard
Empty cells = Not analyzed
NS = No Standard
N = Normal Environmental Sample
FD = Field Duplicate Sample
Units are in µg/L = micrograms per liter
MA-GW1 = Massachusetts Contingency Plan, 310 CMR 40,
Method 1 Groundwater Standards, Category GW-1

*Table 2*
*Summary of Groundwater Analytical Data -*
*Southern Area*
*Former Raytheon Facility*
*Wayland, Massachusetts*

| Analyte | Location ID<br>Sample Date<br>Sample Type<br>MA-GW-1 | MW-1023<br>20-Mar-13<br>N | MW-1023<br>01-Oct-13<br>N | MW-1023<br>10-Apr-14<br>N | MW-1023<br>14-Apr-14<br>N |
|---|---|---|---|---|---|
| **Method EPA522, µg/L** | | | | | |
| 1,4-Dioxane | **3** | 0.65 | 0.81 | | *< 0.20* |
| **Method SW8260B_SIM, µg/L** | | | | | |
| 1,4-Dioxane | **3** | *< 1.6* | | | |
| **Method SW8260C, µg/L** | | | | | |
| 1,1,1-Trichloroethane | 200 | *< 1.0* | *< 1.0* | *< 1.0* | |
| 1,1-Dichloroethane | 70 | *< 1.0* | *< 1.0* | *< 1.0* | |
| 1,1-Dichloroethene | **7** | *< 1.0* | *< 1.0* | *< 1.0* | |
| 1,2,4-Trimethylbenzene | NS | *< 1.0* | *< 1.0* | *< 1.0* | |
| 1,2-Dichlorobenzene | 600 | *< 1.0* | *< 1.0* | *< 1.0* | |
| 1,3,5-Trimethylbenzene | NS | *< 1.0* | *< 1.0* | *< 1.0* | |
| 1,4-Dichlorobenzene | 5 | *< 1.0* | *< 1.0* | *< 1.0* | |
| 1,4-Dioxane | **3** | ***< 50*** | ***< 50*** | ***< 50*** | *< 1.6* |
| Acetone | 6300 | *< 50* | *< 50* | 80 | |
| Benzene | 5 | *< 1.0* | *< 1.0* | *< 1.0* | |
| Carbon disulfide | NS | *< 10* | *< 10* | *< 10* | |
| Chlorobenzene | 100 | *< 1.0* | *< 1.0* | *< 1.0* | |
| Chloroform | 70 | *< 1.0* | *< 1.0* | *< 1.0* | |
| cis-1,2-Dichloroethene | 70 | 6.6 | 6.6 | 3.5 | |
| Cymene | NS | *< 1.0* | *< 1.0* | *< 1.0* | |
| Freon 11 | NS | *< 1.0* | *< 1.0* | *< 1.0* | |
| Methyl tert-butyl ether | **70** | *< 1.0* | *< 1.0* | *< 1.0* | |
| Naphthalene | 140 | *< 5.0* | *< 5.0* | *< 5.0* | |
| tert-Amyl Methyl Ether | NS | *< 5.0* | *< 5.0* | *< 5.0* | |
| Tetrachloroethene | 5 | *< 1.0* | *< 1.0* | *< 1.0* | |
| trans-1,2-Dichloroethene | 100 | *< 1.0* | *< 1.0* | *< 1.0* | |
| Trichloroethene | **5** | **38** | **46** | **13** | |
| **Method SW8260C_SIM, µg/L** | | | | | |
| 1,4-Dioxane | **3** | | | | |

Notes:
< = Compound not detected. Reportable detection limit showr
Italics = Reporting limt exceeds GW-1 Standard
Empty cells = Not analyzed
NS = No Standard
N = Normal Environmental Sample
FD = Field Duplicate Sample
Units are in µg/L = micrograms per liter
MA-GW1 = Massachusetts Contingency Plan, 310 CMR 40,
Method 1 Groundwater Standards, Category GW-1

*Table 2*
*Summary of Groundwater Analytical Data -*
*Southern Area*
*Former Raytheon Facility*
*Wayland, Massachusetts*

| | Location ID | MW-1024D | MW-1024D | MW-1024D | MW-1024D |
|---|---|---|---|---|---|
| | Sample Date | 22-Mar-13 | 03-Oct-13 | 10-Apr-14 | 14-Apr-14 |
| | Sample Type | N | N | N | N |
| **Analyte** | **MA-GW-1** | | | | |
| **Method EPA522, µg/L** | | | | | |
| 1,4-Dioxane | **3** | 0.40 | 0.55 | | 0.24 |
| **Method SW8260B_SIM, µg/L** | | | | | |
| 1,4-Dioxane | **3** | *< 1.6* | | | |
| **Method SW8260C, µg/L** | | | | | |
| 1,1,1-Trichloroethane | 200 | *< 1.0* | *< 1.0* | *< 1.0* | |
| 1,1-Dichloroethane | 70 | *< 1.0* | *< 1.0* | *< 1.0* | |
| 1,1-Dichloroethene | **7** | *< 1.0* | *< 1.0* | *< 1.0* | |
| 1,2,4-Trimethylbenzene | NS | *< 1.0* | *< 1.0* | *< 1.0* | |
| 1,2-Dichlorobenzene | 600 | *< 1.0* | *< 1.0* | *< 1.0* | |
| 1,3,5-Trimethylbenzene | NS | *< 1.0* | *< 1.0* | *< 1.0* | |
| 1,4-Dichlorobenzene | 5 | *< 1.0* | *< 1.0* | *< 1.0* | |
| 1,4-Dioxane | **3** | ***< 50*** | ***< 50*** | ***< 50*** | *< 1.6* |
| Acetone | 6300 | *< 50* | *< 50* | 85 | |
| Benzene | 5 | *< 1.0* | *< 1.0* | *< 1.0* | |
| Carbon disulfide | NS | *< 10* | *< 10* | *< 10* | |
| Chlorobenzene | 100 | *< 1.0* | *< 1.0* | *< 1.0* | |
| Chloroform | 70 | *< 1.0* | *< 1.0* | *< 1.0* | |
| cis-1,2-Dichloroethene | 70 | 13 | 18 | 4.2 | |
| Cymene | NS | *< 1.0* | *< 1.0* | *< 1.0* | |
| Freon 11 | NS | *< 1.0* | *< 1.0* | *< 1.0* | |
| Methyl tert-butyl ether | **70** | *< 1.0* | *< 1.0* | *< 1.0* | |
| Naphthalene | 140 | *< 5.0* | *< 5.0* | *< 5.0* | |
| tert-Amyl Methyl Ether | NS | *< 5.0* | *< 5.0* | *< 5.0* | |
| Tetrachloroethene | 5 | *< 1.0* | *< 1.0* | *< 1.0* | |
| trans-1,2-Dichloroethene | 100 | *< 1.0* | *< 1.0* | *< 1.0* | |
| Trichloroethene | **5** | **73** | **72** | **14** | |
| **Method SW8260C_SIM, µg/L** | | | | | |
| 1,4-Dioxane | **3** | | *< 1.6* | | |

Notes:
< = Compound not detected. Reportable detection limit showr
Italics = Reporting limt exceeds GW-1 Standard
Empty cells = Not analyzed
NS = No Standard
N = Normal Environmental Sample
FD = Field Duplicate Sample
Units are in µg/L = micrograms per liter
MA-GW1 = Massachusetts Contingency Plan, 310 CMR 40,
Method 1 Groundwater Standards, Category GW-1

*Table 2*
*Summary of Groundwater Analytical Data -*
*Southern Area*
*Former Raytheon Facility*
*Wayland, Massachusetts*

| Analyte | Location ID<br>Sample Date<br>Sample Type<br>MA-GW-1 | MW-1025D<br>21-Mar-13<br>N | MW-1025D<br>03-Oct-13<br>N | MW-1025D<br>10-Apr-14<br>N | MW-1025D<br>14-Apr-14<br>N |
|---|---|---|---|---|---|
| **Method EPA522, µg/L** | | | | | |
| 1,4-Dioxane | **3** | 0.31 | 0.39 | | *< 0.20* |
| **Method SW8260B_SIM, µg/L** | | | | | |
| 1,4-Dioxane | **3** | *< 1.6* | | | |
| **Method SW8260C, µg/L** | | | | | |
| 1,1,1-Trichloroethane | 200 | *< 1.0* | *< 2.0* | *< 1.0* | |
| 1,1-Dichloroethane | 70 | *< 1.0* | *< 2.0* | *< 1.0* | |
| 1,1-Dichloroethene | **7** | *< 1.0* | *< 2.0* | *< 1.0* | |
| 1,2,4-Trimethylbenzene | NS | *< 1.0* | *< 2.0* | *< 1.0* | |
| 1,2-Dichlorobenzene | 600 | *< 1.0* | *< 2.0* | *< 1.0* | |
| 1,3,5-Trimethylbenzene | NS | *< 1.0* | *< 2.0* | *< 1.0* | |
| 1,4-Dichlorobenzene | 5 | *< 1.0* | *< 2.0* | *< 1.0* | |
| 1,4-Dioxane | **3** | ***< 50*** | ***< 100*** | ***< 50*** | *< 1.6* |
| Acetone | 6300 | *< 50* | *< 100* | *< 50* | |
| Benzene | 5 | *< 1.0* | *< 2.0* | *< 1.0* | |
| Carbon disulfide | NS | *< 10* | *< 20* | *< 10* | |
| Chlorobenzene | 100 | *< 1.0* | *< 2.0* | *< 1.0* | |
| Chloroform | 70 | *< 1.0* | *< 2.0* | *< 1.0* | |
| cis-1,2-Dichloroethene | 70 | 17 | 17 | 25 | |
| Cymene | NS | *< 1.0* | *< 2.0* | *< 1.0* | |
| Freon 11 | NS | *< 1.0* | *< 2.0* | *< 1.0* | |
| Methyl tert-butyl ether | **70** | *< 1.0* | *< 2.0* | *< 1.0* | |
| Naphthalene | 140 | *< 5.0* | *< 10* | *< 5.0* | |
| tert-Amyl Methyl Ether | NS | *< 5.0* | *< 10* | *< 5.0* | |
| Tetrachloroethene | 5 | *< 1.0* | *< 2.0* | *< 1.0* | |
| trans-1,2-Dichloroethene | 100 | *< 1.0* | *< 2.0* | *< 1.0* | |
| Trichloroethene | **5** | **110** | **110** | *< 1.0* | |
| **Method SW8260C_SIM, µg/L** | | | | | |
| 1,4-Dioxane | **3** | | *< 1.6* | | |

Notes:
< = Compound not detected. Reportable detection limit showr
Italics = Reporting limt exceeds GW-1 Standard
Empty cells = Not analyzed
NS = No Standard
N = Normal Environmental Sample
FD = Field Duplicate Sample
Units are in µg/L = micrograms per liter
MA-GW1 = Massachusetts Contingency Plan, 310 CMR 40,
Method 1 Groundwater Standards, Category GW-1

*Table 2*
*Summary of Groundwater Analytical Data -*
*Southern Area*
*Former Raytheon Facility*
*Wayland, Massachusetts*

| | Location ID | MW-1025M | MW-1025M | MW-1025M | MW-1025M | MW-1025M | MW-1025M |
|---|---|---|---|---|---|---|---|
| | Sample Date | 20-Mar-13 | 03-Oct-13 | 17-Oct-13 | 10-Apr-14 | 10-Apr-14 | 14-Apr-14 |
| | Sample Type | N | N | N | N | FD | N |
| **Analyte** | **MA-GW-1** | | | | | | |
| **Method EPA522, µg/L** | | | | | | | |
| 1,4-Dioxane | **3** | | | | | | 1.2 |
| **Method SW8260B_SIM, µg/L** | | | | | | | |
| 1,4-Dioxane | **3** | **6.1** | | | | | |
| **Method SW8260C, µg/L** | | | | | | | |
| 1,1,1-Trichloroethane | 200 | 14 | 3.3 | *< 2.0* | 2.9 | 2.9 | |
| 1,1-Dichloroethane | 70 | 4.5 | 2.3 | 2.0 | *< 2.0* | 1.8 | |
| 1,1-Dichloroethene | **7** | 6.6 | **9.2** | *< 2.0* | 4.8 | 4.9 | |
| 1,2,4-Trimethylbenzene | NS | *< 1.0* | *< 2.0* | *< 2.0* | *< 2.0* | *< 1.0* | |
| 1,2-Dichlorobenzene | 600 | *< 1.0* | *< 2.0* | *< 2.0* | *< 2.0* | *< 1.0* | |
| 1,3,5-Trimethylbenzene | NS | *< 1.0* | *< 2.0* | *< 2.0* | *< 2.0* | *< 1.0* | |
| 1,4-Dichlorobenzene | 5 | *< 1.0* | *< 2.0* | *< 2.0* | *< 2.0* | *< 1.0* | |
| 1,4-Dioxane | **3** | ***< 50*** | ***< 100*** | ***< 100*** | ***< 100*** | ***< 50*** | *< 1.6* |
| Acetone | 6300 | *< 50* | *< 100* | *< 100* | *< 100* | 81 | |
| Benzene | 5 | *< 1.0* | *< 2.0* | *< 2.0* | *< 2.0* | *< 1.0* | |
| Carbon disulfide | NS | *< 10* | *< 20* | *< 20* | *< 20* | *< 10* | |
| Chlorobenzene | 100 | *< 1.0* | *< 2.0* | *< 2.0* | *< 2.0* | *< 1.0* | |
| Chloroform | 70 | *< 1.0* | *< 2.0* | *< 2.0* | *< 2.0* | *< 1.0* | |
| cis-1,2-Dichloroethene | 70 | 2.4 | *< 2.0* | *< 2.0* | 3.4 | 3.6 | |
| Cymene | NS | *< 1.0* | *< 2.0* | *< 2.0* | *< 2.0* | *< 1.0* | |
| Freon 11 | NS | *< 1.0* | *< 2.0* | *< 2.0* | *< 2.0* | *< 1.0* | |
| Methyl tert-butyl ether | **70** | 23 | 12 | *< 2.0* | *< 2.0* | *< 1.0* | |
| Naphthalene | 140 | *< 5.0* | *< 10* | *< 10* | *< 10* | *< 5.0* | |
| tert-Amyl Methyl Ether | NS | *< 5.0* | *< 10* | *< 10* | *< 10* | *< 5.0* | |
| Tetrachloroethene | 5 | *< 1.0* | *< 2.0* | *< 2.0* | *< 2.0* | *< 1.0* | |
| trans-1,2-Dichloroethene | 100 | *< 1.0* | *< 2.0* | *< 2.0* | *< 2.0* | *< 1.0* | |
| Trichloroethene | **5** | **170** | **130** | **140** | **83** | **85** | |
| **Method SW8260C_SIM, µg/L** | | | | | | | |
| 1,4-Dioxane | **3** | | **6.8** | | | | |

Notes:
< = Compound not detected. Reportable detection limit showr
Italics = Reporting limt exceeds GW-1 Standard
Empty cells = Not analyzed
NS = No Standard
N = Normal Environmental Sample
FD = Field Duplicate Sample
Units are in µg/L = micrograms per liter
MA-GW1 = Massachusetts Contingency Plan, 310 CMR 40,
Method 1 Groundwater Standards, Category GW-1

*Table 2*
*Summary of Groundwater Analytical Data -*
*Southern Area*
*Former Raytheon Facility*
*Wayland, Massachusetts*

| Analyte | Location ID<br>Sample Date<br>Sample Type<br>MA-GW-1 | MW-1026D<br>22-Mar-13<br>N | MW-1026D<br>01-Oct-13<br>N |
|---|---|---|---|
| **Method EPA522, µg/L** | | | |
| 1,4-Dioxane | **3** | 0.43 | 0.39 |
| **Method SW8260B_SIM, µg/L** | | | |
| 1,4-Dioxane | **3** | *< 1.6* | |
| **Method SW8260C, µg/L** | | | |
| 1,1,1-Trichloroethane | 200 | *< 1.0* | *< 1.0* |
| 1,1-Dichloroethane | 70 | *< 1.0* | *< 1.0* |
| 1,1-Dichloroethene | **7** | *< 1.0* | *< 1.0* |
| 1,2,4-Trimethylbenzene | NS | *< 1.0* | *< 1.0* |
| 1,2-Dichlorobenzene | 600 | *< 1.0* | *< 1.0* |
| 1,3,5-Trimethylbenzene | NS | *< 1.0* | *< 1.0* |
| 1,4-Dichlorobenzene | 5 | *< 1.0* | *< 1.0* |
| 1,4-Dioxane | **3** | ***< 50*** | ***< 50*** |
| Acetone | 6300 | *< 50* | *< 50* |
| Benzene | 5 | *< 1.0* | *< 1.0* |
| Carbon disulfide | NS | *< 10* | *< 10* |
| Chlorobenzene | 100 | *< 1.0* | *< 1.0* |
| Chloroform | 70 | *< 1.0* | *< 1.0* |
| cis-1,2-Dichloroethene | 70 | 2.4 | 11 |
| Cymene | NS | *< 1.0* | *< 1.0* |
| Freon 11 | NS | *< 1.0* | *< 1.0* |
| Methyl tert-butyl ether | **70** | *< 1.0* | *< 1.0* |
| Naphthalene | 140 | *< 5.0* | *< 5.0* |
| tert-Amyl Methyl Ether | NS | *< 5.0* | *< 5.0* |
| Tetrachloroethene | 5 | *< 1.0* | *< 1.0* |
| trans-1,2-Dichloroethene | 100 | *< 1.0* | *< 1.0* |
| Trichloroethene | **5** | **19** | **89** |
| **Method SW8260C_SIM, µg/L** | | | |
| 1,4-Dioxane | **3** | | |

Notes:
< = Compound not detected. Reportable detection limit showr
Italics = Reporting limt exceeds GW-1 Standard
Empty cells = Not analyzed
NS = No Standard
N = Normal Environmental Sample
FD = Field Duplicate Sample
Units are in µg/L = micrograms per liter
MA-GW1 = Massachusetts Contingency Plan, 310 CMR 40,
Method 1 Groundwater Standards, Category GW-1

*Table 2*
*Summary of Groundwater Analytical Data -*
*Southern Area*
*Former Raytheon Facility*
*Wayland, Massachusetts*

| | Location ID | MW-1027 | MW-1027 | MW-1027 |
|---|---|---|---|---|
| | Sample Date | 20-Mar-13 | 02-Oct-13 | 10-Apr-14 |
| | Sample Type | N | N | N |
| **Analyte** | **MA-GW-1** | | | |
| **Method EPA522, µg/L** | | | | |
| 1,4-Dioxane | **3** | | | |
| **Method SW8260B_SIM, µg/L** | | | | |
| 1,4-Dioxane | **3** | | | |
| **Method SW8260C, µg/L** | | | | |
| 1,1,1-Trichloroethane | 200 | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,1-Dichloroethane | 70 | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,1-Dichloroethene | **7** | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,2,4-Trimethylbenzene | NS | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,2-Dichlorobenzene | 600 | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,3,5-Trimethylbenzene | NS | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,4-Dichlorobenzene | 5 | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,4-Dioxane | **3** | ***< 50*** | ***< 50*** | ***< 50*** |
| Acetone | 6300 | *< 50* | *< 50* | *< 50* |
| Benzene | 5 | *< 1.0* | *< 1.0* | *< 1.0* |
| Carbon disulfide | NS | *< 10* | 19 | *< 10* |
| Chlorobenzene | 100 | *< 1.0* | *< 1.0* | *< 1.0* |
| Chloroform | 70 | *< 1.0* | *< 1.0* | *< 1.0* |
| cis-1,2-Dichloroethene | 70 | *< 1.0* | *< 1.0* | *< 1.0* |
| Cymene | NS | *< 1.0* | *< 1.0* | *< 1.0* |
| Freon 11 | NS | *< 1.0* | *< 1.0* | *< 1.0* |
| Methyl tert-butyl ether | **70** | *< 1.0* | *< 1.0* | *< 1.0* |
| Naphthalene | 140 | *< 5.0* | *< 5.0* | *< 5.0* |
| tert-Amyl Methyl Ether | NS | *< 5.0* | *< 5.0* | *< 5.0* |
| Tetrachloroethene | 5 | *< 1.0* | *< 1.0* | *< 1.0* |
| trans-1,2-Dichloroethene | 100 | *< 1.0* | *< 1.0* | *< 1.0* |
| Trichloroethene | **5** | *< 1.0* | *< 1.0* | *< 1.0* |
| **Method SW8260C_SIM, µg/L** | | | | |
| 1,4-Dioxane | **3** | | | |

Notes:
< = Compound not detected. Reportable detection limit showr
Italics = Reporting limt exceeds GW-1 Standard
Empty cells = Not analyzed
NS = No Standard
N = Normal Environmental Sample
FD = Field Duplicate Sample
Units are in µg/L = micrograms per liter
MA-GW1 = Massachusetts Contingency Plan, 310 CMR 40,
Method 1 Groundwater Standards, Category GW-1

*Table 2*
*Summary of Groundwater Analytical Data -*
*Southern Area*
*Former Raytheon Facility*
*Wayland, Massachusetts*

| Analyte | Location ID<br>Sample Date<br>Sample Type<br>MA-GW-1 | MW-1028<br>20-Mar-13<br>N | MW-1028<br>02-Oct-13<br>N | MW-1028<br>17-Oct-13<br>N | MW-1028<br>10-Apr-14<br>N |
|---|---|---|---|---|---|
| **Method EPA522, µg/L** | | | | | |
| 1,4-Dioxane | **3** | | | | |
| **Method SW8260B_SIM, µg/L** | | | | | |
| 1,4-Dioxane | **3** | | | | |
| **Method SW8260C, µg/L** | | | | | |
| 1,1,1-Trichloroethane | 200 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,1-Dichloroethane | 70 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,1-Dichloroethene | **7** | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,2,4-Trimethylbenzene | NS | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,2-Dichlorobenzene | 600 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,3,5-Trimethylbenzene | NS | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,4-Dichlorobenzene | 5 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,4-Dioxane | **3** | *< 50* | *< 50 ** | *< 50* | *< 50* |
| Acetone | 6300 | *< 50* | *< 50* | *< 50* | 80 |
| Benzene | 5 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| Carbon disulfide | NS | *< 10* | *< 10* | *< 10* | *< 10* |
| Chlorobenzene | 100 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| Chloroform | 70 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| cis-1,2-Dichloroethene | 70 | 1.6 | 1.2 | 1.2 | *< 1.0* |
| Cymene | NS | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| Freon 11 | NS | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| Methyl tert-butyl ether | **70** | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| Naphthalene | 140 | *< 5.0* | *< 5.0* | *< 5.0* | *< 5.0* |
| tert-Amyl Methyl Ether | NS | *< 5.0* | *< 5.0* | *< 5.0* | *< 5.0* |
| Tetrachloroethene | 5 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| trans-1,2-Dichloroethene | 100 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| Trichloroethene | **5** | **6.8** | **6.4** | **6.1** | 3.3 |
| **Method SW8260C_SIM, µg/L** | | | | | |
| 1,4-Dioxane | **3** | | | | |

Notes:
< = Compound not detected. Reportable detection limit showr
Italics = Reporting limt exceeds GW-1 Standard
Empty cells = Not analyzed
NS = No Standard
N = Normal Environmental Sample
FD = Field Duplicate Sample
Units are in µg/L = micrograms per liter
MA-GW1 = Massachusetts Contingency Plan, 310 CMR 40,
Method 1 Groundwater Standards, Category GW-1

*Table 2*
*Summary of Groundwater Analytical Data -*
*Southern Area*
*Former Raytheon Facility*
*Wayland, Massachusetts*

| | Location ID | MW-1030 | MW-1030 | MW-1030 | MW-1030 |
|---|---|---|---|---|---|
| | Sample Date | 20-Mar-13 | 01-Oct-13 | 17-Oct-13 | 10-Apr-14 |
| | Sample Type | N | N | N | N |
| **Analyte** | **MA-GW-1** | | | | |
| **Method EPA522, µg/L** | | | | | |
| 1,4-Dioxane | **3** | | | | |
| **Method SW8260B_SIM, µg/L** | | | | | |
| 1,4-Dioxane | **3** | | | | |
| **Method SW8260C, µg/L** | | | | | |
| 1,1,1-Trichloroethane | 200 | 4.1 | 3.6 | 1.9 | 4.1 |
| 1,1-Dichloroethane | 70 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,1-Dichloroethene | **7** | 2.4 | 2.2 | *< 1.0* | 2.7 |
| 1,2,4-Trimethylbenzene | NS | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,2-Dichlorobenzene | 600 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,3,5-Trimethylbenzene | NS | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,4-Dichlorobenzene | 5 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,4-Dioxane | **3** | *< 50* | *< 50* | *< 50* | *< 50* |
| Acetone | 6300 | *< 50* | *< 50* | *< 50* | 76 |
| Benzene | 5 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| Carbon disulfide | NS | *< 10* | *< 10* | *< 10* | *< 10* |
| Chlorobenzene | 100 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| Chloroform | 70 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| cis-1,2-Dichloroethene | 70 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| Cymene | NS | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| Freon 11 | NS | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| Methyl tert-butyl ether | **70** | 12 | 38 | 2.4 | 1.7 |
| Naphthalene | 140 | *< 5.0* | *< 5.0* | *< 5.0* | *< 5.0* |
| tert-Amyl Methyl Ether | NS | *< 5.0* | 7.9 | *< 5.0* | *< 5.0* |
| Tetrachloroethene | 5 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| trans-1,2-Dichloroethene | 100 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| Trichloroethene | **5** | **23** | **25** | **13** | **39** |
| **Method SW8260C_SIM, µg/L** | | | | | |
| 1,4-Dioxane | **3** | | | | |

Notes:
< = Compound not detected. Reportable detection limit showr
Italics = Reporting limt exceeds GW-1 Standard
Empty cells = Not analyzed
NS = No Standard
N = Normal Environmental Sample
FD = Field Duplicate Sample
Units are in µg/L = micrograms per liter
MA-GW1 = Massachusetts Contingency Plan, 310 CMR 40,
Method 1 Groundwater Standards, Category GW-1

*Table 2*
*Summary of Groundwater Analytical Data -*
*Southern Area*
*Former Raytheon Facility*
*Wayland, Massachusetts*

| | Location ID | MW-1031 | MW-1031 | MW-1031 |
|---|---|---|---|---|
| | Sample Date | 21-Mar-13 | 01-Oct-13 | 10-Apr-14 |
| | Sample Type | N | N | N |
| **Analyte** | **MA-GW-1** | | | |
| **Method EPA522, µg/L** | | | | |
| 1,4-Dioxane | **3** | | | |
| **Method SW8260B_SIM, µg/L** | | | | |
| 1,4-Dioxane | **3** | | | |
| **Method SW8260C, µg/L** | | | | |
| 1,1,1-Trichloroethane | 200 | *< 1.0* | 5.4 | *< 1.0* |
| 1,1-Dichloroethane | 70 | *< 1.0* | 2.2 | *< 1.0* |
| 1,1-Dichloroethene | **7** | *< 1.0* | 6.2 | *< 1.0* |
| 1,2,4-Trimethylbenzene | NS | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,2-Dichlorobenzene | 600 | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,3,5-Trimethylbenzene | NS | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,4-Dichlorobenzene | 5 | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,4-Dioxane | **3** | *< 50* | *< 50* | *< 50* |
| Acetone | 6300 | *< 50* | *< 50* | 79 |
| Benzene | 5 | *< 1.0* | *< 1.0* | *< 1.0* |
| Carbon disulfide | NS | *< 10* | *< 10* | *< 10* |
| Chlorobenzene | 100 | *< 1.0* | *< 1.0* | *< 1.0* |
| Chloroform | 70 | *< 1.0* | *< 1.0* | *< 1.0* |
| cis-1,2-Dichloroethene | 70 | *< 1.0* | *< 1.0* | *< 1.0* |
| Cymene | NS | *< 1.0* | *< 1.0* | *< 1.0* |
| Freon 11 | NS | *< 1.0* | *< 1.0* | *< 1.0* |
| Methyl tert-butyl ether | **70** | 1.1 | 64 | *< 1.0* |
| Naphthalene | 140 | *< 5.0* | *< 5.0* | *< 5.0* |
| tert-Amyl Methyl Ether | NS | *< 5.0* | 18 | *< 5.0* |
| Tetrachloroethene | 5 | *< 1.0* | *< 1.0* | *< 1.0* |
| trans-1,2-Dichloroethene | 100 | *< 1.0* | *< 1.0* | *< 1.0* |
| Trichloroethene | **5** | 2.3 | **88** | 2.9 |
| **Method SW8260C_SIM, µg/L** | | | | |
| 1,4-Dioxane | **3** | | | |

Notes:
< = Compound not detected. Reportable detection limit showr
Italics = Reporting limt exceeds GW-1 Standard
Empty cells = Not analyzed
NS = No Standard
N = Normal Environmental Sample
FD = Field Duplicate Sample
Units are in µg/L = micrograms per liter
MA-GW1 = Massachusetts Contingency Plan, 310 CMR 40,
Method 1 Groundwater Standards, Category GW-1

*Table 2*
*Summary of Groundwater Analytical Data -*
*Southern Area*
*Former Raytheon Facility*
*Wayland, Massachusetts*

| | Location ID | MW-1032 | MW-1032 | MW-1032 | MW-1032 |
|---|---|---|---|---|---|
| | Sample Date | 19-Mar-13 | 19-Mar-13 | 01-Oct-13 | 10-Apr-14 |
| | Sample Type | N | FD | N | N |
| **Analyte** | **MA-GW-1** | | | | |
| **Method EPA522, µg/L** | | | | | |
| 1,4-Dioxane | **3** | | | | |
| **Method SW8260B_SIM, µg/L** | | | | | |
| 1,4-Dioxane | **3** | | | | |
| **Method SW8260C, µg/L** | | | | | |
| 1,1,1-Trichloroethane | 200 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,1-Dichloroethane | 70 | 1.3 | 1.3 | 1.2 | 1.0 |
| 1,1-Dichloroethene | **7** | 1.7 | 1.6 | 1.7 | 1.9 |
| 1,2,4-Trimethylbenzene | NS | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,2-Dichlorobenzene | 600 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,3,5-Trimethylbenzene | NS | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,4-Dichlorobenzene | 5 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| 1,4-Dioxane | **3** | *< 50* | *< 50* | *< 50* | *< 50* |
| Acetone | 6300 | *< 50* | *< 50* | *< 50* | *< 50* |
| Benzene | 5 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| Carbon disulfide | NS | *< 10* | *< 10* | *< 10* | *< 10* |
| Chlorobenzene | 100 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| Chloroform | 70 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| cis-1,2-Dichloroethene | 70 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| Cymene | NS | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| Freon 11 | NS | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| Methyl tert-butyl ether | **70** | **86** | **85** | **94** | 4.1 |
| Naphthalene | 140 | *< 5.0* | *< 5.0* | *< 5.0* | *< 5.0* |
| tert-Amyl Methyl Ether | NS | 18 | 18 | 17 | *< 5.0* |
| Tetrachloroethene | 5 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| trans-1,2-Dichloroethene | 100 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* |
| Trichloroethene | **5** | **12** | **11** | **10** | **11** |
| **Method SW8260C_SIM, µg/L** | | | | | |
| 1,4-Dioxane | **3** | | | | |

Notes:
< = Compound not detected. Reportable detection limit showr
Italics = Reporting limt exceeds GW-1 Standard
Empty cells = Not analyzed
NS = No Standard
N = Normal Environmental Sample
FD = Field Duplicate Sample
Units are in µg/L = micrograms per liter
MA-GW1 = Massachusetts Contingency Plan, 310 CMR 40,
Method 1 Groundwater Standards, Category GW-1

*Table 2*
*Summary of Groundwater Analytical Data -*
*Southern Area*
*Former Raytheon Facility*
*Wayland, Massachusetts*

| | Location ID | MW-1033 | MW-1033 | MW-1033 | MW-1033 | MW-1033 | MW-1033 |
|---|---|---|---|---|---|---|---|
| | Sample Date | 20-Mar-13 | 20-Mar-13 | 03-Oct-13 | 10-Apr-14 | 10-Apr-14 | 14-Apr-14 |
| | Sample Type | N | FD | N | N | FD | N |
| **Analyte** | **MA-GW-1** | | | | | | |
| **Method EPA522, µg/L** | | | | | | | |
| 1,4-Dioxane | **3** | **3.4** | | | | | 0.49 |
| **Method SW8260B_SIM, µg/L** | | | | | | | |
| 1,4-Dioxane | **3** | **4.7** | | | | | |
| **Method SW8260C, µg/L** | | | | | | | |
| 1,1,1-Trichloroethane | 200 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | |
| 1,1-Dichloroethane | 70 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | |
| 1,1-Dichloroethene | **7** | 1.5 | 1.4 | *< 1.0* | *< 1.0* | *< 1.0* | |
| 1,2,4-Trimethylbenzene | NS | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | |
| 1,2-Dichlorobenzene | 600 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | |
| 1,3,5-Trimethylbenzene | NS | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | |
| 1,4-Dichlorobenzene | 5 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | |
| 1,4-Dioxane | **3** | *< 50* | *< 50* | *< 50* | *< 50* | *< 50* | *< 1.6* |
| Acetone | 6300 | *< 50* | *< 50* | *< 50* | 80 | 79 | |
| Benzene | 5 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | |
| Carbon disulfide | NS | *< 10* | *< 10* | *< 10* | *< 10* | *< 10* | |
| Chlorobenzene | 100 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | |
| Chloroform | 70 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | |
| cis-1,2-Dichloroethene | 70 | 1.8 | 1.8 | *< 1.0* | *< 1.0* | *< 1.0* | |
| Cymene | NS | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | |
| Freon 11 | NS | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | |
| Methyl tert-butyl ether | **70** | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | |
| Naphthalene | 140 | *< 5.0* | *< 5.0* | *< 5.0* | *< 5.0* | *< 5.0* | |
| tert-Amyl Methyl Ether | NS | *< 5.0* | *< 5.0* | *< 5.0* | *< 5.0* | *< 5.0* | |
| Tetrachloroethene | 5 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | |
| trans-1,2-Dichloroethene | 100 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | |
| Trichloroethene | **5** | **14** | **13** | **5.3** | *< 1.0* | *< 1.0* | |
| **Method SW8260C_SIM, µg/L** | | | | | | | |
| 1,4-Dioxane | **3** | | | 2.3 | | | |

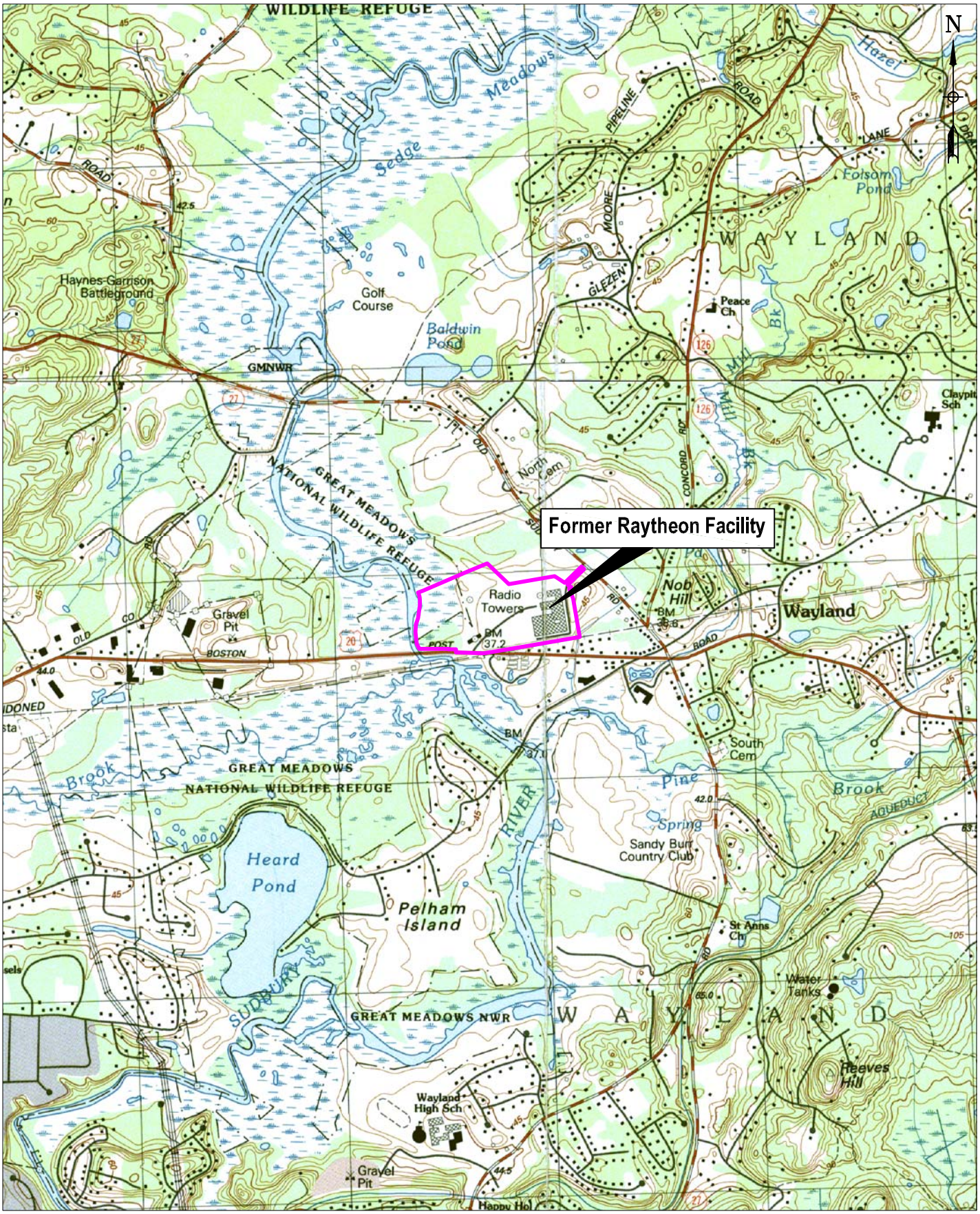
Notes:
< = Compound not detected. Reportable detection limit showr
Italics = Reporting limt exceeds GW-1 Standard
Empty cells = Not analyzed
NS = No Standard
N = Normal Environmental Sample
FD = Field Duplicate Sample
Units are in µg/L = micrograms per liter
MA-GW1 = Massachusetts Contingency Plan, 310 CMR 40,
Method 1 Groundwater Standards, Category GW-1

*Table 2*
*Summary of Groundwater Analytical Data -*
*Southern Area*
*Former Raytheon Facility*
*Wayland, Massachusetts*

| | Location ID | MW-1034 | MW-1034 | MW-1034 | MW-1034 | MW-1034 |
|---|---|---|---|---|---|---|
| | Sample Date | 20-Mar-13 | 02-Oct-13 | 17-Oct-13 | 10-Apr-14 | 14-Apr-14 |
| | Sample Type | N | N | N | N | N |
| **Analyte** | **MA-GW-1** | | | | | |
| **Method EPA522, µg/L** | | | | | | |
| 1,4-Dioxane | **3** | 0.59 | 0.63 | | | 0.32 |
| **Method SW8260B_SIM, µg/L** | | | | | | |
| 1,4-Dioxane | **3** | *< 1.6* | | | | |
| **Method SW8260C, µg/L** | | | | | | |
| 1,1,1-Trichloroethane | 200 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | |
| 1,1-Dichloroethane | 70 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | |
| 1,1-Dichloroethene | **7** | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | |
| 1,2,4-Trimethylbenzene | NS | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | |
| 1,2-Dichlorobenzene | 600 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | |
| 1,3,5-Trimethylbenzene | NS | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | |
| 1,4-Dichlorobenzene | 5 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | |
| 1,4-Dioxane | **3** | *< 50* | *< 50* | *< 50* | *< 50* | *< 1.6* |
| Acetone | 6300 | *< 50* | *< 50* | *< 50* | 81 | |
| Benzene | 5 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | |
| Carbon disulfide | NS | *< 10* | *< 10* | *< 10* | *< 10* | |
| Chlorobenzene | 100 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | |
| Chloroform | 70 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | |
| cis-1,2-Dichloroethene | 70 | 16 | 16 | 15 | 1.9 | |
| Cymene | NS | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | |
| Freon 11 | NS | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | |
| Methyl tert-butyl ether | **70** | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | |
| Naphthalene | 140 | *< 5.0* | *< 5.0* | *< 5.0* | *< 5.0* | |
| tert-Amyl Methyl Ether | NS | *< 5.0* | *< 5.0* | *< 5.0* | *< 5.0* | |
| Tetrachloroethene | 5 | *< 1.0* | *< 1.0* | *< 1.0* | *< 1.0* | |
| trans-1,2-Dichloroethene | 100 | *< 1.0* | *< 1.0* | 1.1 | *< 1.0* | |
| Trichloroethene | **5** | **39** | **44** | **51** | **5.0** | |
| **Method SW8260C_SIM, µg/L** | | | | | | |
| 1,4-Dioxane | **3** | | | | | |

Notes:
< = Compound not detected. Reportable detection limit showr
Italics = Reporting limt exceeds GW-1 Standard
Empty cells = Not analyzed
NS = No Standard
N = Normal Environmental Sample
FD = Field Duplicate Sample
Units are in µg/L = micrograms per liter
MA-GW1 = Massachusetts Contingency Plan, 310 CMR 40,
Method 1 Groundwater Standards, Category GW-1

*Figures*




Legend

Former Raytheon Facility Property Boundary

Scale = 1:25,000

**Figure 1** - Site Locus Map
Former Raytheon Facility
and Former Hamlen Parcel - Wayland, MA

ERM

R:\Raytheon\Wayland - 1922\Raytheon ROS\ROS Locus.dwg (05/24/2005 - 11:50am Boston)

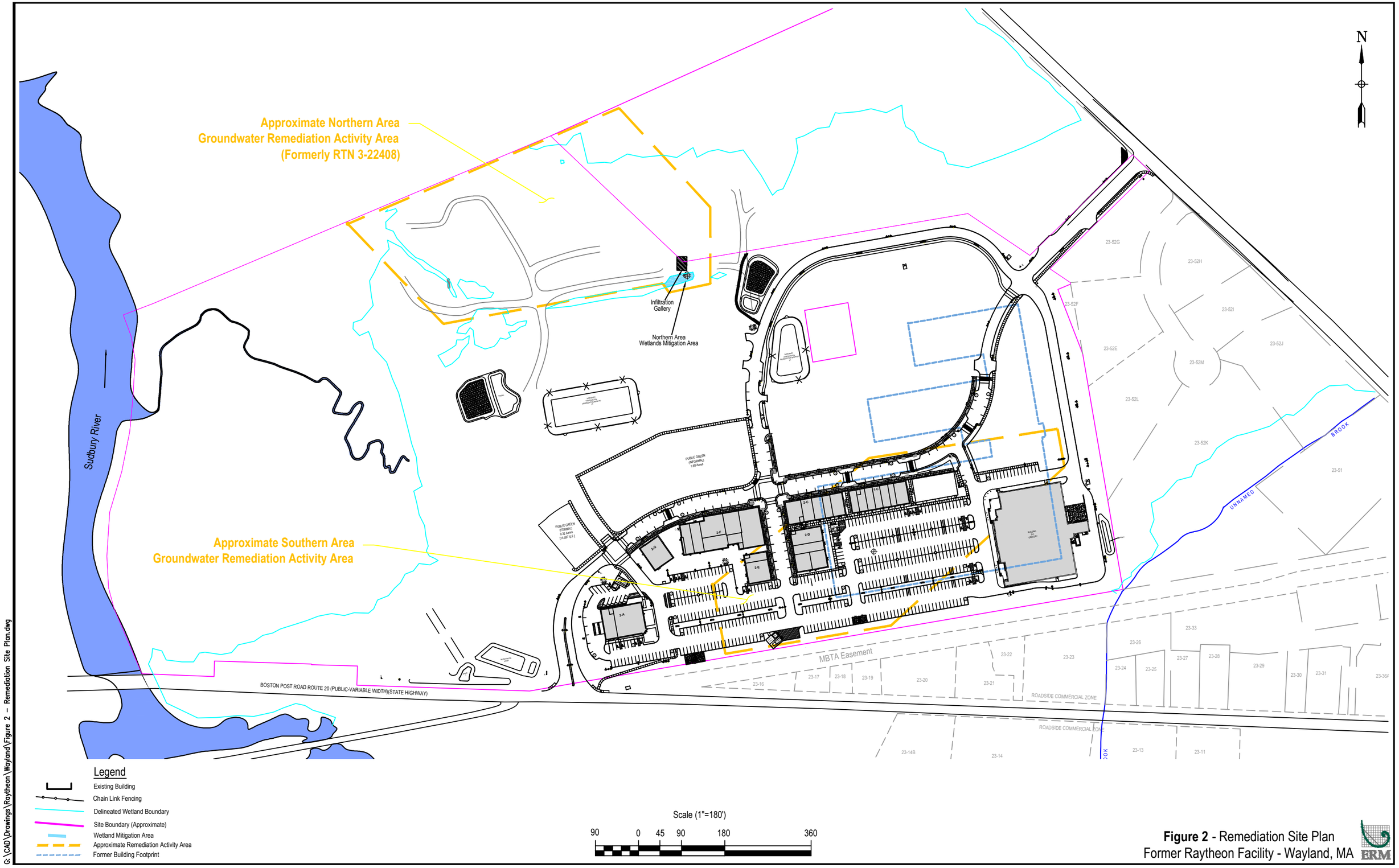



**Figure 2** - Remediation Site Plan
Former Raytheon Facility - Wayland, MA

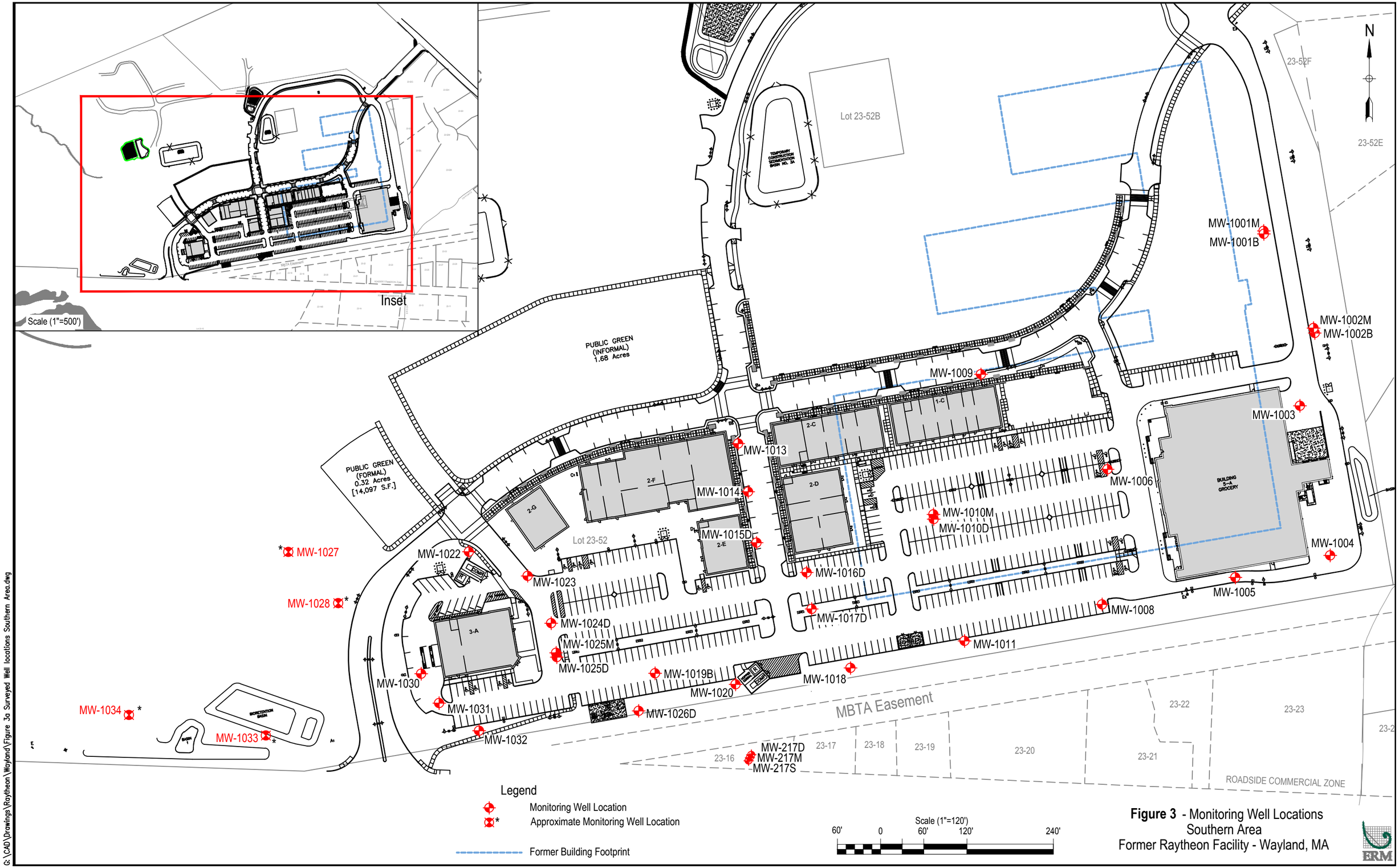
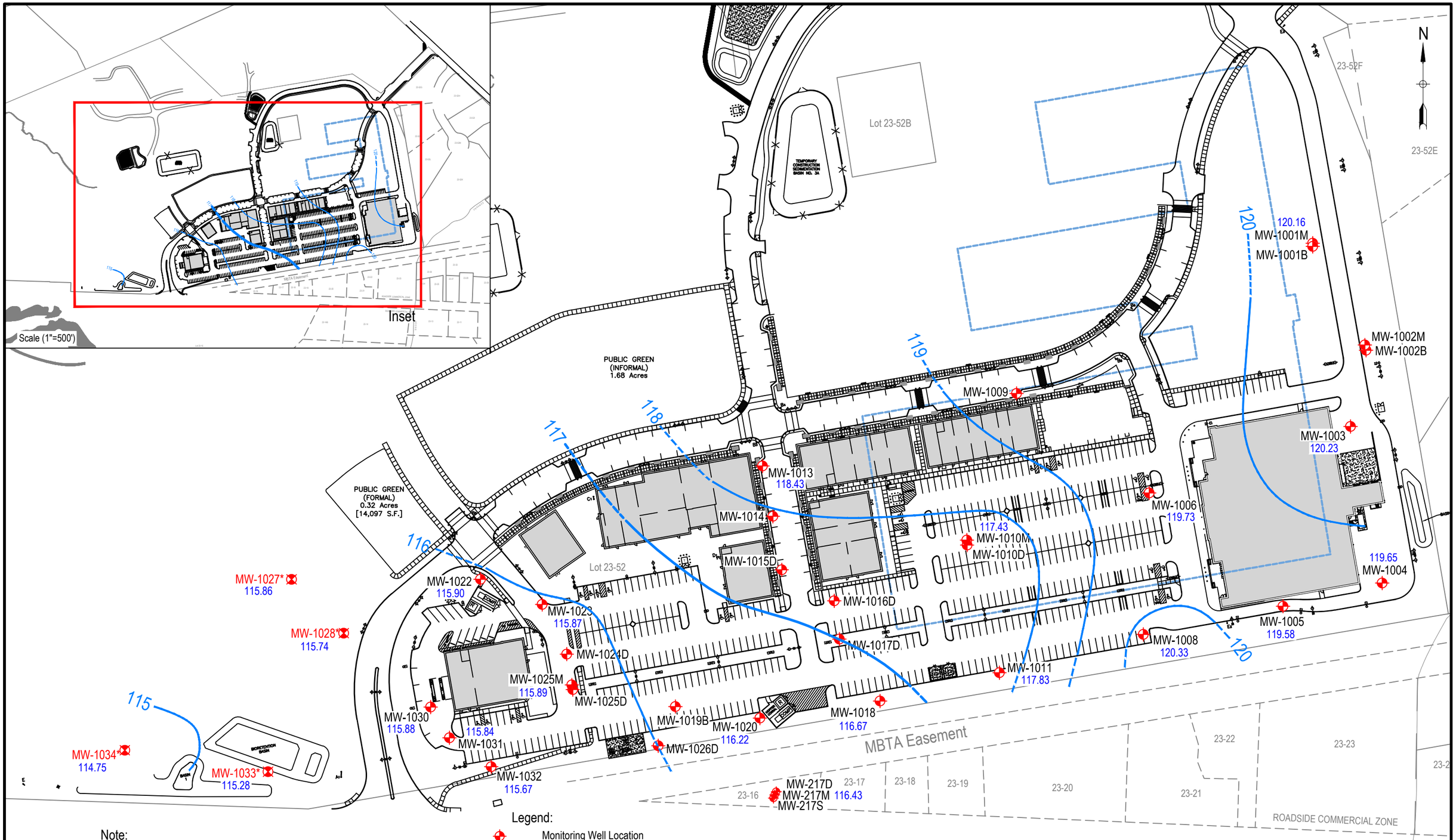



**Figure 3** - Monitoring Well Locations
Southern Area
Former Raytheon Facility - Wayland, MA

G:\CAD\Drawings\Raytheon\Wayland\Figure 3a Surveyed Well locations Southern Area.dwg




Note:
Only monitoring wells screened in the upper sand unit were used to generate the upper potentiometric groundwater contours.

**Figure 4** - March 2014 Upper Potentiometric Surface
Southern Area
Former Raytheon Facility - Wayland, MA

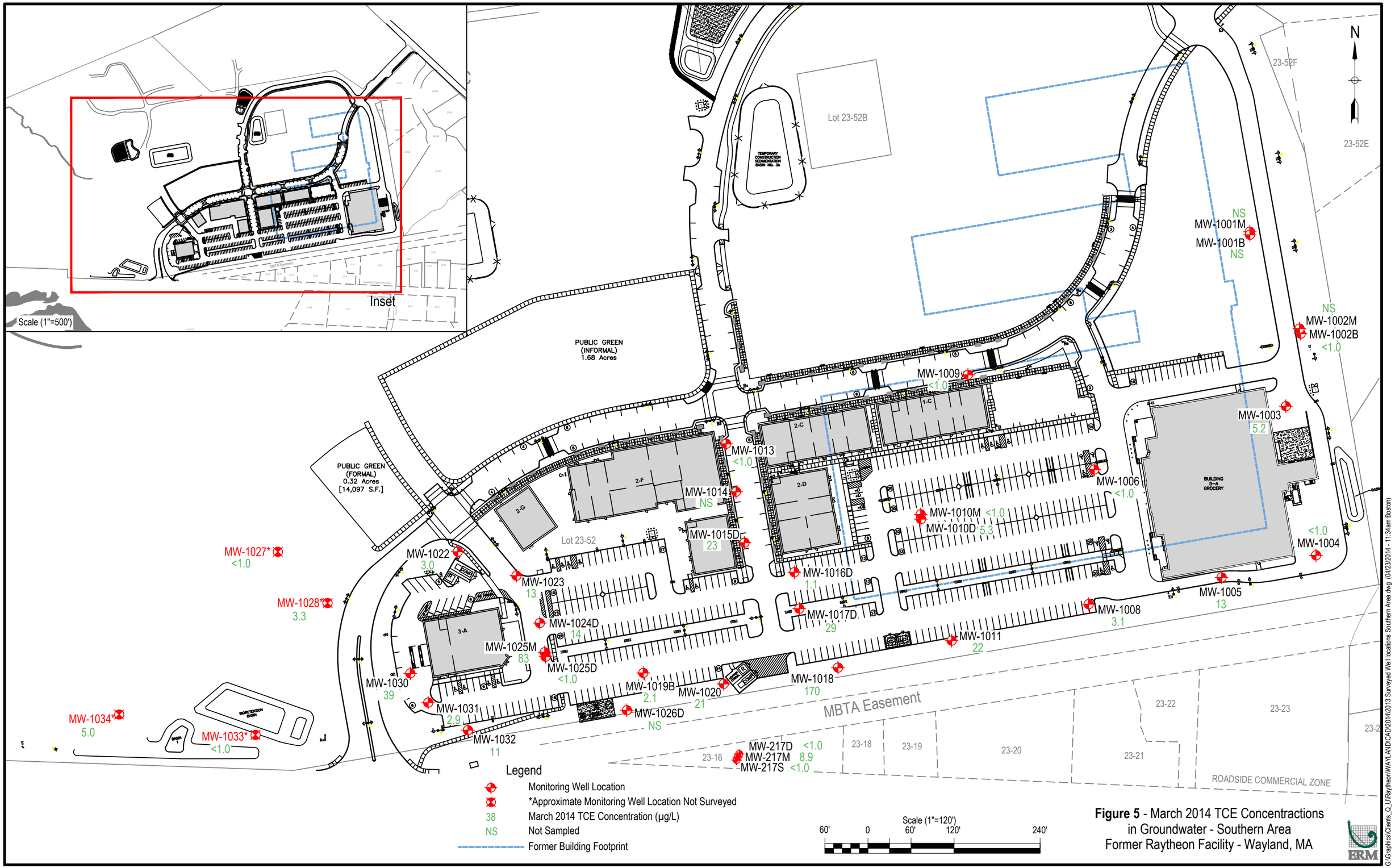



**Figure 5** - March 2014 TCE Concentractions in Groundwater - Southern Area
Former Raytheon Facility - Wayland, MA

*Appendix A*
*IESI Memorandum*

Innovative Engineering Solutions, Inc.
25 Spring Street • Walpole, Massachusetts 02081-4301 (508) 668-0033 • fax (508) 668-5175

# MEMORANDUM

**To:** Jerry, Cellucci, Esq., Chip Burkhardt, Jonathan Hone; Raytheon Company
**From:** Sami A. Fam, Ph.D., P.E., L.S.P., IESI
David Falatko, P.E., IESI
**Subject:** Work Summary for ROS Report
Raytheon Facility
Wayland, Massachusetts
**Date:** May 13, 2014

At the request of Raytheon Company (Raytheon), Innovative Engineering Solutions Inc. (IESI) has prepared this memorandum outlining the bioremediation activities (at the Northern Area) between October 21, 2013 and April 30, 2014 at the Former Raytheon Facility located in Wayland, Massachusetts. The memorandum provides sufficient detail to be incorporated into a Remedy Operation Status (ROS) report. The following activities have been performed during this time period:

1. Enhanced Anaerobic Dechlorination (EAD) system operation;
2. Collection of groundwater elevation data; and,
3. Sampling and analysis to evaluate remediation progress;

These activities are described in greater detail below.

## 1. EAD Recirculation System Operation

The EAD program involves recirculation of groundwater within the treatment zone to distribute the added electron donor. During the reporting period, the remediation system extracted from wells REW-6, REW-7, REW-8, REW-9, REW-11 and REW-12 (extraction rate of approximately 6 gallons per minute overall; see site map-Figure 1). During November 2013, and a portion of December 2013 wells REW-1, REW-4 and REW-5 were also operational. Groundwater was injected into different wells at different times, but generally the following wells received recirculated groundwater during the reporting period: IW-4 to IW-9, RIW-8 to RIW-10, IW-13 to IW-16, RIW-12 to RIW-14 and RIW-16. Other wells did receive periodic groundwater injection. No groundwater was injected into wells RIW4 to RIW-7 after May 2013. No electron donor was added during the reporting period. Bioaugmentation culture (NJ-14) was added to selected wells as specified in Table 1.

Approximate recirculation groundwater volumes are also listed in Table 1 for each extraction well. In total, the system recirculated approximately 1,603,482 gallons of groundwater during the past six months. Groundwater extraction rates are relatively accurate for the combined flow of wells REW-6 to REW-12, however, flow is estimated for wells REW-1, REW-4 and REW-5 since flow meters for these wells have clogged repeatedly for the past 6 months. The wells and pumps were cleaned as needed during the reporting period. No significant operational problems were encountered during the reporting period.

The system will continue to operate in 2014. Additional electron donor injections are planned throughout the year beginning in May 2014.

## 2. Collection of Groundwater Elevation Data

Groundwater elevation data was collected from selected wells in the Northern Area on April 5, 2014. The data is compiled and presented in Table 2. Figure 2 presents interpreted groundwater elevation contour maps for the April 2014 measurement event. Consistent with past groundwater elevation measurements, groundwater flow is to the west.

## 3. Sampling and Analysis to Evaluate the Progress of the Recirculation System

Groundwater samples were collected to evaluate the progress of the remedial program. Groundwater sampling was conducted in January, 2014 and in April, 2014. The January 2014 analytical data is summarized in Table 3 and the April 2014 data is summarized in Table 4. All laboratory analytical data reports can be found in Attachment A. All sampling was conducted using low flow sampling methods using a peristaltic pump. Groundwater sampling logs can be found in Attachment B.

Some collected samples were analyzed by Spectrum Analytical of North Kingstown, RI for a variety of biogeochemical parameters (dissolved gases, anions, organic acids, TOC, ammonia, ortho-phosphate, total iron, total manganese). VOC analysis was conducted by Test America of Westfield, MA.

Analytical data are presented in Attachment A and selected data are graphed in Attachment C. Each page in Attachment C is for a single well and is made up of four separate graphs to allow a simultaneous evaluation of biogeochemical and VOC data.

In general, the data indicate excellent VOC reduction, electron donor distribution, sulfate reduction, methane generation and dechlorination of parent compounds to breakdown products (leading to ethane/ethane). The data often indicate initial electron donor induced desorption (of VOCs), followed by dechlorination of the chlorinated VOCs (CVOCs). These are all indicators of EAD system success. In addition to the complete dechlorination at wells MW-562 (see graphs in Attachment C), significant groundwater quality improvement is also observed at wells REW-1, REW-4, REW-5, MW-261S, MW-551, MW-552, MW-553, MW-265M, MW-560, MW-561 and newly installed MW-563 within the expanded treatment zone. TCE concentrations have declined in the newly (2012 fall) operating extraction wells (REW6 to REW-12). In general, the areas upgradient of well MW-563 have been remediated and progress is ongoing in the more downgradient portions of the site. Total organic carbon (TOC) has been detected at well MW-563 and wells REW-6 to REW-12 indicating that the expanded remediation system is already affecting these areas. TOC has also been detected at well MW-267M, indicating its widespread distribution across the project site.

Analytical results for sample trip blanks and sample duplicates conform to acceptable and applicable guidelines/standards and are tabulated in Tables 3 and 4 alongside the respective sampled wells. Some low concentration detections are not uniformly detected between duplicates, however that is not considered significant and may be indicative of slight sample dilution differences.

Acetone, a fermentation product of many electron donors, is being produced at several locations within the treatment area in concentrations up to 15,000 µg/L (MW-551 in April 2014). It is noteworthy that acetone is only present near injection locations, and is degraded and does not reach more downgradient locations in significant concentrations. The generation of acetone at these locations is a transient phenomenon and the compound is not expected to mobilize beyond the treatment area. Acetone, itself is an electron donor and is expected to degrade rapidly once electron donor addition ceases (Fowler et. al., 2011).

## 4. References

Fowler, T., Thompson, B., Mueller, J., 2011; Acetone and 2-Butanone Creation Associated with Biological and Chemical Remediation of Environmental Contamination; Remediation Journal Winter 2011, p-9-27.

Tables



Figures



Attachments

**Table 1 Summary of Additives & Recirculation Volumes**
**Former Raytheon, Wayland Facility**
**October 21, 2013 to April, 30, 2014**

| Date (week of) | Injection Location | Additive | Estimated Weight |
|---|---|---|---|
| 12/7/2013 | RIW-11 to RIW-14 | Bioaugmentation culture- NJ-14 | 50 gallons- 425 lbs. |

**Recirculation Volumes**

| Well | REW-1 (gallons) | REW-4 (gallons) | REW-5 (gallons) | REW-6, REW-7, REW-8, REW-9, REW-10, REW-11, REW-12 |
|---|---|---|---|---|
| October 21, 2013 to April 30, 2014 | 50,000 | 50,000 | 50,000 | 1,453,482 |
| **Total** | Estimated- flow meter clogging | Estimated- flow meter clogging | Estimated- flow meter clogging | |
| **1,603,482** | | | | |

**Former Raytheon Facility**
**Wayland, Massachusetts**
**Table 2 - Groundwater Gauging Summary**

| Well Designation | Screen Length (feet) | Total Well Depth (feet) | Measuring Point Elevation | DTW 5-Apr-14 | GW Elevation April 5, 2014 |
|---|---|---|---|---|---|
| MW-32 | 10 | 12 | 124.41 | NM | NM |
| MW-1S | 10 | 15 | 133.79 | NM | NM |
| MW-1M | 5 | 40 | 133.78 | NM | NM |
| MW-1D | 5 | 55 | 133.74 | NM | NM |
| MW-261S | 5 | 22 | 131.28 | 13.23 | 118.05 |
| MW-263S | 5 | 25 | 127.96 | 9.53 | 118.43 |
| MW-263M | 5 | 50 | 127.77 | 8.82 | 118.95 |
| MW-264S | 10 | 20 | 126.32 | NM | NM |
| MW-264M | 10 | 44 | 126.28 | 6.34 | 119.94 |
| MW-264D | 5 | 77 | 126.63 | NM | NM |
| MW-265S | 10 | 18 | 130.06 | 9.41 | 120.65 |
| MW-265M | 5 | 45 | 129.89 | 6.06 | 123.83 |
| MW-265D | 5 | 89 | 130.07 | 11.89 | 118.18 |
| MW-266S | 10 | 17 | 126.79 | 10.98 | 115.81 |
| MW-266Ma | 5 | 52 | 127.72 | 8.93 | 118.79 |
| MW-266Mb | 10 | 68 | 126.88 | 8.22 | 118.66 |
| MW-266D | 5 | 105 | 127.70 | NM | NM |
| MW-266B | 5 | 138 | 128.14 | NM | NM |
| MW-267S | 5 | 77 | 125.30 | 9.71 | 115.59 |
| MW-267M | 10 | 95 | 125.40 | 8.46 | 116.94 |
| MW-267D | 5 | 121 | 125.88 | NM | NM |
| MW-267B | 5 | 153 | 124.02 | NM | NM |
| MW-268S | 5 | 74 | 123.66 | 7.48 | 116.18 |
| MW-268M | 10 | 94 | 123.41 | 6.76 | 116.65 |
| MW-268D | 5 | 127 | 124.86 | 7.13 | 117.73 |
| MW-268B | 5 | 153 | 122.34 | NM | NM |
| MW-269S | 10 | 20 | 125.54 | NM | NM |
| MW-269Ma | 5 | 32 | 124.96 | 5.91 | 119.05 |
| MW-269Mb | 10 | 84 | 125.42 | NM | NM |
| MW-269D | 5 | 144 | 125.34 | NM | NM |
| MW-551 | 5 | 26 | 129.30 | 6.71 | 122.59 |
| MW-552 | 5 | 24 | 130.09 | 8.18 | 121.91 |
| MW-553 | 5 | 20 | 130.33 | 8.51 | 121.82 |
| MW-554S | 5 | 196 | 120.93 | NM | NM |
| MW-554Ma | 10 | 196 | 120.82 | NM | NM |
| MW-554Mb | 10 | 196 | 120.96 | NM | NM |
| MW-554D | 10 | 196 | 120.96 | NM | NM |
| MW-555S | 5 | 194.5 | 121.10 | NM | NM |
| MW-555Ma | 10 | 194.5 | 121.25 | NM | NM |
| MW-555Mb | 10 | 194.5 | 121.26 | NM | NM |
| MW-555D | 10 | 194.5 | 121.19 | NM | NM |
| MW-556S | 5 | 165 | 120.93 | NM | NM |
| MW-556M | 10 | 165 | 121.00 | NM | NM |
| MW-556D | 10 | 165 | 120.92 | NM | NM |
| MW-307 | 5 | 11 | 124.86 | NM | NM |
| DEP-19S | 5 | 15 | 120.79 | 6.35 | 114.44 |
| DEP-19M | 5 | 40 | 120.62 | NM | NM |
| DEP-19D | 5 | 50 | 120.78 | NM | NM |
| DEP-20 | 5 | 50 | 119.98 | NM | NM |
| DEP-21 | 5 | 50 | 119.18 | 8 | 111.18 |
| MW-560 | 10 | 67 | 127.23 | 8.84 | 118.39 |
| MW-561 | | 53.65 | 127.90 | 8.21 | 119.69 |
| MW-562 | 10 | 45 | 128.13 | 6.52 | 121.61 |
| MW-563 | 30 | 70 | 125.70 | 6.23 | 119.47 |
| RIW-1 | 30 | 45 | 127.84 | NM | NM |
| RIW-2 | 30 | 45 | 127.09 | NM | NM |
| RIW-3 | 30 | 45 | 127.82 | NM | NM |
| RIW-4 | 15 | 30 | 127.23 | NM | NM |
| RIW-5 | 15 | 30 | 126.88 | NM | NM |
| RIW-6 | 15 | 30 | 127.69 | NM | NM |
| RIW-7 | 15 | 30 | 128.54 | NM | NM |
| REW-1 | 30 | 45 | 126.23 | 4.81 | 121.42 |
| REW-2 | 30 | 45 | 127.40 | NM | NM |
| REW-3 | 30 | 45 | 127.15 | NM | NM |
| REW-4 | 30 | 45 | 125.85 | 5.42 | 120.43 |
| REW-5 | 30 | 45 | 125.80 | 4.13 | 121.67 |
| IW-4 | 10 | 65 | 128.30 | NM | NM |
| IW-5 | 10 | 65 | 128.26 | NM | NM |
| IW-6 | 10 | 65 | 128.01 | NM | NM |
| IW-7 | 10 | 65 | 127.93 | NM | NM |
| IW-8 | 10 | 65 | 128.48 | NM | NM |
| IW-9 | 10 | 65 | 128.13 | NM | NM |
| IW-13 | 10 | 50 | 129.47 | NM | NM |
| IW-14 | 10 | 50 | 128.91 | NM | NM |
| IW-15 | 10 | 50 | 129.08 | NM | NM |
| IW-16 | 10 | 50 | 129.66 | NM | NM |
| IW-18 | 10 | 35 | 131.04 | NM | NM |

DTW- depth to water
NM-not measured

**Table 3- Summary of Analytical Data, January 2014**
**Former Raytheon Facility, Wayland MA**

| Sample ID | units | MW-267S | MW-267M | MW-268M | MW 561 | MW-561 Dup-X | MW 553 | REW-6 | REW-7 | REW-8 | REW-9 | REW-12 | Trip Blank |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Methane | ug/L | 4400 | 27000 | 1900 | 7000 | na | 18000 | 7200 | 4100 | 830 | 1900 | 1400 | ND |
| Ethene | ug/L | 15 | 170 | 21 | 21 | na | ND | 3 | 61 | ND | ND | 3 | ND |
| Ethane | ug/L | ND | ND | ND | 43 | na | 45 | 49 | 89 | ND | ND | ND | ND |
| Vinyl Chloride | ug/L | 13 | 40 | 210 | 240 | 250 | 87 | 19 | 110 | 7.1 | 22 | 58 | ND |
| Chloroethane | ug/L | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1-DCE | ug/L | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1-DCA | ug/L | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-cDCE | ug/L | 390 | 430 | 3100 | ND | ND | 200 | 400 | 730 | 17 | 67 | 340 | ND |
| t-1,2 DCE | ug/L | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,1-TCA | ug/L | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| TCE | ug/L | ND | ND | 1100 | 50 | ND | ND | 65 | 100 | 1.5 | ND | 52 | ND |
| PCE | ug/L | ND | ND | 37 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Acetone | ug/L | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| THF | ug/L | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| m,p xylene | ug/L | ND | ND | ND | 61 | 67 | 12 | ND | ND | ND | 3.5 | ND | ND |
| 2-Butan. (MEK) | ug/L | 280 | 180 | ND | 61 | ND | 130 | ND | ND | ND | 78 | ND | ND |
| Ethyl benzene | | ND | ND | ND | 15 | ND | ND | ND | ND | ND | ND | ND | ND |
| Benzene | ug/L | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Toluene | ug/L | 350 | 90 | ND | 1200 | 1200 | 33 | 170 | ND | 1 | 46 | 23 | ND |
| 1,2,4 TMB | ug/L | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| o-xylene | ug/L | ND | ND | ND | 15 | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,4 Dioxane | ug/L | na | na | na | na | na | na | na | na | na | na | na | na |
| Chloride | mg/L | 44 | 32 | 21 | 27 | na | 27 | 37 | 20 | 1 | 22 | 34 | na |
| Nitrate | mg/L | <1 | ND | <1 | <1 | na | <1 | <1 | <1 | <1 | <1 | 0.1 | na |
| Sulfate | mg/L | <1 | ND | 41 | <1 | na | 0 | 14 | 14 | 9 | <1 | 30 | na |
| Lactate | mg/L | <1 | | <1 | <1 | na | 2 | 1 | <1 | <1 | <1 | 5 | na |
| Acetate | mg/L | 400 | 550 | 2 | 320 | na | 510 | 310 | 140 | <1 | 280 | 93 | na |
| Propionate | mg/L | <1 | 10 | <1 | 1 | na | 8 | 1 | 1 | <1 | 2 | 1 | na |
| Butyrate | mg/L | 1.3 | 7 | <1 | 3 | na | 16 | 5 | 1 | <1 | 9 | 1 | na |
| Alkalinity | mg/L | 210.0 | 350 | 84 | 210 | na | 230 | 130 | 92 | 0 | 170 | 20 | na |
| Manganese | mg/L | na | na | na | na | na | na | na | na | na | na | na | na |
| NH3-N | mg/L | 0.4 | 0.2 | 0.1 | 0.6 | na | <.2 | 0.2 | <.2 | 0.1 | <.2 | 0.2 | na |
| PO4 | mg/L | 0.5 | 0.4 | 0.3 | 0.3 | na | 0.2 | 0.4 | 0.5 | 0.5 | 0.2 | 0.1 | na |
| Sulfide | mg/L | na | na | na | na | na | na | na | na | na | na | na | na |
| Total Iron | mg/L | 53 | 140 | 23 | 26 | na | 79 | 63 | 29 | 9 | 32 | 32 | na |
| COD | mg/L | na | na | na | na | na | na | na | na | na | na | na | na |
| TOC | mg/L | 250 | 140 | 2.0 | 500 | na | 160 | 110 | 40 | 13 | 85 | 55 | na |
| pH | pH unit | 5.8 | 6.2 | 6.6 | 6.5 | na | 5.8 | 6.4 | 6.6 | 6.4 | 5.9 | 6.6 | na |
| H2 headspace | µM | na | na | na | na | na | na | na | na | na | na | na | na |
| CO2 | mg/L | na | na | na | na | na | na | na | na | na | na | na | na |

1,1 DCE- 1,1 dichloroethene; 1,1 DCA-1,1 Dichloroethane; 1,2cDCE- 1,2 cis dichloroethene;
1,1,1 TCA- 1,1,1 trichoroethane, TCE- trichoroethene; PCE- tetrachloroethene
na- not analyzed
VOCs by Test America, rest by BTC
1,4 dioxane by 8260 sim
all other VOCs by 8260B
THF-tetrahydrofuran
1,2,4 TMB- 1,2,4 trimethylbenzene
ND- not detected- see lab report for detection limits
ketone breakdown products  VOC detections

**Table 4- Summary of Analytical Data, April 2014**
**Former Raytheon Facility, Wayland MA**

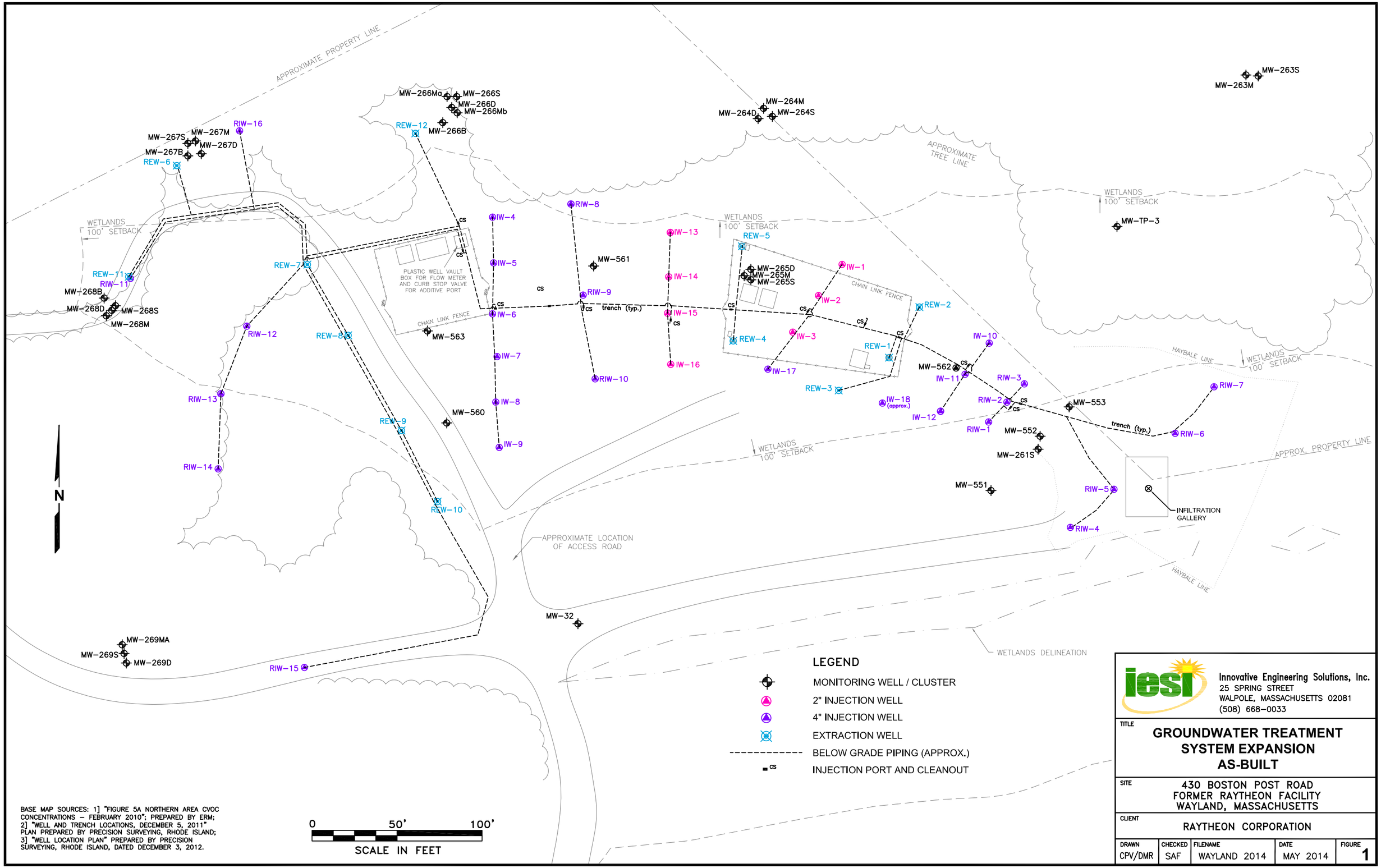
| Sample ID | units | DEP-19M | DEP-21 | MW-261S | MW-261S Dup-X3- | MW-263M | MW-264M | MW-265S | MW-265M | MW-265D | MW-266Ma | MW-266MB | MW-266MB Dup-X1 | MW-267S | MW-267M | MW-268S | MW-268M | MW-268D | MW-269Ma | MW-551 | MW-552 | MW-553 | MW-560 | MW-561 | MW-562 | MW-563 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Methane | ug/L | na | na | 8500 | na | na | na | na | 8300 | na | na | na | na | na | na | na | 230 | na | na | na | 8700 | 8000 | 15000 | 17000 | 20000 | 40000 |
| Ethene | ug/L | na | na | 16.0 | na | na | na | na | 16 | na | na | na | na | na | na | na | 5.0 | na | na | na | 38.0 | 6 | 31 | 32 | 160 | 160 |
| Ethane | ug/L | na | na | 13.0 | na | na | na | na | 13 | na | na | na | na | na | na | na | 1.3 | na | na | na | 3.0 | 2.4 | 25 | 25 | 130 | 130 |
| Vinyl Chloride | ug/L | ND | ND | ND | 2.2 | ND | ND | 2.7 | 15 | ND | ND | 49 | 43 | 16 | 31 | ND | 180 | 2.6 | ND | ND | 4.6 | 28 | 42 | 84 | ND | 90 |
| Chloroethane | ug/L | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1-DCE | ug/L | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1-DCA | ug/L | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-c DCE | ug/L | ND | 3.8 | ND | 7.3 | ND | 12 | ND | 49 | ND | 1.5 | 60 | 58 | 360 | 380 | 11 | 3100 | 8.5 | 3.2 | ND | 2.6 | 22 | 48 | ND | ND | 190 |
| 1,2 t-DCE | | ND | ND | ND | ND | ND | ND | ND | 1.4 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 2.8 | 1.8 | ND | ND | ND | ND |
| 1,1,1-TCA | ug/L | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| TCE | ug/L | ND | 1 | ND | 2.6 | ND | 14 | ND | 1.9 | ND | 1.6 | 39 | 37 | ND | ND | 11 | 1200 | 1.2 | 2.2 | ND | ND | ND | ND | ND | ND | ND |
| PCE | ug/L | ND | ND | ND | ND | ND | 2.9 | ND | ND | ND | ND | 11 | 10 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Acetone | ug/L | ND | ND | 11000 | 14000 | ND | ND | ND | 2200 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 15000 | 120 | 160 | ND | ND | 910 | ND |
| THF | ug/L | ND | ND | ND | 18 | ND | ND | ND | 50 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 10 | ND | ND | ND | ND |
| m,p xylene | ug/L | ND | ND | ND | 11 | ND | ND | ND | 5.6 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 2.6 | 6.9 | 21 | 23 | 11 |
| Toluene | ug/L | ND | ND | ND | 20 | ND | ND | ND | 6.2 | ND | ND | ND | ND | 410 | 87 | ND | ND | 2 | ND | ND | 2.4 | 3.9 | 200 | 600 | 46 | 37 |
| Ethyl Benzene | | ND | ND | ND | 3.3 | ND | ND | ND | 1.8 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 1.8 | ND | 6.6 | ND |
| 2-Butan. (MEK) | ug/L | ND | ND | ND | 160 | ND | ND | ND | 230 | ND | ND | ND | ND | 210 | 180 | ND | ND | ND | ND | ND | ND | ND | 210 | ND | 150 | 150 |
| o-xylene | ug/L | ND | ND | ND | 2.1 | ND | ND | ND | 1.7 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 1.7 | ND | 7.2 | ND |
| 1,4 Dioxane | ug/L | na | na | <3.2 | <3.2 | na | na | na | <3.2 | na | <1.6 | na | na | <3.2 | <3.2 | <1.6 | 25 | na | 2.9 | na | <3.2 | na | na | na | na | na |
| Chloride | mg/L | na | na | 33 | na | na | na | na | 26 | na | na | na | na | na | na | na | 23 | na | na | na | 23 | 19 | 22 | 25 | 36 | 29 |
| Nitrate | mg/L | na | na | 0.3 | na | na | na | na | 0 | na | na | na | na | na | na | na | 0.1 | na | na | na | 0 | 0 | 0 | 0 | 0 | 0 |
| Sulfate | mg/L | na | na | 0.4 | na | na | na | na | 1 | na | na | na | na | na | na | na | 41 | na | na | na | 2 | 1 | 1 | 5 | 1 | 0 |
| Lactate | mg/L | na | na | 5 | na | na | na | na | 5 | na | na | na | na | na | na | na | 5 | na | na | na | 5 | 5 | 5 | 5 | 5 | 5 |
| Acetate | mg/L | na | na | 260 | na | na | na | na | 1100 | na | na | na | na | na | na | na | 0.43 | na | na | na | 17 | 14 | 780 | 330 | 530 | 620 |
| Propionate | mg/L | na | na | 5 | na | na | na | na | 7 | na | na | na | na | na | na | na | 5 | na | na | na | 1 | 5 | 6 | 1 | 9 | 6 |
| Butyrate | mg/L | na | na | 9 | na | na | na | na | 26 | na | na | na | na | na | na | na | 5 | na | na | na | 5 | 5 | 16 | 3 | 39 | 32 |
| Alkalinity | mg/L | na | na | 160 | na | na | na | na | 150 | na | na | na | na | na | na | na | 24 | na | na | na | 61 | 40 | 65 | 31 | 140 | 59 |
| Manganese | mg/L | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na |
| NH3-N | mg/L | na | na | 0.2 | na | na | na | na | 0.5 | na | na | na | na | na | na | na | 0.2 | na | na | na | 0.2 | 0.20 | 0.3 | 0.6 | 2.2 | 0.2 |
| PO4 | mg/L | na | na | 0.5 | na | na | na | na | 0.1 | na | na | na | na | na | na | na | 0.1 | na | na | na | 0.6 | 0.1 | 0.31 | 0.1 | 0.9 | 0.1 |
| Sulfide | mg/L | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na |
| Total Iron | mg/L | na | na | 100 | na | na | na | na | 120 | na | na | na | na | na | na | na | 21 | na | na | na | 41 | 21 | 94.0 | 26.0 | 290 | 120 |
| COD | mg/L | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na |
| TOC | mg/L | na | na | 120 | na | na | na | na | 380 | na | na | na | na | na | na | na | 10 | na | na | na | 16 | 17 | 330 | 220 | 270 | 270 |
| pH | pH unit | na | na | 6.6 | na | na | na | na | 6.5 | na | na | na | na | na | na | na | 6.9 | na | na | na | 7.0 | 7.2 | 6.3 | 6.6 | 6.5 | 6.0 |
| H2 headspace | µM | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na |
| CO2 | mg/L | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na |

1,1 DCE- 1,1 dichloroethene; 1,1 DCA-1,1 Dichloroethane; 1,2cDCE- 1,2 cis dichloroethene;
1,1,1 TCA- 1,1,1 trichoroethane, TCE- trichoroethene; PCE- tetrachloroethene
na- not analyzed
VOCs by Test America, rest by BTC
1,4 dioxane by 8260C sim; all other VOCs by 8260B
THF-tetrahydrofuran
1,2,4 TMB- 1,2,4 trimethylbenzene
ND- below detection limit- see lab report for specific limits
ketone breakdown products  VOC detections

**Table 4- Summary of Analytical Data, April 2014 (Cont)**
**Former Raytheon Facility, Wayland MA**

| Sample ID | units | REW-1 | REW-4 | REW-5 | REW-6 | REW-7 | REW-8 | REW-9 | REW-10 | REW-11 | REW-11 Dup X2 | REW-12 | Trip Blank |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Methane | ug/L | 9500 | 6000 | 8300 | 8000 | 200 | 15000 | 9400 | 3400 | 240 | na | 2200 | ND |
| Ethene | ug/L | 32 | 32 | 15 | 15 | 2 | 31 | 31 | 16 | 3 | na | 6 | ND |
| Ethane | ug/L | 25 | 25 | 12 | 12 | 1 | 25 | 25 | 13 | 1 | na | 1 | ND |
| Vinyl Chloride | ug/L | ND | 4 | 3.8 | 19 | 99 | 36 | 26 | ND | 120 | 97 | 55 | ND |
| Chloroethane | ug/L | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1-DCE | ug/L | ND | ND | ND | ND | ND | ND | ND | ND | ND | 2.5 | ND | ND |
| 1,1-DCA | ug/L | ND | ND | ND | ND | ND | ND | ND | ND | ND | 5.5 | ND | ND |
| 1,2-cDCE | ug/L | 6 | 7.6 | 62 | 370 | 660 | 27 | 80 | ND | 1800 | 1500 | 310 | ND |
| t-1,2 DCE | ug/L | ND | ND | ND | ND | ND | ND | ND | ND | ND | 3.3 | ND | ND |
| 1,1,1-TCA | ug/L | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| TCE | ug/L | ND | ND | 5.4 | 50 | 65 | ND | ND | ND | 460 | 390 | 50 | ND |
| PCE | ug/L | ND | ND | ND | ND | ND | ND | ND | ND | ND | 16 | ND | ND |
| Acetone | ug/L | 1500 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| THF | ug/L | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| m,p xylene | ug/L | ND | ND | ND | ND | ND | 2.4 | 4.8 | ND | ND | ND | ND | ND |
| 2-Butan. (MEK) | ug/L | ND | ND | ND | ND | ND | 75 | 54 | ND | ND | ND | ND | ND |
| Ethyl benzene | | ND | ND | ND | ND | ND | ND | 1.3 | ND | ND | ND | ND | ND |
| Benzene | ug/L | ND | ND | ND | ND | ND | ND | ND | ND | ND | 1.5 | ND | ND |
| Toluene | ug/L | ND | ND | 3.2 | 170 | 12 | 36 | 84 | ND | ND | ND | 28 | ND |
| 1,2,4 TMB | ug/L | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| o-xylene | ug/L | ND | ND | ND | ND | ND | ND | 1.1 | ND | ND | 1.1 | ND | ND |
| 1,4 Dioxane | ug/L | na | na | na | na | na | na | na | na | na | na | na | na |
| Chloride | mg/L | 8 | 5 | 6 | 37 | 25 | 24 | 27 | 2 | 22 | na | 34 | na |
| Nitrate | mg/L | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 2 | 0.1 | na | 0.1 | na |
| Sulfate | mg/L | 4.3 | 21 | 6 | 14 | 10 | 2 | 13 | 13 | 34 | na | 30 | na |
| Lactate | mg/L | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | na | 5 | na |
| Acetate | mg/L | 12 | 5 | 15 | 340 | 110 | 310 | 340 | 1 | 48 | na | 93 | na |
| Propionate | mg/L | 5 | 5 | 5 | 2 | 2 | 5 | 3 | 5 | 5 | na | 1 | na |
| Butyrate | mg/L | 5 | 5 | 5 | 9 | 1 | 6 | 8 | 5 | 5 | na | 1 | na |
| Alkalinity | mg/L | 26.0 | 20 | 20 | 34 | 20 | 49 | 33 | 20 | 20 | na | 20 | na |
| Manganese | mg/L | na | na | na | na | na | na | na | na | na | na | na | na |
| NH3-N | mg/L | 0.5 | 1 | 0.2 | 0.2 | 0.2 | 0.4 | 0.2 | 0.2 | 0.2 | na | 0.2 | na |
| PO4 | mg/L | 0.4 | 0.1 | 0.5 | 0.5 | 0.1 | 0.2 | 0.2 | 0.1 | 0.1 | na | 0.1 | na |
| Sulfide | mg/L | na | na | na | na | na | na | na | na | na | na | na | na |
| Total Iron | mg/L | 13 | 13 | 15.0 | 71 | 42 | 89 | 64 | 0.1 | 23 | na | 32.0 | na |
| COD | mg/L | na | na | na | na | na | na | na | na | na | na | na | na |
| TOC | mg/L | 52 | 22 | 29.0 | 220 | 63 | 150 | 180 | 6.6 | 35 | na | 55 | na |
| pH | pH unit | 7.0 | 6.8 | 6.7 | 6.3 | 6.5 | 6.5 | 6.4 | 6.3 | 6.5 | na | 6.6 | na |
| H2 headspace | µM | na | na | na | na | na | na | na | na | na | na | na | na |
| CO2 | mg/L | na | na | na | na | na | na | na | na | na | na | na | na |

1,1 DCE- 1,1 dichloroethene; 1,1 DCA-1,1 Dichloroethane; 1,2cDCE- 1,2 cis dichloroethene;
1,1,1 TCA- 1,1,1 trichoroethane, TCE- trichoroethene; PCE- tetrachloroethene
na- not analyzed
VOCs by Test America, rest by BTC
1,4 dioxane by 8260 sim
all other VOCs by 8260B
THF-tetrahydrofuran
1,2,4 TMB- 1,2,4 trimethylbenzene
ND- not detected- see lab report for detection limits
ketone breakdown products  VOC detections




BASE MAP SOURCES: 1] "FIGURE 5A NORTHERN AREA CVOC CONCENTRATIONS – FEBRUARY 2010"; PREPARED BY ERM; 2] "WELL AND TRENCH LOCATIONS, DECEMBER 5, 2011" PLAN PREPARED BY PRECISION SURVEYING, RHODE ISLAND; 3] "WELL LOCATION PLAN" PREPARED BY PRECISION SURVEYING, RHODE ISLAND, DATED DECEMBER 3, 2012.

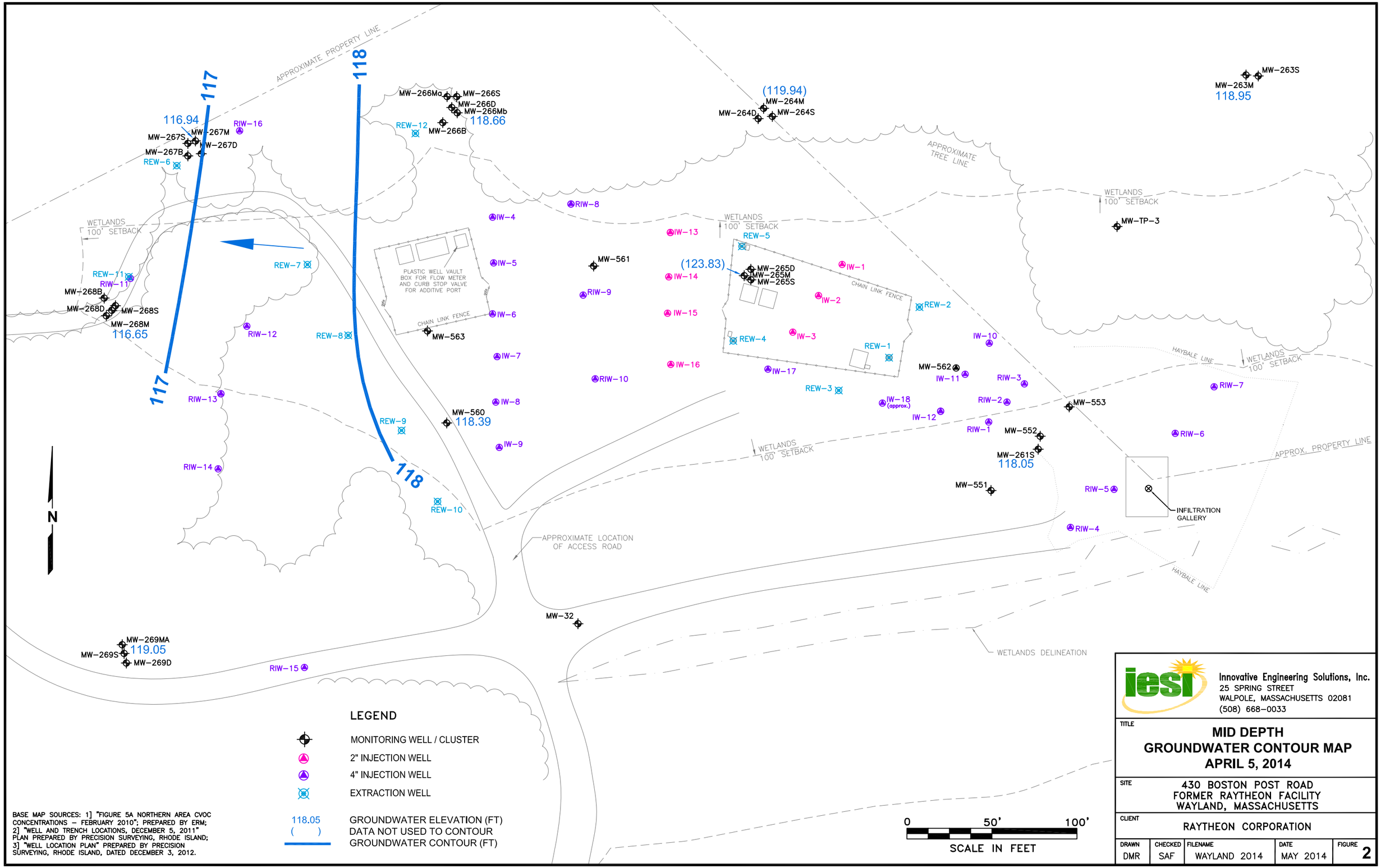

Innovative Engineering Solutions, Inc.
25 SPRING STREET
WALPOLE, MASSACHUSETTS 02081
(508) 668-0033


TITLE
**GROUNDWATER TREATMENT SYSTEM EXPANSION AS-BUILT**

SITE
430 BOSTON POST ROAD
FORMER RAYTHEON FACILITY
WAYLAND, MASSACHUSETTS

CLIENT
RAYTHEON CORPORATION

| DRAWN | CHECKED | FILENAME | DATE | FIGURE |
|---|---|---|---|---|
| CPV/DMR | SAF | WAYLAND 2014 | MAY 2014 | 1 |




BASE MAP SOURCES: 1] "FIGURE 5A NORTHERN AREA CVOC CONCENTRATIONS – FEBRUARY 2010"; PREPARED BY ERM; 2] "WELL AND TRENCH LOCATIONS, DECEMBER 5, 2011" PLAN PREPARED BY PRECISION SURVEYING, RHODE ISLAND; 3] "WELL LOCATION PLAN" PREPARED BY PRECISION SURVEYING, RHODE ISLAND, DATED DECEMBER 3, 2012.


Innovative Engineering Solutions, Inc.
25 SPRING STREET
WALPOLE, MASSACHUSETTS 02081
(508) 668-0033


TITLE

**MID DEPTH GROUNDWATER CONTOUR MAP APRIL 5, 2014**

SITE

430 BOSTON POST ROAD
FORMER RAYTHEON FACILITY
WAYLAND, MASSACHUSETTS

CLIENT

RAYTHEON CORPORATION

| DRAWN | CHECKED | FILENAME | DATE | FIGURE |
|---|---|---|---|---|
| DMR | SAF | WAYLAND 2014 | MAY 2014 | 2 |

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

# ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

TestAmerica Job ID: 480-54029-1
Client Project/Site: IDS Wayland

For:
Innovative Engineering Solutions, Inc
25 Spring Street
Walpole, Massachusetts 02081

Attn: Vicki Pariyar

*Authorized for release by:*
*2/7/2014 9:46:33 AM*
Rich Emerich, Analyst V
rich.emerich@testamericainc.com

Designee for

Becky Mason, Project Manager II
(413)572-4000
becky.mason@testamericainc.com



*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

# Table of Contents

## Qualifiers

### GC/MS VOA

| Qualifier | Qualifier Description |
|---|---|
| * | LCS or LCSD exceeds the control limits |
| F1 | MS and/or MSD Recovery exceeds the control limits |
| 4 | MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable. |
| E | Result exceeded calibration range. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CNF | Contains no Free Liquid |
| DER | Duplicate error ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision level concentration |
| MDA | Minimum detectable activity |
| EDL | Estimated Detection Limit |
| MDC | Minimum detectable concentration |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative error ratio |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

## Job ID: 480-54029-1

### Laboratory: TestAmerica Buffalo

**Narrative**

**Receipt**

The samples were received on 1/31/2014 at 12:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.3º C.

**GC/MS VOA**

Method 8260C: With the exception of diluted samples, per question G on the MassDEP Analytical Protocol Certification Form, TestAmerica's routine reporting limits do not achieve the CAM reporting limits specified in this CAM protocol for 1,2-dibromo-3-chloropropane, Carbon Disulfide, Isopropyl Ether, Naphthalene, tert-Butyl Ethyl Ether, tert-Amyl Methyl Ether and Tetrahydrofuran.

Method 8260C: The continuing calibration verification (CCV) for Dichlorodifluoromethane and Chloromethane associated with batch 164338 recovered above the MCP upper control limit. MCP protocol allows for 20% of the target compounds to be outside the 20% difference but not over 40% difference.

Method 8260C: The laboratory control sample (LCS) and / or the laboratory control sample duplicate (LCSD) for batch 164338 exceeded control limits for the following analytes: Dichlorodifluoromethane and Tetrahydrofuran. MCP protocol allows for 10% of the target compounds to be outside of the limits provided the recoveries are over 10%.

Method 8260C: The following samples wwere diluted to bring the concentration of target analytes within the calibration range: (480-54029-3 MS), (480-54029-3 MSD), MW-267M-20140130-01 (480-54029-2), MW-267S-20140130-01 (480-54029-1), MW-268M-20140130-01 (480-54029-3), MW-561-20140130-01 (480-54029-4), REW-12-20140130-01 (480-54029-10), REW-6-20140130-01 (480-54029-6), REW-7-20140130-01 (480-54029-7), DupX-20140130-01 (480-54029-11), MW-268M-20140130-01 (480-54029-3),MW-553-20140130-01 (480-54029-5) and MW-561-20140130-01 (480-54029-4). Elevated reporting limits (RLs) are provided.

Method 8260C: The continuing calibration verification (CCV) for 1,4-Dioxane, 2-Butanone, 2-Hexanone, Acetone, Chloromethane, and Dichlorodifluoromethane associated with batch 164408 recovered above the MCP upper control limit. MCP protocol allows for 20% of the target compounds to be outside the 20% difference but not over 40% difference.

Method 8260C: The laboratory control sample (LCS) and the laboratory control sample duplicate (LCSD) for batch 164408 exceeded control limits for the following analytes: Dichlorodifluoromethane and Tetrahydrofuran. MCP protocol allows for 10% of the target compounds to be outside of the limits provided the recoveries are over 10%.

Method 8260C: The large number of analytes included in the continuing calibration verification (CCV) in batch 164532 gives a high probability that one or more analytes will be outside acceptance criteria. As indicated in the reference method, analysis may proceed as long as no more than 20% of the analytes are outside the method-defined %D criteria.

Method 8260C: Due to the high concentration of cis-1,2-Dichloroethene, the matrix spike / matrix spike duplicate (MS/MSD) for batch 164338 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

Method 8260C: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 164338 were outside control limits. Sample matrix interference was suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No other analytical or quality issues were noted.

# MassDEP Analytical Protocol Certification Form

Laboratory Name: **TestAmerica Buffalo** Project #: **480-54029**

Project Location: **IDS Wayland** RTN:

**This form provides certifications for the data set for the following Laboratory Sample ID Number(s):**

**480-54209 [1-11]**

Matrices: ■ Groundwater/Surface Water ☐ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

**CAM Protocols (check all that apply below):**

| | | | | | |
|---|---|---|---|---|---|
| 8260 VOC CAM II A ■ | 7470/7471 Hg CAM III B ☐ | Mass DEP VPH CAM IV A ☐ | 8081 Pesticides CAM V B ☐ | 7196 Hex Cr CAM VI B ☐ | Mass DEP APH CAM IX A ☐ |
| 8270 SVOC CAM II B ☐ | 7010 Metals CAM III C ☐ | Mass DEP EPH CAM IV B ☐ | 8151 Herbicides CAM V C ☐ | 8330 Explosives CAM VIII A ☐ | TO-15 VOC CAM IX B ☐ |
| 6010 Metals CAM III A ☐ | 6020 Metals CAM III D ☐ | 8082 PCB CAM V A ☐ | 9012 / 9014/ 4500CN Total Cyanide/PAC CAM VI A ☐ | 6860 Perchlorate CAM VIII B ☐ | |

**Affirmative Responses to Questions A through F are required for "Presumptive Certainty" status**

| | | |
|---|---|---|
| **A** | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding time. | ■ Yes ☐ No |
| **B** | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | ■ Yes ☐ No |
| **C** | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | ■ Yes ☐ No |
| **D** | Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | ■ Yes ☐ No |
| **E** | a. VPH, EPH and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).<br>b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | ☐ Yes ☐ No<br>☐ Yes ☐ No |
| **F** | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | ■ Yes ☐ No |

**Responses to Questions G, H and I below are required for "Presumptive Certainty" status**

| | | |
|---|---|---|
| **G** | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)? | ☐ Yes ■ No[1] |

***Data User Note:*** ***Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WCS-07-350***

| | | |
|---|---|---|
| **H** | Were **all** QC performance standards specified in the CAM protocol(s) achieved? | ☐ Yes ■ No[1] |
| **I** | Were results reported for the complete analyte list specified in the selected CAM protocol(s) ? | ■ Yes ☐ No[1] |

[1] All negative responses must be addressed in an attached laboratory narrative.

***I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, is accurate and complete.***

Signature: Position: Technical Director, TestAmerica Westfield

Printed Name: Richard Emerich Date: 2/7/14 9:32

This form has been electronically signed and approved.

# Detection Summary

Client: Innovative Engineering Solutions, Inc
Project/Site: IDS Wayland

TestAmerica Job ID: 480-54029-1

## Client Sample ID: MW-267S-20140130-01 — Lab Sample ID: 480-54029-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 2-Butanone (MEK) | 280 | | 50 | | ug/L | 5 | | 8260C | Total/NA |
| cis-1,2-Dichloroethene | 390 | | 5.0 | | ug/L | 5 | | 8260C | Total/NA |
| Toluene | 350 | | 5.0 | | ug/L | 5 | | 8260C | Total/NA |
| Vinyl chloride | 13 | | 5.0 | | ug/L | 5 | | 8260C | Total/NA |

## Client Sample ID: MW-267M-20140130-01 — Lab Sample ID: 480-54029-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 2-Butanone (MEK) | 180 | | 100 | | ug/L | 10 | | 8260C | Total/NA |
| cis-1,2-Dichloroethene | 430 | | 10 | | ug/L | 10 | | 8260C | Total/NA |
| Toluene | 90 | | 10 | | ug/L | 10 | | 8260C | Total/NA |
| Vinyl chloride | 40 | | 10 | | ug/L | 10 | | 8260C | Total/NA |

## Client Sample ID: MW-268M-20140130-01 — Lab Sample ID: 480-54029-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 37 | | 25 | | ug/L | 25 | | 8260C | Total/NA |
| Trichloroethene | 1100 | | 25 | | ug/L | 25 | | 8260C | Total/NA |
| Vinyl chloride | 210 | | 25 | | ug/L | 25 | | 8260C | Total/NA |
| cis-1,2-Dichloroethene - DL | 3100 | | 40 | | ug/L | 40 | | 8260C | Total/NA |

## Client Sample ID: MW-561-20140130-01 — Lab Sample ID: 480-54029-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 2-Butanone (MEK) | 61 | | 50 | | ug/L | 5 | | 8260C | Total/NA |
| Ethylbenzene | 15 | | 5.0 | | ug/L | 5 | | 8260C | Total/NA |
| m-Xylene & p-Xylene | 61 | | 10 | | ug/L | 5 | | 8260C | Total/NA |
| o-Xylene | 15 | | 5.0 | | ug/L | 5 | | 8260C | Total/NA |
| Vinyl chloride | 240 | | 5.0 | | ug/L | 5 | | 8260C | Total/NA |
| Toluene - DL | 1200 | | 20 | | ug/L | 20 | | 8260C | Total/NA |

## Client Sample ID: MW-553-20140130-01 — Lab Sample ID: 480-54029-5

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 2-Butanone (MEK) | 130 | | 40 | | ug/L | 4 | | 8260C | Total/NA |
| cis-1,2-Dichloroethene | 200 | | 4.0 | | ug/L | 4 | | 8260C | Total/NA |
| m-Xylene & p-Xylene | 12 | | 8.0 | | ug/L | 4 | | 8260C | Total/NA |
| Toluene | 33 | | 4.0 | | ug/L | 4 | | 8260C | Total/NA |
| Vinyl chloride | 87 | | 4.0 | | ug/L | 4 | | 8260C | Total/NA |

## Client Sample ID: REW-6-20140130-01 — Lab Sample ID: 480-54029-6

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| cis-1,2-Dichloroethene | 400 | | 5.0 | | ug/L | 5 | | 8260C | Total/NA |
| Toluene | 170 | | 5.0 | | ug/L | 5 | | 8260C | Total/NA |
| Trichloroethene | 65 | | 5.0 | | ug/L | 5 | | 8260C | Total/NA |
| Vinyl chloride | 19 | | 5.0 | | ug/L | 5 | | 8260C | Total/NA |

## Client Sample ID: REW-7-20140130-01 — Lab Sample ID: 480-54029-7

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: Innovative Engineering Solutions, Inc
Project/Site: IDS Wayland

TestAmerica Job ID: 480-54029-1

## Client Sample ID: REW-7-20140130-01 (Continued) — Lab Sample ID: 480-54029-7

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| cis-1,2-Dichloroethene | 730 | | 10 | | ug/L | 10 | | 8260C | Total/NA |
| Trichloroethene | 100 | | 10 | | ug/L | 10 | | 8260C | Total/NA |
| Vinyl chloride | 110 | | 10 | | ug/L | 10 | | 8260C | Total/NA |

## Client Sample ID: REW-8-20140130-01 — Lab Sample ID: 480-54029-8

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| cis-1,2-Dichloroethene | 17 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Toluene | 1.0 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Trichloroethene | 1.5 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Vinyl chloride | 7.1 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |

## Client Sample ID: REW-9-20140130-01 — Lab Sample ID: 480-54029-9

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 2-Butanone (MEK) | 78 | | 10 | | ug/L | 1 | | 8260C | Total/NA |
| cis-1,2-Dichloroethene | 67 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| m-Xylene & p-Xylene | 3.5 | | 2.0 | | ug/L | 1 | | 8260C | Total/NA |
| Toluene | 46 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Vinyl chloride | 22 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |

## Client Sample ID: REW-12-20140130-01 — Lab Sample ID: 480-54029-10

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| cis-1,2-Dichloroethene | 340 | | 4.0 | | ug/L | 4 | | 8260C | Total/NA |
| Toluene | 23 | | 4.0 | | ug/L | 4 | | 8260C | Total/NA |
| Trichloroethene | 52 | | 4.0 | | ug/L | 4 | | 8260C | Total/NA |
| Vinyl chloride | 58 | | 4.0 | | ug/L | 4 | | 8260C | Total/NA |

## Client Sample ID: DupX-20140130-01 — Lab Sample ID: 480-54029-11

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| m-Xylene & p-Xylene | 67 | | 40 | | ug/L | 20 | | 8260C | Total/NA |
| Toluene | 1200 | | 20 | | ug/L | 20 | | 8260C | Total/NA |
| Vinyl chloride | 250 | | 20 | | ug/L | 20 | | 8260C | Total/NA |

## Client Sample ID: Trip Blank — Lab Sample ID: 480-54029-12

No Detections.

This Detection Summary does not include radiochemical test results.

Client: Innovative Engineering Solutions, Inc
Project/Site: IDS Wayland

TestAmerica Job ID: 480-54029-1

**Client Sample ID: MW-267S-20140130-01**
**Date Collected: 01/30/14 12:50**
**Date Received: 01/31/14 00:30**

**Lab Sample ID: 480-54029-1**
**Matrix: Water**

**Method: 8260C - Volatile Organic Compounds (GC/MS)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 5.0 | | ug/L | | | 02/04/14 04:10 | 5 |
| 1,1,1-Trichloroethane | ND | | 5.0 | | ug/L | | | 02/04/14 04:10 | 5 |
| 1,1,2,2-Tetrachloroethane | ND | | 2.5 | | ug/L | | | 02/04/14 04:10 | 5 |
| 1,1,2-Trichloroethane | ND | | 5.0 | | ug/L | | | 02/04/14 04:10 | 5 |
| 1,1-Dichloroethane | ND | | 5.0 | | ug/L | | | 02/04/14 04:10 | 5 |
| 1,1-Dichloroethene | ND | | 5.0 | | ug/L | | | 02/04/14 04:10 | 5 |
| 1,1-Dichloropropene | ND | | 5.0 | | ug/L | | | 02/04/14 04:10 | 5 |
| 1,2,3-Trichlorobenzene | ND | | 5.0 | | ug/L | | | 02/04/14 04:10 | 5 |
| 1,2,3-Trichloropropane | ND | | 5.0 | | ug/L | | | 02/04/14 04:10 | 5 |
| 1,2,4-Trichlorobenzene | ND | | 5.0 | | ug/L | | | 02/04/14 04:10 | 5 |
| 1,2,4-Trimethylbenzene | ND | | 5.0 | | ug/L | | | 02/04/14 04:10 | 5 |
| 1,2-Dibromo-3-Chloropropane | ND | | 25 | | ug/L | | | 02/04/14 04:10 | 5 |
| 1,2-Dichlorobenzene | ND | | 5.0 | | ug/L | | | 02/04/14 04:10 | 5 |
| 1,2-Dichloroethane | ND | | 5.0 | | ug/L | | | 02/04/14 04:10 | 5 |
| 1,2-Dichloropropane | ND | | 5.0 | | ug/L | | | 02/04/14 04:10 | 5 |
| 1,3,5-Trimethylbenzene | ND | | 5.0 | | ug/L | | | 02/04/14 04:10 | 5 |
| 1,3-Dichlorobenzene | ND | | 5.0 | | ug/L | | | 02/04/14 04:10 | 5 |
| 1,3-Dichloropropane | ND | | 5.0 | | ug/L | | | 02/04/14 04:10 | 5 |
| 1,4-Dichlorobenzene | ND | | 5.0 | | ug/L | | | 02/04/14 04:10 | 5 |
| 1,4-Dioxane | ND | | 250 | | ug/L | | | 02/04/14 04:10 | 5 |
| 2,2-Dichloropropane | ND | | 5.0 | | ug/L | | | 02/04/14 04:10 | 5 |
| **2-Butanone (MEK)** | **280** | | 50 | | ug/L | | | 02/04/14 04:10 | 5 |
| 2-Chlorotoluene | ND | | 5.0 | | ug/L | | | 02/04/14 04:10 | 5 |
| 2-Hexanone | ND | | 50 | | ug/L | | | 02/04/14 04:10 | 5 |
| 4-Chlorotoluene | ND | | 5.0 | | ug/L | | | 02/04/14 04:10 | 5 |
| 4-Isopropyltoluene | ND | | 5.0 | | ug/L | | | 02/04/14 04:10 | 5 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 50 | | ug/L | | | 02/04/14 04:10 | 5 |
| Acetone | ND | | 250 | | ug/L | | | 02/04/14 04:10 | 5 |
| Benzene | ND | | 5.0 | | ug/L | | | 02/04/14 04:10 | 5 |
| Bromobenzene | ND | | 5.0 | | ug/L | | | 02/04/14 04:10 | 5 |
| Bromoform | ND | | 5.0 | | ug/L | | | 02/04/14 04:10 | 5 |
| Bromomethane | ND | | 10 | | ug/L | | | 02/04/14 04:10 | 5 |
| Carbon disulfide | ND | | 50 | | ug/L | | | 02/04/14 04:10 | 5 |
| Carbon tetrachloride | ND | | 5.0 | | ug/L | | | 02/04/14 04:10 | 5 |
| Chlorobenzene | ND | | 5.0 | | ug/L | | | 02/04/14 04:10 | 5 |
| Chlorobromomethane | ND | | 5.0 | | ug/L | | | 02/04/14 04:10 | 5 |
| Chlorodibromomethane | ND | | 2.5 | | ug/L | | | 02/04/14 04:10 | 5 |
| Chloroethane | ND | | 10 | | ug/L | | | 02/04/14 04:10 | 5 |
| Chloroform | ND | | 5.0 | | ug/L | | | 02/04/14 04:10 | 5 |
| Chloromethane | ND | | 10 | | ug/L | | | 02/04/14 04:10 | 5 |
| **cis-1,2-Dichloroethene** | **390** | | 5.0 | | ug/L | | | 02/04/14 04:10 | 5 |
| cis-1,3-Dichloropropene | ND | | 2.0 | | ug/L | | | 02/04/14 04:10 | 5 |
| Dichlorobromomethane | ND | | 2.5 | | ug/L | | | 02/04/14 04:10 | 5 |
| Dichlorodifluoromethane | ND | * | 5.0 | | ug/L | | | 02/04/14 04:10 | 5 |
| Ethyl ether | ND | | 5.0 | | ug/L | | | 02/04/14 04:10 | 5 |
| Ethylbenzene | ND | | 5.0 | | ug/L | | | 02/04/14 04:10 | 5 |
| Ethylene Dibromide | ND | | 5.0 | | ug/L | | | 02/04/14 04:10 | 5 |
| Hexachlorobutadiene | ND | | 2.0 | | ug/L | | | 02/04/14 04:10 | 5 |
| Isopropyl ether | ND | | 50 | | ug/L | | | 02/04/14 04:10 | 5 |

## Client Sample ID: MW-267S-20140130-01

**Lab Sample ID: 480-54029-1**

**Date Collected: 01/30/14 12:50**

**Matrix: Water**

**Date Received: 01/31/14 00:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Isopropylbenzene | ND | | 5.0 | | ug/L | | | 02/04/14 04:10 | 5 |
| Methyl tert-butyl ether | ND | | 5.0 | | ug/L | | | 02/04/14 04:10 | 5 |
| Methylene Chloride | ND | | 5.0 | | ug/L | | | 02/04/14 04:10 | 5 |
| m-Xylene & p-Xylene | ND | | 10 | | ug/L | | | 02/04/14 04:10 | 5 |
| Naphthalene | ND | | 25 | | ug/L | | | 02/04/14 04:10 | 5 |
| n-Butylbenzene | ND | | 5.0 | | ug/L | | | 02/04/14 04:10 | 5 |
| N-Propylbenzene | ND | | 5.0 | | ug/L | | | 02/04/14 04:10 | 5 |
| o-Xylene | ND | | 5.0 | | ug/L | | | 02/04/14 04:10 | 5 |
| sec-Butylbenzene | ND | | 5.0 | | ug/L | | | 02/04/14 04:10 | 5 |
| Styrene | ND | | 5.0 | | ug/L | | | 02/04/14 04:10 | 5 |
| Tert-amyl methyl ether | ND | | 25 | | ug/L | | | 02/04/14 04:10 | 5 |
| Tert-butyl ethyl ether | ND | | 25 | | ug/L | | | 02/04/14 04:10 | 5 |
| tert-Butylbenzene | ND | | 5.0 | | ug/L | | | 02/04/14 04:10 | 5 |
| Tetrachloroethene | ND | | 5.0 | | ug/L | | | 02/04/14 04:10 | 5 |
| Tetrahydrofuran | ND | * | 50 | | ug/L | | | 02/04/14 04:10 | 5 |
| **Toluene** | **350** | | 5.0 | | ug/L | | | 02/04/14 04:10 | 5 |
| trans-1,2-Dichloroethene | ND | | 5.0 | | ug/L | | | 02/04/14 04:10 | 5 |
| trans-1,3-Dichloropropene | ND | | 2.0 | | ug/L | | | 02/04/14 04:10 | 5 |
| Trichloroethene | ND | | 5.0 | | ug/L | | | 02/04/14 04:10 | 5 |
| Trichlorofluoromethane | ND | | 5.0 | | ug/L | | | 02/04/14 04:10 | 5 |
| **Vinyl chloride** | **13** | | 5.0 | | ug/L | | | 02/04/14 04:10 | 5 |
| Dibromomethane | ND | | 5.0 | | ug/L | | | 02/04/14 04:10 | 5 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *102* | | *70 - 130* | | *02/04/14 04:10* | *5* |
| *1,2-Dichloroethane-d4 (Surr)* | *98* | | *70 - 130* | | *02/04/14 04:10* | *5* |
| *4-Bromofluorobenzene (Surr)* | *104* | | *70 - 130* | | *02/04/14 04:10* | *5* |

## Client Sample ID: MW-267M-20140130-01

**Lab Sample ID: 480-54029-2**

**Date Collected: 01/30/14 12:10**

**Matrix: Water**

**Date Received: 01/31/14 00:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 10 | | ug/L | | | 02/04/14 04:33 | 10 |
| 1,1,1-Trichloroethane | ND | | 10 | | ug/L | | | 02/04/14 04:33 | 10 |
| 1,1,2,2-Tetrachloroethane | ND | | 5.0 | | ug/L | | | 02/04/14 04:33 | 10 |
| 1,1,2-Trichloroethane | ND | | 10 | | ug/L | | | 02/04/14 04:33 | 10 |
| 1,1-Dichloroethane | ND | | 10 | | ug/L | | | 02/04/14 04:33 | 10 |
| 1,1-Dichloroethene | ND | | 10 | | ug/L | | | 02/04/14 04:33 | 10 |
| 1,1-Dichloropropene | ND | | 10 | | ug/L | | | 02/04/14 04:33 | 10 |
| 1,2,3-Trichlorobenzene | ND | | 10 | | ug/L | | | 02/04/14 04:33 | 10 |
| 1,2,3-Trichloropropane | ND | | 10 | | ug/L | | | 02/04/14 04:33 | 10 |
| 1,2,4-Trichlorobenzene | ND | | 10 | | ug/L | | | 02/04/14 04:33 | 10 |
| 1,2,4-Trimethylbenzene | ND | | 10 | | ug/L | | | 02/04/14 04:33 | 10 |
| 1,2-Dibromo-3-Chloropropane | ND | | 50 | | ug/L | | | 02/04/14 04:33 | 10 |
| 1,2-Dichlorobenzene | ND | | 10 | | ug/L | | | 02/04/14 04:33 | 10 |
| 1,2-Dichloroethane | ND | | 10 | | ug/L | | | 02/04/14 04:33 | 10 |
| 1,2-Dichloropropane | ND | | 10 | | ug/L | | | 02/04/14 04:33 | 10 |
| 1,3,5-Trimethylbenzene | ND | | 10 | | ug/L | | | 02/04/14 04:33 | 10 |

## Client Sample ID: MW-267M-20140130-01

**Lab Sample ID: 480-54029-2**

**Date Collected: 01/30/14 12:10**

**Matrix: Water**

**Date Received: 01/31/14 00:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,3-Dichlorobenzene | ND | | 10 | | ug/L | | | 02/04/14 04:33 | 10 |
| 1,3-Dichloropropane | ND | | 10 | | ug/L | | | 02/04/14 04:33 | 10 |
| 1,4-Dichlorobenzene | ND | | 10 | | ug/L | | | 02/04/14 04:33 | 10 |
| 1,4-Dioxane | ND | | 500 | | ug/L | | | 02/04/14 04:33 | 10 |
| 2,2-Dichloropropane | ND | | 10 | | ug/L | | | 02/04/14 04:33 | 10 |
| **2-Butanone (MEK)** | **180** | | 100 | | ug/L | | | 02/04/14 04:33 | 10 |
| 2-Chlorotoluene | ND | | 10 | | ug/L | | | 02/04/14 04:33 | 10 |
| 2-Hexanone | ND | | 100 | | ug/L | | | 02/04/14 04:33 | 10 |
| 4-Chlorotoluene | ND | | 10 | | ug/L | | | 02/04/14 04:33 | 10 |
| 4-Isopropyltoluene | ND | | 10 | | ug/L | | | 02/04/14 04:33 | 10 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 100 | | ug/L | | | 02/04/14 04:33 | 10 |
| Acetone | ND | | 500 | | ug/L | | | 02/04/14 04:33 | 10 |
| Benzene | ND | | 10 | | ug/L | | | 02/04/14 04:33 | 10 |
| Bromobenzene | ND | | 10 | | ug/L | | | 02/04/14 04:33 | 10 |
| Bromoform | ND | | 10 | | ug/L | | | 02/04/14 04:33 | 10 |
| Bromomethane | ND | | 20 | | ug/L | | | 02/04/14 04:33 | 10 |
| Carbon disulfide | ND | | 100 | | ug/L | | | 02/04/14 04:33 | 10 |
| Carbon tetrachloride | ND | | 10 | | ug/L | | | 02/04/14 04:33 | 10 |
| Chlorobenzene | ND | | 10 | | ug/L | | | 02/04/14 04:33 | 10 |
| Chlorobromomethane | ND | | 10 | | ug/L | | | 02/04/14 04:33 | 10 |
| Chlorodibromomethane | ND | | 5.0 | | ug/L | | | 02/04/14 04:33 | 10 |
| Chloroethane | ND | | 20 | | ug/L | | | 02/04/14 04:33 | 10 |
| Chloroform | ND | | 10 | | ug/L | | | 02/04/14 04:33 | 10 |
| Chloromethane | ND | | 20 | | ug/L | | | 02/04/14 04:33 | 10 |
| **cis-1,2-Dichloroethene** | **430** | | 10 | | ug/L | | | 02/04/14 04:33 | 10 |
| cis-1,3-Dichloropropene | ND | | 4.0 | | ug/L | | | 02/04/14 04:33 | 10 |
| Dichlorobromomethane | ND | | 5.0 | | ug/L | | | 02/04/14 04:33 | 10 |
| Dichlorodifluoromethane | ND | * | 10 | | ug/L | | | 02/04/14 04:33 | 10 |
| Ethyl ether | ND | | 10 | | ug/L | | | 02/04/14 04:33 | 10 |
| Ethylbenzene | ND | | 10 | | ug/L | | | 02/04/14 04:33 | 10 |
| Ethylene Dibromide | ND | | 10 | | ug/L | | | 02/04/14 04:33 | 10 |
| Hexachlorobutadiene | ND | | 4.0 | | ug/L | | | 02/04/14 04:33 | 10 |
| Isopropyl ether | ND | | 100 | | ug/L | | | 02/04/14 04:33 | 10 |
| Isopropylbenzene | ND | | 10 | | ug/L | | | 02/04/14 04:33 | 10 |
| Methyl tert-butyl ether | ND | | 10 | | ug/L | | | 02/04/14 04:33 | 10 |
| Methylene Chloride | ND | | 10 | | ug/L | | | 02/04/14 04:33 | 10 |
| m-Xylene & p-Xylene | ND | | 20 | | ug/L | | | 02/04/14 04:33 | 10 |
| Naphthalene | ND | | 50 | | ug/L | | | 02/04/14 04:33 | 10 |
| n-Butylbenzene | ND | | 10 | | ug/L | | | 02/04/14 04:33 | 10 |
| N-Propylbenzene | ND | | 10 | | ug/L | | | 02/04/14 04:33 | 10 |
| o-Xylene | ND | | 10 | | ug/L | | | 02/04/14 04:33 | 10 |
| sec-Butylbenzene | ND | | 10 | | ug/L | | | 02/04/14 04:33 | 10 |
| Styrene | ND | | 10 | | ug/L | | | 02/04/14 04:33 | 10 |
| Tert-amyl methyl ether | ND | | 50 | | ug/L | | | 02/04/14 04:33 | 10 |
| Tert-butyl ethyl ether | ND | | 50 | | ug/L | | | 02/04/14 04:33 | 10 |
| tert-Butylbenzene | ND | | 10 | | ug/L | | | 02/04/14 04:33 | 10 |
| Tetrachloroethene | ND | | 10 | | ug/L | | | 02/04/14 04:33 | 10 |
| Tetrahydrofuran | ND | * | 100 | | ug/L | | | 02/04/14 04:33 | 10 |
| **Toluene** | **90** | | 10 | | ug/L | | | 02/04/14 04:33 | 10 |

## Client Sample ID: MW-267M-20140130-01

**Lab Sample ID: 480-54029-2**

**Date Collected: 01/30/14 12:10**

**Matrix: Water**

**Date Received: 01/31/14 00:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| trans-1,2-Dichloroethene | ND | | 10 | | ug/L | | | 02/04/14 04:33 | 10 |
| trans-1,3-Dichloropropene | ND | | 4.0 | | ug/L | | | 02/04/14 04:33 | 10 |
| Trichloroethene | ND | | 10 | | ug/L | | | 02/04/14 04:33 | 10 |
| Trichlorofluoromethane | ND | | 10 | | ug/L | | | 02/04/14 04:33 | 10 |
| **Vinyl chloride** | **40** | | 10 | | ug/L | | | 02/04/14 04:33 | 10 |
| Dibromomethane | ND | | 10 | | ug/L | | | 02/04/14 04:33 | 10 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *102* | | *70 - 130* | | *02/04/14 04:33* | *10* |
| *1,2-Dichloroethane-d4 (Surr)* | *100* | | *70 - 130* | | *02/04/14 04:33* | *10* |
| *4-Bromofluorobenzene (Surr)* | *103* | | *70 - 130* | | *02/04/14 04:33* | *10* |

## Client Sample ID: MW-268M-20140130-01

**Lab Sample ID: 480-54029-3**

**Date Collected: 01/30/14 11:25**

**Matrix: Water**

**Date Received: 01/31/14 00:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 25 | | ug/L | | | 02/04/14 04:57 | 25 |
| 1,1,1-Trichloroethane | ND | | 25 | | ug/L | | | 02/04/14 04:57 | 25 |
| 1,1,2,2-Tetrachloroethane | ND | | 13 | | ug/L | | | 02/04/14 04:57 | 25 |
| 1,1,2-Trichloroethane | ND | | 25 | | ug/L | | | 02/04/14 04:57 | 25 |
| 1,1-Dichloroethane | ND | | 25 | | ug/L | | | 02/04/14 04:57 | 25 |
| 1,1-Dichloroethene | ND | | 25 | | ug/L | | | 02/04/14 04:57 | 25 |
| 1,1-Dichloropropene | ND | | 25 | | ug/L | | | 02/04/14 04:57 | 25 |
| 1,2,3-Trichlorobenzene | ND | | 25 | | ug/L | | | 02/04/14 04:57 | 25 |
| 1,2,3-Trichloropropane | ND | | 25 | | ug/L | | | 02/04/14 04:57 | 25 |
| 1,2,4-Trichlorobenzene | ND | | 25 | | ug/L | | | 02/04/14 04:57 | 25 |
| 1,2,4-Trimethylbenzene | ND | | 25 | | ug/L | | | 02/04/14 04:57 | 25 |
| 1,2-Dibromo-3-Chloropropane | ND | | 130 | | ug/L | | | 02/04/14 04:57 | 25 |
| 1,2-Dichlorobenzene | ND | | 25 | | ug/L | | | 02/04/14 04:57 | 25 |
| 1,2-Dichloroethane | ND | | 25 | | ug/L | | | 02/04/14 04:57 | 25 |
| 1,2-Dichloropropane | ND | | 25 | | ug/L | | | 02/04/14 04:57 | 25 |
| 1,3,5-Trimethylbenzene | ND | | 25 | | ug/L | | | 02/04/14 04:57 | 25 |
| 1,3-Dichlorobenzene | ND | | 25 | | ug/L | | | 02/04/14 04:57 | 25 |
| 1,3-Dichloropropane | ND | | 25 | | ug/L | | | 02/04/14 04:57 | 25 |
| 1,4-Dichlorobenzene | ND | | 25 | | ug/L | | | 02/04/14 04:57 | 25 |
| 1,4-Dioxane | ND | | 1300 | | ug/L | | | 02/04/14 04:57 | 25 |
| 2,2-Dichloropropane | ND | | 25 | | ug/L | | | 02/04/14 04:57 | 25 |
| 2-Butanone (MEK) | ND | | 250 | | ug/L | | | 02/04/14 04:57 | 25 |
| 2-Chlorotoluene | ND | | 25 | | ug/L | | | 02/04/14 04:57 | 25 |
| 2-Hexanone | ND | | 250 | | ug/L | | | 02/04/14 04:57 | 25 |
| 4-Chlorotoluene | ND | | 25 | | ug/L | | | 02/04/14 04:57 | 25 |
| 4-Isopropyltoluene | ND | | 25 | | ug/L | | | 02/04/14 04:57 | 25 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 250 | | ug/L | | | 02/04/14 04:57 | 25 |
| Acetone | ND | | 1300 | | ug/L | | | 02/04/14 04:57 | 25 |
| Benzene | ND | | 25 | | ug/L | | | 02/04/14 04:57 | 25 |
| Bromobenzene | ND | | 25 | | ug/L | | | 02/04/14 04:57 | 25 |
| Bromoform | ND | | 25 | | ug/L | | | 02/04/14 04:57 | 25 |
| Bromomethane | ND | | 50 | | ug/L | | | 02/04/14 04:57 | 25 |

## Client Sample ID: MW-268M-20140130-01

**Lab Sample ID: 480-54029-3**

**Date Collected: 01/30/14 11:25**

**Matrix: Water**

**Date Received: 01/31/14 00:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | ND | | 250 | | ug/L | | | 02/04/14 04:57 | 25 |
| Carbon tetrachloride | ND | | 25 | | ug/L | | | 02/04/14 04:57 | 25 |
| Chlorobenzene | ND | | 25 | | ug/L | | | 02/04/14 04:57 | 25 |
| Chlorobromomethane | ND | | 25 | | ug/L | | | 02/04/14 04:57 | 25 |
| Chlorodibromomethane | ND | | 13 | | ug/L | | | 02/04/14 04:57 | 25 |
| Chloroethane | ND | | 50 | | ug/L | | | 02/04/14 04:57 | 25 |
| Chloroform | ND | | 25 | | ug/L | | | 02/04/14 04:57 | 25 |
| Chloromethane | ND | | 50 | | ug/L | | | 02/04/14 04:57 | 25 |
| cis-1,3-Dichloropropene | ND | | 10 | | ug/L | | | 02/04/14 04:57 | 25 |
| Dichlorobromomethane | ND | | 13 | | ug/L | | | 02/04/14 04:57 | 25 |
| Dichlorodifluoromethane | ND | * | 25 | | ug/L | | | 02/04/14 04:57 | 25 |
| Ethyl ether | ND | | 25 | | ug/L | | | 02/04/14 04:57 | 25 |
| Ethylbenzene | ND | | 25 | | ug/L | | | 02/04/14 04:57 | 25 |
| Ethylene Dibromide | ND | | 25 | | ug/L | | | 02/04/14 04:57 | 25 |
| Hexachlorobutadiene | ND | | 10 | | ug/L | | | 02/04/14 04:57 | 25 |
| Isopropyl ether | ND | | 250 | | ug/L | | | 02/04/14 04:57 | 25 |
| Isopropylbenzene | ND | | 25 | | ug/L | | | 02/04/14 04:57 | 25 |
| Methyl tert-butyl ether | ND | | 25 | | ug/L | | | 02/04/14 04:57 | 25 |
| Methylene Chloride | ND | | 25 | | ug/L | | | 02/04/14 04:57 | 25 |
| m-Xylene & p-Xylene | ND | | 50 | | ug/L | | | 02/04/14 04:57 | 25 |
| Naphthalene | ND | | 130 | | ug/L | | | 02/04/14 04:57 | 25 |
| n-Butylbenzene | ND | | 25 | | ug/L | | | 02/04/14 04:57 | 25 |
| N-Propylbenzene | ND | | 25 | | ug/L | | | 02/04/14 04:57 | 25 |
| o-Xylene | ND | | 25 | | ug/L | | | 02/04/14 04:57 | 25 |
| sec-Butylbenzene | ND | | 25 | | ug/L | | | 02/04/14 04:57 | 25 |
| Styrene | ND | | 25 | | ug/L | | | 02/04/14 04:57 | 25 |
| Tert-amyl methyl ether | ND | | 130 | | ug/L | | | 02/04/14 04:57 | 25 |
| Tert-butyl ethyl ether | ND | | 130 | | ug/L | | | 02/04/14 04:57 | 25 |
| tert-Butylbenzene | ND | | 25 | | ug/L | | | 02/04/14 04:57 | 25 |
| **Tetrachloroethene** | **37** | | 25 | | ug/L | | | 02/04/14 04:57 | 25 |
| Tetrahydrofuran | ND | * | 250 | | ug/L | | | 02/04/14 04:57 | 25 |
| Toluene | ND | | 25 | | ug/L | | | 02/04/14 04:57 | 25 |
| trans-1,2-Dichloroethene | ND | | 25 | | ug/L | | | 02/04/14 04:57 | 25 |
| trans-1,3-Dichloropropene | ND | | 10 | | ug/L | | | 02/04/14 04:57 | 25 |
| **Trichloroethene** | **1100** | | 25 | | ug/L | | | 02/04/14 04:57 | 25 |
| Trichlorofluoromethane | ND | | 25 | | ug/L | | | 02/04/14 04:57 | 25 |
| **Vinyl chloride** | **210** | | 25 | | ug/L | | | 02/04/14 04:57 | 25 |
| Dibromomethane | ND | | 25 | | ug/L | | | 02/04/14 04:57 | 25 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *106* | | *70 - 130* | | *02/04/14 04:57* | *25* |
| *1,2-Dichloroethane-d4 (Surr)* | *100* | | *70 - 130* | | *02/04/14 04:57* | *25* |
| *4-Bromofluorobenzene (Surr)* | *109* | | *70 - 130* | | *02/04/14 04:57* | *25* |

### Method: 8260C - Volatile Organic Compounds (GC/MS) - DL

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **cis-1,2-Dichloroethene** | **3100** | | 40 | | ug/L | | | 02/04/14 13:47 | 40 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *103* | | *70 - 130* | | *02/04/14 13:47* | *40* |

## Client Sample ID: MW-268M-20140130-01

**Lab Sample ID: 480-54029-3**

**Date Collected: 01/30/14 11:25**

**Matrix: Water**

**Date Received: 01/31/14 00:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS) - DL (Continued)

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *98* | | *70 - 130* | | *02/04/14 13:47* | *40* |
| *4-Bromofluorobenzene (Surr)* | *102* | | *70 - 130* | | *02/04/14 13:47* | *40* |

## Client Sample ID: MW-561-20140130-01

**Lab Sample ID: 480-54029-4**

**Date Collected: 01/30/14 09:10**

**Matrix: Water**

**Date Received: 01/31/14 00:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 5.0 | | ug/L | | | 02/04/14 05:21 | 5 |
| 1,1,1-Trichloroethane | ND | | 5.0 | | ug/L | | | 02/04/14 05:21 | 5 |
| 1,1,2,2-Tetrachloroethane | ND | | 2.5 | | ug/L | | | 02/04/14 05:21 | 5 |
| 1,1,2-Trichloroethane | ND | | 5.0 | | ug/L | | | 02/04/14 05:21 | 5 |
| 1,1-Dichloroethane | ND | | 5.0 | | ug/L | | | 02/04/14 05:21 | 5 |
| 1,1-Dichloroethene | ND | | 5.0 | | ug/L | | | 02/04/14 05:21 | 5 |
| 1,1-Dichloropropene | ND | | 5.0 | | ug/L | | | 02/04/14 05:21 | 5 |
| 1,2,3-Trichlorobenzene | ND | | 5.0 | | ug/L | | | 02/04/14 05:21 | 5 |
| 1,2,3-Trichloropropane | ND | | 5.0 | | ug/L | | | 02/04/14 05:21 | 5 |
| 1,2,4-Trichlorobenzene | ND | | 5.0 | | ug/L | | | 02/04/14 05:21 | 5 |
| 1,2,4-Trimethylbenzene | ND | | 5.0 | | ug/L | | | 02/04/14 05:21 | 5 |
| 1,2-Dibromo-3-Chloropropane | ND | | 25 | | ug/L | | | 02/04/14 05:21 | 5 |
| 1,2-Dichlorobenzene | ND | | 5.0 | | ug/L | | | 02/04/14 05:21 | 5 |
| 1,2-Dichloroethane | ND | | 5.0 | | ug/L | | | 02/04/14 05:21 | 5 |
| 1,2-Dichloropropane | ND | | 5.0 | | ug/L | | | 02/04/14 05:21 | 5 |
| 1,3,5-Trimethylbenzene | ND | | 5.0 | | ug/L | | | 02/04/14 05:21 | 5 |
| 1,3-Dichlorobenzene | ND | | 5.0 | | ug/L | | | 02/04/14 05:21 | 5 |
| 1,3-Dichloropropane | ND | | 5.0 | | ug/L | | | 02/04/14 05:21 | 5 |
| 1,4-Dichlorobenzene | ND | | 5.0 | | ug/L | | | 02/04/14 05:21 | 5 |
| 1,4-Dioxane | ND | | 250 | | ug/L | | | 02/04/14 05:21 | 5 |
| 2,2-Dichloropropane | ND | | 5.0 | | ug/L | | | 02/04/14 05:21 | 5 |
| **2-Butanone (MEK)** | **61** | | 50 | | ug/L | | | 02/04/14 05:21 | 5 |
| 2-Chlorotoluene | ND | | 5.0 | | ug/L | | | 02/04/14 05:21 | 5 |
| 2-Hexanone | ND | | 50 | | ug/L | | | 02/04/14 05:21 | 5 |
| 4-Chlorotoluene | ND | | 5.0 | | ug/L | | | 02/04/14 05:21 | 5 |
| 4-Isopropyltoluene | ND | | 5.0 | | ug/L | | | 02/04/14 05:21 | 5 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 50 | | ug/L | | | 02/04/14 05:21 | 5 |
| Acetone | ND | | 250 | | ug/L | | | 02/04/14 05:21 | 5 |
| Benzene | ND | | 5.0 | | ug/L | | | 02/04/14 05:21 | 5 |
| Bromobenzene | ND | | 5.0 | | ug/L | | | 02/04/14 05:21 | 5 |
| Bromoform | ND | | 5.0 | | ug/L | | | 02/04/14 05:21 | 5 |
| Bromomethane | ND | | 10 | | ug/L | | | 02/04/14 05:21 | 5 |
| Carbon disulfide | ND | | 50 | | ug/L | | | 02/04/14 05:21 | 5 |
| Carbon tetrachloride | ND | | 5.0 | | ug/L | | | 02/04/14 05:21 | 5 |
| Chlorobenzene | ND | | 5.0 | | ug/L | | | 02/04/14 05:21 | 5 |
| Chlorobromomethane | ND | | 5.0 | | ug/L | | | 02/04/14 05:21 | 5 |
| Chlorodibromomethane | ND | | 2.5 | | ug/L | | | 02/04/14 05:21 | 5 |
| Chloroethane | ND | | 10 | | ug/L | | | 02/04/14 05:21 | 5 |
| Chloroform | ND | | 5.0 | | ug/L | | | 02/04/14 05:21 | 5 |
| Chloromethane | ND | | 10 | | ug/L | | | 02/04/14 05:21 | 5 |

## Client Sample ID: MW-561-20140130-01

**Lab Sample ID: 480-54029-4**

**Date Collected: 01/30/14 09:10**

**Matrix: Water**

**Date Received: 01/31/14 00:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| cis-1,2-Dichloroethene | ND | | 5.0 | | ug/L | | | 02/04/14 05:21 | 5 |
| cis-1,3-Dichloropropene | ND | | 2.0 | | ug/L | | | 02/04/14 05:21 | 5 |
| Dichlorobromomethane | ND | | 2.5 | | ug/L | | | 02/04/14 05:21 | 5 |
| Dichlorodifluoromethane | ND | * | 5.0 | | ug/L | | | 02/04/14 05:21 | 5 |
| Ethyl ether | ND | | 5.0 | | ug/L | | | 02/04/14 05:21 | 5 |
| **Ethylbenzene** | **15** | | 5.0 | | ug/L | | | 02/04/14 05:21 | 5 |
| Ethylene Dibromide | ND | | 5.0 | | ug/L | | | 02/04/14 05:21 | 5 |
| Hexachlorobutadiene | ND | | 2.0 | | ug/L | | | 02/04/14 05:21 | 5 |
| Isopropyl ether | ND | | 50 | | ug/L | | | 02/04/14 05:21 | 5 |
| Isopropylbenzene | ND | | 5.0 | | ug/L | | | 02/04/14 05:21 | 5 |
| Methyl tert-butyl ether | ND | | 5.0 | | ug/L | | | 02/04/14 05:21 | 5 |
| Methylene Chloride | ND | | 5.0 | | ug/L | | | 02/04/14 05:21 | 5 |
| **m-Xylene & p-Xylene** | **61** | | 10 | | ug/L | | | 02/04/14 05:21 | 5 |
| Naphthalene | ND | | 25 | | ug/L | | | 02/04/14 05:21 | 5 |
| n-Butylbenzene | ND | | 5.0 | | ug/L | | | 02/04/14 05:21 | 5 |
| N-Propylbenzene | ND | | 5.0 | | ug/L | | | 02/04/14 05:21 | 5 |
| **o-Xylene** | **15** | | 5.0 | | ug/L | | | 02/04/14 05:21 | 5 |
| sec-Butylbenzene | ND | | 5.0 | | ug/L | | | 02/04/14 05:21 | 5 |
| Styrene | ND | | 5.0 | | ug/L | | | 02/04/14 05:21 | 5 |
| Tert-amyl methyl ether | ND | | 25 | | ug/L | | | 02/04/14 05:21 | 5 |
| Tert-butyl ethyl ether | ND | | 25 | | ug/L | | | 02/04/14 05:21 | 5 |
| tert-Butylbenzene | ND | | 5.0 | | ug/L | | | 02/04/14 05:21 | 5 |
| Tetrachloroethene | ND | | 5.0 | | ug/L | | | 02/04/14 05:21 | 5 |
| Tetrahydrofuran | ND | * | 50 | | ug/L | | | 02/04/14 05:21 | 5 |
| trans-1,2-Dichloroethene | ND | | 5.0 | | ug/L | | | 02/04/14 05:21 | 5 |
| trans-1,3-Dichloropropene | ND | | 2.0 | | ug/L | | | 02/04/14 05:21 | 5 |
| Trichloroethene | ND | | 5.0 | | ug/L | | | 02/04/14 05:21 | 5 |
| Trichlorofluoromethane | ND | | 5.0 | | ug/L | | | 02/04/14 05:21 | 5 |
| **Vinyl chloride** | **240** | | 5.0 | | ug/L | | | 02/04/14 05:21 | 5 |
| Dibromomethane | ND | | 5.0 | | ug/L | | | 02/04/14 05:21 | 5 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *101* | | *70 - 130* | | *02/04/14 05:21* | *5* |
| *1,2-Dichloroethane-d4 (Surr)* | *98* | | *70 - 130* | | *02/04/14 05:21* | *5* |
| *4-Bromofluorobenzene (Surr)* | *104* | | *70 - 130* | | *02/04/14 05:21* | *5* |

### Method: 8260C - Volatile Organic Compounds (GC/MS) - DL

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Toluene** | **1200** | | 20 | | ug/L | | | 02/04/14 14:11 | 20 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *101* | | *70 - 130* | | *02/04/14 14:11* | *20* |
| *1,2-Dichloroethane-d4 (Surr)* | *100* | | *70 - 130* | | *02/04/14 14:11* | *20* |
| *4-Bromofluorobenzene (Surr)* | *105* | | *70 - 130* | | *02/04/14 14:11* | *20* |

Client: Innovative Engineering Solutions, Inc
Project/Site: IDS Wayland

TestAmerica Job ID: 480-54029-1

**Client Sample ID: MW-553-20140130-01**
**Date Collected: 01/30/14 10:30**
**Date Received: 01/31/14 00:30**

**Lab Sample ID: 480-54029-5**
**Matrix: Water**

**Method: 8260C - Volatile Organic Compounds (GC/MS)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 4.0 | | ug/L | | | 02/05/14 00:18 | 4 |
| 1,1,1-Trichloroethane | ND | | 4.0 | | ug/L | | | 02/05/14 00:18 | 4 |
| 1,1,2,2-Tetrachloroethane | ND | | 2.0 | | ug/L | | | 02/05/14 00:18 | 4 |
| 1,1,2-Trichloroethane | ND | | 4.0 | | ug/L | | | 02/05/14 00:18 | 4 |
| 1,1-Dichloroethane | ND | | 4.0 | | ug/L | | | 02/05/14 00:18 | 4 |
| 1,1-Dichloroethene | ND | | 4.0 | | ug/L | | | 02/05/14 00:18 | 4 |
| 1,1-Dichloropropene | ND | | 4.0 | | ug/L | | | 02/05/14 00:18 | 4 |
| 1,2,3-Trichlorobenzene | ND | | 4.0 | | ug/L | | | 02/05/14 00:18 | 4 |
| 1,2,3-Trichloropropane | ND | | 4.0 | | ug/L | | | 02/05/14 00:18 | 4 |
| 1,2,4-Trichlorobenzene | ND | | 4.0 | | ug/L | | | 02/05/14 00:18 | 4 |
| 1,2,4-Trimethylbenzene | ND | | 4.0 | | ug/L | | | 02/05/14 00:18 | 4 |
| 1,2-Dibromo-3-Chloropropane | ND | | 20 | | ug/L | | | 02/05/14 00:18 | 4 |
| 1,2-Dichlorobenzene | ND | | 4.0 | | ug/L | | | 02/05/14 00:18 | 4 |
| 1,2-Dichloroethane | ND | | 4.0 | | ug/L | | | 02/05/14 00:18 | 4 |
| 1,2-Dichloropropane | ND | | 4.0 | | ug/L | | | 02/05/14 00:18 | 4 |
| 1,3,5-Trimethylbenzene | ND | | 4.0 | | ug/L | | | 02/05/14 00:18 | 4 |
| 1,3-Dichlorobenzene | ND | | 4.0 | | ug/L | | | 02/05/14 00:18 | 4 |
| 1,3-Dichloropropane | ND | | 4.0 | | ug/L | | | 02/05/14 00:18 | 4 |
| 1,4-Dichlorobenzene | ND | | 4.0 | | ug/L | | | 02/05/14 00:18 | 4 |
| 1,4-Dioxane | ND | | 200 | | ug/L | | | 02/05/14 00:18 | 4 |
| 2,2-Dichloropropane | ND | | 4.0 | | ug/L | | | 02/05/14 00:18 | 4 |
| **2-Butanone (MEK)** | **130** | | 40 | | ug/L | | | 02/05/14 00:18 | 4 |
| 2-Chlorotoluene | ND | | 4.0 | | ug/L | | | 02/05/14 00:18 | 4 |
| 2-Hexanone | ND | | 40 | | ug/L | | | 02/05/14 00:18 | 4 |
| 4-Chlorotoluene | ND | | 4.0 | | ug/L | | | 02/05/14 00:18 | 4 |
| 4-Isopropyltoluene | ND | | 4.0 | | ug/L | | | 02/05/14 00:18 | 4 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 40 | | ug/L | | | 02/05/14 00:18 | 4 |
| Acetone | ND | | 200 | | ug/L | | | 02/05/14 00:18 | 4 |
| Benzene | ND | | 4.0 | | ug/L | | | 02/05/14 00:18 | 4 |
| Bromobenzene | ND | | 4.0 | | ug/L | | | 02/05/14 00:18 | 4 |
| Bromoform | ND | | 4.0 | | ug/L | | | 02/05/14 00:18 | 4 |
| Bromomethane | ND | | 8.0 | | ug/L | | | 02/05/14 00:18 | 4 |
| Carbon disulfide | ND | | 40 | | ug/L | | | 02/05/14 00:18 | 4 |
| Carbon tetrachloride | ND | | 4.0 | | ug/L | | | 02/05/14 00:18 | 4 |
| Chlorobenzene | ND | | 4.0 | | ug/L | | | 02/05/14 00:18 | 4 |
| Chlorobromomethane | ND | | 4.0 | | ug/L | | | 02/05/14 00:18 | 4 |
| Chlorodibromomethane | ND | | 2.0 | | ug/L | | | 02/05/14 00:18 | 4 |
| Chloroethane | ND | | 8.0 | | ug/L | | | 02/05/14 00:18 | 4 |
| Chloroform | ND | | 4.0 | | ug/L | | | 02/05/14 00:18 | 4 |
| Chloromethane | ND | | 8.0 | | ug/L | | | 02/05/14 00:18 | 4 |
| **cis-1,2-Dichloroethene** | **200** | | 4.0 | | ug/L | | | 02/05/14 00:18 | 4 |
| cis-1,3-Dichloropropene | ND | | 1.6 | | ug/L | | | 02/05/14 00:18 | 4 |
| Dichlorobromomethane | ND | | 2.0 | | ug/L | | | 02/05/14 00:18 | 4 |
| Dichlorodifluoromethane | ND | | 4.0 | | ug/L | | | 02/05/14 00:18 | 4 |
| Ethyl ether | ND | | 4.0 | | ug/L | | | 02/05/14 00:18 | 4 |
| Ethylbenzene | ND | | 4.0 | | ug/L | | | 02/05/14 00:18 | 4 |
| Ethylene Dibromide | ND | | 4.0 | | ug/L | | | 02/05/14 00:18 | 4 |
| Hexachlorobutadiene | ND | | 1.6 | | ug/L | | | 02/05/14 00:18 | 4 |
| Isopropyl ether | ND | | 40 | | ug/L | | | 02/05/14 00:18 | 4 |

## Client Sample ID: MW-553-20140130-01

**Lab Sample ID: 480-54029-5**

**Date Collected: 01/30/14 10:30**

**Matrix: Water**

**Date Received: 01/31/14 00:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Isopropylbenzene | ND | | 4.0 | | ug/L | | | 02/05/14 00:18 | 4 |
| Methyl tert-butyl ether | ND | | 4.0 | | ug/L | | | 02/05/14 00:18 | 4 |
| Methylene Chloride | ND | | 4.0 | | ug/L | | | 02/05/14 00:18 | 4 |
| **m-Xylene & p-Xylene** | **12** | | 8.0 | | ug/L | | | 02/05/14 00:18 | 4 |
| Naphthalene | ND | | 20 | | ug/L | | | 02/05/14 00:18 | 4 |
| n-Butylbenzene | ND | | 4.0 | | ug/L | | | 02/05/14 00:18 | 4 |
| N-Propylbenzene | ND | | 4.0 | | ug/L | | | 02/05/14 00:18 | 4 |
| o-Xylene | ND | | 4.0 | | ug/L | | | 02/05/14 00:18 | 4 |
| sec-Butylbenzene | ND | | 4.0 | | ug/L | | | 02/05/14 00:18 | 4 |
| Styrene | ND | | 4.0 | | ug/L | | | 02/05/14 00:18 | 4 |
| Tert-amyl methyl ether | ND | | 20 | | ug/L | | | 02/05/14 00:18 | 4 |
| Tert-butyl ethyl ether | ND | | 20 | | ug/L | | | 02/05/14 00:18 | 4 |
| tert-Butylbenzene | ND | | 4.0 | | ug/L | | | 02/05/14 00:18 | 4 |
| Tetrachloroethene | ND | | 4.0 | | ug/L | | | 02/05/14 00:18 | 4 |
| Tetrahydrofuran | ND | | 40 | | ug/L | | | 02/05/14 00:18 | 4 |
| **Toluene** | **33** | | 4.0 | | ug/L | | | 02/05/14 00:18 | 4 |
| trans-1,2-Dichloroethene | ND | | 4.0 | | ug/L | | | 02/05/14 00:18 | 4 |
| trans-1,3-Dichloropropene | ND | | 1.6 | | ug/L | | | 02/05/14 00:18 | 4 |
| Trichloroethene | ND | | 4.0 | | ug/L | | | 02/05/14 00:18 | 4 |
| Trichlorofluoromethane | ND | | 4.0 | | ug/L | | | 02/05/14 00:18 | 4 |
| **Vinyl chloride** | **87** | | 4.0 | | ug/L | | | 02/05/14 00:18 | 4 |
| Dibromomethane | ND | | 4.0 | | ug/L | | | 02/05/14 00:18 | 4 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *102* | | *70 - 130* | | *02/05/14 00:18* | *4* |
| *1,2-Dichloroethane-d4 (Surr)* | *99* | | *70 - 130* | | *02/05/14 00:18* | *4* |
| *4-Bromofluorobenzene (Surr)* | *103* | | *70 - 130* | | *02/05/14 00:18* | *4* |

## Client Sample ID: REW-6-20140130-01

**Lab Sample ID: 480-54029-6**

**Date Collected: 01/30/14 09:55**

**Matrix: Water**

**Date Received: 01/31/14 00:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 5.0 | | ug/L | | | 02/04/14 06:08 | 5 |
| 1,1,1-Trichloroethane | ND | | 5.0 | | ug/L | | | 02/04/14 06:08 | 5 |
| 1,1,2,2-Tetrachloroethane | ND | | 2.5 | | ug/L | | | 02/04/14 06:08 | 5 |
| 1,1,2-Trichloroethane | ND | | 5.0 | | ug/L | | | 02/04/14 06:08 | 5 |
| 1,1-Dichloroethane | ND | | 5.0 | | ug/L | | | 02/04/14 06:08 | 5 |
| 1,1-Dichloroethene | ND | | 5.0 | | ug/L | | | 02/04/14 06:08 | 5 |
| 1,1-Dichloropropene | ND | | 5.0 | | ug/L | | | 02/04/14 06:08 | 5 |
| 1,2,3-Trichlorobenzene | ND | | 5.0 | | ug/L | | | 02/04/14 06:08 | 5 |
| 1,2,3-Trichloropropane | ND | | 5.0 | | ug/L | | | 02/04/14 06:08 | 5 |
| 1,2,4-Trichlorobenzene | ND | | 5.0 | | ug/L | | | 02/04/14 06:08 | 5 |
| 1,2,4-Trimethylbenzene | ND | | 5.0 | | ug/L | | | 02/04/14 06:08 | 5 |
| 1,2-Dibromo-3-Chloropropane | ND | | 25 | | ug/L | | | 02/04/14 06:08 | 5 |
| 1,2-Dichlorobenzene | ND | | 5.0 | | ug/L | | | 02/04/14 06:08 | 5 |
| 1,2-Dichloroethane | ND | | 5.0 | | ug/L | | | 02/04/14 06:08 | 5 |
| 1,2-Dichloropropane | ND | | 5.0 | | ug/L | | | 02/04/14 06:08 | 5 |
| 1,3,5-Trimethylbenzene | ND | | 5.0 | | ug/L | | | 02/04/14 06:08 | 5 |

**Client Sample ID: REW-6-20140130-01**
**Date Collected: 01/30/14 09:55**
**Date Received: 01/31/14 00:30**

**Lab Sample ID: 480-54029-6**
**Matrix: Water**

**Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,3-Dichlorobenzene | ND | | 5.0 | | ug/L | | | 02/04/14 06:08 | 5 |
| 1,3-Dichloropropane | ND | | 5.0 | | ug/L | | | 02/04/14 06:08 | 5 |
| 1,4-Dichlorobenzene | ND | | 5.0 | | ug/L | | | 02/04/14 06:08 | 5 |
| 1,4-Dioxane | ND | | 250 | | ug/L | | | 02/04/14 06:08 | 5 |
| 2,2-Dichloropropane | ND | | 5.0 | | ug/L | | | 02/04/14 06:08 | 5 |
| 2-Butanone (MEK) | ND | | 50 | | ug/L | | | 02/04/14 06:08 | 5 |
| 2-Chlorotoluene | ND | | 5.0 | | ug/L | | | 02/04/14 06:08 | 5 |
| 2-Hexanone | ND | | 50 | | ug/L | | | 02/04/14 06:08 | 5 |
| 4-Chlorotoluene | ND | | 5.0 | | ug/L | | | 02/04/14 06:08 | 5 |
| 4-Isopropyltoluene | ND | | 5.0 | | ug/L | | | 02/04/14 06:08 | 5 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 50 | | ug/L | | | 02/04/14 06:08 | 5 |
| Acetone | ND | | 250 | | ug/L | | | 02/04/14 06:08 | 5 |
| Benzene | ND | | 5.0 | | ug/L | | | 02/04/14 06:08 | 5 |
| Bromobenzene | ND | | 5.0 | | ug/L | | | 02/04/14 06:08 | 5 |
| Bromoform | ND | | 5.0 | | ug/L | | | 02/04/14 06:08 | 5 |
| Bromomethane | ND | | 10 | | ug/L | | | 02/04/14 06:08 | 5 |
| Carbon disulfide | ND | | 50 | | ug/L | | | 02/04/14 06:08 | 5 |
| Carbon tetrachloride | ND | | 5.0 | | ug/L | | | 02/04/14 06:08 | 5 |
| Chlorobenzene | ND | | 5.0 | | ug/L | | | 02/04/14 06:08 | 5 |
| Chlorobromomethane | ND | | 5.0 | | ug/L | | | 02/04/14 06:08 | 5 |
| Chlorodibromomethane | ND | | 2.5 | | ug/L | | | 02/04/14 06:08 | 5 |
| Chloroethane | ND | | 10 | | ug/L | | | 02/04/14 06:08 | 5 |
| Chloroform | ND | | 5.0 | | ug/L | | | 02/04/14 06:08 | 5 |
| Chloromethane | ND | | 10 | | ug/L | | | 02/04/14 06:08 | 5 |
| **cis-1,2-Dichloroethene** | **400** | | 5.0 | | ug/L | | | 02/04/14 06:08 | 5 |
| cis-1,3-Dichloropropene | ND | | 2.0 | | ug/L | | | 02/04/14 06:08 | 5 |
| Dichlorobromomethane | ND | | 2.5 | | ug/L | | | 02/04/14 06:08 | 5 |
| Dichlorodifluoromethane | ND | * | 5.0 | | ug/L | | | 02/04/14 06:08 | 5 |
| Ethyl ether | ND | | 5.0 | | ug/L | | | 02/04/14 06:08 | 5 |
| Ethylbenzene | ND | | 5.0 | | ug/L | | | 02/04/14 06:08 | 5 |
| Ethylene Dibromide | ND | | 5.0 | | ug/L | | | 02/04/14 06:08 | 5 |
| Hexachlorobutadiene | ND | | 2.0 | | ug/L | | | 02/04/14 06:08 | 5 |
| Isopropyl ether | ND | | 50 | | ug/L | | | 02/04/14 06:08 | 5 |
| Isopropylbenzene | ND | | 5.0 | | ug/L | | | 02/04/14 06:08 | 5 |
| Methyl tert-butyl ether | ND | | 5.0 | | ug/L | | | 02/04/14 06:08 | 5 |
| Methylene Chloride | ND | | 5.0 | | ug/L | | | 02/04/14 06:08 | 5 |
| m-Xylene & p-Xylene | ND | | 10 | | ug/L | | | 02/04/14 06:08 | 5 |
| Naphthalene | ND | | 25 | | ug/L | | | 02/04/14 06:08 | 5 |
| n-Butylbenzene | ND | | 5.0 | | ug/L | | | 02/04/14 06:08 | 5 |
| N-Propylbenzene | ND | | 5.0 | | ug/L | | | 02/04/14 06:08 | 5 |
| o-Xylene | ND | | 5.0 | | ug/L | | | 02/04/14 06:08 | 5 |
| sec-Butylbenzene | ND | | 5.0 | | ug/L | | | 02/04/14 06:08 | 5 |
| Styrene | ND | | 5.0 | | ug/L | | | 02/04/14 06:08 | 5 |
| Tert-amyl methyl ether | ND | | 25 | | ug/L | | | 02/04/14 06:08 | 5 |
| Tert-butyl ethyl ether | ND | | 25 | | ug/L | | | 02/04/14 06:08 | 5 |
| tert-Butylbenzene | ND | | 5.0 | | ug/L | | | 02/04/14 06:08 | 5 |
| Tetrachloroethene | ND | | 5.0 | | ug/L | | | 02/04/14 06:08 | 5 |
| Tetrahydrofuran | ND | * | 50 | | ug/L | | | 02/04/14 06:08 | 5 |
| **Toluene** | **170** | | 5.0 | | ug/L | | | 02/04/14 06:08 | 5 |

## Client Sample ID: REW-6-20140130-01

**Lab Sample ID: 480-54029-6**

**Date Collected: 01/30/14 09:55**

**Matrix: Water**

**Date Received: 01/31/14 00:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| trans-1,2-Dichloroethene | ND | | 5.0 | | ug/L | | | 02/04/14 06:08 | 5 |
| trans-1,3-Dichloropropene | ND | | 2.0 | | ug/L | | | 02/04/14 06:08 | 5 |
| **Trichloroethene** | **65** | | 5.0 | | ug/L | | | 02/04/14 06:08 | 5 |
| Trichlorofluoromethane | ND | | 5.0 | | ug/L | | | 02/04/14 06:08 | 5 |
| **Vinyl chloride** | **19** | | 5.0 | | ug/L | | | 02/04/14 06:08 | 5 |
| Dibromomethane | ND | | 5.0 | | ug/L | | | 02/04/14 06:08 | 5 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *102* | | *70 - 130* | | *02/04/14 06:08* | *5* |
| *1,2-Dichloroethane-d4 (Surr)* | *98* | | *70 - 130* | | *02/04/14 06:08* | *5* |
| *4-Bromofluorobenzene (Surr)* | *104* | | *70 - 130* | | *02/04/14 06:08* | *5* |

## Client Sample ID: REW-7-20140130-01

**Lab Sample ID: 480-54029-7**

**Date Collected: 01/30/14 10:50**

**Matrix: Water**

**Date Received: 01/31/14 00:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 10 | | ug/L | | | 02/04/14 06:33 | 10 |
| 1,1,1-Trichloroethane | ND | | 10 | | ug/L | | | 02/04/14 06:33 | 10 |
| 1,1,2,2-Tetrachloroethane | ND | | 5.0 | | ug/L | | | 02/04/14 06:33 | 10 |
| 1,1,2-Trichloroethane | ND | | 10 | | ug/L | | | 02/04/14 06:33 | 10 |
| 1,1-Dichloroethane | ND | | 10 | | ug/L | | | 02/04/14 06:33 | 10 |
| 1,1-Dichloroethene | ND | | 10 | | ug/L | | | 02/04/14 06:33 | 10 |
| 1,1-Dichloropropene | ND | | 10 | | ug/L | | | 02/04/14 06:33 | 10 |
| 1,2,3-Trichlorobenzene | ND | | 10 | | ug/L | | | 02/04/14 06:33 | 10 |
| 1,2,3-Trichloropropane | ND | | 10 | | ug/L | | | 02/04/14 06:33 | 10 |
| 1,2,4-Trichlorobenzene | ND | | 10 | | ug/L | | | 02/04/14 06:33 | 10 |
| 1,2,4-Trimethylbenzene | ND | | 10 | | ug/L | | | 02/04/14 06:33 | 10 |
| 1,2-Dibromo-3-Chloropropane | ND | | 50 | | ug/L | | | 02/04/14 06:33 | 10 |
| 1,2-Dichlorobenzene | ND | | 10 | | ug/L | | | 02/04/14 06:33 | 10 |
| 1,2-Dichloroethane | ND | | 10 | | ug/L | | | 02/04/14 06:33 | 10 |
| 1,2-Dichloropropane | ND | | 10 | | ug/L | | | 02/04/14 06:33 | 10 |
| 1,3,5-Trimethylbenzene | ND | | 10 | | ug/L | | | 02/04/14 06:33 | 10 |
| 1,3-Dichlorobenzene | ND | | 10 | | ug/L | | | 02/04/14 06:33 | 10 |
| 1,3-Dichloropropane | ND | | 10 | | ug/L | | | 02/04/14 06:33 | 10 |
| 1,4-Dichlorobenzene | ND | | 10 | | ug/L | | | 02/04/14 06:33 | 10 |
| 1,4-Dioxane | ND | | 500 | | ug/L | | | 02/04/14 06:33 | 10 |
| 2,2-Dichloropropane | ND | | 10 | | ug/L | | | 02/04/14 06:33 | 10 |
| 2-Butanone (MEK) | ND | | 100 | | ug/L | | | 02/04/14 06:33 | 10 |
| 2-Chlorotoluene | ND | | 10 | | ug/L | | | 02/04/14 06:33 | 10 |
| 2-Hexanone | ND | | 100 | | ug/L | | | 02/04/14 06:33 | 10 |
| 4-Chlorotoluene | ND | | 10 | | ug/L | | | 02/04/14 06:33 | 10 |
| 4-Isopropyltoluene | ND | | 10 | | ug/L | | | 02/04/14 06:33 | 10 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 100 | | ug/L | | | 02/04/14 06:33 | 10 |
| Acetone | ND | | 500 | | ug/L | | | 02/04/14 06:33 | 10 |
| Benzene | ND | | 10 | | ug/L | | | 02/04/14 06:33 | 10 |
| Bromobenzene | ND | | 10 | | ug/L | | | 02/04/14 06:33 | 10 |
| Bromoform | ND | | 10 | | ug/L | | | 02/04/14 06:33 | 10 |
| Bromomethane | ND | | 20 | | ug/L | | | 02/04/14 06:33 | 10 |

**Client Sample ID: REW-7-20140130-01**
**Date Collected: 01/30/14 10:50**
**Date Received: 01/31/14 00:30**

**Lab Sample ID: 480-54029-7**
**Matrix: Water**

**Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | ND | | 100 | | ug/L | | | 02/04/14 06:33 | 10 |
| Carbon tetrachloride | ND | | 10 | | ug/L | | | 02/04/14 06:33 | 10 |
| Chlorobenzene | ND | | 10 | | ug/L | | | 02/04/14 06:33 | 10 |
| Chlorobromomethane | ND | | 10 | | ug/L | | | 02/04/14 06:33 | 10 |
| Chlorodibromomethane | ND | | 5.0 | | ug/L | | | 02/04/14 06:33 | 10 |
| Chloroethane | ND | | 20 | | ug/L | | | 02/04/14 06:33 | 10 |
| Chloroform | ND | | 10 | | ug/L | | | 02/04/14 06:33 | 10 |
| Chloromethane | ND | | 20 | | ug/L | | | 02/04/14 06:33 | 10 |
| **cis-1,2-Dichloroethene** | **730** | | 10 | | ug/L | | | 02/04/14 06:33 | 10 |
| cis-1,3-Dichloropropene | ND | | 4.0 | | ug/L | | | 02/04/14 06:33 | 10 |
| Dichlorobromomethane | ND | | 5.0 | | ug/L | | | 02/04/14 06:33 | 10 |
| Dichlorodifluoromethane | ND | * | 10 | | ug/L | | | 02/04/14 06:33 | 10 |
| Ethyl ether | ND | | 10 | | ug/L | | | 02/04/14 06:33 | 10 |
| Ethylbenzene | ND | | 10 | | ug/L | | | 02/04/14 06:33 | 10 |
| Ethylene Dibromide | ND | | 10 | | ug/L | | | 02/04/14 06:33 | 10 |
| Hexachlorobutadiene | ND | | 4.0 | | ug/L | | | 02/04/14 06:33 | 10 |
| Isopropyl ether | ND | | 100 | | ug/L | | | 02/04/14 06:33 | 10 |
| Isopropylbenzene | ND | | 10 | | ug/L | | | 02/04/14 06:33 | 10 |
| Methyl tert-butyl ether | ND | | 10 | | ug/L | | | 02/04/14 06:33 | 10 |
| Methylene Chloride | ND | | 10 | | ug/L | | | 02/04/14 06:33 | 10 |
| m-Xylene & p-Xylene | ND | | 20 | | ug/L | | | 02/04/14 06:33 | 10 |
| Naphthalene | ND | | 50 | | ug/L | | | 02/04/14 06:33 | 10 |
| n-Butylbenzene | ND | | 10 | | ug/L | | | 02/04/14 06:33 | 10 |
| N-Propylbenzene | ND | | 10 | | ug/L | | | 02/04/14 06:33 | 10 |
| o-Xylene | ND | | 10 | | ug/L | | | 02/04/14 06:33 | 10 |
| sec-Butylbenzene | ND | | 10 | | ug/L | | | 02/04/14 06:33 | 10 |
| Styrene | ND | | 10 | | ug/L | | | 02/04/14 06:33 | 10 |
| Tert-amyl methyl ether | ND | | 50 | | ug/L | | | 02/04/14 06:33 | 10 |
| Tert-butyl ethyl ether | ND | | 50 | | ug/L | | | 02/04/14 06:33 | 10 |
| tert-Butylbenzene | ND | | 10 | | ug/L | | | 02/04/14 06:33 | 10 |
| Tetrachloroethene | ND | | 10 | | ug/L | | | 02/04/14 06:33 | 10 |
| Tetrahydrofuran | ND | * | 100 | | ug/L | | | 02/04/14 06:33 | 10 |
| Toluene | ND | | 10 | | ug/L | | | 02/04/14 06:33 | 10 |
| trans-1,2-Dichloroethene | ND | | 10 | | ug/L | | | 02/04/14 06:33 | 10 |
| trans-1,3-Dichloropropene | ND | | 4.0 | | ug/L | | | 02/04/14 06:33 | 10 |
| **Trichloroethene** | **100** | | 10 | | ug/L | | | 02/04/14 06:33 | 10 |
| Trichlorofluoromethane | ND | | 10 | | ug/L | | | 02/04/14 06:33 | 10 |
| **Vinyl chloride** | **110** | | 10 | | ug/L | | | 02/04/14 06:33 | 10 |
| Dibromomethane | ND | | 10 | | ug/L | | | 02/04/14 06:33 | 10 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *103* | | *70 - 130* | | *02/04/14 06:33* | *10* |
| *1,2-Dichloroethane-d4 (Surr)* | *96* | | *70 - 130* | | *02/04/14 06:33* | *10* |
| *4-Bromofluorobenzene (Surr)* | *104* | | *70 - 130* | | *02/04/14 06:33* | *10* |

# Client Sample Results

Client: Innovative Engineering Solutions, Inc
Project/Site: IDS Wayland

TestAmerica Job ID: 480-54029-1

**Client Sample ID: REW-8-20140130-01**
**Date Collected: 01/30/14 12:55**
**Date Received: 01/31/14 00:30**

**Lab Sample ID: 480-54029-8**
**Matrix: Water**

**Method: 8260C - Volatile Organic Compounds (GC/MS)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 02/04/14 14:59 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 02/04/14 14:59 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 02/04/14 14:59 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 02/04/14 14:59 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 02/04/14 14:59 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 02/04/14 14:59 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 02/04/14 14:59 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 02/04/14 14:59 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 02/04/14 14:59 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 02/04/14 14:59 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 02/04/14 14:59 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 02/04/14 14:59 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 02/04/14 14:59 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 02/04/14 14:59 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 02/04/14 14:59 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 02/04/14 14:59 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 02/04/14 14:59 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 02/04/14 14:59 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 02/04/14 14:59 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 02/04/14 14:59 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 02/04/14 14:59 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 02/04/14 14:59 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 02/04/14 14:59 | 1 |
| 2-Hexanone | ND | | 10 | | ug/L | | | 02/04/14 14:59 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 02/04/14 14:59 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 02/04/14 14:59 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 02/04/14 14:59 | 1 |
| Acetone | ND | | 50 | | ug/L | | | 02/04/14 14:59 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 02/04/14 14:59 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 02/04/14 14:59 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 02/04/14 14:59 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 02/04/14 14:59 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 02/04/14 14:59 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 02/04/14 14:59 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 02/04/14 14:59 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 02/04/14 14:59 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 02/04/14 14:59 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 02/04/14 14:59 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 02/04/14 14:59 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 02/04/14 14:59 | 1 |
| **cis-1,2-Dichloroethene** | **17** | | 1.0 | | ug/L | | | 02/04/14 14:59 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 02/04/14 14:59 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 02/04/14 14:59 | 1 |
| Dichlorodifluoromethane | ND | * | 1.0 | | ug/L | | | 02/04/14 14:59 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 02/04/14 14:59 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 02/04/14 14:59 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 02/04/14 14:59 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 02/04/14 14:59 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 02/04/14 14:59 | 1 |

## Client Sample ID: REW-8-20140130-01

**Lab Sample ID: 480-54029-8**

**Date Collected: 01/30/14 12:55**

**Matrix: Water**

**Date Received: 01/31/14 00:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 02/04/14 14:59 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 02/04/14 14:59 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 02/04/14 14:59 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 02/04/14 14:59 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 02/04/14 14:59 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 02/04/14 14:59 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 02/04/14 14:59 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 02/04/14 14:59 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 02/04/14 14:59 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 02/04/14 14:59 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 02/04/14 14:59 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 02/04/14 14:59 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 02/04/14 14:59 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 02/04/14 14:59 | 1 |
| Tetrahydrofuran | ND | * | 10 | | ug/L | | | 02/04/14 14:59 | 1 |
| **Toluene** | **1.0** | | 1.0 | | ug/L | | | 02/04/14 14:59 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 02/04/14 14:59 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 02/04/14 14:59 | 1 |
| **Trichloroethene** | **1.5** | | 1.0 | | ug/L | | | 02/04/14 14:59 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 02/04/14 14:59 | 1 |
| **Vinyl chloride** | **7.1** | | 1.0 | | ug/L | | | 02/04/14 14:59 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 02/04/14 14:59 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *101* | | *70 - 130* | | *02/04/14 14:59* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *98* | | *70 - 130* | | *02/04/14 14:59* | *1* |
| *4-Bromofluorobenzene (Surr)* | *105* | | *70 - 130* | | *02/04/14 14:59* | *1* |

## Client Sample ID: REW-9-20140130-01

**Lab Sample ID: 480-54029-9**

**Date Collected: 01/30/14 12:15**

**Matrix: Water**

**Date Received: 01/31/14 00:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 02/04/14 07:20 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 02/04/14 07:20 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 02/04/14 07:20 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 02/04/14 07:20 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 02/04/14 07:20 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 02/04/14 07:20 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 02/04/14 07:20 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 02/04/14 07:20 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 02/04/14 07:20 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 02/04/14 07:20 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 02/04/14 07:20 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 02/04/14 07:20 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 02/04/14 07:20 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 02/04/14 07:20 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 02/04/14 07:20 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 02/04/14 07:20 | 1 |

**Client Sample ID: REW-9-20140130-01**
**Date Collected: 01/30/14 12:15**
**Date Received: 01/31/14 00:30**

**Lab Sample ID: 480-54029-9**
**Matrix: Water**

**Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 02/04/14 07:20 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 02/04/14 07:20 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 02/04/14 07:20 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 02/04/14 07:20 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 02/04/14 07:20 | 1 |
| **2-Butanone (MEK)** | **78** | | 10 | | ug/L | | | 02/04/14 07:20 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 02/04/14 07:20 | 1 |
| 2-Hexanone | ND | | 10 | | ug/L | | | 02/04/14 07:20 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 02/04/14 07:20 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 02/04/14 07:20 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 02/04/14 07:20 | 1 |
| Acetone | ND | | 50 | | ug/L | | | 02/04/14 07:20 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 02/04/14 07:20 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 02/04/14 07:20 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 02/04/14 07:20 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 02/04/14 07:20 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 02/04/14 07:20 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 02/04/14 07:20 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 02/04/14 07:20 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 02/04/14 07:20 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 02/04/14 07:20 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 02/04/14 07:20 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 02/04/14 07:20 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 02/04/14 07:20 | 1 |
| **cis-1,2-Dichloroethene** | **67** | | 1.0 | | ug/L | | | 02/04/14 07:20 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 02/04/14 07:20 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 02/04/14 07:20 | 1 |
| Dichlorodifluoromethane | ND | * | 1.0 | | ug/L | | | 02/04/14 07:20 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 02/04/14 07:20 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 02/04/14 07:20 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 02/04/14 07:20 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 02/04/14 07:20 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 02/04/14 07:20 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 02/04/14 07:20 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 02/04/14 07:20 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 02/04/14 07:20 | 1 |
| **m-Xylene & p-Xylene** | **3.5** | | 2.0 | | ug/L | | | 02/04/14 07:20 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 02/04/14 07:20 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 02/04/14 07:20 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 02/04/14 07:20 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 02/04/14 07:20 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 02/04/14 07:20 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 02/04/14 07:20 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 02/04/14 07:20 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 02/04/14 07:20 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 02/04/14 07:20 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 02/04/14 07:20 | 1 |
| Tetrahydrofuran | ND | * | 10 | | ug/L | | | 02/04/14 07:20 | 1 |
| **Toluene** | **46** | | 1.0 | | ug/L | | | 02/04/14 07:20 | 1 |

## Client Sample ID: REW-9-20140130-01

**Lab Sample ID: 480-54029-9**

**Date Collected: 01/30/14 12:15**

**Matrix: Water**

**Date Received: 01/31/14 00:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 02/04/14 07:20 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 02/04/14 07:20 | 1 |
| Trichloroethene | ND | | 1.0 | | ug/L | | | 02/04/14 07:20 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 02/04/14 07:20 | 1 |
| **Vinyl chloride** | **22** | | 1.0 | | ug/L | | | 02/04/14 07:20 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 02/04/14 07:20 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *101* | | *70 - 130* | | *02/04/14 07:20* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *98* | | *70 - 130* | | *02/04/14 07:20* | *1* |
| *4-Bromofluorobenzene (Surr)* | *106* | | *70 - 130* | | *02/04/14 07:20* | *1* |

## Client Sample ID: REW-12-20140130-01

**Lab Sample ID: 480-54029-10**

**Date Collected: 01/30/14 09:10**

**Matrix: Water**

**Date Received: 01/31/14 00:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 4.0 | | ug/L | | | 02/04/14 07:44 | 4 |
| 1,1,1-Trichloroethane | ND | | 4.0 | | ug/L | | | 02/04/14 07:44 | 4 |
| 1,1,2,2-Tetrachloroethane | ND | | 2.0 | | ug/L | | | 02/04/14 07:44 | 4 |
| 1,1,2-Trichloroethane | ND | | 4.0 | | ug/L | | | 02/04/14 07:44 | 4 |
| 1,1-Dichloroethane | ND | | 4.0 | | ug/L | | | 02/04/14 07:44 | 4 |
| 1,1-Dichloroethene | ND | | 4.0 | | ug/L | | | 02/04/14 07:44 | 4 |
| 1,1-Dichloropropene | ND | | 4.0 | | ug/L | | | 02/04/14 07:44 | 4 |
| 1,2,3-Trichlorobenzene | ND | | 4.0 | | ug/L | | | 02/04/14 07:44 | 4 |
| 1,2,3-Trichloropropane | ND | | 4.0 | | ug/L | | | 02/04/14 07:44 | 4 |
| 1,2,4-Trichlorobenzene | ND | | 4.0 | | ug/L | | | 02/04/14 07:44 | 4 |
| 1,2,4-Trimethylbenzene | ND | | 4.0 | | ug/L | | | 02/04/14 07:44 | 4 |
| 1,2-Dibromo-3-Chloropropane | ND | | 20 | | ug/L | | | 02/04/14 07:44 | 4 |
| 1,2-Dichlorobenzene | ND | | 4.0 | | ug/L | | | 02/04/14 07:44 | 4 |
| 1,2-Dichloroethane | ND | | 4.0 | | ug/L | | | 02/04/14 07:44 | 4 |
| 1,2-Dichloropropane | ND | | 4.0 | | ug/L | | | 02/04/14 07:44 | 4 |
| 1,3,5-Trimethylbenzene | ND | | 4.0 | | ug/L | | | 02/04/14 07:44 | 4 |
| 1,3-Dichlorobenzene | ND | | 4.0 | | ug/L | | | 02/04/14 07:44 | 4 |
| 1,3-Dichloropropane | ND | | 4.0 | | ug/L | | | 02/04/14 07:44 | 4 |
| 1,4-Dichlorobenzene | ND | | 4.0 | | ug/L | | | 02/04/14 07:44 | 4 |
| 1,4-Dioxane | ND | | 200 | | ug/L | | | 02/04/14 07:44 | 4 |
| 2,2-Dichloropropane | ND | | 4.0 | | ug/L | | | 02/04/14 07:44 | 4 |
| 2-Butanone (MEK) | ND | | 40 | | ug/L | | | 02/04/14 07:44 | 4 |
| 2-Chlorotoluene | ND | | 4.0 | | ug/L | | | 02/04/14 07:44 | 4 |
| 2-Hexanone | ND | | 40 | | ug/L | | | 02/04/14 07:44 | 4 |
| 4-Chlorotoluene | ND | | 4.0 | | ug/L | | | 02/04/14 07:44 | 4 |
| 4-Isopropyltoluene | ND | | 4.0 | | ug/L | | | 02/04/14 07:44 | 4 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 40 | | ug/L | | | 02/04/14 07:44 | 4 |
| Acetone | ND | | 200 | | ug/L | | | 02/04/14 07:44 | 4 |
| Benzene | ND | | 4.0 | | ug/L | | | 02/04/14 07:44 | 4 |
| Bromobenzene | ND | | 4.0 | | ug/L | | | 02/04/14 07:44 | 4 |
| Bromoform | ND | | 4.0 | | ug/L | | | 02/04/14 07:44 | 4 |
| Bromomethane | ND | | 8.0 | | ug/L | | | 02/04/14 07:44 | 4 |

**Client Sample ID: REW-12-20140130-01**
**Date Collected: 01/30/14 09:10**
**Date Received: 01/31/14 00:30**

**Lab Sample ID: 480-54029-10**
**Matrix: Water**

**Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | ND | | 40 | | ug/L | | | 02/04/14 07:44 | 4 |
| Carbon tetrachloride | ND | | 4.0 | | ug/L | | | 02/04/14 07:44 | 4 |
| Chlorobenzene | ND | | 4.0 | | ug/L | | | 02/04/14 07:44 | 4 |
| Chlorobromomethane | ND | | 4.0 | | ug/L | | | 02/04/14 07:44 | 4 |
| Chlorodibromomethane | ND | | 2.0 | | ug/L | | | 02/04/14 07:44 | 4 |
| Chloroethane | ND | | 8.0 | | ug/L | | | 02/04/14 07:44 | 4 |
| Chloroform | ND | | 4.0 | | ug/L | | | 02/04/14 07:44 | 4 |
| Chloromethane | ND | | 8.0 | | ug/L | | | 02/04/14 07:44 | 4 |
| **cis-1,2-Dichloroethene** | **340** | | 4.0 | | ug/L | | | 02/04/14 07:44 | 4 |
| cis-1,3-Dichloropropene | ND | | 1.6 | | ug/L | | | 02/04/14 07:44 | 4 |
| Dichlorobromomethane | ND | | 2.0 | | ug/L | | | 02/04/14 07:44 | 4 |
| Dichlorodifluoromethane | ND | * | 4.0 | | ug/L | | | 02/04/14 07:44 | 4 |
| Ethyl ether | ND | | 4.0 | | ug/L | | | 02/04/14 07:44 | 4 |
| Ethylbenzene | ND | | 4.0 | | ug/L | | | 02/04/14 07:44 | 4 |
| Ethylene Dibromide | ND | | 4.0 | | ug/L | | | 02/04/14 07:44 | 4 |
| Hexachlorobutadiene | ND | | 1.6 | | ug/L | | | 02/04/14 07:44 | 4 |
| Isopropyl ether | ND | | 40 | | ug/L | | | 02/04/14 07:44 | 4 |
| Isopropylbenzene | ND | | 4.0 | | ug/L | | | 02/04/14 07:44 | 4 |
| Methyl tert-butyl ether | ND | | 4.0 | | ug/L | | | 02/04/14 07:44 | 4 |
| Methylene Chloride | ND | | 4.0 | | ug/L | | | 02/04/14 07:44 | 4 |
| m-Xylene & p-Xylene | ND | | 8.0 | | ug/L | | | 02/04/14 07:44 | 4 |
| Naphthalene | ND | | 20 | | ug/L | | | 02/04/14 07:44 | 4 |
| n-Butylbenzene | ND | | 4.0 | | ug/L | | | 02/04/14 07:44 | 4 |
| N-Propylbenzene | ND | | 4.0 | | ug/L | | | 02/04/14 07:44 | 4 |
| o-Xylene | ND | | 4.0 | | ug/L | | | 02/04/14 07:44 | 4 |
| sec-Butylbenzene | ND | | 4.0 | | ug/L | | | 02/04/14 07:44 | 4 |
| Styrene | ND | | 4.0 | | ug/L | | | 02/04/14 07:44 | 4 |
| Tert-amyl methyl ether | ND | | 20 | | ug/L | | | 02/04/14 07:44 | 4 |
| Tert-butyl ethyl ether | ND | | 20 | | ug/L | | | 02/04/14 07:44 | 4 |
| tert-Butylbenzene | ND | | 4.0 | | ug/L | | | 02/04/14 07:44 | 4 |
| Tetrachloroethene | ND | | 4.0 | | ug/L | | | 02/04/14 07:44 | 4 |
| Tetrahydrofuran | ND | * | 40 | | ug/L | | | 02/04/14 07:44 | 4 |
| **Toluene** | **23** | | 4.0 | | ug/L | | | 02/04/14 07:44 | 4 |
| trans-1,2-Dichloroethene | ND | | 4.0 | | ug/L | | | 02/04/14 07:44 | 4 |
| trans-1,3-Dichloropropene | ND | | 1.6 | | ug/L | | | 02/04/14 07:44 | 4 |
| **Trichloroethene** | **52** | | 4.0 | | ug/L | | | 02/04/14 07:44 | 4 |
| Trichlorofluoromethane | ND | | 4.0 | | ug/L | | | 02/04/14 07:44 | 4 |
| **Vinyl chloride** | **58** | | 4.0 | | ug/L | | | 02/04/14 07:44 | 4 |
| Dibromomethane | ND | | 4.0 | | ug/L | | | 02/04/14 07:44 | 4 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *101* | | *70 - 130* | | *02/04/14 07:44* | *4* |
| *1,2-Dichloroethane-d4 (Surr)* | *101* | | *70 - 130* | | *02/04/14 07:44* | *4* |
| *4-Bromofluorobenzene (Surr)* | *108* | | *70 - 130* | | *02/04/14 07:44* | *4* |

## Client Sample ID: DupX-20140130-01

**Lab Sample ID: 480-54029-11**

**Date Collected: 01/30/14 00:00**

**Matrix: Water**

**Date Received: 01/31/14 00:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 20 | | ug/L | | | 02/04/14 15:23 | 20 |
| 1,1,1-Trichloroethane | ND | | 20 | | ug/L | | | 02/04/14 15:23 | 20 |
| 1,1,2,2-Tetrachloroethane | ND | | 10 | | ug/L | | | 02/04/14 15:23 | 20 |
| 1,1,2-Trichloroethane | ND | | 20 | | ug/L | | | 02/04/14 15:23 | 20 |
| 1,1-Dichloroethane | ND | | 20 | | ug/L | | | 02/04/14 15:23 | 20 |
| 1,1-Dichloroethene | ND | | 20 | | ug/L | | | 02/04/14 15:23 | 20 |
| 1,1-Dichloropropene | ND | | 20 | | ug/L | | | 02/04/14 15:23 | 20 |
| 1,2,3-Trichlorobenzene | ND | | 20 | | ug/L | | | 02/04/14 15:23 | 20 |
| 1,2,3-Trichloropropane | ND | | 20 | | ug/L | | | 02/04/14 15:23 | 20 |
| 1,2,4-Trichlorobenzene | ND | | 20 | | ug/L | | | 02/04/14 15:23 | 20 |
| 1,2,4-Trimethylbenzene | ND | | 20 | | ug/L | | | 02/04/14 15:23 | 20 |
| 1,2-Dibromo-3-Chloropropane | ND | | 100 | | ug/L | | | 02/04/14 15:23 | 20 |
| 1,2-Dichlorobenzene | ND | | 20 | | ug/L | | | 02/04/14 15:23 | 20 |
| 1,2-Dichloroethane | ND | | 20 | | ug/L | | | 02/04/14 15:23 | 20 |
| 1,2-Dichloropropane | ND | | 20 | | ug/L | | | 02/04/14 15:23 | 20 |
| 1,3,5-Trimethylbenzene | ND | | 20 | | ug/L | | | 02/04/14 15:23 | 20 |
| 1,3-Dichlorobenzene | ND | | 20 | | ug/L | | | 02/04/14 15:23 | 20 |
| 1,3-Dichloropropane | ND | | 20 | | ug/L | | | 02/04/14 15:23 | 20 |
| 1,4-Dichlorobenzene | ND | | 20 | | ug/L | | | 02/04/14 15:23 | 20 |
| 1,4-Dioxane | ND | | 1000 | | ug/L | | | 02/04/14 15:23 | 20 |
| 2,2-Dichloropropane | ND | | 20 | | ug/L | | | 02/04/14 15:23 | 20 |
| 2-Butanone (MEK) | ND | | 200 | | ug/L | | | 02/04/14 15:23 | 20 |
| 2-Chlorotoluene | ND | | 20 | | ug/L | | | 02/04/14 15:23 | 20 |
| 2-Hexanone | ND | | 200 | | ug/L | | | 02/04/14 15:23 | 20 |
| 4-Chlorotoluene | ND | | 20 | | ug/L | | | 02/04/14 15:23 | 20 |
| 4-Isopropyltoluene | ND | | 20 | | ug/L | | | 02/04/14 15:23 | 20 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 200 | | ug/L | | | 02/04/14 15:23 | 20 |
| Acetone | ND | | 1000 | | ug/L | | | 02/04/14 15:23 | 20 |
| Benzene | ND | | 20 | | ug/L | | | 02/04/14 15:23 | 20 |
| Bromobenzene | ND | | 20 | | ug/L | | | 02/04/14 15:23 | 20 |
| Bromoform | ND | | 20 | | ug/L | | | 02/04/14 15:23 | 20 |
| Bromomethane | ND | | 40 | | ug/L | | | 02/04/14 15:23 | 20 |
| Carbon disulfide | ND | | 200 | | ug/L | | | 02/04/14 15:23 | 20 |
| Carbon tetrachloride | ND | | 20 | | ug/L | | | 02/04/14 15:23 | 20 |
| Chlorobenzene | ND | | 20 | | ug/L | | | 02/04/14 15:23 | 20 |
| Chlorobromomethane | ND | | 20 | | ug/L | | | 02/04/14 15:23 | 20 |
| Chlorodibromomethane | ND | | 10 | | ug/L | | | 02/04/14 15:23 | 20 |
| Chloroethane | ND | | 40 | | ug/L | | | 02/04/14 15:23 | 20 |
| Chloroform | ND | | 20 | | ug/L | | | 02/04/14 15:23 | 20 |
| Chloromethane | ND | | 40 | | ug/L | | | 02/04/14 15:23 | 20 |
| cis-1,2-Dichloroethene | ND | | 20 | | ug/L | | | 02/04/14 15:23 | 20 |
| cis-1,3-Dichloropropene | ND | | 8.0 | | ug/L | | | 02/04/14 15:23 | 20 |
| Dichlorobromomethane | ND | | 10 | | ug/L | | | 02/04/14 15:23 | 20 |
| Dichlorodifluoromethane | ND | * | 20 | | ug/L | | | 02/04/14 15:23 | 20 |
| Ethyl ether | ND | | 20 | | ug/L | | | 02/04/14 15:23 | 20 |
| Ethylbenzene | ND | | 20 | | ug/L | | | 02/04/14 15:23 | 20 |
| Ethylene Dibromide | ND | | 20 | | ug/L | | | 02/04/14 15:23 | 20 |
| Hexachlorobutadiene | ND | | 8.0 | | ug/L | | | 02/04/14 15:23 | 20 |
| Isopropyl ether | ND | | 200 | | ug/L | | | 02/04/14 15:23 | 20 |

## Client Sample ID: DupX-20140130-01

**Lab Sample ID: 480-54029-11**

**Date Collected: 01/30/14 00:00**

**Matrix: Water**

**Date Received: 01/31/14 00:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Isopropylbenzene | ND | | 20 | | ug/L | | | 02/04/14 15:23 | 20 |
| Methyl tert-butyl ether | ND | | 20 | | ug/L | | | 02/04/14 15:23 | 20 |
| Methylene Chloride | ND | | 20 | | ug/L | | | 02/04/14 15:23 | 20 |
| **m-Xylene & p-Xylene** | **67** | | 40 | | ug/L | | | 02/04/14 15:23 | 20 |
| Naphthalene | ND | | 100 | | ug/L | | | 02/04/14 15:23 | 20 |
| n-Butylbenzene | ND | | 20 | | ug/L | | | 02/04/14 15:23 | 20 |
| N-Propylbenzene | ND | | 20 | | ug/L | | | 02/04/14 15:23 | 20 |
| o-Xylene | ND | | 20 | | ug/L | | | 02/04/14 15:23 | 20 |
| sec-Butylbenzene | ND | | 20 | | ug/L | | | 02/04/14 15:23 | 20 |
| Styrene | ND | | 20 | | ug/L | | | 02/04/14 15:23 | 20 |
| Tert-amyl methyl ether | ND | | 100 | | ug/L | | | 02/04/14 15:23 | 20 |
| Tert-butyl ethyl ether | ND | | 100 | | ug/L | | | 02/04/14 15:23 | 20 |
| tert-Butylbenzene | ND | | 20 | | ug/L | | | 02/04/14 15:23 | 20 |
| Tetrachloroethene | ND | | 20 | | ug/L | | | 02/04/14 15:23 | 20 |
| Tetrahydrofuran | ND | * | 200 | | ug/L | | | 02/04/14 15:23 | 20 |
| **Toluene** | **1200** | | 20 | | ug/L | | | 02/04/14 15:23 | 20 |
| trans-1,2-Dichloroethene | ND | | 20 | | ug/L | | | 02/04/14 15:23 | 20 |
| trans-1,3-Dichloropropene | ND | | 8.0 | | ug/L | | | 02/04/14 15:23 | 20 |
| Trichloroethene | ND | | 20 | | ug/L | | | 02/04/14 15:23 | 20 |
| Trichlorofluoromethane | ND | | 20 | | ug/L | | | 02/04/14 15:23 | 20 |
| **Vinyl chloride** | **250** | | 20 | | ug/L | | | 02/04/14 15:23 | 20 |
| Dibromomethane | ND | | 20 | | ug/L | | | 02/04/14 15:23 | 20 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *103* | | *70 - 130* | | *02/04/14 15:23* | *20* |
| *1,2-Dichloroethane-d4 (Surr)* | *99* | | *70 - 130* | | *02/04/14 15:23* | *20* |
| *4-Bromofluorobenzene (Surr)* | *106* | | *70 - 130* | | *02/04/14 15:23* | *20* |

## Client Sample ID: Trip Blank

**Lab Sample ID: 480-54029-12**

**Date Collected: 01/30/14 00:00**

**Matrix: Water**

**Date Received: 01/31/14 00:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 02/04/14 15:47 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 02/04/14 15:47 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 02/04/14 15:47 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 02/04/14 15:47 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 02/04/14 15:47 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 02/04/14 15:47 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 02/04/14 15:47 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 02/04/14 15:47 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 02/04/14 15:47 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 02/04/14 15:47 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 02/04/14 15:47 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 02/04/14 15:47 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 02/04/14 15:47 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 02/04/14 15:47 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 02/04/14 15:47 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 02/04/14 15:47 | 1 |

## Client Sample ID: Trip Blank

**Lab Sample ID: 480-54029-12**

**Date Collected: 01/30/14 00:00**

**Matrix: Water**

**Date Received: 01/31/14 00:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 02/04/14 15:47 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 02/04/14 15:47 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 02/04/14 15:47 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 02/04/14 15:47 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 02/04/14 15:47 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 02/04/14 15:47 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 02/04/14 15:47 | 1 |
| 2-Hexanone | ND | | 10 | | ug/L | | | 02/04/14 15:47 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 02/04/14 15:47 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 02/04/14 15:47 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 02/04/14 15:47 | 1 |
| Acetone | ND | | 50 | | ug/L | | | 02/04/14 15:47 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 02/04/14 15:47 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 02/04/14 15:47 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 02/04/14 15:47 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 02/04/14 15:47 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 02/04/14 15:47 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 02/04/14 15:47 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 02/04/14 15:47 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 02/04/14 15:47 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 02/04/14 15:47 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 02/04/14 15:47 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 02/04/14 15:47 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 02/04/14 15:47 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 02/04/14 15:47 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 02/04/14 15:47 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 02/04/14 15:47 | 1 |
| Dichlorodifluoromethane | ND | * | 1.0 | | ug/L | | | 02/04/14 15:47 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 02/04/14 15:47 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 02/04/14 15:47 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 02/04/14 15:47 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 02/04/14 15:47 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 02/04/14 15:47 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 02/04/14 15:47 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 02/04/14 15:47 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 02/04/14 15:47 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 02/04/14 15:47 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 02/04/14 15:47 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 02/04/14 15:47 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 02/04/14 15:47 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 02/04/14 15:47 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 02/04/14 15:47 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 02/04/14 15:47 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 02/04/14 15:47 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 02/04/14 15:47 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 02/04/14 15:47 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 02/04/14 15:47 | 1 |
| Tetrahydrofuran | ND | * | 10 | | ug/L | | | 02/04/14 15:47 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 02/04/14 15:47 | 1 |

## Client Sample ID: Trip Blank

**Lab Sample ID: 480-54029-12**

**Date Collected: 01/30/14 00:00**

**Matrix: Water**

**Date Received: 01/31/14 00:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 02/04/14 15:47 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 02/04/14 15:47 | 1 |
| Trichloroethene | ND | | 1.0 | | ug/L | | | 02/04/14 15:47 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 02/04/14 15:47 | 1 |
| Vinyl chloride | ND | | 1.0 | | ug/L | | | 02/04/14 15:47 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 02/04/14 15:47 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *101* | | *70 - 130* | | *02/04/14 15:47* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *98* | | *70 - 130* | | *02/04/14 15:47* | *1* |
| *4-Bromofluorobenzene (Surr)* | *101* | | *70 - 130* | | *02/04/14 15:47* | *1* |

# Surrogate Summary

Client: Innovative Engineering Solutions, Inc
Project/Site: IDS Wayland

TestAmerica Job ID: 480-54029-1

## Method: 8260C - Volatile Organic Compounds (GC/MS)

**Matrix: Water** **Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | | |
|---|---|---|---|---|
| | | TOL | 12DCE | BFB |
| Lab Sample ID | Client Sample ID | (70-130) | (70-130) | (70-130) |
| 480-54029-1 | MW-267S-20140130-01 | 102 | 98 | 104 |
| 480-54029-2 | MW-267M-20140130-01 | 102 | 100 | 103 |
| 480-54029-3 | MW-268M-20140130-01 | 106 | 100 | 109 |
| 480-54029-3 - DL | MW-268M-20140130-01 | 103 | 98 | 102 |
| 480-54029-3 MS | MW-268M-20140130-01 | 100 | 96 | 107 |
| 480-54029-3 MSD | MW-268M-20140130-01 | 100 | 97 | 106 |
| 480-54029-4 | MW-561-20140130-01 | 101 | 98 | 104 |
| 480-54029-4 - DL | MW-561-20140130-01 | 101 | 100 | 105 |
| 480-54029-5 | MW-553-20140130-01 | 102 | 99 | 103 |
| 480-54029-6 | REW-6-20140130-01 | 102 | 98 | 104 |
| 480-54029-7 | REW-7-20140130-01 | 103 | 96 | 104 |
| 480-54029-8 | REW-8-20140130-01 | 101 | 98 | 105 |
| 480-54029-9 | REW-9-20140130-01 | 101 | 98 | 106 |
| 480-54029-10 | REW-12-20140130-01 | 101 | 101 | 108 |
| 480-54029-11 | DupX-20140130-01 | 103 | 99 | 106 |
| 480-54029-12 | Trip Blank | 101 | 98 | 101 |
| LCS 480-164338/4 | Lab Control Sample | 103 | 97 | 105 |
| LCS 480-164408/4 | Lab Control Sample | 102 | 96 | 109 |
| LCS 480-164532/4 | Lab Control Sample | 100 | 99 | 107 |
| LCSD 480-164338/5 | Lab Control Sample Dup | 103 | 97 | 106 |
| LCSD 480-164408/5 | Lab Control Sample Dup | 101 | 96 | 109 |
| LCSD 480-164532/5 | Lab Control Sample Dup | 102 | 98 | 106 |
| MB 480-164338/7 | Method Blank | 104 | 98 | 103 |
| MB 480-164408/7 | Method Blank | 102 | 97 | 103 |
| MB 480-164532/7 | Method Blank | 104 | 100 | 105 |

**Surrogate Legend**

TOL = Toluene-d8 (Surr)

12DCE = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

## Method: 8260C - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 480-164338/7**
**Matrix: Water**
**Analysis Batch: 164338**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 02/03/14 23:58 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 02/03/14 23:58 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 02/03/14 23:58 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 02/03/14 23:58 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 02/03/14 23:58 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 02/03/14 23:58 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 02/03/14 23:58 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 02/03/14 23:58 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 02/03/14 23:58 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 02/03/14 23:58 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 02/03/14 23:58 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 02/03/14 23:58 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 02/03/14 23:58 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 02/03/14 23:58 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 02/03/14 23:58 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 02/03/14 23:58 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 02/03/14 23:58 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 02/03/14 23:58 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 02/03/14 23:58 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 02/03/14 23:58 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 02/03/14 23:58 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 02/03/14 23:58 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 02/03/14 23:58 | 1 |
| 2-Hexanone | ND | | 10 | | ug/L | | | 02/03/14 23:58 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 02/03/14 23:58 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 02/03/14 23:58 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 02/03/14 23:58 | 1 |
| Acetone | ND | | 50 | | ug/L | | | 02/03/14 23:58 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 02/03/14 23:58 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 02/03/14 23:58 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 02/03/14 23:58 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 02/03/14 23:58 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 02/03/14 23:58 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 02/03/14 23:58 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 02/03/14 23:58 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 02/03/14 23:58 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 02/03/14 23:58 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 02/03/14 23:58 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 02/03/14 23:58 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 02/03/14 23:58 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 02/03/14 23:58 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 02/03/14 23:58 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 02/03/14 23:58 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 02/03/14 23:58 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 02/03/14 23:58 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 02/03/14 23:58 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 02/03/14 23:58 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 02/03/14 23:58 | 1 |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 480-164338/7**
**Matrix: Water**
**Analysis Batch: 164338**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Isopropyl ether | ND | | 10 | | ug/L | | | 02/03/14 23:58 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 02/03/14 23:58 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 02/03/14 23:58 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 02/03/14 23:58 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 02/03/14 23:58 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 02/03/14 23:58 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 02/03/14 23:58 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 02/03/14 23:58 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 02/03/14 23:58 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 02/03/14 23:58 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 02/03/14 23:58 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 02/03/14 23:58 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 02/03/14 23:58 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 02/03/14 23:58 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 02/03/14 23:58 | 1 |
| Tetrahydrofuran | ND | | 10 | | ug/L | | | 02/03/14 23:58 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 02/03/14 23:58 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 02/03/14 23:58 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 02/03/14 23:58 | 1 |
| Trichloroethene | ND | | 1.0 | | ug/L | | | 02/03/14 23:58 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 02/03/14 23:58 | 1 |
| Vinyl chloride | ND | | 1.0 | | ug/L | | | 02/03/14 23:58 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 02/03/14 23:58 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *104* | | *70 - 130* | | *02/03/14 23:58* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *98* | | *70 - 130* | | *02/03/14 23:58* | *1* |
| *4-Bromofluorobenzene (Surr)* | *103* | | *70 - 130* | | *02/03/14 23:58* | *1* |

**Lab Sample ID: LCS 480-164338/4**
**Matrix: Water**
**Analysis Batch: 164338**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 25.0 | 27.1 | | ug/L | | 108 | 70 - 130 |
| 1,1,1-Trichloroethane | 25.0 | 26.0 | | ug/L | | 104 | 70 - 130 |
| 1,1,2,2-Tetrachloroethane | 25.0 | 24.8 | | ug/L | | 99 | 70 - 130 |
| 1,1,2-Trichloroethane | 25.0 | 24.8 | | ug/L | | 99 | 70 - 130 |
| 1,1-Dichloroethane | 25.0 | 25.8 | | ug/L | | 103 | 70 - 130 |
| 1,1-Dichloroethene | 25.0 | 25.5 | | ug/L | | 102 | 70 - 130 |
| 1,1-Dichloropropene | 25.0 | 25.8 | | ug/L | | 103 | 70 - 130 |
| 1,2,3-Trichlorobenzene | 25.0 | 28.5 | | ug/L | | 114 | 70 - 130 |
| 1,2,3-Trichloropropane | 25.0 | 24.2 | | ug/L | | 97 | 70 - 130 |
| 1,2,4-Trichlorobenzene | 25.0 | 27.9 | | ug/L | | 112 | 70 - 130 |
| 1,2,4-Trimethylbenzene | 25.0 | 25.1 | | ug/L | | 101 | 70 - 130 |
| 1,2-Dibromo-3-Chloropropane | 25.0 | 24.9 | | ug/L | | 100 | 70 - 130 |
| 1,2-Dichlorobenzene | 25.0 | 26.5 | | ug/L | | 106 | 70 - 130 |
| 1,2-Dichloroethane | 25.0 | 25.0 | | ug/L | | 100 | 70 - 130 |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 480-164338/4**
**Matrix: Water**
**Analysis Batch: 164338**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,2-Dichloropropane | 25.0 | 26.2 | | ug/L | | 105 | 70 - 130 |
| 1,3,5-Trimethylbenzene | 25.0 | 25.1 | | ug/L | | 100 | 70 - 130 |
| 1,3-Dichlorobenzene | 25.0 | 26.3 | | ug/L | | 105 | 70 - 130 |
| 1,3-Dichloropropane | 25.0 | 24.9 | | ug/L | | 100 | 70 - 130 |
| 1,4-Dichlorobenzene | 25.0 | 26.2 | | ug/L | | 105 | 70 - 130 |
| 1,4-Dioxane | 500 | 501 | | ug/L | | 100 | 70 - 130 |
| 2,2-Dichloropropane | 25.0 | 25.9 | | ug/L | | 103 | 70 - 130 |
| 2-Butanone (MEK) | 125 | 136 | | ug/L | | 108 | 70 - 130 |
| 2-Chlorotoluene | 25.0 | 26.5 | | ug/L | | 106 | 70 - 130 |
| 2-Hexanone | 125 | 132 | | ug/L | | 105 | 70 - 130 |
| 4-Chlorotoluene | 25.0 | 24.6 | | ug/L | | 98 | 70 - 130 |
| 4-Isopropyltoluene | 25.0 | 27.0 | | ug/L | | 108 | 70 - 130 |
| 4-Methyl-2-pentanone (MIBK) | 125 | 125 | | ug/L | | 100 | 70 - 130 |
| Acetone | 125 | 134 | | ug/L | | 107 | 70 - 130 |
| Benzene | 25.0 | 25.6 | | ug/L | | 102 | 70 - 130 |
| Bromobenzene | 25.0 | 26.5 | | ug/L | | 106 | 70 - 130 |
| Bromoform | 25.0 | 26.3 | | ug/L | | 105 | 70 - 130 |
| Bromomethane | 25.0 | 24.2 | | ug/L | | 97 | 70 - 130 |
| Carbon disulfide | 25.0 | 25.8 | | ug/L | | 103 | 70 - 130 |
| Carbon tetrachloride | 25.0 | 26.9 | | ug/L | | 108 | 70 - 130 |
| Chlorobenzene | 25.0 | 27.0 | | ug/L | | 108 | 70 - 130 |
| Chlorobromomethane | 25.0 | 26.5 | | ug/L | | 106 | 70 - 130 |
| Chlorodibromomethane | 24.5 | 25.9 | | ug/L | | 106 | 70 - 130 |
| Chloroethane | 25.0 | 25.5 | | ug/L | | 102 | 70 - 130 |
| Chloroform | 25.0 | 24.1 | | ug/L | | 96 | 70 - 130 |
| Chloromethane | 25.0 | 20.8 | | ug/L | | 83 | 70 - 130 |
| cis-1,2-Dichloroethene | 25.0 | 26.6 | | ug/L | | 107 | 70 - 130 |
| cis-1,3-Dichloropropene | 25.0 | 26.6 | | ug/L | | 106 | 70 - 130 |
| Dichlorobromomethane | 25.0 | 25.1 | | ug/L | | 100 | 70 - 130 |
| Dichlorodifluoromethane | 25.0 | 16.1 | * | ug/L | | 64 | 70 - 130 |
| Ethyl ether | 25.0 | 25.8 | | ug/L | | 103 | 70 - 130 |
| Ethylbenzene | 25.0 | 26.8 | | ug/L | | 107 | 70 - 130 |
| Ethylene Dibromide | 25.0 | 24.7 | | ug/L | | 99 | 70 - 130 |
| Hexachlorobutadiene | 25.0 | 26.9 | | ug/L | | 107 | 70 - 130 |
| Isopropyl ether | 25.0 | 25.7 | | ug/L | | 103 | 70 - 130 |
| Isopropylbenzene | 25.0 | 25.4 | | ug/L | | 102 | 70 - 130 |
| Methyl tert-butyl ether | 25.0 | 24.6 | | ug/L | | 98 | 70 - 130 |
| Methylene Chloride | 25.0 | 24.6 | | ug/L | | 98 | 70 - 130 |
| m-Xylene & p-Xylene | 25.0 | 24.8 | | ug/L | | 99 | 70 - 130 |
| Naphthalene | 25.0 | 28.0 | | ug/L | | 112 | 70 - 130 |
| n-Butylbenzene | 25.0 | 27.2 | | ug/L | | 109 | 70 - 130 |
| N-Propylbenzene | 25.0 | 26.2 | | ug/L | | 105 | 70 - 130 |
| o-Xylene | 25.0 | 25.0 | | ug/L | | 100 | 70 - 130 |
| sec-Butylbenzene | 25.0 | 25.6 | | ug/L | | 103 | 70 - 130 |
| Styrene | 25.0 | 25.4 | | ug/L | | 102 | 70 - 130 |
| Tert-amyl methyl ether | 25.0 | 25.1 | | ug/L | | 100 | 70 - 130 |
| Tert-butyl ethyl ether | 25.0 | 24.2 | | ug/L | | 97 | 70 - 130 |
| tert-Butylbenzene | 25.0 | 28.1 | | ug/L | | 113 | 70 - 130 |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 480-164338/4**
**Matrix: Water**
**Analysis Batch: 164338**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 25.0 | 27.2 | | ug/L | | 109 | 70 - 130 |
| Tetrahydrofuran | 50.0 | 65.9 | * | ug/L | | 132 | 70 - 130 |
| Toluene | 25.0 | 26.4 | | ug/L | | 106 | 70 - 130 |
| trans-1,2-Dichloroethene | 25.0 | 26.6 | | ug/L | | 107 | 70 - 130 |
| trans-1,3-Dichloropropene | 25.0 | 25.5 | | ug/L | | 102 | 70 - 130 |
| Trichloroethene | 25.0 | 27.1 | | ug/L | | 108 | 70 - 130 |
| Trichlorofluoromethane | 25.0 | 24.5 | | ug/L | | 98 | 70 - 130 |
| Vinyl chloride | 25.0 | 21.5 | | ug/L | | 86 | 70 - 130 |
| Dibromomethane | 25.0 | 25.6 | | ug/L | | 103 | 70 - 130 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Toluene-d8 (Surr)* | *103* | | *70 - 130* |
| *1,2-Dichloroethane-d4 (Surr)* | *97* | | *70 - 130* |
| *4-Bromofluorobenzene (Surr)* | *105* | | *70 - 130* |

**Lab Sample ID: LCSD 480-164338/5**
**Matrix: Water**
**Analysis Batch: 164338**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 25.0 | 26.6 | | ug/L | | 106 | 70 - 130 | 2 | 20 |
| 1,1,1-Trichloroethane | 25.0 | 25.5 | | ug/L | | 102 | 70 - 130 | 2 | 20 |
| 1,1,2,2-Tetrachloroethane | 25.0 | 25.3 | | ug/L | | 101 | 70 - 130 | 2 | 20 |
| 1,1,2-Trichloroethane | 25.0 | 25.0 | | ug/L | | 100 | 70 - 130 | 1 | 20 |
| 1,1-Dichloroethane | 25.0 | 25.5 | | ug/L | | 102 | 70 - 130 | 1 | 20 |
| 1,1-Dichloroethene | 25.0 | 25.0 | | ug/L | | 100 | 70 - 130 | 2 | 20 |
| 1,1-Dichloropropene | 25.0 | 25.8 | | ug/L | | 103 | 70 - 130 | 0 | 20 |
| 1,2,3-Trichlorobenzene | 25.0 | 28.1 | | ug/L | | 112 | 70 - 130 | 2 | 20 |
| 1,2,3-Trichloropropane | 25.0 | 24.3 | | ug/L | | 97 | 70 - 130 | 1 | 20 |
| 1,2,4-Trichlorobenzene | 25.0 | 27.5 | | ug/L | | 110 | 70 - 130 | 1 | 20 |
| 1,2,4-Trimethylbenzene | 25.0 | 25.0 | | ug/L | | 100 | 70 - 130 | 0 | 20 |
| 1,2-Dibromo-3-Chloropropane | 25.0 | 25.9 | | ug/L | | 104 | 70 - 130 | 4 | 20 |
| 1,2-Dichlorobenzene | 25.0 | 26.6 | | ug/L | | 106 | 70 - 130 | 0 | 20 |
| 1,2-Dichloroethane | 25.0 | 24.8 | | ug/L | | 99 | 70 - 130 | 1 | 20 |
| 1,2-Dichloropropane | 25.0 | 25.8 | | ug/L | | 103 | 70 - 130 | 2 | 20 |
| 1,3,5-Trimethylbenzene | 25.0 | 25.0 | | ug/L | | 100 | 70 - 130 | 0 | 20 |
| 1,3-Dichlorobenzene | 25.0 | 26.3 | | ug/L | | 105 | 70 - 130 | 0 | 20 |
| 1,3-Dichloropropane | 25.0 | 24.7 | | ug/L | | 99 | 70 - 130 | 1 | 20 |
| 1,4-Dichlorobenzene | 25.0 | 26.4 | | ug/L | | 106 | 70 - 130 | 1 | 20 |
| 1,4-Dioxane | 500 | 523 | | ug/L | | 105 | 70 - 130 | 4 | 20 |
| 2,2-Dichloropropane | 25.0 | 24.4 | | ug/L | | 98 | 70 - 130 | 6 | 20 |
| 2-Butanone (MEK) | 125 | 144 | | ug/L | | 115 | 70 - 130 | 6 | 20 |
| 2-Chlorotoluene | 25.0 | 25.9 | | ug/L | | 104 | 70 - 130 | 2 | 20 |
| 2-Hexanone | 125 | 129 | | ug/L | | 103 | 70 - 130 | 2 | 20 |
| 4-Chlorotoluene | 25.0 | 24.1 | | ug/L | | 96 | 70 - 130 | 2 | 20 |
| 4-Isopropyltoluene | 25.0 | 26.8 | | ug/L | | 107 | 70 - 130 | 1 | 20 |
| 4-Methyl-2-pentanone (MIBK) | 125 | 124 | | ug/L | | 99 | 70 - 130 | 1 | 20 |
| Acetone | 125 | 138 | | ug/L | | 111 | 70 - 130 | 3 | 20 |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 480-164338/5**
**Matrix: Water**
**Analysis Batch: 164338**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | 25.0 | 25.2 | | ug/L | | 101 | 70 - 130 | 1 | 20 |
| Bromobenzene | 25.0 | 26.3 | | ug/L | | 105 | 70 - 130 | 1 | 20 |
| Bromoform | 25.0 | 26.4 | | ug/L | | 105 | 70 - 130 | 0 | 20 |
| Bromomethane | 25.0 | 24.8 | | ug/L | | 99 | 70 - 130 | 3 | 20 |
| Carbon disulfide | 25.0 | 25.6 | | ug/L | | 102 | 70 - 130 | 1 | 20 |
| Carbon tetrachloride | 25.0 | 26.4 | | ug/L | | 105 | 70 - 130 | 2 | 20 |
| Chlorobenzene | 25.0 | 26.2 | | ug/L | | 105 | 70 - 130 | 3 | 20 |
| Chlorobromomethane | 25.0 | 25.8 | | ug/L | | 103 | 70 - 130 | 3 | 20 |
| Chlorodibromomethane | 24.5 | 25.9 | | ug/L | | 106 | 70 - 130 | 0 | 20 |
| Chloroethane | 25.0 | 24.8 | | ug/L | | 99 | 70 - 130 | 3 | 20 |
| Chloroform | 25.0 | 23.7 | | ug/L | | 95 | 70 - 130 | 2 | 20 |
| Chloromethane | 25.0 | 20.3 | | ug/L | | 81 | 70 - 130 | 2 | 20 |
| cis-1,2-Dichloroethene | 25.0 | 26.2 | | ug/L | | 105 | 70 - 130 | 2 | 20 |
| cis-1,3-Dichloropropene | 25.0 | 26.2 | | ug/L | | 105 | 70 - 130 | 2 | 20 |
| Dichlorobromomethane | 25.0 | 25.4 | | ug/L | | 102 | 70 - 130 | 1 | 20 |
| Dichlorodifluoromethane | 25.0 | 15.5 | * | ug/L | | 62 | 70 - 130 | 4 | 20 |
| Ethyl ether | 25.0 | 26.1 | | ug/L | | 104 | 70 - 130 | 1 | 20 |
| Ethylbenzene | 25.0 | 26.0 | | ug/L | | 104 | 70 - 130 | 3 | 20 |
| Ethylene Dibromide | 25.0 | 24.1 | | ug/L | | 96 | 70 - 130 | 2 | 20 |
| Hexachlorobutadiene | 25.0 | 26.0 | | ug/L | | 104 | 70 - 130 | 3 | 20 |
| Isopropyl ether | 25.0 | 25.8 | | ug/L | | 103 | 70 - 130 | 0 | 20 |
| Isopropylbenzene | 25.0 | 24.9 | | ug/L | | 100 | 70 - 130 | 2 | 20 |
| Methyl tert-butyl ether | 25.0 | 24.5 | | ug/L | | 98 | 70 - 130 | 0 | 20 |
| Methylene Chloride | 25.0 | 23.8 | | ug/L | | 95 | 70 - 130 | 3 | 20 |
| m-Xylene & p-Xylene | 25.0 | 24.2 | | ug/L | | 97 | 70 - 130 | 2 | 20 |
| Naphthalene | 25.0 | 27.6 | | ug/L | | 110 | 70 - 130 | 1 | 20 |
| n-Butylbenzene | 25.0 | 26.8 | | ug/L | | 107 | 70 - 130 | 2 | 20 |
| N-Propylbenzene | 25.0 | 25.8 | | ug/L | | 103 | 70 - 130 | 2 | 20 |
| o-Xylene | 25.0 | 24.5 | | ug/L | | 98 | 70 - 130 | 2 | 20 |
| sec-Butylbenzene | 25.0 | 25.7 | | ug/L | | 103 | 70 - 130 | 0 | 20 |
| Styrene | 25.0 | 25.2 | | ug/L | | 101 | 70 - 130 | 1 | 20 |
| Tert-amyl methyl ether | 25.0 | 25.4 | | ug/L | | 102 | 70 - 130 | 1 | 20 |
| Tert-butyl ethyl ether | 25.0 | 24.4 | | ug/L | | 98 | 70 - 130 | 1 | 20 |
| tert-Butylbenzene | 25.0 | 27.2 | | ug/L | | 109 | 70 - 130 | 3 | 20 |
| Tetrachloroethene | 25.0 | 26.4 | | ug/L | | 106 | 70 - 130 | 3 | 20 |
| Tetrahydrofuran | 50.0 | 65.5 | * | ug/L | | 131 | 70 - 130 | 1 | 20 |
| Toluene | 25.0 | 25.4 | | ug/L | | 102 | 70 - 130 | 4 | 20 |
| trans-1,2-Dichloroethene | 25.0 | 25.9 | | ug/L | | 104 | 70 - 130 | 3 | 20 |
| trans-1,3-Dichloropropene | 25.0 | 25.0 | | ug/L | | 100 | 70 - 130 | 2 | 20 |
| Trichloroethene | 25.0 | 26.4 | | ug/L | | 106 | 70 - 130 | 2 | 20 |
| Trichlorofluoromethane | 25.0 | 23.9 | | ug/L | | 96 | 70 - 130 | 3 | 20 |
| Vinyl chloride | 25.0 | 20.5 | | ug/L | | 82 | 70 - 130 | 5 | 20 |
| Dibromomethane | 25.0 | 26.2 | | ug/L | | 105 | 70 - 130 | 2 | 20 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *Toluene-d8 (Surr)* | *103* | | *70 - 130* |
| *1,2-Dichloroethane-d4 (Surr)* | *97* | | *70 - 130* |
| *4-Bromofluorobenzene (Surr)* | *106* | | *70 - 130* |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 480-54029-3 MS**
**Matrix: Water**
**Analysis Batch: 164338**

**Client Sample ID: MW-268M-20140130-01**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 625 | 647 | | ug/L | | 104 | 70 - 130 |
| 1,1,1-Trichloroethane | ND | | 625 | 632 | | ug/L | | 101 | 70 - 130 |
| 1,1,2,2-Tetrachloroethane | ND | | 625 | 628 | | ug/L | | 100 | 70 - 130 |
| 1,1,2-Trichloroethane | ND | | 625 | 614 | | ug/L | | 98 | 70 - 130 |
| 1,1-Dichloroethane | ND | | 625 | 643 | | ug/L | | 101 | 70 - 130 |
| 1,1-Dichloroethene | ND | | 625 | 614 | | ug/L | | 98 | 70 - 130 |
| 1,1-Dichloropropene | ND | | 625 | 627 | | ug/L | | 100 | 70 - 130 |
| 1,2,3-Trichlorobenzene | ND | | 625 | 665 | | ug/L | | 106 | 70 - 130 |
| 1,2,3-Trichloropropane | ND | | 625 | 623 | | ug/L | | 100 | 70 - 130 |
| 1,2,4-Trichlorobenzene | ND | | 625 | 647 | | ug/L | | 104 | 70 - 130 |
| 1,2,4-Trimethylbenzene | ND | | 625 | 618 | | ug/L | | 99 | 70 - 130 |
| 1,2-Dibromo-3-Chloropropane | ND | | 625 | 615 | | ug/L | | 98 | 70 - 130 |
| 1,2-Dichlorobenzene | ND | | 625 | 654 | | ug/L | | 105 | 70 - 130 |
| 1,2-Dichloroethane | ND | | 625 | 612 | | ug/L | | 98 | 70 - 130 |
| 1,2-Dichloropropane | ND | | 625 | 633 | | ug/L | | 101 | 70 - 130 |
| 1,3,5-Trimethylbenzene | ND | | 625 | 622 | | ug/L | | 100 | 70 - 130 |
| 1,3-Dichlorobenzene | ND | | 625 | 660 | | ug/L | | 106 | 70 - 130 |
| 1,3-Dichloropropane | ND | | 625 | 613 | | ug/L | | 98 | 70 - 130 |
| 1,4-Dichlorobenzene | ND | | 625 | 652 | | ug/L | | 104 | 70 - 130 |
| 1,4-Dioxane | ND | | 12500 | 13000 | | ug/L | | 104 | 70 - 130 |
| 2,2-Dichloropropane | ND | | 625 | 521 | | ug/L | | 83 | 70 - 130 |
| 2-Butanone (MEK) | ND | | 3130 | 5490 | F1 | ug/L | | 176 | 70 - 130 |
| 2-Chlorotoluene | ND | | 625 | 656 | | ug/L | | 105 | 70 - 130 |
| 2-Hexanone | ND | | 3130 | 3240 | | ug/L | | 104 | 70 - 130 |
| 4-Chlorotoluene | ND | | 625 | 601 | | ug/L | | 96 | 70 - 130 |
| 4-Isopropyltoluene | ND | | 625 | 666 | | ug/L | | 106 | 70 - 130 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 3130 | 3120 | | ug/L | | 100 | 70 - 130 |
| Acetone | ND | | 3130 | 3220 | | ug/L | | 103 | 70 - 130 |
| Benzene | ND | | 625 | 620 | | ug/L | | 99 | 70 - 130 |
| Bromobenzene | ND | | 625 | 653 | | ug/L | | 105 | 70 - 130 |
| Bromoform | ND | | 625 | 520 | | ug/L | | 83 | 70 - 130 |
| Bromomethane | ND | | 625 | 784 | | ug/L | | 125 | 70 - 130 |
| Carbon disulfide | ND | | 625 | 564 | | ug/L | | 90 | 70 - 130 |
| Carbon tetrachloride | ND | | 625 | 610 | | ug/L | | 98 | 70 - 130 |
| Chlorobenzene | ND | | 625 | 656 | | ug/L | | 105 | 70 - 130 |
| Chlorobromomethane | ND | | 625 | 637 | | ug/L | | 102 | 70 - 130 |
| Chlorodibromomethane | ND | | 613 | 582 | | ug/L | | 95 | 70 - 130 |
| Chloroethane | ND | | 625 | 743 | | ug/L | | 119 | 70 - 130 |
| Chloroform | ND | | 625 | 585 | | ug/L | | 94 | 70 - 130 |
| Chloromethane | ND | | 625 | 452 | | ug/L | | 72 | 70 - 130 |
| cis-1,2-Dichloroethene | 2500 | | 625 | 2830 | E 4 | ug/L | | 51 | 70 - 130 |
| cis-1,3-Dichloropropene | ND | | 625 | 584 | | ug/L | | 93 | 70 - 130 |
| Dichlorobromomethane | ND | | 625 | 592 | | ug/L | | 95 | 70 - 130 |
| Dichlorodifluoromethane | ND | * | 625 | 453 | | ug/L | | 73 | 70 - 130 |
| Ethyl ether | ND | | 625 | 630 | | ug/L | | 101 | 70 - 130 |
| Ethylbenzene | ND | | 625 | 643 | | ug/L | | 103 | 70 - 130 |
| Ethylene Dibromide | ND | | 625 | 600 | | ug/L | | 96 | 70 - 130 |
| Hexachlorobutadiene | ND | | 625 | 624 | | ug/L | | 100 | 70 - 130 |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 480-54029-3 MS** **Client Sample ID: MW-268M-20140130-01**
**Matrix: Water** **Prep Type: Total/NA**
**Analysis Batch: 164338**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Isopropyl ether | ND | | 625 | 626 | | ug/L | | 100 | 70 - 130 |
| Isopropylbenzene | ND | | 625 | 621 | | ug/L | | 99 | 70 - 130 |
| Methyl tert-butyl ether | ND | | 625 | 609 | | ug/L | | 97 | 70 - 130 |
| Methylene Chloride | ND | | 625 | 589 | | ug/L | | 94 | 70 - 130 |
| m-Xylene & p-Xylene | ND | | 625 | 613 | | ug/L | | 98 | 70 - 130 |
| Naphthalene | ND | | 625 | 670 | | ug/L | | 107 | 70 - 130 |
| n-Butylbenzene | ND | | 625 | 652 | | ug/L | | 104 | 70 - 130 |
| N-Propylbenzene | ND | | 625 | 632 | | ug/L | | 101 | 70 - 130 |
| o-Xylene | ND | | 625 | 610 | | ug/L | | 98 | 70 - 130 |
| sec-Butylbenzene | ND | | 625 | 631 | | ug/L | | 101 | 70 - 130 |
| Styrene | ND | | 625 | 625 | | ug/L | | 100 | 70 - 130 |
| Tert-amyl methyl ether | ND | | 625 | 616 | | ug/L | | 99 | 70 - 130 |
| Tert-butyl ethyl ether | ND | | 625 | 605 | | ug/L | | 97 | 70 - 130 |
| tert-Butylbenzene | ND | | 625 | 675 | | ug/L | | 108 | 70 - 130 |
| Tetrachloroethene | 37 | | 625 | 675 | | ug/L | | 102 | 70 - 130 |
| Tetrahydrofuran | ND | * | 1250 | 1570 | | ug/L | | 126 | 70 - 130 |
| Toluene | ND | | 625 | 639 | | ug/L | | 102 | 70 - 130 |
| trans-1,2-Dichloroethene | ND | | 625 | 654 | | ug/L | | 105 | 70 - 130 |
| trans-1,3-Dichloropropene | ND | | 625 | 547 | | ug/L | | 88 | 70 - 130 |
| Trichloroethene | 1100 | | 625 | 1520 | | ug/L | | 70 | 70 - 130 |
| Trichlorofluoromethane | ND | | 625 | 574 | | ug/L | | 92 | 70 - 130 |
| Vinyl chloride | 210 | | 625 | 695 | | ug/L | | 78 | 70 - 130 |
| Dibromomethane | ND | | 625 | 633 | | ug/L | | 101 | 70 - 130 |

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *Toluene-d8 (Surr)* | *100* | | *70 - 130* |
| *1,2-Dichloroethane-d4 (Surr)* | *96* | | *70 - 130* |
| *4-Bromofluorobenzene (Surr)* | *107* | | *70 - 130* |

**Lab Sample ID: 480-54029-3 MSD** **Client Sample ID: MW-268M-20140130-01**
**Matrix: Water** **Prep Type: Total/NA**
**Analysis Batch: 164338**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 625 | 663 | | ug/L | | 106 | 70 - 130 | 2 | 20 |
| 1,1,1-Trichloroethane | ND | | 625 | 654 | | ug/L | | 105 | 70 - 130 | 3 | 20 |
| 1,1,2,2-Tetrachloroethane | ND | | 625 | 620 | | ug/L | | 99 | 70 - 130 | 1 | 20 |
| 1,1,2-Trichloroethane | ND | | 625 | 613 | | ug/L | | 98 | 70 - 130 | 0 | 20 |
| 1,1-Dichloroethane | ND | | 625 | 641 | | ug/L | | 101 | 70 - 130 | 0 | 20 |
| 1,1-Dichloroethene | ND | | 625 | 645 | | ug/L | | 103 | 70 - 130 | 5 | 20 |
| 1,1-Dichloropropene | ND | | 625 | 636 | | ug/L | | 102 | 70 - 130 | 2 | 20 |
| 1,2,3-Trichlorobenzene | ND | | 625 | 653 | | ug/L | | 105 | 70 - 130 | 2 | 20 |
| 1,2,3-Trichloropropane | ND | | 625 | 596 | | ug/L | | 95 | 70 - 130 | 4 | 20 |
| 1,2,4-Trichlorobenzene | ND | | 625 | 659 | | ug/L | | 105 | 70 - 130 | 2 | 20 |
| 1,2,4-Trimethylbenzene | ND | | 625 | 627 | | ug/L | | 100 | 70 - 130 | 2 | 20 |
| 1,2-Dibromo-3-Chloropropane | ND | | 625 | 602 | | ug/L | | 96 | 70 - 130 | 2 | 20 |
| 1,2-Dichlorobenzene | ND | | 625 | 655 | | ug/L | | 105 | 70 - 130 | 0 | 20 |
| 1,2-Dichloroethane | ND | | 625 | 614 | | ug/L | | 98 | 70 - 130 | 0 | 20 |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 480-54029-3 MSD**
**Matrix: Water**
**Analysis Batch: 164338**

**Client Sample ID: MW-268M-20140130-01**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichloropropane | ND | | 625 | 638 | | ug/L | | 102 | 70 - 130 | 1 | 20 |
| 1,3,5-Trimethylbenzene | ND | | 625 | 622 | | ug/L | | 99 | 70 - 130 | 0 | 20 |
| 1,3-Dichlorobenzene | ND | | 625 | 656 | | ug/L | | 105 | 70 - 130 | 1 | 20 |
| 1,3-Dichloropropane | ND | | 625 | 617 | | ug/L | | 99 | 70 - 130 | 1 | 20 |
| 1,4-Dichlorobenzene | ND | | 625 | 651 | | ug/L | | 104 | 70 - 130 | 0 | 20 |
| 1,4-Dioxane | ND | | 12500 | 13800 | | ug/L | | 110 | 70 - 130 | 6 | 20 |
| 2,2-Dichloropropane | ND | | 625 | 549 | | ug/L | | 88 | 70 - 130 | 5 | 20 |
| 2-Butanone (MEK) | ND | | 3130 | 5550 | F1 | ug/L | | 178 | 70 - 130 | 1 | 20 |
| 2-Chlorotoluene | ND | | 625 | 655 | | ug/L | | 105 | 70 - 130 | 0 | 20 |
| 2-Hexanone | ND | | 3130 | 3270 | | ug/L | | 105 | 70 - 130 | 1 | 20 |
| 4-Chlorotoluene | ND | | 625 | 603 | | ug/L | | 96 | 70 - 130 | 0 | 20 |
| 4-Isopropyltoluene | ND | | 625 | 670 | | ug/L | | 107 | 70 - 130 | 1 | 20 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 3130 | 3090 | | ug/L | | 99 | 70 - 130 | 1 | 20 |
| Acetone | ND | | 3130 | 3220 | | ug/L | | 103 | 70 - 130 | 0 | 20 |
| Benzene | ND | | 625 | 630 | | ug/L | | 101 | 70 - 130 | 2 | 20 |
| Bromobenzene | ND | | 625 | 649 | | ug/L | | 104 | 70 - 130 | 1 | 20 |
| Bromoform | ND | | 625 | 542 | | ug/L | | 87 | 70 - 130 | 4 | 20 |
| Bromomethane | ND | | 625 | 703 | | ug/L | | 112 | 70 - 130 | 11 | 20 |
| Carbon disulfide | ND | | 625 | 585 | | ug/L | | 94 | 70 - 130 | 4 | 20 |
| Carbon tetrachloride | ND | | 625 | 636 | | ug/L | | 102 | 70 - 130 | 4 | 20 |
| Chlorobenzene | ND | | 625 | 668 | | ug/L | | 107 | 70 - 130 | 2 | 20 |
| Chlorobromomethane | ND | | 625 | 657 | | ug/L | | 105 | 70 - 130 | 3 | 20 |
| Chlorodibromomethane | ND | | 613 | 581 | | ug/L | | 95 | 70 - 130 | 0 | 20 |
| Chloroethane | ND | | 625 | 692 | | ug/L | | 111 | 70 - 130 | 7 | 20 |
| Chloroform | ND | | 625 | 595 | | ug/L | | 95 | 70 - 130 | 2 | 20 |
| Chloromethane | ND | | 625 | 489 | | ug/L | | 78 | 70 - 130 | 8 | 20 |
| cis-1,2-Dichloroethene | 2500 | | 625 | 2840 | E 4 | ug/L | | 54 | 70 - 130 | 1 | 20 |
| cis-1,3-Dichloropropene | ND | | 625 | 586 | | ug/L | | 94 | 70 - 130 | 0 | 20 |
| Dichlorobromomethane | ND | | 625 | 600 | | ug/L | | 96 | 70 - 130 | 1 | 20 |
| Dichlorodifluoromethane | ND | * | 625 | 455 | | ug/L | | 73 | 70 - 130 | 0 | 20 |
| Ethyl ether | ND | | 625 | 634 | | ug/L | | 101 | 70 - 130 | 1 | 20 |
| Ethylbenzene | ND | | 625 | 656 | | ug/L | | 105 | 70 - 130 | 2 | 20 |
| Ethylene Dibromide | ND | | 625 | 603 | | ug/L | | 97 | 70 - 130 | 0 | 20 |
| Hexachlorobutadiene | ND | | 625 | 627 | | ug/L | | 100 | 70 - 130 | 0 | 20 |
| Isopropyl ether | ND | | 625 | 628 | | ug/L | | 101 | 70 - 130 | 0 | 20 |
| Isopropylbenzene | ND | | 625 | 624 | | ug/L | | 100 | 70 - 130 | 0 | 20 |
| Methyl tert-butyl ether | ND | | 625 | 604 | | ug/L | | 97 | 70 - 130 | 1 | 20 |
| Methylene Chloride | ND | | 625 | 599 | | ug/L | | 96 | 70 - 130 | 2 | 20 |
| m-Xylene & p-Xylene | ND | | 625 | 629 | | ug/L | | 101 | 70 - 130 | 3 | 20 |
| Naphthalene | ND | | 625 | 662 | | ug/L | | 106 | 70 - 130 | 1 | 20 |
| n-Butylbenzene | ND | | 625 | 657 | | ug/L | | 105 | 70 - 130 | 1 | 20 |
| N-Propylbenzene | ND | | 625 | 641 | | ug/L | | 103 | 70 - 130 | 1 | 20 |
| o-Xylene | ND | | 625 | 619 | | ug/L | | 99 | 70 - 130 | 1 | 20 |
| sec-Butylbenzene | ND | | 625 | 637 | | ug/L | | 102 | 70 - 130 | 1 | 20 |
| Styrene | ND | | 625 | 640 | | ug/L | | 102 | 70 - 130 | 2 | 20 |
| Tert-amyl methyl ether | ND | | 625 | 620 | | ug/L | | 99 | 70 - 130 | 1 | 20 |
| Tert-butyl ethyl ether | ND | | 625 | 601 | | ug/L | | 96 | 70 - 130 | 1 | 20 |
| tert-Butylbenzene | ND | | 625 | 672 | | ug/L | | 107 | 70 - 130 | 0 | 20 |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 480-54029-3 MSD**
**Matrix: Water**
**Analysis Batch: 164338**

**Client Sample ID: MW-268M-20140130-01**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 37 | | 625 | 669 | | ug/L | | 101 | 70 - 130 | 1 | 20 |
| Tetrahydrofuran | ND | * | 1250 | 1580 | | ug/L | | 126 | 70 - 130 | 1 | 20 |
| Toluene | ND | | 625 | 647 | | ug/L | | 104 | 70 - 130 | 1 | 20 |
| trans-1,2-Dichloroethene | ND | | 625 | 661 | | ug/L | | 106 | 70 - 130 | 1 | 20 |
| trans-1,3-Dichloropropene | ND | | 625 | 560 | | ug/L | | 90 | 70 - 130 | 2 | 20 |
| Trichloroethene | 1100 | | 625 | 1550 | | ug/L | | 74 | 70 - 130 | 2 | 20 |
| Trichlorofluoromethane | ND | | 625 | 613 | | ug/L | | 98 | 70 - 130 | 7 | 20 |
| Vinyl chloride | 210 | | 625 | 705 | | ug/L | | 80 | 70 - 130 | 1 | 20 |
| Dibromomethane | ND | | 625 | 635 | | ug/L | | 102 | 70 - 130 | 0 | 20 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *Toluene-d8 (Surr)* | *100* | | *70 - 130* |
| *1,2-Dichloroethane-d4 (Surr)* | *97* | | *70 - 130* |
| *4-Bromofluorobenzene (Surr)* | *106* | | *70 - 130* |

**Lab Sample ID: MB 480-164408/7**
**Matrix: Water**
**Analysis Batch: 164408**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 02/04/14 12:22 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 02/04/14 12:22 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 02/04/14 12:22 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 02/04/14 12:22 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 02/04/14 12:22 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 02/04/14 12:22 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 02/04/14 12:22 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 02/04/14 12:22 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 02/04/14 12:22 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 02/04/14 12:22 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 02/04/14 12:22 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 02/04/14 12:22 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 02/04/14 12:22 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 02/04/14 12:22 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 02/04/14 12:22 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 02/04/14 12:22 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 02/04/14 12:22 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 02/04/14 12:22 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 02/04/14 12:22 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 02/04/14 12:22 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 02/04/14 12:22 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 02/04/14 12:22 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 02/04/14 12:22 | 1 |
| 2-Hexanone | ND | | 10 | | ug/L | | | 02/04/14 12:22 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 02/04/14 12:22 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 02/04/14 12:22 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 02/04/14 12:22 | 1 |
| Acetone | ND | | 50 | | ug/L | | | 02/04/14 12:22 | 1 |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 480-164408/7**
**Matrix: Water**
**Analysis Batch: 164408**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | ND | | 1.0 | | ug/L | | | 02/04/14 12:22 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 02/04/14 12:22 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 02/04/14 12:22 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 02/04/14 12:22 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 02/04/14 12:22 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 02/04/14 12:22 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 02/04/14 12:22 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 02/04/14 12:22 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 02/04/14 12:22 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 02/04/14 12:22 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 02/04/14 12:22 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 02/04/14 12:22 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 02/04/14 12:22 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 02/04/14 12:22 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 02/04/14 12:22 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 02/04/14 12:22 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 02/04/14 12:22 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 02/04/14 12:22 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 02/04/14 12:22 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 02/04/14 12:22 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 02/04/14 12:22 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 02/04/14 12:22 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 02/04/14 12:22 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 02/04/14 12:22 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 02/04/14 12:22 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 02/04/14 12:22 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 02/04/14 12:22 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 02/04/14 12:22 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 02/04/14 12:22 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 02/04/14 12:22 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 02/04/14 12:22 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 02/04/14 12:22 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 02/04/14 12:22 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 02/04/14 12:22 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 02/04/14 12:22 | 1 |
| Tetrahydrofuran | ND | | 10 | | ug/L | | | 02/04/14 12:22 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 02/04/14 12:22 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 02/04/14 12:22 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 02/04/14 12:22 | 1 |
| Trichloroethene | ND | | 1.0 | | ug/L | | | 02/04/14 12:22 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 02/04/14 12:22 | 1 |
| Vinyl chloride | ND | | 1.0 | | ug/L | | | 02/04/14 12:22 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 02/04/14 12:22 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *102* | | *70 - 130* | | *02/04/14 12:22* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *97* | | *70 - 130* | | *02/04/14 12:22* | *1* |
| *4-Bromofluorobenzene (Surr)* | *103* | | *70 - 130* | | *02/04/14 12:22* | *1* |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 480-164408/4**
**Matrix: Water**
**Analysis Batch: 164408**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 25.0 | 27.8 | | ug/L | | 111 | 70 - 130 |
| 1,1,1-Trichloroethane | 25.0 | 26.2 | | ug/L | | 105 | 70 - 130 |
| 1,1,2,2-Tetrachloroethane | 25.0 | 25.5 | | ug/L | | 102 | 70 - 130 |
| 1,1,2-Trichloroethane | 25.0 | 25.8 | | ug/L | | 103 | 70 - 130 |
| 1,1-Dichloroethane | 25.0 | 27.1 | | ug/L | | 108 | 70 - 130 |
| 1,1-Dichloroethene | 25.0 | 26.7 | | ug/L | | 107 | 70 - 130 |
| 1,1-Dichloropropene | 25.0 | 27.0 | | ug/L | | 108 | 70 - 130 |
| 1,2,3-Trichlorobenzene | 25.0 | 28.1 | | ug/L | | 112 | 70 - 130 |
| 1,2,3-Trichloropropane | 25.0 | 25.4 | | ug/L | | 102 | 70 - 130 |
| 1,2,4-Trichlorobenzene | 25.0 | 28.7 | | ug/L | | 115 | 70 - 130 |
| 1,2,4-Trimethylbenzene | 25.0 | 25.9 | | ug/L | | 104 | 70 - 130 |
| 1,2-Dibromo-3-Chloropropane | 25.0 | 25.8 | | ug/L | | 103 | 70 - 130 |
| 1,2-Dichlorobenzene | 25.0 | 27.4 | | ug/L | | 109 | 70 - 130 |
| 1,2-Dichloroethane | 25.0 | 26.0 | | ug/L | | 104 | 70 - 130 |
| 1,2-Dichloropropane | 25.0 | 26.4 | | ug/L | | 106 | 70 - 130 |
| 1,3,5-Trimethylbenzene | 25.0 | 26.1 | | ug/L | | 104 | 70 - 130 |
| 1,3-Dichlorobenzene | 25.0 | 27.8 | | ug/L | | 111 | 70 - 130 |
| 1,3-Dichloropropane | 25.0 | 25.9 | | ug/L | | 104 | 70 - 130 |
| 1,4-Dichlorobenzene | 25.0 | 27.5 | | ug/L | | 110 | 70 - 130 |
| 1,4-Dioxane | 500 | 563 | | ug/L | | 113 | 70 - 130 |
| 2,2-Dichloropropane | 25.0 | 25.5 | | ug/L | | 102 | 70 - 130 |
| 2-Butanone (MEK) | 125 | 145 | | ug/L | | 116 | 70 - 130 |
| 2-Chlorotoluene | 25.0 | 27.4 | | ug/L | | 110 | 70 - 130 |
| 2-Hexanone | 125 | 138 | | ug/L | | 111 | 70 - 130 |
| 4-Chlorotoluene | 25.0 | 25.2 | | ug/L | | 101 | 70 - 130 |
| 4-Isopropyltoluene | 25.0 | 28.3 | | ug/L | | 113 | 70 - 130 |
| 4-Methyl-2-pentanone (MIBK) | 125 | 130 | | ug/L | | 104 | 70 - 130 |
| Acetone | 125 | 145 | | ug/L | | 116 | 70 - 130 |
| Benzene | 25.0 | 26.0 | | ug/L | | 104 | 70 - 130 |
| Bromobenzene | 25.0 | 27.0 | | ug/L | | 108 | 70 - 130 |
| Bromoform | 25.0 | 28.4 | | ug/L | | 114 | 70 - 130 |
| Bromomethane | 25.0 | 25.8 | | ug/L | | 103 | 70 - 130 |
| Carbon disulfide | 25.0 | 26.2 | | ug/L | | 105 | 70 - 130 |
| Carbon tetrachloride | 25.0 | 27.3 | | ug/L | | 109 | 70 - 130 |
| Chlorobenzene | 25.0 | 27.5 | | ug/L | | 110 | 70 - 130 |
| Chlorobromomethane | 25.0 | 27.3 | | ug/L | | 109 | 70 - 130 |
| Chlorodibromomethane | 24.5 | 27.7 | | ug/L | | 113 | 70 - 130 |
| Chloroethane | 25.0 | 25.7 | | ug/L | | 103 | 70 - 130 |
| Chloroform | 25.0 | 24.8 | | ug/L | | 99 | 70 - 130 |
| Chloromethane | 25.0 | 18.5 | | ug/L | | 74 | 70 - 130 |
| cis-1,2-Dichloroethene | 25.0 | 27.1 | | ug/L | | 108 | 70 - 130 |
| cis-1,3-Dichloropropene | 25.0 | 26.2 | | ug/L | | 105 | 70 - 130 |
| Dichlorobromomethane | 25.0 | 26.6 | | ug/L | | 106 | 70 - 130 |
| Dichlorodifluoromethane | 25.0 | 12.8 | * | ug/L | | 51 | 70 - 130 |
| Ethyl ether | 25.0 | 26.1 | | ug/L | | 105 | 70 - 130 |
| Ethylbenzene | 25.0 | 27.5 | | ug/L | | 110 | 70 - 130 |
| Ethylene Dibromide | 25.0 | 25.4 | | ug/L | | 102 | 70 - 130 |
| Hexachlorobutadiene | 25.0 | 27.5 | | ug/L | | 110 | 70 - 130 |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 480-164408/4**
**Matrix: Water**
**Analysis Batch: 164408**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Isopropyl ether | 25.0 | 25.3 | | ug/L | | 101 | 70 - 130 |
| Isopropylbenzene | 25.0 | 25.9 | | ug/L | | 104 | 70 - 130 |
| Methyl tert-butyl ether | 25.0 | 25.3 | | ug/L | | 101 | 70 - 130 |
| Methylene Chloride | 25.0 | 24.9 | | ug/L | | 99 | 70 - 130 |
| m-Xylene & p-Xylene | 25.0 | 26.4 | | ug/L | | 105 | 70 - 130 |
| Naphthalene | 25.0 | 27.7 | | ug/L | | 111 | 70 - 130 |
| n-Butylbenzene | 25.0 | 28.1 | | ug/L | | 113 | 70 - 130 |
| N-Propylbenzene | 25.0 | 26.8 | | ug/L | | 107 | 70 - 130 |
| o-Xylene | 25.0 | 26.3 | | ug/L | | 105 | 70 - 130 |
| sec-Butylbenzene | 25.0 | 26.7 | | ug/L | | 107 | 70 - 130 |
| Styrene | 25.0 | 27.0 | | ug/L | | 108 | 70 - 130 |
| Tert-amyl methyl ether | 25.0 | 25.1 | | ug/L | | 100 | 70 - 130 |
| Tert-butyl ethyl ether | 25.0 | 23.8 | | ug/L | | 95 | 70 - 130 |
| tert-Butylbenzene | 25.0 | 28.6 | | ug/L | | 115 | 70 - 130 |
| Tetrachloroethene | 25.0 | 27.7 | | ug/L | | 111 | 70 - 130 |
| Tetrahydrofuran | 50.0 | 67.2 | * | ug/L | | 134 | 70 - 130 |
| Toluene | 25.0 | 27.0 | | ug/L | | 108 | 70 - 130 |
| trans-1,2-Dichloroethene | 25.0 | 27.5 | | ug/L | | 110 | 70 - 130 |
| trans-1,3-Dichloropropene | 25.0 | 25.4 | | ug/L | | 102 | 70 - 130 |
| Trichloroethene | 25.0 | 27.4 | | ug/L | | 109 | 70 - 130 |
| Trichlorofluoromethane | 25.0 | 23.3 | | ug/L | | 93 | 70 - 130 |
| Vinyl chloride | 25.0 | 20.0 | | ug/L | | 80 | 70 - 130 |
| Dibromomethane | 25.0 | 26.1 | | ug/L | | 105 | 70 - 130 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Toluene-d8 (Surr)* | *102* | | *70 - 130* |
| *1,2-Dichloroethane-d4 (Surr)* | *96* | | *70 - 130* |
| *4-Bromofluorobenzene (Surr)* | *109* | | *70 - 130* |

**Lab Sample ID: LCSD 480-164408/5**
**Matrix: Water**
**Analysis Batch: 164408**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 25.0 | 27.0 | | ug/L | | 108 | 70 - 130 | 3 | 20 |
| 1,1,1-Trichloroethane | 25.0 | 26.1 | | ug/L | | 105 | 70 - 130 | 0 | 20 |
| 1,1,2,2-Tetrachloroethane | 25.0 | 25.2 | | ug/L | | 101 | 70 - 130 | 1 | 20 |
| 1,1,2-Trichloroethane | 25.0 | 24.6 | | ug/L | | 98 | 70 - 130 | 5 | 20 |
| 1,1-Dichloroethane | 25.0 | 26.6 | | ug/L | | 106 | 70 - 130 | 2 | 20 |
| 1,1-Dichloroethene | 25.0 | 25.8 | | ug/L | | 103 | 70 - 130 | 3 | 20 |
| 1,1-Dichloropropene | 25.0 | 26.4 | | ug/L | | 106 | 70 - 130 | 2 | 20 |
| 1,2,3-Trichlorobenzene | 25.0 | 27.0 | | ug/L | | 108 | 70 - 130 | 4 | 20 |
| 1,2,3-Trichloropropane | 25.0 | 24.1 | | ug/L | | 96 | 70 - 130 | 5 | 20 |
| 1,2,4-Trichlorobenzene | 25.0 | 27.2 | | ug/L | | 109 | 70 - 130 | 5 | 20 |
| 1,2,4-Trimethylbenzene | 25.0 | 25.1 | | ug/L | | 100 | 70 - 130 | 3 | 20 |
| 1,2-Dibromo-3-Chloropropane | 25.0 | 25.3 | | ug/L | | 101 | 70 - 130 | 2 | 20 |
| 1,2-Dichlorobenzene | 25.0 | 26.6 | | ug/L | | 107 | 70 - 130 | 3 | 20 |
| 1,2-Dichloroethane | 25.0 | 25.6 | | ug/L | | 102 | 70 - 130 | 2 | 20 |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 480-164408/5**
**Matrix: Water**
**Analysis Batch: 164408**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichloropropane | 25.0 | 26.3 | | ug/L | | 105 | 70 - 130 | 0 | 20 |
| 1,3,5-Trimethylbenzene | 25.0 | 25.2 | | ug/L | | 101 | 70 - 130 | 4 | 20 |
| 1,3-Dichlorobenzene | 25.0 | 26.7 | | ug/L | | 107 | 70 - 130 | 4 | 20 |
| 1,3-Dichloropropane | 25.0 | 25.6 | | ug/L | | 102 | 70 - 130 | 1 | 20 |
| 1,4-Dichlorobenzene | 25.0 | 26.4 | | ug/L | | 106 | 70 - 130 | 4 | 20 |
| 1,4-Dioxane | 500 | 542 | | ug/L | | 108 | 70 - 130 | 4 | 20 |
| 2,2-Dichloropropane | 25.0 | 26.3 | | ug/L | | 105 | 70 - 130 | 3 | 20 |
| 2-Butanone (MEK) | 125 | 147 | | ug/L | | 117 | 70 - 130 | 1 | 20 |
| 2-Chlorotoluene | 25.0 | 26.6 | | ug/L | | 106 | 70 - 130 | 3 | 20 |
| 2-Hexanone | 125 | 134 | | ug/L | | 107 | 70 - 130 | 3 | 20 |
| 4-Chlorotoluene | 25.0 | 24.3 | | ug/L | | 97 | 70 - 130 | 4 | 20 |
| 4-Isopropyltoluene | 25.0 | 27.0 | | ug/L | | 108 | 70 - 130 | 5 | 20 |
| 4-Methyl-2-pentanone (MIBK) | 125 | 130 | | ug/L | | 104 | 70 - 130 | 0 | 20 |
| Acetone | 125 | 142 | | ug/L | | 114 | 70 - 130 | 2 | 20 |
| Benzene | 25.0 | 25.8 | | ug/L | | 103 | 70 - 130 | 1 | 20 |
| Bromobenzene | 25.0 | 26.9 | | ug/L | | 108 | 70 - 130 | 0 | 20 |
| Bromoform | 25.0 | 27.8 | | ug/L | | 111 | 70 - 130 | 2 | 20 |
| Bromomethane | 25.0 | 25.4 | | ug/L | | 102 | 70 - 130 | 1 | 20 |
| Carbon disulfide | 25.0 | 25.9 | | ug/L | | 104 | 70 - 130 | 1 | 20 |
| Carbon tetrachloride | 25.0 | 26.9 | | ug/L | | 108 | 70 - 130 | 1 | 20 |
| Chlorobenzene | 25.0 | 26.9 | | ug/L | | 108 | 70 - 130 | 2 | 20 |
| Chlorobromomethane | 25.0 | 26.9 | | ug/L | | 107 | 70 - 130 | 2 | 20 |
| Chlorodibromomethane | 24.5 | 27.0 | | ug/L | | 110 | 70 - 130 | 3 | 20 |
| Chloroethane | 25.0 | 25.5 | | ug/L | | 102 | 70 - 130 | 1 | 20 |
| Chloroform | 25.0 | 24.9 | | ug/L | | 100 | 70 - 130 | 1 | 20 |
| Chloromethane | 25.0 | 17.7 | | ug/L | | 71 | 70 - 130 | 4 | 20 |
| cis-1,2-Dichloroethene | 25.0 | 26.3 | | ug/L | | 105 | 70 - 130 | 3 | 20 |
| cis-1,3-Dichloropropene | 25.0 | 26.4 | | ug/L | | 106 | 70 - 130 | 1 | 20 |
| Dichlorobromomethane | 25.0 | 25.7 | | ug/L | | 103 | 70 - 130 | 3 | 20 |
| Dichlorodifluoromethane | 25.0 | 12.4 | * | ug/L | | 50 | 70 - 130 | 3 | 20 |
| Ethyl ether | 25.0 | 26.2 | | ug/L | | 105 | 70 - 130 | 0 | 20 |
| Ethylbenzene | 25.0 | 26.8 | | ug/L | | 107 | 70 - 130 | 3 | 20 |
| Ethylene Dibromide | 25.0 | 25.1 | | ug/L | | 100 | 70 - 130 | 1 | 20 |
| Hexachlorobutadiene | 25.0 | 25.6 | | ug/L | | 102 | 70 - 130 | 7 | 20 |
| Isopropyl ether | 25.0 | 24.8 | | ug/L | | 99 | 70 - 130 | 2 | 20 |
| Isopropylbenzene | 25.0 | 25.2 | | ug/L | | 101 | 70 - 130 | 3 | 20 |
| Methyl tert-butyl ether | 25.0 | 25.1 | | ug/L | | 101 | 70 - 130 | 1 | 20 |
| Methylene Chloride | 25.0 | 25.1 | | ug/L | | 100 | 70 - 130 | 1 | 20 |
| m-Xylene & p-Xylene | 25.0 | 25.6 | | ug/L | | 102 | 70 - 130 | 3 | 20 |
| Naphthalene | 25.0 | 27.4 | | ug/L | | 110 | 70 - 130 | 1 | 20 |
| n-Butylbenzene | 25.0 | 27.0 | | ug/L | | 108 | 70 - 130 | 4 | 20 |
| N-Propylbenzene | 25.0 | 25.8 | | ug/L | | 103 | 70 - 130 | 4 | 20 |
| o-Xylene | 25.0 | 25.8 | | ug/L | | 103 | 70 - 130 | 2 | 20 |
| sec-Butylbenzene | 25.0 | 25.4 | | ug/L | | 102 | 70 - 130 | 5 | 20 |
| Styrene | 25.0 | 26.1 | | ug/L | | 104 | 70 - 130 | 3 | 20 |
| Tert-amyl methyl ether | 25.0 | 25.2 | | ug/L | | 101 | 70 - 130 | 0 | 20 |
| Tert-butyl ethyl ether | 25.0 | 23.9 | | ug/L | | 96 | 70 - 130 | 1 | 20 |
| tert-Butylbenzene | 25.0 | 26.5 | | ug/L | | 106 | 70 - 130 | 8 | 20 |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 480-164408/5**
**Matrix: Water**
**Analysis Batch: 164408**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | | | 25.0 | 27.2 | | ug/L | | 109 | 70 - 130 | 2 | 20 |
| Tetrahydrofuran | | | 50.0 | 67.2 | * | ug/L | | 134 | 70 - 130 | 0 | 20 |
| Toluene | | | 25.0 | 26.0 | | ug/L | | 104 | 70 - 130 | 4 | 20 |
| trans-1,2-Dichloroethene | | | 25.0 | 27.1 | | ug/L | | 108 | 70 - 130 | 2 | 20 |
| trans-1,3-Dichloropropene | | | 25.0 | 25.5 | | ug/L | | 102 | 70 - 130 | 0 | 20 |
| Trichloroethene | | | 25.0 | 27.0 | | ug/L | | 108 | 70 - 130 | 1 | 20 |
| Trichlorofluoromethane | | | 25.0 | 22.2 | | ug/L | | 89 | 70 - 130 | 5 | 20 |
| Vinyl chloride | | | 25.0 | 18.9 | | ug/L | | 76 | 70 - 130 | 5 | 20 |
| Dibromomethane | | | 25.0 | 26.3 | | ug/L | | 105 | 70 - 130 | 1 | 20 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *Toluene-d8 (Surr)* | *101* | | *70 - 130* |
| *1,2-Dichloroethane-d4 (Surr)* | *96* | | *70 - 130* |
| *4-Bromofluorobenzene (Surr)* | *109* | | *70 - 130* |

**Lab Sample ID: MB 480-164532/7**
**Matrix: Water**
**Analysis Batch: 164532**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 02/04/14 23:41 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 02/04/14 23:41 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 02/04/14 23:41 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 02/04/14 23:41 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 02/04/14 23:41 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 02/04/14 23:41 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 02/04/14 23:41 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 02/04/14 23:41 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 02/04/14 23:41 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 02/04/14 23:41 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 02/04/14 23:41 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 02/04/14 23:41 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 02/04/14 23:41 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 02/04/14 23:41 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 02/04/14 23:41 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 02/04/14 23:41 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 02/04/14 23:41 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 02/04/14 23:41 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 02/04/14 23:41 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 02/04/14 23:41 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 02/04/14 23:41 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 02/04/14 23:41 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 02/04/14 23:41 | 1 |
| 2-Hexanone | ND | | 10 | | ug/L | | | 02/04/14 23:41 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 02/04/14 23:41 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 02/04/14 23:41 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 02/04/14 23:41 | 1 |
| Acetone | ND | | 50 | | ug/L | | | 02/04/14 23:41 | 1 |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 480-164532/7**
**Matrix: Water**
**Analysis Batch: 164532**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | ND | | 1.0 | | ug/L | | | 02/04/14 23:41 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 02/04/14 23:41 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 02/04/14 23:41 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 02/04/14 23:41 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 02/04/14 23:41 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 02/04/14 23:41 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 02/04/14 23:41 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 02/04/14 23:41 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 02/04/14 23:41 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 02/04/14 23:41 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 02/04/14 23:41 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 02/04/14 23:41 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 02/04/14 23:41 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 02/04/14 23:41 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 02/04/14 23:41 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 02/04/14 23:41 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 02/04/14 23:41 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 02/04/14 23:41 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 02/04/14 23:41 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 02/04/14 23:41 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 02/04/14 23:41 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 02/04/14 23:41 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 02/04/14 23:41 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 02/04/14 23:41 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 02/04/14 23:41 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 02/04/14 23:41 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 02/04/14 23:41 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 02/04/14 23:41 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 02/04/14 23:41 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 02/04/14 23:41 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 02/04/14 23:41 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 02/04/14 23:41 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 02/04/14 23:41 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 02/04/14 23:41 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 02/04/14 23:41 | 1 |
| Tetrahydrofuran | ND | | 10 | | ug/L | | | 02/04/14 23:41 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 02/04/14 23:41 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 02/04/14 23:41 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 02/04/14 23:41 | 1 |
| Trichloroethene | ND | | 1.0 | | ug/L | | | 02/04/14 23:41 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 02/04/14 23:41 | 1 |
| Vinyl chloride | ND | | 1.0 | | ug/L | | | 02/04/14 23:41 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 02/04/14 23:41 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *104* | | *70 - 130* | | *02/04/14 23:41* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *100* | | *70 - 130* | | *02/04/14 23:41* | *1* |
| *4-Bromofluorobenzene (Surr)* | *105* | | *70 - 130* | | *02/04/14 23:41* | *1* |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 480-164532/4**
**Matrix: Water**
**Analysis Batch: 164532**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 25.0 | 26.5 | | ug/L | | 106 | 70 - 130 |
| 1,1,1-Trichloroethane | 25.0 | 26.5 | | ug/L | | 106 | 70 - 130 |
| 1,1,2,2-Tetrachloroethane | 25.0 | 25.0 | | ug/L | | 100 | 70 - 130 |
| 1,1,2-Trichloroethane | 25.0 | 24.2 | | ug/L | | 97 | 70 - 130 |
| 1,1-Dichloroethane | 25.0 | 26.3 | | ug/L | | 105 | 70 - 130 |
| 1,1-Dichloroethene | 25.0 | 26.3 | | ug/L | | 105 | 70 - 130 |
| 1,1-Dichloropropene | 25.0 | 26.5 | | ug/L | | 106 | 70 - 130 |
| 1,2,3-Trichlorobenzene | 25.0 | 25.7 | | ug/L | | 103 | 70 - 130 |
| 1,2,3-Trichloropropane | 25.0 | 24.5 | | ug/L | | 98 | 70 - 130 |
| 1,2,4-Trichlorobenzene | 25.0 | 26.1 | | ug/L | | 105 | 70 - 130 |
| 1,2,4-Trimethylbenzene | 25.0 | 24.8 | | ug/L | | 99 | 70 - 130 |
| 1,2-Dibromo-3-Chloropropane | 25.0 | 24.0 | | ug/L | | 96 | 70 - 130 |
| 1,2-Dichlorobenzene | 25.0 | 26.4 | | ug/L | | 106 | 70 - 130 |
| 1,2-Dichloroethane | 25.0 | 24.8 | | ug/L | | 99 | 70 - 130 |
| 1,2-Dichloropropane | 25.0 | 26.0 | | ug/L | | 104 | 70 - 130 |
| 1,3,5-Trimethylbenzene | 25.0 | 24.9 | | ug/L | | 100 | 70 - 130 |
| 1,3-Dichlorobenzene | 25.0 | 26.3 | | ug/L | | 105 | 70 - 130 |
| 1,3-Dichloropropane | 25.0 | 23.9 | | ug/L | | 96 | 70 - 130 |
| 1,4-Dichlorobenzene | 25.0 | 26.5 | | ug/L | | 106 | 70 - 130 |
| 1,4-Dioxane | 500 | 456 | | ug/L | | 91 | 70 - 130 |
| 2,2-Dichloropropane | 25.0 | 25.1 | | ug/L | | 100 | 70 - 130 |
| 2-Butanone (MEK) | 125 | 139 | | ug/L | | 111 | 70 - 130 |
| 2-Chlorotoluene | 25.0 | 26.5 | | ug/L | | 106 | 70 - 130 |
| 2-Hexanone | 125 | 126 | | ug/L | | 101 | 70 - 130 |
| 4-Chlorotoluene | 25.0 | 24.3 | | ug/L | | 97 | 70 - 130 |
| 4-Isopropyltoluene | 25.0 | 27.0 | | ug/L | | 108 | 70 - 130 |
| 4-Methyl-2-pentanone (MIBK) | 125 | 121 | | ug/L | | 97 | 70 - 130 |
| Acetone | 125 | 138 | | ug/L | | 111 | 70 - 130 |
| Benzene | 25.0 | 25.7 | | ug/L | | 103 | 70 - 130 |
| Bromobenzene | 25.0 | 26.1 | | ug/L | | 104 | 70 - 130 |
| Bromoform | 25.0 | 25.7 | | ug/L | | 103 | 70 - 130 |
| Bromomethane | 25.0 | 29.2 | | ug/L | | 117 | 70 - 130 |
| Carbon disulfide | 25.0 | 25.9 | | ug/L | | 104 | 70 - 130 |
| Carbon tetrachloride | 25.0 | 26.7 | | ug/L | | 107 | 70 - 130 |
| Chlorobenzene | 25.0 | 26.2 | | ug/L | | 105 | 70 - 130 |
| Chlorobromomethane | 25.0 | 26.8 | | ug/L | | 107 | 70 - 130 |
| Chlorodibromomethane | 24.5 | 25.9 | | ug/L | | 106 | 70 - 130 |
| Chloroethane | 25.0 | 29.6 | | ug/L | | 118 | 70 - 130 |
| Chloroform | 25.0 | 24.4 | | ug/L | | 98 | 70 - 130 |
| Chloromethane | 25.0 | 26.3 | | ug/L | | 105 | 70 - 130 |
| cis-1,2-Dichloroethene | 25.0 | 26.8 | | ug/L | | 107 | 70 - 130 |
| cis-1,3-Dichloropropene | 25.0 | 26.0 | | ug/L | | 104 | 70 - 130 |
| Dichlorobromomethane | 25.0 | 25.4 | | ug/L | | 102 | 70 - 130 |
| Dichlorodifluoromethane | 25.0 | 30.0 | | ug/L | | 120 | 70 - 130 |
| Ethyl ether | 25.0 | 25.9 | | ug/L | | 103 | 70 - 130 |
| Ethylbenzene | 25.0 | 26.1 | | ug/L | | 104 | 70 - 130 |
| Ethylene Dibromide | 25.0 | 24.2 | | ug/L | | 97 | 70 - 130 |
| Hexachlorobutadiene | 25.0 | 25.3 | | ug/L | | 101 | 70 - 130 |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 480-164532/4**
**Matrix: Water**
**Analysis Batch: 164532**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Isopropyl ether | 25.0 | 25.9 | | ug/L | | 104 | 70 - 130 |
| Isopropylbenzene | 25.0 | 25.1 | | ug/L | | 100 | 70 - 130 |
| Methyl tert-butyl ether | 25.0 | 24.8 | | ug/L | | 99 | 70 - 130 |
| Methylene Chloride | 25.0 | 24.7 | | ug/L | | 99 | 70 - 130 |
| m-Xylene & p-Xylene | 25.0 | 25.0 | | ug/L | | 100 | 70 - 130 |
| Naphthalene | 25.0 | 25.7 | | ug/L | | 103 | 70 - 130 |
| n-Butylbenzene | 25.0 | 26.7 | | ug/L | | 107 | 70 - 130 |
| N-Propylbenzene | 25.0 | 26.2 | | ug/L | | 105 | 70 - 130 |
| o-Xylene | 25.0 | 24.7 | | ug/L | | 99 | 70 - 130 |
| sec-Butylbenzene | 25.0 | 25.5 | | ug/L | | 102 | 70 - 130 |
| Styrene | 25.0 | 25.0 | | ug/L | | 100 | 70 - 130 |
| Tert-amyl methyl ether | 25.0 | 24.9 | | ug/L | | 100 | 70 - 130 |
| Tert-butyl ethyl ether | 25.0 | 24.2 | | ug/L | | 97 | 70 - 130 |
| tert-Butylbenzene | 25.0 | 27.7 | | ug/L | | 111 | 70 - 130 |
| Tetrachloroethene | 25.0 | 26.8 | | ug/L | | 107 | 70 - 130 |
| Tetrahydrofuran | 50.0 | 63.7 | | ug/L | | 127 | 70 - 130 |
| Toluene | 25.0 | 25.7 | | ug/L | | 103 | 70 - 130 |
| trans-1,2-Dichloroethene | 25.0 | 26.5 | | ug/L | | 106 | 70 - 130 |
| trans-1,3-Dichloropropene | 25.0 | 24.0 | | ug/L | | 96 | 70 - 130 |
| Trichloroethene | 25.0 | 27.1 | | ug/L | | 109 | 70 - 130 |
| Trichlorofluoromethane | 25.0 | 27.7 | | ug/L | | 111 | 70 - 130 |
| Vinyl chloride | 25.0 | 27.1 | | ug/L | | 108 | 70 - 130 |
| Dibromomethane | 25.0 | 25.4 | | ug/L | | 102 | 70 - 130 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Toluene-d8 (Surr)* | *100* | | *70 - 130* |
| *1,2-Dichloroethane-d4 (Surr)* | *99* | | *70 - 130* |
| *4-Bromofluorobenzene (Surr)* | *107* | | *70 - 130* |

**Lab Sample ID: LCSD 480-164532/5**
**Matrix: Water**
**Analysis Batch: 164532**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 25.0 | 26.0 | | ug/L | | 104 | 70 - 130 | 2 | 20 |
| 1,1,1-Trichloroethane | 25.0 | 25.2 | | ug/L | | 101 | 70 - 130 | 5 | 20 |
| 1,1,2,2-Tetrachloroethane | 25.0 | 24.7 | | ug/L | | 99 | 70 - 130 | 1 | 20 |
| 1,1,2-Trichloroethane | 25.0 | 23.9 | | ug/L | | 96 | 70 - 130 | 1 | 20 |
| 1,1-Dichloroethane | 25.0 | 24.8 | | ug/L | | 99 | 70 - 130 | 6 | 20 |
| 1,1-Dichloroethene | 25.0 | 24.7 | | ug/L | | 99 | 70 - 130 | 7 | 20 |
| 1,1-Dichloropropene | 25.0 | 25.3 | | ug/L | | 101 | 70 - 130 | 4 | 20 |
| 1,2,3-Trichlorobenzene | 25.0 | 26.3 | | ug/L | | 105 | 70 - 130 | 2 | 20 |
| 1,2,3-Trichloropropane | 25.0 | 24.2 | | ug/L | | 97 | 70 - 130 | 1 | 20 |
| 1,2,4-Trichlorobenzene | 25.0 | 26.8 | | ug/L | | 107 | 70 - 130 | 3 | 20 |
| 1,2,4-Trimethylbenzene | 25.0 | 25.2 | | ug/L | | 101 | 70 - 130 | 2 | 20 |
| 1,2-Dibromo-3-Chloropropane | 25.0 | 24.4 | | ug/L | | 98 | 70 - 130 | 2 | 20 |
| 1,2-Dichlorobenzene | 25.0 | 26.6 | | ug/L | | 106 | 70 - 130 | 1 | 20 |
| 1,2-Dichloroethane | 25.0 | 24.4 | | ug/L | | 98 | 70 - 130 | 2 | 20 |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 480-164532/5**
**Matrix: Water**
**Analysis Batch: 164532**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichloropropane | 25.0 | 25.4 | | ug/L | | 102 | 70 - 130 | 3 | 20 |
| 1,3,5-Trimethylbenzene | 25.0 | 25.0 | | ug/L | | 100 | 70 - 130 | 0 | 20 |
| 1,3-Dichlorobenzene | 25.0 | 26.3 | | ug/L | | 105 | 70 - 130 | 0 | 20 |
| 1,3-Dichloropropane | 25.0 | 24.3 | | ug/L | | 97 | 70 - 130 | 1 | 20 |
| 1,4-Dichlorobenzene | 25.0 | 26.6 | | ug/L | | 106 | 70 - 130 | 0 | 20 |
| 1,4-Dioxane | 500 | 480 | | ug/L | | 96 | 70 - 130 | 5 | 20 |
| 2,2-Dichloropropane | 25.0 | 24.4 | | ug/L | | 98 | 70 - 130 | 3 | 20 |
| 2-Butanone (MEK) | 125 | 133 | | ug/L | | 107 | 70 - 130 | 4 | 20 |
| 2-Chlorotoluene | 25.0 | 26.0 | | ug/L | | 104 | 70 - 130 | 2 | 20 |
| 2-Hexanone | 125 | 129 | | ug/L | | 103 | 70 - 130 | 2 | 20 |
| 4-Chlorotoluene | 25.0 | 24.5 | | ug/L | | 98 | 70 - 130 | 1 | 20 |
| 4-Isopropyltoluene | 25.0 | 26.7 | | ug/L | | 107 | 70 - 130 | 1 | 20 |
| 4-Methyl-2-pentanone (MIBK) | 125 | 122 | | ug/L | | 98 | 70 - 130 | 1 | 20 |
| Acetone | 125 | 135 | | ug/L | | 108 | 70 - 130 | 2 | 20 |
| Benzene | 25.0 | 24.8 | | ug/L | | 99 | 70 - 130 | 4 | 20 |
| Bromobenzene | 25.0 | 26.4 | | ug/L | | 106 | 70 - 130 | 1 | 20 |
| Bromoform | 25.0 | 25.7 | | ug/L | | 103 | 70 - 130 | 0 | 20 |
| Bromomethane | 25.0 | 31.0 | | ug/L | | 124 | 70 - 130 | 6 | 20 |
| Carbon disulfide | 25.0 | 24.9 | | ug/L | | 100 | 70 - 130 | 4 | 20 |
| Carbon tetrachloride | 25.0 | 26.1 | | ug/L | | 104 | 70 - 130 | 2 | 20 |
| Chlorobenzene | 25.0 | 26.1 | | ug/L | | 104 | 70 - 130 | 0 | 20 |
| Chlorobromomethane | 25.0 | 26.0 | | ug/L | | 104 | 70 - 130 | 3 | 20 |
| Chlorodibromomethane | 24.5 | 25.4 | | ug/L | | 104 | 70 - 130 | 2 | 20 |
| Chloroethane | 25.0 | 29.5 | | ug/L | | 118 | 70 - 130 | 0 | 20 |
| Chloroform | 25.0 | 23.5 | | ug/L | | 94 | 70 - 130 | 4 | 20 |
| Chloromethane | 25.0 | 24.8 | | ug/L | | 99 | 70 - 130 | 6 | 20 |
| cis-1,2-Dichloroethene | 25.0 | 26.3 | | ug/L | | 105 | 70 - 130 | 2 | 20 |
| cis-1,3-Dichloropropene | 25.0 | 25.4 | | ug/L | | 102 | 70 - 130 | 2 | 20 |
| Dichlorobromomethane | 25.0 | 24.7 | | ug/L | | 99 | 70 - 130 | 3 | 20 |
| Dichlorodifluoromethane | 25.0 | 29.0 | | ug/L | | 116 | 70 - 130 | 3 | 20 |
| Ethyl ether | 25.0 | 25.3 | | ug/L | | 101 | 70 - 130 | 2 | 20 |
| Ethylbenzene | 25.0 | 25.9 | | ug/L | | 104 | 70 - 130 | 1 | 20 |
| Ethylene Dibromide | 25.0 | 24.1 | | ug/L | | 96 | 70 - 130 | 0 | 20 |
| Hexachlorobutadiene | 25.0 | 25.1 | | ug/L | | 100 | 70 - 130 | 1 | 20 |
| Isopropyl ether | 25.0 | 25.3 | | ug/L | | 101 | 70 - 130 | 3 | 20 |
| Isopropylbenzene | 25.0 | 25.1 | | ug/L | | 101 | 70 - 130 | 0 | 20 |
| Methyl tert-butyl ether | 25.0 | 24.4 | | ug/L | | 98 | 70 - 130 | 1 | 20 |
| Methylene Chloride | 25.0 | 23.9 | | ug/L | | 95 | 70 - 130 | 4 | 20 |
| m-Xylene & p-Xylene | 25.0 | 24.6 | | ug/L | | 98 | 70 - 130 | 1 | 20 |
| Naphthalene | 25.0 | 26.3 | | ug/L | | 105 | 70 - 130 | 2 | 20 |
| n-Butylbenzene | 25.0 | 26.7 | | ug/L | | 107 | 70 - 130 | 0 | 20 |
| N-Propylbenzene | 25.0 | 25.8 | | ug/L | | 103 | 70 - 130 | 2 | 20 |
| o-Xylene | 25.0 | 24.8 | | ug/L | | 99 | 70 - 130 | 0 | 20 |
| sec-Butylbenzene | 25.0 | 25.5 | | ug/L | | 102 | 70 - 130 | 0 | 20 |
| Styrene | 25.0 | 25.4 | | ug/L | | 102 | 70 - 130 | 1 | 20 |
| Tert-amyl methyl ether | 25.0 | 24.7 | | ug/L | | 99 | 70 - 130 | 1 | 20 |
| Tert-butyl ethyl ether | 25.0 | 23.9 | | ug/L | | 95 | 70 - 130 | 1 | 20 |
| tert-Butylbenzene | 25.0 | 27.3 | | ug/L | | 109 | 70 - 130 | 2 | 20 |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 480-164532/5**
**Matrix: Water**
**Analysis Batch: 164532**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | | | 25.0 | 26.6 | | ug/L | | 106 | 70 - 130 | 1 | 20 |
| Tetrahydrofuran | | | 50.0 | 63.4 | | ug/L | | 127 | 70 - 130 | 0 | 20 |
| Toluene | | | 25.0 | 25.4 | | ug/L | | 102 | 70 - 130 | 1 | 20 |
| trans-1,2-Dichloroethene | | | 25.0 | 26.4 | | ug/L | | 106 | 70 - 130 | 0 | 20 |
| trans-1,3-Dichloropropene | | | 25.0 | 24.1 | | ug/L | | 96 | 70 - 130 | 0 | 20 |
| Trichloroethene | | | 25.0 | 26.1 | | ug/L | | 104 | 70 - 130 | 4 | 20 |
| Trichlorofluoromethane | | | 25.0 | 27.3 | | ug/L | | 109 | 70 - 130 | 1 | 20 |
| Vinyl chloride | | | 25.0 | 26.0 | | ug/L | | 104 | 70 - 130 | 4 | 20 |
| Dibromomethane | | | 25.0 | 25.4 | | ug/L | | 101 | 70 - 130 | 0 | 20 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *Toluene-d8 (Surr)* | *102* | | *70 - 130* |
| *1,2-Dichloroethane-d4 (Surr)* | *98* | | *70 - 130* |
| *4-Bromofluorobenzene (Surr)* | *106* | | *70 - 130* |

# QC Association Summary

Client: Innovative Engineering Solutions, Inc
Project/Site: IDS Wayland

TestAmerica Job ID: 480-54029-1

## GC/MS VOA

### Analysis Batch: 164338

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 480-54029-1 | MW-267S-20140130-01 | Total/NA | Water | 8260C | |
| 480-54029-2 | MW-267M-20140130-01 | Total/NA | Water | 8260C | |
| 480-54029-3 | MW-268M-20140130-01 | Total/NA | Water | 8260C | |
| 480-54029-3 MS | MW-268M-20140130-01 | Total/NA | Water | 8260C | |
| 480-54029-3 MSD | MW-268M-20140130-01 | Total/NA | Water | 8260C | |
| 480-54029-4 | MW-561-20140130-01 | Total/NA | Water | 8260C | |
| 480-54029-6 | REW-6-20140130-01 | Total/NA | Water | 8260C | |
| 480-54029-7 | REW-7-20140130-01 | Total/NA | Water | 8260C | |
| 480-54029-9 | REW-9-20140130-01 | Total/NA | Water | 8260C | |
| 480-54029-10 | REW-12-20140130-01 | Total/NA | Water | 8260C | |
| LCS 480-164338/4 | Lab Control Sample | Total/NA | Water | 8260C | |
| LCSD 480-164338/5 | Lab Control Sample Dup | Total/NA | Water | 8260C | |
| MB 480-164338/7 | Method Blank | Total/NA | Water | 8260C | |

### Analysis Batch: 164408

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 480-54029-3 - DL | MW-268M-20140130-01 | Total/NA | Water | 8260C | |
| 480-54029-4 - DL | MW-561-20140130-01 | Total/NA | Water | 8260C | |
| 480-54029-8 | REW-8-20140130-01 | Total/NA | Water | 8260C | |
| 480-54029-11 | DupX-20140130-01 | Total/NA | Water | 8260C | |
| 480-54029-12 | Trip Blank | Total/NA | Water | 8260C | |
| LCS 480-164408/4 | Lab Control Sample | Total/NA | Water | 8260C | |
| LCSD 480-164408/5 | Lab Control Sample Dup | Total/NA | Water | 8260C | |
| MB 480-164408/7 | Method Blank | Total/NA | Water | 8260C | |

### Analysis Batch: 164532

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 480-54029-5 | MW-553-20140130-01 | Total/NA | Water | 8260C | |
| LCS 480-164532/4 | Lab Control Sample | Total/NA | Water | 8260C | |
| LCSD 480-164532/5 | Lab Control Sample Dup | Total/NA | Water | 8260C | |
| MB 480-164532/7 | Method Blank | Total/NA | Water | 8260C | |

# Lab Chronicle

Client: Innovative Engineering Solutions, Inc
Project/Site: IDS Wayland

TestAmerica Job ID: 480-54029-1

## Client Sample ID: MW-267S-20140130-01 — Lab Sample ID: 480-54029-1

**Date Collected: 01/30/14 12:50** — **Matrix: Water**
**Date Received: 01/31/14 00:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 5 | 164338 | 02/04/14 04:10 | LCH | TAL BUF |

## Client Sample ID: MW-267M-20140130-01 — Lab Sample ID: 480-54029-2

**Date Collected: 01/30/14 12:10** — **Matrix: Water**
**Date Received: 01/31/14 00:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 10 | 164338 | 02/04/14 04:33 | LCH | TAL BUF |

## Client Sample ID: MW-268M-20140130-01 — Lab Sample ID: 480-54029-3

**Date Collected: 01/30/14 11:25** — **Matrix: Water**
**Date Received: 01/31/14 00:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 25 | 164338 | 02/04/14 04:57 | LCH | TAL BUF |
| Total/NA | Analysis | 8260C | DL | 40 | 164408 | 02/04/14 13:47 | RAL | TAL BUF |

## Client Sample ID: MW-561-20140130-01 — Lab Sample ID: 480-54029-4

**Date Collected: 01/30/14 09:10** — **Matrix: Water**
**Date Received: 01/31/14 00:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 5 | 164338 | 02/04/14 05:21 | LCH | TAL BUF |
| Total/NA | Analysis | 8260C | DL | 20 | 164408 | 02/04/14 14:11 | RAL | TAL BUF |

## Client Sample ID: MW-553-20140130-01 — Lab Sample ID: 480-54029-5

**Date Collected: 01/30/14 10:30** — **Matrix: Water**
**Date Received: 01/31/14 00:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 4 | 164532 | 02/05/14 00:18 | GTG | TAL BUF |

## Client Sample ID: REW-6-20140130-01 — Lab Sample ID: 480-54029-6

**Date Collected: 01/30/14 09:55** — **Matrix: Water**
**Date Received: 01/31/14 00:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 5 | 164338 | 02/04/14 06:08 | LCH | TAL BUF |

# Lab Chronicle

Client: Innovative Engineering Solutions, Inc
Project/Site: IDS Wayland

TestAmerica Job ID: 480-54029-1

## Client Sample ID: REW-7-20140130-01 — Lab Sample ID: 480-54029-7

**Date Collected: 01/30/14 10:50** — **Matrix: Water**
**Date Received: 01/31/14 00:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 10 | 164338 | 02/04/14 06:33 | LCH | TAL BUF |

## Client Sample ID: REW-8-20140130-01 — Lab Sample ID: 480-54029-8

**Date Collected: 01/30/14 12:55** — **Matrix: Water**
**Date Received: 01/31/14 00:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 164408 | 02/04/14 14:59 | RAL | TAL BUF |

## Client Sample ID: REW-9-20140130-01 — Lab Sample ID: 480-54029-9

**Date Collected: 01/30/14 12:15** — **Matrix: Water**
**Date Received: 01/31/14 00:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 164338 | 02/04/14 07:20 | LCH | TAL BUF |

## Client Sample ID: REW-12-20140130-01 — Lab Sample ID: 480-54029-10

**Date Collected: 01/30/14 09:10** — **Matrix: Water**
**Date Received: 01/31/14 00:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 4 | 164338 | 02/04/14 07:44 | LCH | TAL BUF |

## Client Sample ID: DupX-20140130-01 — Lab Sample ID: 480-54029-11

**Date Collected: 01/30/14 00:00** — **Matrix: Water**
**Date Received: 01/31/14 00:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 20 | 164408 | 02/04/14 15:23 | RAL | TAL BUF |

## Client Sample ID: Trip Blank — Lab Sample ID: 480-54029-12

**Date Collected: 01/30/14 00:00** — **Matrix: Water**
**Date Received: 01/31/14 00:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 164408 | 02/04/14 15:47 | RAL | TAL BUF |

**Laboratory References:**

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

# Certification Summary

Client: Innovative Engineering Solutions, Inc
Project/Site: IDS Wayland

TestAmerica Job ID: 480-54029-1

## Laboratory: TestAmerica Buffalo

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

| Authority | Program | EPA Region | Certification ID | Expiration Date |
|---|---|---|---|---|
| Arkansas DEQ | State Program | 6 | 88-0686 | 07-06-14 |
| California | NELAP | 9 | 1169CA | 09-30-14 |
| Connecticut | State Program | 1 | PH-0568 | 09-30-14 |
| Florida | NELAP | 4 | E87672 | 06-30-14 |
| Georgia | State Program | 4 | N/A | 03-31-14 |
| Illinois | NELAP | 5 | 200003 | 09-30-14 |
| Iowa | State Program | 7 | 374 | 03-01-15 |
| Kansas | NELAP | 7 | E-10187 | 04-01-14 |
| Kentucky (DW) | State Program | 4 | 90029 | 12-31-14 |
| Kentucky (UST) | State Program | 4 | 30 | 04-01-14 |
| Louisiana | NELAP | 6 | 02031 | 06-30-14 |
| Maine | State Program | 1 | NY00044 | 12-04-14 |
| Maryland | State Program | 3 | 294 | 03-31-14 |
| Massachusetts | State Program | 1 | M-NY044 | 06-30-14 |
| Michigan | State Program | 5 | 9937 | 04-01-14 |
| Minnesota | NELAP | 5 | 036-999-337 | 12-31-14 |
| New Hampshire | NELAP | 1 | 2337 | 11-17-14 |
| New Jersey | NELAP | 2 | NY455 | 06-30-14 |
| New York | NELAP | 2 | 10026 | 03-31-14 |
| North Dakota | State Program | 8 | R-176 | 03-31-14 |
| Oklahoma | State Program | 6 | 9421 | 08-31-14 |
| Oregon | NELAP | 10 | NY200003 | 06-09-14 |
| Pennsylvania | NELAP | 3 | 68-00281 | 07-31-14 |
| Rhode Island | State Program | 1 | LAO00328 | 12-30-14 |
| Tennessee | State Program | 4 | TN02970 | 04-01-14 |
| Texas | NELAP | 6 | T104704412-11-2 | 07-31-14 |
| USDA | Federal | | P330-11-00386 | 11-22-14 |
| Virginia | NELAP | 3 | 460185 | 09-14-14 |
| Washington | State Program | 10 | C784 | 02-10-14 * |
| West Virginia DEP | State Program | 3 | 252 | 03-31-14 |
| Wisconsin | State Program | 5 | 998310390 | 08-31-14 |

* Expired certification is currently pending renewal and is considered valid.

# Method Summary

Client: Innovative Engineering Solutions, Inc
Project/Site: IDS Wayland

TestAmerica Job ID: 480-54029-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 8260C | Volatile Organic Compounds (GC/MS) | MA DEP | TAL BUF |

**Protocol References:**

MA DEP = Massachusetts Department Of Environmental Protection

**Laboratory References:**

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

# Sample Summary

Client: Innovative Engineering Solutions, Inc
Project/Site: IDS Wayland

TestAmerica Job ID: 480-54029-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 480-54029-1 | MW-267S-20140130-01 | Water | 01/30/14 12:50 | 01/31/14 00:30 |
| 480-54029-2 | MW-267M-20140130-01 | Water | 01/30/14 12:10 | 01/31/14 00:30 |
| 480-54029-3 | MW-268M-20140130-01 | Water | 01/30/14 11:25 | 01/31/14 00:30 |
| 480-54029-4 | MW-561-20140130-01 | Water | 01/30/14 09:10 | 01/31/14 00:30 |
| 480-54029-5 | MW-553-20140130-01 | Water | 01/30/14 10:30 | 01/31/14 00:30 |
| 480-54029-6 | REW-6-20140130-01 | Water | 01/30/14 09:55 | 01/31/14 00:30 |
| 480-54029-7 | REW-7-20140130-01 | Water | 01/30/14 10:50 | 01/31/14 00:30 |
| 480-54029-8 | REW-8-20140130-01 | Water | 01/30/14 12:55 | 01/31/14 00:30 |
| 480-54029-9 | REW-9-20140130-01 | Water | 01/30/14 12:15 | 01/31/14 00:30 |
| 480-54029-10 | REW-12-20140130-01 | Water | 01/30/14 09:10 | 01/31/14 00:30 |
| 480-54029-11 | DupX-20140130-01 | Water | 01/30/14 00:00 | 01/31/14 00:30 |
| 480-54029-12 | Trip Blank | Water | 01/30/14 00:00 | 01/31/14 00:30 |

# Login Sample Receipt Checklist

Client: Innovative Engineering Solutions, Inc

Job Number: 480-54029-1

**Login Number: 54029**

**List Source: TestAmerica Buffalo**

**List Number: 1**

**Creator: Wienke, Robert K**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity either was not measured or, if measured, is at or below background | True | |
| The cooler's custody seal, if present, is intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the sample IDs on the containers and the COC. | True | |
| Samples are received within Holding Time. | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified | N/A | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter. | True | |
| If necessary, staff have been informed of any short hold time or quick TAT needs | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Sampling Company provided. | True | |
| Samples received within 48 hours of sampling. | True | |
| Samples requiring field filtration have been filtered in the field. | N/A | |
| Chlorine Residual checked. | N/A | |

# Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☒

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1007)

| Client | Project Manager | Date | Chain of Custody Number |
|---|---|---|---|
| [illegible] Engineering Solutions Inc. | [illegible] | 1/30/14 | 261465 |
| **Address** | **Telephone Number (Area Code)/Fax Number** | **Lab Number** | **Page 1 of 1** |
| 25 [illegible] St | 303-663-0222 / 303-663-5175 | | |
| **City** / **State** / **Zip Code** | **Site Contact** | **Lab Contact** | |
| [illegible] / MA / 03051 | [illegible] | | |
| **Project Name and Location (State)** | **Carrier/Waybill Number** | | |
| RA-003 [illegible] | | | |
| **Contract/Purchase Order/Quote No.** | | | |
| RA-003 | | | |

| Sample I.D. No. and Description (Containers for each sample may be combined on one line) | Date | Time | Air | Aqueous | Sed. | Soil | | Unpres. | H2SO4 | HNO3 | HCl | NaOH | ZnAc/NaOH | | 8260B | | | | | | | | | | | Special Instructions/ Conditions of Receipt |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-267S-20140130-01 | 1/30/14 | 1250 | | X | | | | | | | 3 | | | | X | | | | | | | | | | | |
| MW-267M-20140130-01 | 1/30/14 | 1210 | | X | | | | | | | 3 | | | | X | | | | | | | | | | | |
| MW-268M-20140130-01 | 1/30/14 | 1245 | | X | | | | | | | 3 | | | | X | | | | | | | | | | | |
| MW-364-20140130-01 | 1/30/14 | 0910 | | X | | | | | | | 3 | | | | X | | | | | | | | | | | |
| MW-553-20140130-01 | 1/30/14 | 1030 | | X | | | | | | | 3 | | | | X | | | | | | | | | | | |
| RBW-6-20140130-01 | 1/30/14 | 0955 | | X | | | | | | | 3 | | | | X | | | | | | | | | | | |
| RBW-7-20140130-01 | 1/30/14 | 1050 | | X | | | | | | | 3 | | | | X | | | | | | | | | | | |
| RBW-8-20140130-01 | 1/30/14 | 1255 | | X | | | | | | | 3 | | | | X | | | | | | | | | | | |
| RBW-9-20140130-01 | 1/30/14 | 1215 | | X | | | | | | | 3 | | | | X | | | | | | | | | | | |
| RBW-10-20140130-01 | 1/30/14 | 0910 | | X | | | | | | | 3 | | | | X | | | | | | | | | | | |
| Dup-20140130-01 | 1/30/14 | — | | X | | | | | | | 3 | | | | X | | | | | | | | | | | |
| Trip Blank | — | — | | X | | | | | | | 2 | | | | X | | | | | | | | | | | |

**Possible Hazard Identification**
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

**Sample Disposal**
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

**Turn Around Time Required**
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☒ 14 Days ☐ 21 Days ☐ Other _____

**QC Requirements (Specify)**

| | Date | Time | | Date | Time |
|---|---|---|---|---|---|
| 1. Relinquished By [signature] | 1/30/14 | 1405 | 1. Received By [signature] | 1/30/14 | 1405 |
| 2. Relinquished By [signature] | 1/31/14 | 1630 | 2. Received By [signature] TAL | 1.31.14 | 0630 |
| 3. Relinquished By | | | 3. Received By | | |

Comments

3.3 #1

**DISTRIBUTION:** WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

# ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

TestAmerica Job ID: 480-57495-1
Client Project/Site: IDS Wayland
Revision: 1

For:
Innovative Engineering Solutions, Inc
25 Spring Street
Walpole, Massachusetts 02081

Attn: Vicki Pariyar

*Authorized for release by:*
*5/6/2014 10:32:22 AM*

Becky Mason, Project Manager II
(413)572-4000
becky.mason@testamericainc.com



*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

# Table of Contents

## Qualifiers

### GC/MS VOA

| Qualifier | Qualifier Description |
|---|---|
| * | LCS or LCSD exceeds the control limits |
| F1 | MS and/or MSD Recovery exceeds the control limits |
| F2 | MS/MSD RPD exceeds control limits |
| * | RPD of the LCS and LCSD exceeds the control limits |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CNF | Contains no Free Liquid |
| DER | Duplicate error ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision level concentration |
| MDA | Minimum detectable activity |
| EDL | Estimated Detection Limit |
| MDC | Minimum detectable concentration |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative error ratio |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

## Job ID: 480-57495-1

### Laboratory: TestAmerica Buffalo

**Narrative**

Revision: Per client request correct ID for 480-57495-7, the COC was incorrect. This replaces final report data 4/16/14.

**Receipt**

The samples were received on 4/9/2014 at 1:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.1º C and 2.3º C.

**GC/MS VOA**

Method 8260: With the exception of diluted samples, per question G on the MassDEP Analytical Protocol Certification Form, TestAmerica's routine reporting limits do not achieve the CAM reporting limits specified in this CAM protocol for 1,2-dibromo-3-chloropropane, Carbon Disulfide, Isopropyl Ether, Naphthalene, tert-Butyl Ethyl Ether, tert-Amyl Methyl Ether and Tetrahydrofuran.

Method 8260: Due to the dilutions required, per question G on the MassDEP Analytical Protocol Certification Form, the CAM reporting limits specified in this CAM protocol could not be achieved for some or all samples/analytes.

Method 8260B SIM: The following volatiles samples were diluted due to foaming at the time of purging during the original sample analysis: DupX3-20140408-01 (480-57495-36), MW-261S-20140408-01 (480-57495-3), MW-265M-20140408-01 (480-57495-7), MW-267M-20140405-01 (480-57495-12), MW-267S-20140405-01 (480-57495-11) and MW-552-20140407-01 (480-57495-18). Elevated reporting limits (RLs) are provided.

Method 8260C: The laboratory control sample (LCS) and / or the laboratory control sample duplicate (LCSD) for batches 174684 and 175485 exceeded control limits for the following analyte: Tetrahydrofuran. MCP protocol allows for 10% of the target compounds to be outside of the limits provided the recoveries are over 10%.

Method 8260C: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-261S-20140408-01 (480-57495-3). Elevated reporting limits (RLs) are provided.

Method 8260C: The laboratory control sample (LCS) and / or the laboratory control sample duplicate (LCSD) for batches 175074, 175163 and 174949 exceeded control limits for the following analytes: 2-Hexanone. MCP protocol allows for 10% of the target compounds to be outside of the limits provided the recoveries are over 10%.

Method 8260C: The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch175074 recovered outside control limits for the following analytes: 1,4-Dioxane.

Method 8260C: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 175074 were outside control limits.

Method 8260C: The following samples were diluted to bring the concentration of target analytes within the calibration range: (480-57495-17 MS), (480-57495-17 MSD), DupX2-20140406-01 (480-57495-35), MW-551-20140408-01 (480-57495-17), MW-560-20140407-01 (480-57495-20), MW-561-20140407-01 (480-57495-21), MW-562-20140407-01 (480-57495-22), REW-1-20140406-01 (480-57495-24), (480-57495-33 MS), (480-57495-33 MSD), MW-562-20140407-01 (480-57495-22), MW-563-20140407-01 (480-57495-23), REW-11-20140406-01 (480-57495-32), REW-12-20140406-01 (480-57495-33), REW-6-20140406-01 (480-57495-27), REW-7-20140406-01 (480-57495-28), MW-263M-20140408-01 (480-57495-7), MW-267S-20140405-01 (480-57495-11), MW-268M-20140407 (480-57495-14) and DupX3-20140408-01 (480-57495-36). Elevated reporting limits (RLs) are provided.

Method 8260C: The following sample was diluted due to the abundance of non-target analytes: MW-267M-20140405-01 (480-57495-12). Elevated reporting limits (RLs) are provided.

Method 8260C: The laboratory control sample (LCS) and the laboratory control sample duplicate (LCSD) for batch 174949 exceeded control limits for the following analyte: 2-Butanone. Unlike the calibration standards, this is due to the coelution with Ethyl Acetate in the spiking solution. This does not indicate a performance issue with the spike recovery, but rather the laboratory's ability to measure the two analytes together in a combined spiking solution. Through the use of spectral analysis, the two compounds can be distinguished from one another if present in a client sample.

Method 8260C: The method blank for batch 175163 contained Carbon Disulfide above the method detection limit. This target analyte concentration was less than the reporting limit (RL) so re-analysis of the associated samples was not performed.

## Job ID: 480-57495-1 (Continued)

### Laboratory: TestAmerica Buffalo (Continued)

Method 8260C: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 175163 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8260C: The matrix spike / matrix spike duplicate / sample duplicate (MS/MSD/DUP) precision for batch 175163 was outside control limits. Sample matrix interference was suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision was within acceptance limits.

No other analytical or quality issues were noted.

# MassDEP Analytical Protocol Certification Form

Laboratory Name: **TestAmerica Buffalo** Project #: **480-57495**

Project Location: **IDS Wayland** RTN:

**This form provides certifications for the data set for the following Laboratory Sample ID Number(s):**

**480-57495 [1-36]**

Matrices: ■ Groundwater/Surface Water ☐ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

**CAM Protocols (check all that apply below):**

| | | | | | |
|---|---|---|---|---|---|
| 8260 VOC CAM II A ■ | 7470/7471 Hg CAM III B ☐ | Mass DEP VPH CAM IV A ☐ | 8081 Pesticides CAM V B ☐ | 7196 Hex Cr CAM VI B ☐ | Mass DEP APH CAM IX A ☐ |
| 8270 SVOC CAM II B ☐ | 7010 Metals CAM III C ☐ | Mass DEP EPH CAM IV B ☐ | 8151 Herbicides CAM V C ☐ | 8330 Explosives CAM VIII A ☐ | TO-15 VOC CAM IX B ☐ |
| 6010 Metals CAM III A ☐ | 6020 Metals CAM III D ☐ | 8082 PCB CAM V A ☐ | 9012 / 9014/ 4500CN Total Cyanide/PAC CAM VI A ☐ | 6860 Perchlorate CAM VIII B ☐ | |

**Affirmative Responses to Questions A through F are required for "Presumptive Certainty" status**

| | | |
|---|---|---|
| **A** | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding time. | ■ Yes ☐ No |
| **B** | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | ■ Yes ☐ No |
| **C** | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | ■ Yes ☐ No |
| **D** | Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | ■ Yes ☐ No |
| **E** | a. VPH, EPH and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).<br>b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | ☐ Yes ☐ No<br>☐ Yes ☐ No |
| **F** | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | ■ Yes ☐ No |

**Responses to Questions G, H and I below are required for "Presumptive Certainty" status**

| | | |
|---|---|---|
| **G** | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)? | ☐ Yes ■ No[1] |

***Data User Note:*** ***Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WCS-07-350***

| | | |
|---|---|---|
| **H** | Were **all** QC performance standards specified in the CAM protocol(s) achieved? | ☐ Yes ■ No[1] |
| **I** | Were results reported for the complete analyte list specified in the selected CAM protocol(s) ? | ■ Yes ☐ No[1] |

[1] All negative responses must be addressed in an attached laboratory narrative.

***I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, is accurate and complete.***

Signature: Position: Technical Director, TestAmerica Westfield

Printed Name: Richard Emerich Date: 4/15/14 15:29

This form has been electronically signed and approved.

# Detection Summary

Client: Innovative Engineering Solutions, Inc
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57495-1

## Client Sample ID: DEP-19M-20140405-01 — Lab Sample ID: 480-57495-1

No Detections.

## Client Sample ID: DEP-21-20140405-01 — Lab Sample ID: 480-57495-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| cis-1,2-Dichloroethene | 3.8 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Trichloroethene | 1.0 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |

## Client Sample ID: MW-261S-20140408-01 — Lab Sample ID: 480-57495-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 11000 | | 2500 | | ug/L | 50 | | 8260C | Total/NA |

## Client Sample ID: MW-263M-20140408-01 — Lab Sample ID: 480-57495-4

No Detections.

## Client Sample ID: MW-264M-20140408-01 — Lab Sample ID: 480-57495-5

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| cis-1,2-Dichloroethene | 12 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Tetrachloroethene | 2.9 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Trichloroethene | 14 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |

## Client Sample ID: MW-265S-20140408-01 — Lab Sample ID: 480-57495-6

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Vinyl chloride | 2.7 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |

## Client Sample ID: MW-265M-20140408-01 — Lab Sample ID: 480-57495-7

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 2-Butanone (MEK) | 230 | | 10 | | ug/L | 1 | | 8260C | Total/NA |
| cis-1,2-Dichloroethene | 49 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Ethylbenzene | 1.8 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| m-Xylene & p-Xylene | 5.6 | | 2.0 | | ug/L | 1 | | 8260C | Total/NA |
| o-Xylene | 1.7 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Tetrahydrofuran | 50 | * | 10 | | ug/L | 1 | | 8260C | Total/NA |
| Toluene | 6.2 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Trichloroethene | 1.9 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Vinyl chloride | 15 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Acetone - DL | 2200 | | 250 | | ug/L | 5 | | 8260C | Total/NA |

## Client Sample ID: MW-265D-20140408-01 — Lab Sample ID: 480-57495-8

No Detections.

## Client Sample ID: MW-266Ma-20140405-01 — Lab Sample ID: 480-57495-9

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| cis-1,2-Dichloroethene | 1.5 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Trichloroethene | 1.6 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: Innovative Engineering Solutions, Inc
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57495-1

## Client Sample ID: MW-266Mb-20140405-01 — Lab Sample ID: 480-57495-10

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| cis-1,2-Dichloroethene | 60 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Tetrachloroethene | 11 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Trichloroethene | 39 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Vinyl chloride | 49 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |

## Client Sample ID: MW-267S-20140405-01 — Lab Sample ID: 480-57495-11

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 2-Butanone (MEK) | 210 | * | 50 | | ug/L | 5 | | 8260C | Total/NA |
| cis-1,2-Dichloroethene | 360 | | 5.0 | | ug/L | 5 | | 8260C | Total/NA |
| Toluene | 410 | | 5.0 | | ug/L | 5 | | 8260C | Total/NA |
| Vinyl chloride | 16 | | 5.0 | | ug/L | 5 | | 8260C | Total/NA |

## Client Sample ID: MW-267M-20140405-01 — Lab Sample ID: 480-57495-12

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 2-Butanone (MEK) | 180 | * | 100 | | ug/L | 10 | | 8260C | Total/NA |
| cis-1,2-Dichloroethene | 380 | | 10 | | ug/L | 10 | | 8260C | Total/NA |
| Toluene | 87 | | 10 | | ug/L | 10 | | 8260C | Total/NA |
| Vinyl chloride | 31 | | 10 | | ug/L | 10 | | 8260C | Total/NA |

## Client Sample ID: MW-268S-20140407 — Lab Sample ID: 480-57495-13

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| cis-1,2-Dichloroethene | 11 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Trichloroethene | 11 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |

## Client Sample ID: MW-268M-20140407 — Lab Sample ID: 480-57495-14

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | 25 | | 1.6 | | ug/L | 1 | | 8260B SIM | Total/NA |
| cis-1,2-Dichloroethene | 3100 | | 40 | | ug/L | 40 | | 8260C | Total/NA |
| Trichloroethene | 1200 | | 40 | | ug/L | 40 | | 8260C | Total/NA |
| Vinyl chloride | 180 | | 40 | | ug/L | 40 | | 8260C | Total/NA |

## Client Sample ID: MW-268D-20140405 — Lab Sample ID: 480-57495-15

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| cis-1,2-Dichloroethene | 8.5 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Toluene | 2.0 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Trichloroethene | 1.2 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Vinyl chloride | 2.6 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |

## Client Sample ID: MW-269Ma-20140405 — Lab Sample ID: 480-57495-16

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | 2.9 | | 1.6 | | ug/L | 1 | | 8260B SIM | Total/NA |
| cis-1,2-Dichloroethene | 3.2 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Trichloroethene | 2.2 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: Innovative Engineering Solutions, Inc
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57495-1

## Client Sample ID: MW-551-20140408-01 — Lab Sample ID: 480-57495-17

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 15000 | | 2000 | | ug/L | 40 | | 8260C | Total/NA |

## Client Sample ID: MW-552-20140407-01 — Lab Sample ID: 480-57495-18

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 120 | | 50 | | ug/L | 1 | | 8260C | Total/NA |
| cis-1,2-Dichloroethene | 2.6 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Toluene | 2.4 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| trans-1,2-Dichloroethene | 2.8 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Vinyl chloride | 4.6 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |

## Client Sample ID: MW-553-20140407-01 — Lab Sample ID: 480-57495-19

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 160 | | 50 | | ug/L | 1 | | 8260C | Total/NA |
| cis-1,2-Dichloroethene | 22 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| m-Xylene & p-Xylene | 2.6 | | 2.0 | | ug/L | 1 | | 8260C | Total/NA |
| Tetrahydrofuran | 10 | | 10 | | ug/L | 1 | | 8260C | Total/NA |
| Toluene | 3.9 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| trans-1,2-Dichloroethene | 1.8 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Vinyl chloride | 28 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |

## Client Sample ID: MW-560-20140407-01 — Lab Sample ID: 480-57495-20

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 2-Butanone (MEK) | 210 | * | 10 | | ug/L | 1 | | 8260C | Total/NA |
| cis-1,2-Dichloroethene | 48 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Ethylbenzene | 1.8 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| m-Xylene & p-Xylene | 6.9 | | 2.0 | | ug/L | 1 | | 8260C | Total/NA |
| o-Xylene | 1.7 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Vinyl chloride | 42 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Toluene - DL | 200 | | 4.0 | | ug/L | 4 | | 8260C | Total/NA |

## Client Sample ID: MW-561-20140407-01 — Lab Sample ID: 480-57495-21

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| m-Xylene & p-Xylene | 21 | | 20 | | ug/L | 10 | | 8260C | Total/NA |
| Toluene | 600 | | 10 | | ug/L | 10 | | 8260C | Total/NA |
| Vinyl chloride | 84 | | 10 | | ug/L | 10 | | 8260C | Total/NA |

## Client Sample ID: MW-562-20140407-01 — Lab Sample ID: 480-57495-22

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 2-Butanone (MEK) | 150 | | 20 | | ug/L | 2 | | 8260C | Total/NA |
| Ethylbenzene | 6.6 | | 2.0 | | ug/L | 2 | | 8260C | Total/NA |
| m-Xylene & p-Xylene | 23 | | 4.0 | | ug/L | 2 | | 8260C | Total/NA |
| o-Xylene | 7.2 | | 2.0 | | ug/L | 2 | | 8260C | Total/NA |
| Toluene | 46 | | 2.0 | | ug/L | 2 | | 8260C | Total/NA |
| Acetone - DL | 910 | | 200 | | ug/L | 4 | | 8260C | Total/NA |

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: Innovative Engineering Solutions, Inc
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57495-1

## Client Sample ID: MW-563-20140407-01 — Lab Sample ID: 480-57495-23

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 2-Butanone (MEK) | 150 | | 40 | | ug/L | 4 | | 8260C | Total/NA |
| cis-1,2-Dichloroethene | 190 | | 4.0 | | ug/L | 4 | | 8260C | Total/NA |
| m-Xylene & p-Xylene | 11 | | 8.0 | | ug/L | 4 | | 8260C | Total/NA |
| Toluene | 37 | | 4.0 | | ug/L | 4 | | 8260C | Total/NA |
| Vinyl chloride | 90 | | 4.0 | | ug/L | 4 | | 8260C | Total/NA |

## Client Sample ID: REW-1-20140406-01 — Lab Sample ID: 480-57495-24

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 1500 | | 250 | | ug/L | 5 | | 8260C | Total/NA |
| cis-1,2-Dichloroethene | 6.0 | | 5.0 | | ug/L | 5 | | 8260C | Total/NA |

## Client Sample ID: REW-4-20140406-01 — Lab Sample ID: 480-57495-25

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| cis-1,2-Dichloroethene | 7.6 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Vinyl chloride | 4.0 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |

## Client Sample ID: REW-5-20140406-01 — Lab Sample ID: 480-57495-26

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| cis-1,2-Dichloroethene | 62 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Toluene | 3.2 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Trichloroethene | 5.4 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Vinyl chloride | 3.8 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |

## Client Sample ID: REW-6-20140406-01 — Lab Sample ID: 480-57495-27

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| cis-1,2-Dichloroethene | 370 | | 5.0 | | ug/L | 5 | | 8260C | Total/NA |
| Toluene | 170 | | 5.0 | | ug/L | 5 | | 8260C | Total/NA |
| Trichloroethene | 50 | | 5.0 | | ug/L | 5 | | 8260C | Total/NA |
| Vinyl chloride | 19 | | 5.0 | | ug/L | 5 | | 8260C | Total/NA |

## Client Sample ID: REW-7-20140406-01 — Lab Sample ID: 480-57495-28

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| cis-1,2-Dichloroethene | 660 | | 10 | | ug/L | 10 | | 8260C | Total/NA |
| Toluene | 12 | | 10 | | ug/L | 10 | | 8260C | Total/NA |
| Trichloroethene | 65 | | 10 | | ug/L | 10 | | 8260C | Total/NA |
| Vinyl chloride | 99 | | 10 | | ug/L | 10 | | 8260C | Total/NA |

## Client Sample ID: REW-8-20140406-01 — Lab Sample ID: 480-57495-29

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 2-Butanone (MEK) | 75 | | 10 | | ug/L | 1 | | 8260C | Total/NA |
| cis-1,2-Dichloroethene | 27 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| m-Xylene & p-Xylene | 2.4 | | 2.0 | | ug/L | 1 | | 8260C | Total/NA |
| Toluene | 36 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Vinyl chloride | 36 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: Innovative Engineering Solutions, Inc
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57495-1

## Client Sample ID: REW-9-20140406-01 — Lab Sample ID: 480-57495-30

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 2-Butanone (MEK) | 54 | | 10 | | ug/L | 1 | | 8260C | Total/NA |
| cis-1,2-Dichloroethene | 80 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Ethylbenzene | 1.3 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| m-Xylene & p-Xylene | 4.8 | | 2.0 | | ug/L | 1 | | 8260C | Total/NA |
| o-Xylene | 1.1 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Toluene | 84 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Vinyl chloride | 26 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |

## Client Sample ID: REW-10-20140406-01 — Lab Sample ID: 480-57495-31

No Detections.

## Client Sample ID: REW-11-20140406-01 — Lab Sample ID: 480-57495-32

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| cis-1,2-Dichloroethene | 1800 | | 25 | | ug/L | 25 | | 8260C | Total/NA |
| Trichloroethene | 460 | | 25 | | ug/L | 25 | | 8260C | Total/NA |
| Vinyl chloride | 120 | | 25 | | ug/L | 25 | | 8260C | Total/NA |

## Client Sample ID: REW-12-20140406-01 — Lab Sample ID: 480-57495-33

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| cis-1,2-Dichloroethene | 310 | | 4.0 | | ug/L | 4 | | 8260C | Total/NA |
| Toluene | 28 | | 4.0 | | ug/L | 4 | | 8260C | Total/NA |
| Trichloroethene | 50 | | 4.0 | | ug/L | 4 | | 8260C | Total/NA |
| Vinyl chloride | 55 | | 4.0 | | ug/L | 4 | | 8260C | Total/NA |

## Client Sample ID: DupX1-20140405-01 — Lab Sample ID: 480-57495-34

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| cis-1,2-Dichloroethene | 58 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Tetrachloroethene | 10 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Trichloroethene | 37 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Vinyl chloride | 43 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |

## Client Sample ID: DupX2-20140406-01 — Lab Sample ID: 480-57495-35

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | 5.5 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| 1,1-Dichloroethene | 2.5 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Benzene | 1.5 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| o-Xylene | 1.1 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Tetrachloroethene | 16 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| trans-1,2-Dichloroethene | 3.3 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| cis-1,2-Dichloroethene - DL | 1500 | | 25 | | ug/L | 25 | | 8260C | Total/NA |
| Trichloroethene - DL | 390 | | 25 | | ug/L | 25 | | 8260C | Total/NA |
| Vinyl chloride - DL | 97 | | 25 | | ug/L | 25 | | 8260C | Total/NA |

## Client Sample ID: DupX3-20140408-01 — Lab Sample ID: 480-57495-36

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: Innovative Engineering Solutions, Inc
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57495-1

## Client Sample ID: DupX3-20140408-01 (Continued) — Lab Sample ID: 480-57495-36

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 2-Butanone (MEK) | 160 | | 10 | | ug/L | 1 | | 8260C | Total/NA |
| cis-1,2-Dichloroethene | 7.3 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Ethylbenzene | 3.3 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| m-Xylene & p-Xylene | 11 | | 2.0 | | ug/L | 1 | | 8260C | Total/NA |
| o-Xylene | 2.1 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Tetrahydrofuran | 18 | | 10 | | ug/L | 1 | | 8260C | Total/NA |
| Toluene | 20 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Trichloroethene | 2.6 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Vinyl chloride | 2.2 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Acetone - DL | 14000 | | 2000 | | ug/L | 40 | | 8260C | Total/NA |

## Client Sample ID: Trip Blanks — Lab Sample ID: 480-57495-37

No Detections.

This Detection Summary does not include radiochemical test results.

**Client Sample ID: DEP-19M-20140405-01**
**Date Collected: 04/05/14 10:30**
**Date Received: 04/09/14 01:30**

**Lab Sample ID: 480-57495-1**
**Matrix: Water**

**Method: 8260C - Volatile Organic Compounds (GC/MS)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/09/14 17:26 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/09/14 17:26 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/09/14 17:26 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/09/14 17:26 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/09/14 17:26 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/09/14 17:26 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/09/14 17:26 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/09/14 17:26 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/09/14 17:26 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/09/14 17:26 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 17:26 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/09/14 17:26 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/09/14 17:26 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/09/14 17:26 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/09/14 17:26 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 17:26 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/09/14 17:26 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/09/14 17:26 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/09/14 17:26 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/09/14 17:26 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/09/14 17:26 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 04/09/14 17:26 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/09/14 17:26 | 1 |
| 2-Hexanone | ND | | 10 | | ug/L | | | 04/09/14 17:26 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/09/14 17:26 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/09/14 17:26 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/09/14 17:26 | 1 |
| Acetone | ND | | 50 | | ug/L | | | 04/09/14 17:26 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/09/14 17:26 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/09/14 17:26 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/09/14 17:26 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/09/14 17:26 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/09/14 17:26 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/09/14 17:26 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/09/14 17:26 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/09/14 17:26 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/09/14 17:26 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/09/14 17:26 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/09/14 17:26 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/09/14 17:26 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/09/14 17:26 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/09/14 17:26 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/09/14 17:26 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/09/14 17:26 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/09/14 17:26 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 17:26 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/09/14 17:26 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/09/14 17:26 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/09/14 17:26 | 1 |

## Client Sample ID: DEP-19M-20140405-01

**Lab Sample ID: 480-57495-1**

**Date Collected: 04/05/14 10:30**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 17:26 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/09/14 17:26 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/09/14 17:26 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/09/14 17:26 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/09/14 17:26 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 17:26 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 17:26 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/09/14 17:26 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 17:26 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/09/14 17:26 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/09/14 17:26 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/09/14 17:26 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 17:26 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/09/14 17:26 | 1 |
| Tetrahydrofuran | ND | * | 10 | | ug/L | | | 04/09/14 17:26 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 04/09/14 17:26 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/09/14 17:26 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/09/14 17:26 | 1 |
| Trichloroethene | ND | | 1.0 | | ug/L | | | 04/09/14 17:26 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/09/14 17:26 | 1 |
| Vinyl chloride | ND | | 1.0 | | ug/L | | | 04/09/14 17:26 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/09/14 17:26 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *98* | | *70 - 130* | | *04/09/14 17:26* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *103* | | *70 - 130* | | *04/09/14 17:26* | *1* |
| *4-Bromofluorobenzene (Surr)* | *98* | | *70 - 130* | | *04/09/14 17:26* | *1* |

## Client Sample ID: DEP-21-20140405-01

**Lab Sample ID: 480-57495-2**

**Date Collected: 04/05/14 11:25**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/09/14 17:50 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/09/14 17:50 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/09/14 17:50 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/09/14 17:50 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/09/14 17:50 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/09/14 17:50 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/09/14 17:50 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/09/14 17:50 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/09/14 17:50 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/09/14 17:50 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 17:50 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/09/14 17:50 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/09/14 17:50 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/09/14 17:50 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/09/14 17:50 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 17:50 | 1 |

## Client Sample ID: DEP-21-20140405-01

**Lab Sample ID: 480-57495-2**

**Date Collected: 04/05/14 11:25**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/09/14 17:50 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/09/14 17:50 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/09/14 17:50 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/09/14 17:50 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/09/14 17:50 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 04/09/14 17:50 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/09/14 17:50 | 1 |
| 2-Hexanone | ND | | 10 | | ug/L | | | 04/09/14 17:50 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/09/14 17:50 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/09/14 17:50 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/09/14 17:50 | 1 |
| Acetone | ND | | 50 | | ug/L | | | 04/09/14 17:50 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/09/14 17:50 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/09/14 17:50 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/09/14 17:50 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/09/14 17:50 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/09/14 17:50 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/09/14 17:50 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/09/14 17:50 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/09/14 17:50 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/09/14 17:50 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/09/14 17:50 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/09/14 17:50 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/09/14 17:50 | 1 |
| **cis-1,2-Dichloroethene** | **3.8** | | 1.0 | | ug/L | | | 04/09/14 17:50 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/09/14 17:50 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/09/14 17:50 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/09/14 17:50 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/09/14 17:50 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 17:50 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/09/14 17:50 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/09/14 17:50 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/09/14 17:50 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 17:50 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/09/14 17:50 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/09/14 17:50 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/09/14 17:50 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/09/14 17:50 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 17:50 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 17:50 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/09/14 17:50 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 17:50 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/09/14 17:50 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/09/14 17:50 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/09/14 17:50 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 17:50 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/09/14 17:50 | 1 |
| Tetrahydrofuran | ND | * | 10 | | ug/L | | | 04/09/14 17:50 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 04/09/14 17:50 | 1 |

## Client Sample ID: DEP-21-20140405-01

**Lab Sample ID: 480-57495-2**

**Date Collected: 04/05/14 11:25**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/09/14 17:50 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/09/14 17:50 | 1 |
| **Trichloroethene** | **1.0** | | 1.0 | | ug/L | | | 04/09/14 17:50 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/09/14 17:50 | 1 |
| Vinyl chloride | ND | | 1.0 | | ug/L | | | 04/09/14 17:50 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/09/14 17:50 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *101* | | *70 - 130* | | *04/09/14 17:50* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *102* | | *70 - 130* | | *04/09/14 17:50* | *1* |
| *4-Bromofluorobenzene (Surr)* | *100* | | *70 - 130* | | *04/09/14 17:50* | *1* |

## Client Sample ID: MW-261S-20140408-01

**Lab Sample ID: 480-57495-3**

**Date Collected: 04/08/14 07:20**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | ND | | 3.2 | | ug/L | | | 04/11/14 23:36 | 2 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *TBA-d9 (Surr)* | *144* | | *50 - 150* | | *04/11/14 23:36* | *2* |
| *Dibromofluoromethane (Surr)* | *85* | | *50 - 150* | | *04/11/14 23:36* | *2* |

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 50 | | ug/L | | | 04/09/14 18:14 | 50 |
| 1,1,1-Trichloroethane | ND | | 50 | | ug/L | | | 04/09/14 18:14 | 50 |
| 1,1,2,2-Tetrachloroethane | ND | | 25 | | ug/L | | | 04/09/14 18:14 | 50 |
| 1,1,2-Trichloroethane | ND | | 50 | | ug/L | | | 04/09/14 18:14 | 50 |
| 1,1-Dichloroethane | ND | | 50 | | ug/L | | | 04/09/14 18:14 | 50 |
| 1,1-Dichloroethene | ND | | 50 | | ug/L | | | 04/09/14 18:14 | 50 |
| 1,1-Dichloropropene | ND | | 50 | | ug/L | | | 04/09/14 18:14 | 50 |
| 1,2,3-Trichlorobenzene | ND | | 50 | | ug/L | | | 04/09/14 18:14 | 50 |
| 1,2,3-Trichloropropane | ND | | 50 | | ug/L | | | 04/09/14 18:14 | 50 |
| 1,2,4-Trichlorobenzene | ND | | 50 | | ug/L | | | 04/09/14 18:14 | 50 |
| 1,2,4-Trimethylbenzene | ND | | 50 | | ug/L | | | 04/09/14 18:14 | 50 |
| 1,2-Dibromo-3-Chloropropane | ND | | 250 | | ug/L | | | 04/09/14 18:14 | 50 |
| 1,2-Dichlorobenzene | ND | | 50 | | ug/L | | | 04/09/14 18:14 | 50 |
| 1,2-Dichloroethane | ND | | 50 | | ug/L | | | 04/09/14 18:14 | 50 |
| 1,2-Dichloropropane | ND | | 50 | | ug/L | | | 04/09/14 18:14 | 50 |
| 1,3,5-Trimethylbenzene | ND | | 50 | | ug/L | | | 04/09/14 18:14 | 50 |
| 1,3-Dichlorobenzene | ND | | 50 | | ug/L | | | 04/09/14 18:14 | 50 |
| 1,3-Dichloropropane | ND | | 50 | | ug/L | | | 04/09/14 18:14 | 50 |
| 1,4-Dichlorobenzene | ND | | 50 | | ug/L | | | 04/09/14 18:14 | 50 |
| 1,4-Dioxane | ND | | 2500 | | ug/L | | | 04/09/14 18:14 | 50 |
| 2,2-Dichloropropane | ND | | 50 | | ug/L | | | 04/09/14 18:14 | 50 |
| 2-Butanone (MEK) | ND | | 500 | | ug/L | | | 04/09/14 18:14 | 50 |
| 2-Chlorotoluene | ND | | 50 | | ug/L | | | 04/09/14 18:14 | 50 |
| 2-Hexanone | ND | | 500 | | ug/L | | | 04/09/14 18:14 | 50 |

**Client Sample ID: MW-261S-20140408-01**
**Date Collected: 04/08/14 07:20**
**Date Received: 04/09/14 01:30**

**Lab Sample ID: 480-57495-3**
**Matrix: Water**

**Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 4-Chlorotoluene | ND | | 50 | | ug/L | | | 04/09/14 18:14 | 50 |
| 4-Isopropyltoluene | ND | | 50 | | ug/L | | | 04/09/14 18:14 | 50 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 500 | | ug/L | | | 04/09/14 18:14 | 50 |
| **Acetone** | **11000** | | 2500 | | ug/L | | | 04/09/14 18:14 | 50 |
| Benzene | ND | | 50 | | ug/L | | | 04/09/14 18:14 | 50 |
| Bromobenzene | ND | | 50 | | ug/L | | | 04/09/14 18:14 | 50 |
| Bromoform | ND | | 50 | | ug/L | | | 04/09/14 18:14 | 50 |
| Bromomethane | ND | | 100 | | ug/L | | | 04/09/14 18:14 | 50 |
| Carbon disulfide | ND | | 500 | | ug/L | | | 04/09/14 18:14 | 50 |
| Carbon tetrachloride | ND | | 50 | | ug/L | | | 04/09/14 18:14 | 50 |
| Chlorobenzene | ND | | 50 | | ug/L | | | 04/09/14 18:14 | 50 |
| Chlorobromomethane | ND | | 50 | | ug/L | | | 04/09/14 18:14 | 50 |
| Chlorodibromomethane | ND | | 25 | | ug/L | | | 04/09/14 18:14 | 50 |
| Chloroethane | ND | | 100 | | ug/L | | | 04/09/14 18:14 | 50 |
| Chloroform | ND | | 50 | | ug/L | | | 04/09/14 18:14 | 50 |
| Chloromethane | ND | | 100 | | ug/L | | | 04/09/14 18:14 | 50 |
| cis-1,2-Dichloroethene | ND | | 50 | | ug/L | | | 04/09/14 18:14 | 50 |
| cis-1,3-Dichloropropene | ND | | 20 | | ug/L | | | 04/09/14 18:14 | 50 |
| Dichlorobromomethane | ND | | 25 | | ug/L | | | 04/09/14 18:14 | 50 |
| Dichlorodifluoromethane | ND | | 50 | | ug/L | | | 04/09/14 18:14 | 50 |
| Ethyl ether | ND | | 50 | | ug/L | | | 04/09/14 18:14 | 50 |
| Ethylbenzene | ND | | 50 | | ug/L | | | 04/09/14 18:14 | 50 |
| Ethylene Dibromide | ND | | 50 | | ug/L | | | 04/09/14 18:14 | 50 |
| Hexachlorobutadiene | ND | | 20 | | ug/L | | | 04/09/14 18:14 | 50 |
| Isopropyl ether | ND | | 500 | | ug/L | | | 04/09/14 18:14 | 50 |
| Isopropylbenzene | ND | | 50 | | ug/L | | | 04/09/14 18:14 | 50 |
| Methyl tert-butyl ether | ND | | 50 | | ug/L | | | 04/09/14 18:14 | 50 |
| Methylene Chloride | ND | | 50 | | ug/L | | | 04/09/14 18:14 | 50 |
| m-Xylene & p-Xylene | ND | | 100 | | ug/L | | | 04/09/14 18:14 | 50 |
| Naphthalene | ND | | 250 | | ug/L | | | 04/09/14 18:14 | 50 |
| n-Butylbenzene | ND | | 50 | | ug/L | | | 04/09/14 18:14 | 50 |
| N-Propylbenzene | ND | | 50 | | ug/L | | | 04/09/14 18:14 | 50 |
| o-Xylene | ND | | 50 | | ug/L | | | 04/09/14 18:14 | 50 |
| sec-Butylbenzene | ND | | 50 | | ug/L | | | 04/09/14 18:14 | 50 |
| Styrene | ND | | 50 | | ug/L | | | 04/09/14 18:14 | 50 |
| Tert-amyl methyl ether | ND | | 250 | | ug/L | | | 04/09/14 18:14 | 50 |
| Tert-butyl ethyl ether | ND | | 250 | | ug/L | | | 04/09/14 18:14 | 50 |
| tert-Butylbenzene | ND | | 50 | | ug/L | | | 04/09/14 18:14 | 50 |
| Tetrachloroethene | ND | | 50 | | ug/L | | | 04/09/14 18:14 | 50 |
| Tetrahydrofuran | ND | * | 500 | | ug/L | | | 04/09/14 18:14 | 50 |
| Toluene | ND | | 50 | | ug/L | | | 04/09/14 18:14 | 50 |
| trans-1,2-Dichloroethene | ND | | 50 | | ug/L | | | 04/09/14 18:14 | 50 |
| trans-1,3-Dichloropropene | ND | | 20 | | ug/L | | | 04/09/14 18:14 | 50 |
| Trichloroethene | ND | | 50 | | ug/L | | | 04/09/14 18:14 | 50 |
| Trichlorofluoromethane | ND | | 50 | | ug/L | | | 04/09/14 18:14 | 50 |
| Vinyl chloride | ND | | 50 | | ug/L | | | 04/09/14 18:14 | 50 |
| Dibromomethane | ND | | 50 | | ug/L | | | 04/09/14 18:14 | 50 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *101* | | *70 - 130* | | *04/09/14 18:14* | *50* |

## Client Sample ID: MW-261S-20140408-01

**Lab Sample ID: 480-57495-3**

**Date Collected: 04/08/14 07:20**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *101* | | *70 - 130* | | *04/09/14 18:14* | *50* |
| *4-Bromofluorobenzene (Surr)* | *97* | | *70 - 130* | | *04/09/14 18:14* | *50* |

## Client Sample ID: MW-263M-20140408-01

**Lab Sample ID: 480-57495-4**

**Date Collected: 04/08/14 11:45**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/09/14 18:37 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/09/14 18:37 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/09/14 18:37 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/09/14 18:37 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/09/14 18:37 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/09/14 18:37 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/09/14 18:37 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/09/14 18:37 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/09/14 18:37 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/09/14 18:37 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 18:37 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/09/14 18:37 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/09/14 18:37 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/09/14 18:37 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/09/14 18:37 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 18:37 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/09/14 18:37 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/09/14 18:37 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/09/14 18:37 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/09/14 18:37 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/09/14 18:37 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 04/09/14 18:37 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/09/14 18:37 | 1 |
| 2-Hexanone | ND | | 10 | | ug/L | | | 04/09/14 18:37 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/09/14 18:37 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/09/14 18:37 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/09/14 18:37 | 1 |
| Acetone | ND | | 50 | | ug/L | | | 04/09/14 18:37 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/09/14 18:37 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/09/14 18:37 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/09/14 18:37 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/09/14 18:37 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/09/14 18:37 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/09/14 18:37 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/09/14 18:37 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/09/14 18:37 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/09/14 18:37 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/09/14 18:37 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/09/14 18:37 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/09/14 18:37 | 1 |

## Client Sample ID: MW-263M-20140408-01

**Lab Sample ID: 480-57495-4**

**Date Collected: 04/08/14 11:45**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| cis-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/09/14 18:37 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/09/14 18:37 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/09/14 18:37 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/09/14 18:37 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/09/14 18:37 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 18:37 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/09/14 18:37 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/09/14 18:37 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/09/14 18:37 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 18:37 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/09/14 18:37 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/09/14 18:37 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/09/14 18:37 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/09/14 18:37 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 18:37 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 18:37 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/09/14 18:37 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 18:37 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/09/14 18:37 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/09/14 18:37 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/09/14 18:37 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 18:37 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/09/14 18:37 | 1 |
| Tetrahydrofuran | ND | * | 10 | | ug/L | | | 04/09/14 18:37 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 04/09/14 18:37 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/09/14 18:37 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/09/14 18:37 | 1 |
| Trichloroethene | ND | | 1.0 | | ug/L | | | 04/09/14 18:37 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/09/14 18:37 | 1 |
| Vinyl chloride | ND | | 1.0 | | ug/L | | | 04/09/14 18:37 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/09/14 18:37 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *101* | | *70 - 130* | | *04/09/14 18:37* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *103* | | *70 - 130* | | *04/09/14 18:37* | *1* |
| *4-Bromofluorobenzene (Surr)* | *98* | | *70 - 130* | | *04/09/14 18:37* | *1* |

## Client Sample ID: MW-264M-20140408-01

**Lab Sample ID: 480-57495-5**

**Date Collected: 04/08/14 10:30**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/09/14 19:01 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/09/14 19:01 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/09/14 19:01 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/09/14 19:01 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/09/14 19:01 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/09/14 19:01 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/09/14 19:01 | 1 |

**Client Sample ID: MW-264M-20140408-01**
**Date Collected: 04/08/14 10:30**
**Date Received: 04/09/14 01:30**

**Lab Sample ID: 480-57495-5**
**Matrix: Water**

**Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/09/14 19:01 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/09/14 19:01 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/09/14 19:01 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 19:01 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/09/14 19:01 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/09/14 19:01 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/09/14 19:01 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/09/14 19:01 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 19:01 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/09/14 19:01 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/09/14 19:01 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/09/14 19:01 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/09/14 19:01 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/09/14 19:01 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 04/09/14 19:01 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/09/14 19:01 | 1 |
| 2-Hexanone | ND | | 10 | | ug/L | | | 04/09/14 19:01 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/09/14 19:01 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/09/14 19:01 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/09/14 19:01 | 1 |
| Acetone | ND | | 50 | | ug/L | | | 04/09/14 19:01 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/09/14 19:01 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/09/14 19:01 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/09/14 19:01 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/09/14 19:01 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/09/14 19:01 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/09/14 19:01 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/09/14 19:01 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/09/14 19:01 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/09/14 19:01 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/09/14 19:01 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/09/14 19:01 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/09/14 19:01 | 1 |
| **cis-1,2-Dichloroethene** | **12** | | 1.0 | | ug/L | | | 04/09/14 19:01 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/09/14 19:01 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/09/14 19:01 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/09/14 19:01 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/09/14 19:01 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 19:01 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/09/14 19:01 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/09/14 19:01 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/09/14 19:01 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 19:01 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/09/14 19:01 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/09/14 19:01 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/09/14 19:01 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/09/14 19:01 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 19:01 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 19:01 | 1 |

## Client Sample ID: MW-264M-20140408-01

**Lab Sample ID: 480-57495-5**

**Date Collected: 04/08/14 10:30**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/09/14 19:01 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 19:01 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/09/14 19:01 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/09/14 19:01 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/09/14 19:01 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 19:01 | 1 |
| **Tetrachloroethene** | **2.9** | | 1.0 | | ug/L | | | 04/09/14 19:01 | 1 |
| Tetrahydrofuran | ND | * | 10 | | ug/L | | | 04/09/14 19:01 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 04/09/14 19:01 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/09/14 19:01 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/09/14 19:01 | 1 |
| **Trichloroethene** | **14** | | 1.0 | | ug/L | | | 04/09/14 19:01 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/09/14 19:01 | 1 |
| Vinyl chloride | ND | | 1.0 | | ug/L | | | 04/09/14 19:01 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/09/14 19:01 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *98* | | *70 - 130* | | *04/09/14 19:01* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *103* | | *70 - 130* | | *04/09/14 19:01* | *1* |
| *4-Bromofluorobenzene (Surr)* | *96* | | *70 - 130* | | *04/09/14 19:01* | *1* |

## Client Sample ID: MW-265S-20140408-01

**Lab Sample ID: 480-57495-6**

**Date Collected: 04/08/14 09:25**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/09/14 19:25 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/09/14 19:25 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/09/14 19:25 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/09/14 19:25 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/09/14 19:25 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/09/14 19:25 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/09/14 19:25 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/09/14 19:25 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/09/14 19:25 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/09/14 19:25 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 19:25 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/09/14 19:25 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/09/14 19:25 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/09/14 19:25 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/09/14 19:25 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 19:25 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/09/14 19:25 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/09/14 19:25 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/09/14 19:25 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/09/14 19:25 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/09/14 19:25 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 04/09/14 19:25 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/09/14 19:25 | 1 |

**Client Sample ID: MW-265S-20140408-01**
**Date Collected: 04/08/14 09:25**
**Date Received: 04/09/14 01:30**

**Lab Sample ID: 480-57495-6**
**Matrix: Water**

**Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 2-Hexanone | ND | | 10 | | ug/L | | | 04/09/14 19:25 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/09/14 19:25 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/09/14 19:25 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/09/14 19:25 | 1 |
| Acetone | ND | | 50 | | ug/L | | | 04/09/14 19:25 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/09/14 19:25 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/09/14 19:25 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/09/14 19:25 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/09/14 19:25 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/09/14 19:25 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/09/14 19:25 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/09/14 19:25 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/09/14 19:25 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/09/14 19:25 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/09/14 19:25 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/09/14 19:25 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/09/14 19:25 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/09/14 19:25 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/09/14 19:25 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/09/14 19:25 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/09/14 19:25 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/09/14 19:25 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 19:25 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/09/14 19:25 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/09/14 19:25 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/09/14 19:25 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 19:25 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/09/14 19:25 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/09/14 19:25 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/09/14 19:25 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/09/14 19:25 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 19:25 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 19:25 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/09/14 19:25 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 19:25 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/09/14 19:25 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/09/14 19:25 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/09/14 19:25 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 19:25 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/09/14 19:25 | 1 |
| Tetrahydrofuran | ND | * | 10 | | ug/L | | | 04/09/14 19:25 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 04/09/14 19:25 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/09/14 19:25 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/09/14 19:25 | 1 |
| Trichloroethene | ND | | 1.0 | | ug/L | | | 04/09/14 19:25 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/09/14 19:25 | 1 |
| **Vinyl chloride** | **2.7** | | 1.0 | | ug/L | | | 04/09/14 19:25 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/09/14 19:25 | 1 |

## Client Sample ID: MW-265S-20140408-01

**Lab Sample ID: 480-57495-6**

**Date Collected: 04/08/14 09:25**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *99* | | *70 - 130* | | *04/09/14 19:25* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *102* | | *70 - 130* | | *04/09/14 19:25* | *1* |
| *4-Bromofluorobenzene (Surr)* | *97* | | *70 - 130* | | *04/09/14 19:25* | *1* |

## Client Sample ID: MW-265M-20140408-01

**Lab Sample ID: 480-57495-7**

**Date Collected: 04/08/14 08:45**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | ND | | 3.2 | | ug/L | | | 04/12/14 00:00 | 2 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *TBA-d9 (Surr)* | *136* | | *50 - 150* | | *04/12/14 00:00* | *2* |
| *Dibromofluoromethane (Surr)* | *86* | | *50 - 150* | | *04/12/14 00:00* | *2* |

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/09/14 19:49 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/09/14 19:49 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/09/14 19:49 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/09/14 19:49 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/09/14 19:49 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/09/14 19:49 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/09/14 19:49 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/09/14 19:49 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/09/14 19:49 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/09/14 19:49 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 19:49 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/09/14 19:49 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/09/14 19:49 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/09/14 19:49 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/09/14 19:49 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 19:49 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/09/14 19:49 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/09/14 19:49 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/09/14 19:49 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/09/14 19:49 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/09/14 19:49 | 1 |
| **2-Butanone (MEK)** | **230** | | 10 | | ug/L | | | 04/09/14 19:49 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/09/14 19:49 | 1 |
| 2-Hexanone | ND | | 10 | | ug/L | | | 04/09/14 19:49 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/09/14 19:49 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/09/14 19:49 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/09/14 19:49 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/09/14 19:49 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/09/14 19:49 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/09/14 19:49 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/09/14 19:49 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/09/14 19:49 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/09/14 19:49 | 1 |

## Client Sample ID: MW-265M-20140408-01

**Lab Sample ID: 480-57495-7**

**Date Collected: 04/08/14 08:45**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/09/14 19:49 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/09/14 19:49 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/09/14 19:49 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/09/14 19:49 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/09/14 19:49 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/09/14 19:49 | 1 |
| **cis-1,2-Dichloroethene** | **49** | | 1.0 | | ug/L | | | 04/09/14 19:49 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/09/14 19:49 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/09/14 19:49 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/09/14 19:49 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/09/14 19:49 | 1 |
| **Ethylbenzene** | **1.8** | | 1.0 | | ug/L | | | 04/09/14 19:49 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/09/14 19:49 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/09/14 19:49 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/09/14 19:49 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 19:49 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/09/14 19:49 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/09/14 19:49 | 1 |
| **m-Xylene & p-Xylene** | **5.6** | | 2.0 | | ug/L | | | 04/09/14 19:49 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/09/14 19:49 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 19:49 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 19:49 | 1 |
| **o-Xylene** | **1.7** | | 1.0 | | ug/L | | | 04/09/14 19:49 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 19:49 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/09/14 19:49 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/09/14 19:49 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/09/14 19:49 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 19:49 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/09/14 19:49 | 1 |
| **Tetrahydrofuran** | **50** | * | 10 | | ug/L | | | 04/09/14 19:49 | 1 |
| **Toluene** | **6.2** | | 1.0 | | ug/L | | | 04/09/14 19:49 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/09/14 19:49 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/09/14 19:49 | 1 |
| **Trichloroethene** | **1.9** | | 1.0 | | ug/L | | | 04/09/14 19:49 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/09/14 19:49 | 1 |
| **Vinyl chloride** | **15** | | 1.0 | | ug/L | | | 04/09/14 19:49 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/09/14 19:49 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *100* | | *70 - 130* | | *04/09/14 19:49* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *97* | | *70 - 130* | | *04/09/14 19:49* | *1* |
| *4-Bromofluorobenzene (Surr)* | *99* | | *70 - 130* | | *04/09/14 19:49* | *1* |

### Method: 8260C - Volatile Organic Compounds (GC/MS) - DL

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Acetone** | **2200** | | 250 | | ug/L | | | 04/10/14 15:48 | 5 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *96* | | *70 - 130* | | *04/10/14 15:48* | *5* |
| *1,2-Dichloroethane-d4 (Surr)* | *94* | | *70 - 130* | | *04/10/14 15:48* | *5* |

## Client Sample ID: MW-265M-20140408-01

**Lab Sample ID: 480-57495-7**

**Date Collected: 04/08/14 08:45**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS) - DL (Continued)

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *102* | | *70 - 130* | | *04/10/14 15:48* | *5* |

## Client Sample ID: MW-265D-20140408-01

**Lab Sample ID: 480-57495-8**

**Date Collected: 04/08/14 08:15**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/10/14 16:14 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/10/14 16:14 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/10/14 16:14 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/10/14 16:14 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/10/14 16:14 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/10/14 16:14 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/10/14 16:14 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/10/14 16:14 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/10/14 16:14 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/10/14 16:14 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/10/14 16:14 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/10/14 16:14 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/10/14 16:14 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/10/14 16:14 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/10/14 16:14 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/10/14 16:14 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/10/14 16:14 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/10/14 16:14 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/10/14 16:14 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/10/14 16:14 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/10/14 16:14 | 1 |
| 2-Butanone (MEK) | ND | * | 10 | | ug/L | | | 04/10/14 16:14 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/10/14 16:14 | 1 |
| 2-Hexanone | ND | * | 10 | | ug/L | | | 04/10/14 16:14 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/10/14 16:14 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/10/14 16:14 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/10/14 16:14 | 1 |
| Acetone | ND | | 50 | | ug/L | | | 04/10/14 16:14 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/10/14 16:14 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/10/14 16:14 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/10/14 16:14 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/10/14 16:14 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/10/14 16:14 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/10/14 16:14 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/10/14 16:14 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/10/14 16:14 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/10/14 16:14 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/10/14 16:14 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/10/14 16:14 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/10/14 16:14 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/10/14 16:14 | 1 |

## Client Sample ID: MW-265D-20140408-01

**Lab Sample ID: 480-57495-8**

**Date Collected: 04/08/14 08:15**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/10/14 16:14 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/10/14 16:14 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/10/14 16:14 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/10/14 16:14 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/10/14 16:14 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/10/14 16:14 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/10/14 16:14 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/10/14 16:14 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/10/14 16:14 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/10/14 16:14 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/10/14 16:14 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/10/14 16:14 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/10/14 16:14 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/10/14 16:14 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/10/14 16:14 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/10/14 16:14 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/10/14 16:14 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/10/14 16:14 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/10/14 16:14 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/10/14 16:14 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/10/14 16:14 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/10/14 16:14 | 1 |
| Tetrahydrofuran | ND | | 10 | | ug/L | | | 04/10/14 16:14 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 04/10/14 16:14 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/10/14 16:14 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/10/14 16:14 | 1 |
| Trichloroethene | ND | | 1.0 | | ug/L | | | 04/10/14 16:14 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/10/14 16:14 | 1 |
| Vinyl chloride | ND | | 1.0 | | ug/L | | | 04/10/14 16:14 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/10/14 16:14 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *95* | | *70 - 130* | | *04/10/14 16:14* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *97* | | *70 - 130* | | *04/10/14 16:14* | *1* |
| *4-Bromofluorobenzene (Surr)* | *98* | | *70 - 130* | | *04/10/14 16:14* | *1* |

## Client Sample ID: MW-266Ma-20140405-01

**Lab Sample ID: 480-57495-9**

**Date Collected: 04/05/14 14:50**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | ND | | 1.6 | | ug/L | | | 04/12/14 00:23 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *TBA-d9 (Surr)* | *120* | | *50 - 150* | | *04/12/14 00:23* | *1* |
| *Dibromofluoromethane (Surr)* | *92* | | *50 - 150* | | *04/12/14 00:23* | *1* |

# Client Sample Results

Client: Innovative Engineering Solutions, Inc
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57495-1

**Client Sample ID: MW-266Ma-20140405-01**
**Date Collected: 04/05/14 14:50**
**Date Received: 04/09/14 01:30**

**Lab Sample ID: 480-57495-9**
**Matrix: Water**

**Method: 8260C - Volatile Organic Compounds (GC/MS)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/09/14 20:37 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/09/14 20:37 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/09/14 20:37 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/09/14 20:37 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/09/14 20:37 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/09/14 20:37 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/09/14 20:37 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/09/14 20:37 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/09/14 20:37 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/09/14 20:37 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 20:37 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/09/14 20:37 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/09/14 20:37 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/09/14 20:37 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/09/14 20:37 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 20:37 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/09/14 20:37 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/09/14 20:37 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/09/14 20:37 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/09/14 20:37 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/09/14 20:37 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 04/09/14 20:37 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/09/14 20:37 | 1 |
| 2-Hexanone | ND | | 10 | | ug/L | | | 04/09/14 20:37 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/09/14 20:37 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/09/14 20:37 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/09/14 20:37 | 1 |
| Acetone | ND | | 50 | | ug/L | | | 04/09/14 20:37 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/09/14 20:37 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/09/14 20:37 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/09/14 20:37 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/09/14 20:37 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/09/14 20:37 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/09/14 20:37 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/09/14 20:37 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/09/14 20:37 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/09/14 20:37 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/09/14 20:37 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/09/14 20:37 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/09/14 20:37 | 1 |
| **cis-1,2-Dichloroethene** | **1.5** | | 1.0 | | ug/L | | | 04/09/14 20:37 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/09/14 20:37 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/09/14 20:37 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/09/14 20:37 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/09/14 20:37 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 20:37 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/09/14 20:37 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/09/14 20:37 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/09/14 20:37 | 1 |

## Client Sample ID: MW-266Ma-20140405-01

**Lab Sample ID: 480-57495-9**

**Date Collected: 04/05/14 14:50**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 20:37 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/09/14 20:37 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/09/14 20:37 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/09/14 20:37 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/09/14 20:37 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 20:37 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 20:37 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/09/14 20:37 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 20:37 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/09/14 20:37 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/09/14 20:37 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/09/14 20:37 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 20:37 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/09/14 20:37 | 1 |
| Tetrahydrofuran | ND | * | 10 | | ug/L | | | 04/09/14 20:37 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 04/09/14 20:37 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/09/14 20:37 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/09/14 20:37 | 1 |
| **Trichloroethene** | **1.6** | | 1.0 | | ug/L | | | 04/09/14 20:37 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/09/14 20:37 | 1 |
| Vinyl chloride | ND | | 1.0 | | ug/L | | | 04/09/14 20:37 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/09/14 20:37 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *99* | | *70 - 130* | | *04/09/14 20:37* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *102* | | *70 - 130* | | *04/09/14 20:37* | *1* |
| *4-Bromofluorobenzene (Surr)* | *97* | | *70 - 130* | | *04/09/14 20:37* | *1* |

## Client Sample ID: MW-266Mb-20140405-01

**Lab Sample ID: 480-57495-10**

**Date Collected: 04/05/14 15:20**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/09/14 21:00 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/09/14 21:00 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/09/14 21:00 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/09/14 21:00 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/09/14 21:00 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/09/14 21:00 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/09/14 21:00 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/09/14 21:00 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/09/14 21:00 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/09/14 21:00 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 21:00 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/09/14 21:00 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/09/14 21:00 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/09/14 21:00 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/09/14 21:00 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 21:00 | 1 |

**Client Sample ID: MW-266Mb-20140405-01**
**Date Collected: 04/05/14 15:20**
**Date Received: 04/09/14 01:30**

**Lab Sample ID: 480-57495-10**
**Matrix: Water**

**Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/09/14 21:00 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/09/14 21:00 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/09/14 21:00 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/09/14 21:00 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/09/14 21:00 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 04/09/14 21:00 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/09/14 21:00 | 1 |
| 2-Hexanone | ND | | 10 | | ug/L | | | 04/09/14 21:00 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/09/14 21:00 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/09/14 21:00 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/09/14 21:00 | 1 |
| Acetone | ND | | 50 | | ug/L | | | 04/09/14 21:00 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/09/14 21:00 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/09/14 21:00 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/09/14 21:00 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/09/14 21:00 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/09/14 21:00 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/09/14 21:00 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/09/14 21:00 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/09/14 21:00 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/09/14 21:00 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/09/14 21:00 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/09/14 21:00 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/09/14 21:00 | 1 |
| **cis-1,2-Dichloroethene** | **60** | | 1.0 | | ug/L | | | 04/09/14 21:00 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/09/14 21:00 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/09/14 21:00 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/09/14 21:00 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/09/14 21:00 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 21:00 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/09/14 21:00 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/09/14 21:00 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/09/14 21:00 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 21:00 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/09/14 21:00 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/09/14 21:00 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/09/14 21:00 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/09/14 21:00 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 21:00 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 21:00 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/09/14 21:00 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 21:00 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/09/14 21:00 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/09/14 21:00 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/09/14 21:00 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 21:00 | 1 |
| **Tetrachloroethene** | **11** | | 1.0 | | ug/L | | | 04/09/14 21:00 | 1 |
| Tetrahydrofuran | ND | * | 10 | | ug/L | | | 04/09/14 21:00 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 04/09/14 21:00 | 1 |

## Client Sample ID: MW-266Mb-20140405-01

**Lab Sample ID: 480-57495-10**

**Date Collected: 04/05/14 15:20**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/09/14 21:00 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/09/14 21:00 | 1 |
| **Trichloroethene** | **39** | | 1.0 | | ug/L | | | 04/09/14 21:00 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/09/14 21:00 | 1 |
| **Vinyl chloride** | **49** | | 1.0 | | ug/L | | | 04/09/14 21:00 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/09/14 21:00 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *98* | | *70 - 130* | | *04/09/14 21:00* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *103* | | *70 - 130* | | *04/09/14 21:00* | *1* |
| *4-Bromofluorobenzene (Surr)* | *95* | | *70 - 130* | | *04/09/14 21:00* | *1* |

## Client Sample ID: MW-267S-20140405-01

**Lab Sample ID: 480-57495-11**

**Date Collected: 04/05/14 13:20**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | ND | | 3.2 | | ug/L | | | 04/12/14 00:48 | 2 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *TBA-d9 (Surr)* | *137* | | *50 - 150* | | *04/12/14 00:48* | *2* |
| *Dibromofluoromethane (Surr)* | *85* | | *50 - 150* | | *04/12/14 00:48* | *2* |

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 5.0 | | ug/L | | | 04/10/14 16:39 | 5 |
| 1,1,1-Trichloroethane | ND | | 5.0 | | ug/L | | | 04/10/14 16:39 | 5 |
| 1,1,2,2-Tetrachloroethane | ND | | 2.5 | | ug/L | | | 04/10/14 16:39 | 5 |
| 1,1,2-Trichloroethane | ND | | 5.0 | | ug/L | | | 04/10/14 16:39 | 5 |
| 1,1-Dichloroethane | ND | | 5.0 | | ug/L | | | 04/10/14 16:39 | 5 |
| 1,1-Dichloroethene | ND | | 5.0 | | ug/L | | | 04/10/14 16:39 | 5 |
| 1,1-Dichloropropene | ND | | 5.0 | | ug/L | | | 04/10/14 16:39 | 5 |
| 1,2,3-Trichlorobenzene | ND | | 5.0 | | ug/L | | | 04/10/14 16:39 | 5 |
| 1,2,3-Trichloropropane | ND | | 5.0 | | ug/L | | | 04/10/14 16:39 | 5 |
| 1,2,4-Trichlorobenzene | ND | | 5.0 | | ug/L | | | 04/10/14 16:39 | 5 |
| 1,2,4-Trimethylbenzene | ND | | 5.0 | | ug/L | | | 04/10/14 16:39 | 5 |
| 1,2-Dibromo-3-Chloropropane | ND | | 25 | | ug/L | | | 04/10/14 16:39 | 5 |
| 1,2-Dichlorobenzene | ND | | 5.0 | | ug/L | | | 04/10/14 16:39 | 5 |
| 1,2-Dichloroethane | ND | | 5.0 | | ug/L | | | 04/10/14 16:39 | 5 |
| 1,2-Dichloropropane | ND | | 5.0 | | ug/L | | | 04/10/14 16:39 | 5 |
| 1,3,5-Trimethylbenzene | ND | | 5.0 | | ug/L | | | 04/10/14 16:39 | 5 |
| 1,3-Dichlorobenzene | ND | | 5.0 | | ug/L | | | 04/10/14 16:39 | 5 |
| 1,3-Dichloropropane | ND | | 5.0 | | ug/L | | | 04/10/14 16:39 | 5 |
| 1,4-Dichlorobenzene | ND | | 5.0 | | ug/L | | | 04/10/14 16:39 | 5 |
| 1,4-Dioxane | ND | | 250 | | ug/L | | | 04/10/14 16:39 | 5 |
| 2,2-Dichloropropane | ND | | 5.0 | | ug/L | | | 04/10/14 16:39 | 5 |
| **2-Butanone (MEK)** | **210** | * | 50 | | ug/L | | | 04/10/14 16:39 | 5 |
| 2-Chlorotoluene | ND | | 5.0 | | ug/L | | | 04/10/14 16:39 | 5 |
| 2-Hexanone | ND | * | 50 | | ug/L | | | 04/10/14 16:39 | 5 |

## Client Sample ID: MW-267S-20140405-01

**Lab Sample ID: 480-57495-11**

**Date Collected: 04/05/14 13:20**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 4-Chlorotoluene | ND | | 5.0 | | ug/L | | | 04/10/14 16:39 | 5 |
| 4-Isopropyltoluene | ND | | 5.0 | | ug/L | | | 04/10/14 16:39 | 5 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 50 | | ug/L | | | 04/10/14 16:39 | 5 |
| Acetone | ND | | 250 | | ug/L | | | 04/10/14 16:39 | 5 |
| Benzene | ND | | 5.0 | | ug/L | | | 04/10/14 16:39 | 5 |
| Bromobenzene | ND | | 5.0 | | ug/L | | | 04/10/14 16:39 | 5 |
| Bromoform | ND | | 5.0 | | ug/L | | | 04/10/14 16:39 | 5 |
| Bromomethane | ND | | 10 | | ug/L | | | 04/10/14 16:39 | 5 |
| Carbon disulfide | ND | | 50 | | ug/L | | | 04/10/14 16:39 | 5 |
| Carbon tetrachloride | ND | | 5.0 | | ug/L | | | 04/10/14 16:39 | 5 |
| Chlorobenzene | ND | | 5.0 | | ug/L | | | 04/10/14 16:39 | 5 |
| Chlorobromomethane | ND | | 5.0 | | ug/L | | | 04/10/14 16:39 | 5 |
| Chlorodibromomethane | ND | | 2.5 | | ug/L | | | 04/10/14 16:39 | 5 |
| Chloroethane | ND | | 10 | | ug/L | | | 04/10/14 16:39 | 5 |
| Chloroform | ND | | 5.0 | | ug/L | | | 04/10/14 16:39 | 5 |
| Chloromethane | ND | | 10 | | ug/L | | | 04/10/14 16:39 | 5 |
| **cis-1,2-Dichloroethene** | **360** | | 5.0 | | ug/L | | | 04/10/14 16:39 | 5 |
| cis-1,3-Dichloropropene | ND | | 2.0 | | ug/L | | | 04/10/14 16:39 | 5 |
| Dichlorobromomethane | ND | | 2.5 | | ug/L | | | 04/10/14 16:39 | 5 |
| Dichlorodifluoromethane | ND | | 5.0 | | ug/L | | | 04/10/14 16:39 | 5 |
| Ethyl ether | ND | | 5.0 | | ug/L | | | 04/10/14 16:39 | 5 |
| Ethylbenzene | ND | | 5.0 | | ug/L | | | 04/10/14 16:39 | 5 |
| Ethylene Dibromide | ND | | 5.0 | | ug/L | | | 04/10/14 16:39 | 5 |
| Hexachlorobutadiene | ND | | 2.0 | | ug/L | | | 04/10/14 16:39 | 5 |
| Isopropyl ether | ND | | 50 | | ug/L | | | 04/10/14 16:39 | 5 |
| Isopropylbenzene | ND | | 5.0 | | ug/L | | | 04/10/14 16:39 | 5 |
| Methyl tert-butyl ether | ND | | 5.0 | | ug/L | | | 04/10/14 16:39 | 5 |
| Methylene Chloride | ND | | 5.0 | | ug/L | | | 04/10/14 16:39 | 5 |
| m-Xylene & p-Xylene | ND | | 10 | | ug/L | | | 04/10/14 16:39 | 5 |
| Naphthalene | ND | | 25 | | ug/L | | | 04/10/14 16:39 | 5 |
| n-Butylbenzene | ND | | 5.0 | | ug/L | | | 04/10/14 16:39 | 5 |
| N-Propylbenzene | ND | | 5.0 | | ug/L | | | 04/10/14 16:39 | 5 |
| o-Xylene | ND | | 5.0 | | ug/L | | | 04/10/14 16:39 | 5 |
| sec-Butylbenzene | ND | | 5.0 | | ug/L | | | 04/10/14 16:39 | 5 |
| Styrene | ND | | 5.0 | | ug/L | | | 04/10/14 16:39 | 5 |
| Tert-amyl methyl ether | ND | | 25 | | ug/L | | | 04/10/14 16:39 | 5 |
| Tert-butyl ethyl ether | ND | | 25 | | ug/L | | | 04/10/14 16:39 | 5 |
| tert-Butylbenzene | ND | | 5.0 | | ug/L | | | 04/10/14 16:39 | 5 |
| Tetrachloroethene | ND | | 5.0 | | ug/L | | | 04/10/14 16:39 | 5 |
| Tetrahydrofuran | ND | | 50 | | ug/L | | | 04/10/14 16:39 | 5 |
| **Toluene** | **410** | | 5.0 | | ug/L | | | 04/10/14 16:39 | 5 |
| trans-1,2-Dichloroethene | ND | | 5.0 | | ug/L | | | 04/10/14 16:39 | 5 |
| trans-1,3-Dichloropropene | ND | | 2.0 | | ug/L | | | 04/10/14 16:39 | 5 |
| Trichloroethene | ND | | 5.0 | | ug/L | | | 04/10/14 16:39 | 5 |
| Trichlorofluoromethane | ND | | 5.0 | | ug/L | | | 04/10/14 16:39 | 5 |
| **Vinyl chloride** | **16** | | 5.0 | | ug/L | | | 04/10/14 16:39 | 5 |
| Dibromomethane | ND | | 5.0 | | ug/L | | | 04/10/14 16:39 | 5 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *98* | | *70 - 130* | | *04/10/14 16:39* | *5* |

## Client Sample ID: MW-267S-20140405-01

**Lab Sample ID: 480-57495-11**

**Date Collected: 04/05/14 13:20**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 (Surr) | 93 | | 70 - 130 | | 04/10/14 16:39 | 5 |
| 4-Bromofluorobenzene (Surr) | 99 | | 70 - 130 | | 04/10/14 16:39 | 5 |

## Client Sample ID: MW-267M-20140405-01

**Lab Sample ID: 480-57495-12**

**Date Collected: 04/05/14 12:50**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | ND | | 3.2 | | ug/L | | | 04/12/14 01:11 | 2 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| TBA-d9 (Surr) | 118 | | 50 - 150 | | 04/12/14 01:11 | 2 |
| Dibromofluoromethane (Surr) | 86 | | 50 - 150 | | 04/12/14 01:11 | 2 |

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 10 | | ug/L | | | 04/10/14 17:04 | 10 |
| 1,1,1-Trichloroethane | ND | | 10 | | ug/L | | | 04/10/14 17:04 | 10 |
| 1,1,2,2-Tetrachloroethane | ND | | 5.0 | | ug/L | | | 04/10/14 17:04 | 10 |
| 1,1,2-Trichloroethane | ND | | 10 | | ug/L | | | 04/10/14 17:04 | 10 |
| 1,1-Dichloroethane | ND | | 10 | | ug/L | | | 04/10/14 17:04 | 10 |
| 1,1-Dichloroethene | ND | | 10 | | ug/L | | | 04/10/14 17:04 | 10 |
| 1,1-Dichloropropene | ND | | 10 | | ug/L | | | 04/10/14 17:04 | 10 |
| 1,2,3-Trichlorobenzene | ND | | 10 | | ug/L | | | 04/10/14 17:04 | 10 |
| 1,2,3-Trichloropropane | ND | | 10 | | ug/L | | | 04/10/14 17:04 | 10 |
| 1,2,4-Trichlorobenzene | ND | | 10 | | ug/L | | | 04/10/14 17:04 | 10 |
| 1,2,4-Trimethylbenzene | ND | | 10 | | ug/L | | | 04/10/14 17:04 | 10 |
| 1,2-Dibromo-3-Chloropropane | ND | | 50 | | ug/L | | | 04/10/14 17:04 | 10 |
| 1,2-Dichlorobenzene | ND | | 10 | | ug/L | | | 04/10/14 17:04 | 10 |
| 1,2-Dichloroethane | ND | | 10 | | ug/L | | | 04/10/14 17:04 | 10 |
| 1,2-Dichloropropane | ND | | 10 | | ug/L | | | 04/10/14 17:04 | 10 |
| 1,3,5-Trimethylbenzene | ND | | 10 | | ug/L | | | 04/10/14 17:04 | 10 |
| 1,3-Dichlorobenzene | ND | | 10 | | ug/L | | | 04/10/14 17:04 | 10 |
| 1,3-Dichloropropane | ND | | 10 | | ug/L | | | 04/10/14 17:04 | 10 |
| 1,4-Dichlorobenzene | ND | | 10 | | ug/L | | | 04/10/14 17:04 | 10 |
| 1,4-Dioxane | ND | | 500 | | ug/L | | | 04/10/14 17:04 | 10 |
| 2,2-Dichloropropane | ND | | 10 | | ug/L | | | 04/10/14 17:04 | 10 |
| **2-Butanone (MEK)** | **180** | * | 100 | | ug/L | | | 04/10/14 17:04 | 10 |
| 2-Chlorotoluene | ND | | 10 | | ug/L | | | 04/10/14 17:04 | 10 |
| 2-Hexanone | ND | * | 100 | | ug/L | | | 04/10/14 17:04 | 10 |
| 4-Chlorotoluene | ND | | 10 | | ug/L | | | 04/10/14 17:04 | 10 |
| 4-Isopropyltoluene | ND | | 10 | | ug/L | | | 04/10/14 17:04 | 10 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 100 | | ug/L | | | 04/10/14 17:04 | 10 |
| Acetone | ND | | 500 | | ug/L | | | 04/10/14 17:04 | 10 |
| Benzene | ND | | 10 | | ug/L | | | 04/10/14 17:04 | 10 |
| Bromobenzene | ND | | 10 | | ug/L | | | 04/10/14 17:04 | 10 |
| Bromoform | ND | | 10 | | ug/L | | | 04/10/14 17:04 | 10 |
| Bromomethane | ND | | 20 | | ug/L | | | 04/10/14 17:04 | 10 |
| Carbon disulfide | ND | | 100 | | ug/L | | | 04/10/14 17:04 | 10 |

**Client Sample ID: MW-267M-20140405-01**
**Date Collected: 04/05/14 12:50**
**Date Received: 04/09/14 01:30**

**Lab Sample ID: 480-57495-12**
**Matrix: Water**

**Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Carbon tetrachloride | ND | | 10 | | ug/L | | | 04/10/14 17:04 | 10 |
| Chlorobenzene | ND | | 10 | | ug/L | | | 04/10/14 17:04 | 10 |
| Chlorobromomethane | ND | | 10 | | ug/L | | | 04/10/14 17:04 | 10 |
| Chlorodibromomethane | ND | | 5.0 | | ug/L | | | 04/10/14 17:04 | 10 |
| Chloroethane | ND | | 20 | | ug/L | | | 04/10/14 17:04 | 10 |
| Chloroform | ND | | 10 | | ug/L | | | 04/10/14 17:04 | 10 |
| Chloromethane | ND | | 20 | | ug/L | | | 04/10/14 17:04 | 10 |
| **cis-1,2-Dichloroethene** | **380** | | 10 | | ug/L | | | 04/10/14 17:04 | 10 |
| cis-1,3-Dichloropropene | ND | | 4.0 | | ug/L | | | 04/10/14 17:04 | 10 |
| Dichlorobromomethane | ND | | 5.0 | | ug/L | | | 04/10/14 17:04 | 10 |
| Dichlorodifluoromethane | ND | | 10 | | ug/L | | | 04/10/14 17:04 | 10 |
| Ethyl ether | ND | | 10 | | ug/L | | | 04/10/14 17:04 | 10 |
| Ethylbenzene | ND | | 10 | | ug/L | | | 04/10/14 17:04 | 10 |
| Ethylene Dibromide | ND | | 10 | | ug/L | | | 04/10/14 17:04 | 10 |
| Hexachlorobutadiene | ND | | 4.0 | | ug/L | | | 04/10/14 17:04 | 10 |
| Isopropyl ether | ND | | 100 | | ug/L | | | 04/10/14 17:04 | 10 |
| Isopropylbenzene | ND | | 10 | | ug/L | | | 04/10/14 17:04 | 10 |
| Methyl tert-butyl ether | ND | | 10 | | ug/L | | | 04/10/14 17:04 | 10 |
| Methylene Chloride | ND | | 10 | | ug/L | | | 04/10/14 17:04 | 10 |
| m-Xylene & p-Xylene | ND | | 20 | | ug/L | | | 04/10/14 17:04 | 10 |
| Naphthalene | ND | | 50 | | ug/L | | | 04/10/14 17:04 | 10 |
| n-Butylbenzene | ND | | 10 | | ug/L | | | 04/10/14 17:04 | 10 |
| N-Propylbenzene | ND | | 10 | | ug/L | | | 04/10/14 17:04 | 10 |
| o-Xylene | ND | | 10 | | ug/L | | | 04/10/14 17:04 | 10 |
| sec-Butylbenzene | ND | | 10 | | ug/L | | | 04/10/14 17:04 | 10 |
| Styrene | ND | | 10 | | ug/L | | | 04/10/14 17:04 | 10 |
| Tert-amyl methyl ether | ND | | 50 | | ug/L | | | 04/10/14 17:04 | 10 |
| Tert-butyl ethyl ether | ND | | 50 | | ug/L | | | 04/10/14 17:04 | 10 |
| tert-Butylbenzene | ND | | 10 | | ug/L | | | 04/10/14 17:04 | 10 |
| Tetrachloroethene | ND | | 10 | | ug/L | | | 04/10/14 17:04 | 10 |
| Tetrahydrofuran | ND | | 100 | | ug/L | | | 04/10/14 17:04 | 10 |
| **Toluene** | **87** | | 10 | | ug/L | | | 04/10/14 17:04 | 10 |
| trans-1,2-Dichloroethene | ND | | 10 | | ug/L | | | 04/10/14 17:04 | 10 |
| trans-1,3-Dichloropropene | ND | | 4.0 | | ug/L | | | 04/10/14 17:04 | 10 |
| Trichloroethene | ND | | 10 | | ug/L | | | 04/10/14 17:04 | 10 |
| Trichlorofluoromethane | ND | | 10 | | ug/L | | | 04/10/14 17:04 | 10 |
| **Vinyl chloride** | **31** | | 10 | | ug/L | | | 04/10/14 17:04 | 10 |
| Dibromomethane | ND | | 10 | | ug/L | | | 04/10/14 17:04 | 10 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *95* | | *70 - 130* | | *04/10/14 17:04* | *10* |
| *1,2-Dichloroethane-d4 (Surr)* | *94* | | *70 - 130* | | *04/10/14 17:04* | *10* |
| *4-Bromofluorobenzene (Surr)* | *98* | | *70 - 130* | | *04/10/14 17:04* | *10* |

## Client Sample ID: MW-268S-20140407

**Lab Sample ID: 480-57495-13**

**Date Collected: 04/07/14 08:45**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | ND | | 1.6 | | ug/L | | | 04/12/14 01:36 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *TBA-d9 (Surr)* | *112* | | *50 - 150* | | *04/12/14 01:36* | *1* |
| *Dibromofluoromethane (Surr)* | *90* | | *50 - 150* | | *04/12/14 01:36* | *1* |

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/10/14 17:29 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/10/14 17:29 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/10/14 17:29 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/10/14 17:29 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/10/14 17:29 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/10/14 17:29 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/10/14 17:29 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/10/14 17:29 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/10/14 17:29 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/10/14 17:29 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/10/14 17:29 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/10/14 17:29 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/10/14 17:29 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/10/14 17:29 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/10/14 17:29 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/10/14 17:29 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/10/14 17:29 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/10/14 17:29 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/10/14 17:29 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/10/14 17:29 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/10/14 17:29 | 1 |
| 2-Butanone (MEK) | ND | * | 10 | | ug/L | | | 04/10/14 17:29 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/10/14 17:29 | 1 |
| 2-Hexanone | ND | * | 10 | | ug/L | | | 04/10/14 17:29 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/10/14 17:29 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/10/14 17:29 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/10/14 17:29 | 1 |
| Acetone | ND | | 50 | | ug/L | | | 04/10/14 17:29 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/10/14 17:29 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/10/14 17:29 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/10/14 17:29 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/10/14 17:29 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/10/14 17:29 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/10/14 17:29 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/10/14 17:29 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/10/14 17:29 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/10/14 17:29 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/10/14 17:29 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/10/14 17:29 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/10/14 17:29 | 1 |
| **cis-1,2-Dichloroethene** | **11** | | 1.0 | | ug/L | | | 04/10/14 17:29 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/10/14 17:29 | 1 |

## Client Sample ID: MW-268S-20140407

**Lab Sample ID: 480-57495-13**

**Date Collected: 04/07/14 08:45**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/10/14 17:29 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/10/14 17:29 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/10/14 17:29 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/10/14 17:29 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/10/14 17:29 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/10/14 17:29 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/10/14 17:29 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/10/14 17:29 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/10/14 17:29 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/10/14 17:29 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/10/14 17:29 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/10/14 17:29 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/10/14 17:29 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/10/14 17:29 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/10/14 17:29 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/10/14 17:29 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/10/14 17:29 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/10/14 17:29 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/10/14 17:29 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/10/14 17:29 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/10/14 17:29 | 1 |
| Tetrahydrofuran | ND | | 10 | | ug/L | | | 04/10/14 17:29 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 04/10/14 17:29 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/10/14 17:29 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/10/14 17:29 | 1 |
| **Trichloroethene** | **11** | | 1.0 | | ug/L | | | 04/10/14 17:29 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/10/14 17:29 | 1 |
| Vinyl chloride | ND | | 1.0 | | ug/L | | | 04/10/14 17:29 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/10/14 17:29 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *99* | | *70 - 130* | | *04/10/14 17:29* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *94* | | *70 - 130* | | *04/10/14 17:29* | *1* |
| *4-Bromofluorobenzene (Surr)* | *101* | | *70 - 130* | | *04/10/14 17:29* | *1* |

## Client Sample ID: MW-268M-20140407

**Lab Sample ID: 480-57495-14**

**Date Collected: 04/07/14 09:25**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **1,4-Dioxane** | **25** | | 1.6 | | ug/L | | | 04/12/14 02:00 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *TBA-d9 (Surr)* | *80* | | *50 - 150* | | *04/12/14 02:00* | *1* |
| *Dibromofluoromethane (Surr)* | *83* | | *50 - 150* | | *04/12/14 02:00* | *1* |

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 40 | | ug/L | | | 04/10/14 17:54 | 40 |

**Client Sample ID: MW-268M-20140407**
**Date Collected: 04/07/14 09:25**
**Date Received: 04/09/14 01:30**

**Lab Sample ID: 480-57495-14**
**Matrix: Water**

**Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | | 40 | | ug/L | | | 04/10/14 17:54 | 40 |
| 1,1,2,2-Tetrachloroethane | ND | | 20 | | ug/L | | | 04/10/14 17:54 | 40 |
| 1,1,2-Trichloroethane | ND | | 40 | | ug/L | | | 04/10/14 17:54 | 40 |
| 1,1-Dichloroethane | ND | | 40 | | ug/L | | | 04/10/14 17:54 | 40 |
| 1,1-Dichloroethene | ND | | 40 | | ug/L | | | 04/10/14 17:54 | 40 |
| 1,1-Dichloropropene | ND | | 40 | | ug/L | | | 04/10/14 17:54 | 40 |
| 1,2,3-Trichlorobenzene | ND | | 40 | | ug/L | | | 04/10/14 17:54 | 40 |
| 1,2,3-Trichloropropane | ND | | 40 | | ug/L | | | 04/10/14 17:54 | 40 |
| 1,2,4-Trichlorobenzene | ND | | 40 | | ug/L | | | 04/10/14 17:54 | 40 |
| 1,2,4-Trimethylbenzene | ND | | 40 | | ug/L | | | 04/10/14 17:54 | 40 |
| 1,2-Dibromo-3-Chloropropane | ND | | 200 | | ug/L | | | 04/10/14 17:54 | 40 |
| 1,2-Dichlorobenzene | ND | | 40 | | ug/L | | | 04/10/14 17:54 | 40 |
| 1,2-Dichloroethane | ND | | 40 | | ug/L | | | 04/10/14 17:54 | 40 |
| 1,2-Dichloropropane | ND | | 40 | | ug/L | | | 04/10/14 17:54 | 40 |
| 1,3,5-Trimethylbenzene | ND | | 40 | | ug/L | | | 04/10/14 17:54 | 40 |
| 1,3-Dichlorobenzene | ND | | 40 | | ug/L | | | 04/10/14 17:54 | 40 |
| 1,3-Dichloropropane | ND | | 40 | | ug/L | | | 04/10/14 17:54 | 40 |
| 1,4-Dichlorobenzene | ND | | 40 | | ug/L | | | 04/10/14 17:54 | 40 |
| 1,4-Dioxane | ND | | 2000 | | ug/L | | | 04/10/14 17:54 | 40 |
| 2,2-Dichloropropane | ND | | 40 | | ug/L | | | 04/10/14 17:54 | 40 |
| 2-Butanone (MEK) | ND | * | 400 | | ug/L | | | 04/10/14 17:54 | 40 |
| 2-Chlorotoluene | ND | | 40 | | ug/L | | | 04/10/14 17:54 | 40 |
| 2-Hexanone | ND | * | 400 | | ug/L | | | 04/10/14 17:54 | 40 |
| 4-Chlorotoluene | ND | | 40 | | ug/L | | | 04/10/14 17:54 | 40 |
| 4-Isopropyltoluene | ND | | 40 | | ug/L | | | 04/10/14 17:54 | 40 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 400 | | ug/L | | | 04/10/14 17:54 | 40 |
| Acetone | ND | | 2000 | | ug/L | | | 04/10/14 17:54 | 40 |
| Benzene | ND | | 40 | | ug/L | | | 04/10/14 17:54 | 40 |
| Bromobenzene | ND | | 40 | | ug/L | | | 04/10/14 17:54 | 40 |
| Bromoform | ND | | 40 | | ug/L | | | 04/10/14 17:54 | 40 |
| Bromomethane | ND | | 80 | | ug/L | | | 04/10/14 17:54 | 40 |
| Carbon disulfide | ND | | 400 | | ug/L | | | 04/10/14 17:54 | 40 |
| Carbon tetrachloride | ND | | 40 | | ug/L | | | 04/10/14 17:54 | 40 |
| Chlorobenzene | ND | | 40 | | ug/L | | | 04/10/14 17:54 | 40 |
| Chlorobromomethane | ND | | 40 | | ug/L | | | 04/10/14 17:54 | 40 |
| Chlorodibromomethane | ND | | 20 | | ug/L | | | 04/10/14 17:54 | 40 |
| Chloroethane | ND | | 80 | | ug/L | | | 04/10/14 17:54 | 40 |
| Chloroform | ND | | 40 | | ug/L | | | 04/10/14 17:54 | 40 |
| Chloromethane | ND | | 80 | | ug/L | | | 04/10/14 17:54 | 40 |
| **cis-1,2-Dichloroethene** | **3100** | | 40 | | ug/L | | | 04/10/14 17:54 | 40 |
| cis-1,3-Dichloropropene | ND | | 16 | | ug/L | | | 04/10/14 17:54 | 40 |
| Dichlorobromomethane | ND | | 20 | | ug/L | | | 04/10/14 17:54 | 40 |
| Dichlorodifluoromethane | ND | | 40 | | ug/L | | | 04/10/14 17:54 | 40 |
| Ethyl ether | ND | | 40 | | ug/L | | | 04/10/14 17:54 | 40 |
| Ethylbenzene | ND | | 40 | | ug/L | | | 04/10/14 17:54 | 40 |
| Ethylene Dibromide | ND | | 40 | | ug/L | | | 04/10/14 17:54 | 40 |
| Hexachlorobutadiene | ND | | 16 | | ug/L | | | 04/10/14 17:54 | 40 |
| Isopropyl ether | ND | | 400 | | ug/L | | | 04/10/14 17:54 | 40 |
| Isopropylbenzene | ND | | 40 | | ug/L | | | 04/10/14 17:54 | 40 |

## Client Sample ID: MW-268M-20140407

**Lab Sample ID: 480-57495-14**

**Date Collected: 04/07/14 09:25**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether | ND | | 40 | | ug/L | | | 04/10/14 17:54 | 40 |
| Methylene Chloride | ND | | 40 | | ug/L | | | 04/10/14 17:54 | 40 |
| m-Xylene & p-Xylene | ND | | 80 | | ug/L | | | 04/10/14 17:54 | 40 |
| Naphthalene | ND | | 200 | | ug/L | | | 04/10/14 17:54 | 40 |
| n-Butylbenzene | ND | | 40 | | ug/L | | | 04/10/14 17:54 | 40 |
| N-Propylbenzene | ND | | 40 | | ug/L | | | 04/10/14 17:54 | 40 |
| o-Xylene | ND | | 40 | | ug/L | | | 04/10/14 17:54 | 40 |
| sec-Butylbenzene | ND | | 40 | | ug/L | | | 04/10/14 17:54 | 40 |
| Styrene | ND | | 40 | | ug/L | | | 04/10/14 17:54 | 40 |
| Tert-amyl methyl ether | ND | | 200 | | ug/L | | | 04/10/14 17:54 | 40 |
| Tert-butyl ethyl ether | ND | | 200 | | ug/L | | | 04/10/14 17:54 | 40 |
| tert-Butylbenzene | ND | | 40 | | ug/L | | | 04/10/14 17:54 | 40 |
| Tetrachloroethene | ND | | 40 | | ug/L | | | 04/10/14 17:54 | 40 |
| Tetrahydrofuran | ND | | 400 | | ug/L | | | 04/10/14 17:54 | 40 |
| Toluene | ND | | 40 | | ug/L | | | 04/10/14 17:54 | 40 |
| trans-1,2-Dichloroethene | ND | | 40 | | ug/L | | | 04/10/14 17:54 | 40 |
| trans-1,3-Dichloropropene | ND | | 16 | | ug/L | | | 04/10/14 17:54 | 40 |
| **Trichloroethene** | **1200** | | 40 | | ug/L | | | 04/10/14 17:54 | 40 |
| Trichlorofluoromethane | ND | | 40 | | ug/L | | | 04/10/14 17:54 | 40 |
| **Vinyl chloride** | **180** | | 40 | | ug/L | | | 04/10/14 17:54 | 40 |
| Dibromomethane | ND | | 40 | | ug/L | | | 04/10/14 17:54 | 40 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *98* | | *70 - 130* | | *04/10/14 17:54* | *40* |
| *1,2-Dichloroethane-d4 (Surr)* | *94* | | *70 - 130* | | *04/10/14 17:54* | *40* |
| *4-Bromofluorobenzene (Surr)* | *99* | | *70 - 130* | | *04/10/14 17:54* | *40* |

## Client Sample ID: MW-268D-20140405

**Lab Sample ID: 480-57495-15**

**Date Collected: 04/05/14 12:20**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/10/14 18:19 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/10/14 18:19 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/10/14 18:19 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/10/14 18:19 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/10/14 18:19 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/10/14 18:19 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/10/14 18:19 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/10/14 18:19 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/10/14 18:19 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/10/14 18:19 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/10/14 18:19 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/10/14 18:19 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/10/14 18:19 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/10/14 18:19 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/10/14 18:19 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/10/14 18:19 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/10/14 18:19 | 1 |

Client: Innovative Engineering Solutions, Inc
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57495-1

**Client Sample ID: MW-268D-20140405**
**Date Collected: 04/05/14 12:20**
**Date Received: 04/09/14 01:30**

**Lab Sample ID: 480-57495-15**
**Matrix: Water**

**Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/10/14 18:19 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/10/14 18:19 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/10/14 18:19 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/10/14 18:19 | 1 |
| 2-Butanone (MEK) | ND | * | 10 | | ug/L | | | 04/10/14 18:19 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/10/14 18:19 | 1 |
| 2-Hexanone | ND | * | 10 | | ug/L | | | 04/10/14 18:19 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/10/14 18:19 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/10/14 18:19 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/10/14 18:19 | 1 |
| Acetone | ND | | 50 | | ug/L | | | 04/10/14 18:19 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/10/14 18:19 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/10/14 18:19 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/10/14 18:19 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/10/14 18:19 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/10/14 18:19 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/10/14 18:19 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/10/14 18:19 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/10/14 18:19 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/10/14 18:19 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/10/14 18:19 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/10/14 18:19 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/10/14 18:19 | 1 |
| **cis-1,2-Dichloroethene** | **8.5** | | 1.0 | | ug/L | | | 04/10/14 18:19 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/10/14 18:19 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/10/14 18:19 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/10/14 18:19 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/10/14 18:19 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/10/14 18:19 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/10/14 18:19 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/10/14 18:19 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/10/14 18:19 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/10/14 18:19 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/10/14 18:19 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/10/14 18:19 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/10/14 18:19 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/10/14 18:19 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/10/14 18:19 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/10/14 18:19 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/10/14 18:19 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/10/14 18:19 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/10/14 18:19 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/10/14 18:19 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/10/14 18:19 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/10/14 18:19 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/10/14 18:19 | 1 |
| Tetrahydrofuran | ND | | 10 | | ug/L | | | 04/10/14 18:19 | 1 |
| **Toluene** | **2.0** | | 1.0 | | ug/L | | | 04/10/14 18:19 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/10/14 18:19 | 1 |

## Client Sample ID: MW-268D-20140405

**Lab Sample ID: 480-57495-15**

**Date Collected: 04/05/14 12:20**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/10/14 18:19 | 1 |
| **Trichloroethene** | **1.2** | | 1.0 | | ug/L | | | 04/10/14 18:19 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/10/14 18:19 | 1 |
| **Vinyl chloride** | **2.6** | | 1.0 | | ug/L | | | 04/10/14 18:19 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/10/14 18:19 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *95* | | *70 - 130* | | *04/10/14 18:19* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *95* | | *70 - 130* | | *04/10/14 18:19* | *1* |
| *4-Bromofluorobenzene (Surr)* | *97* | | *70 - 130* | | *04/10/14 18:19* | *1* |

## Client Sample ID: MW-269Ma-20140405

**Lab Sample ID: 480-57495-16**

**Date Collected: 04/05/14 14:10**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **1,4-Dioxane** | **2.9** | | 1.6 | | ug/L | | | 04/12/14 02:24 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *TBA-d9 (Surr)* | *111* | | *50 - 150* | | *04/12/14 02:24* | *1* |
| *Dibromofluoromethane (Surr)* | *92* | | *50 - 150* | | *04/12/14 02:24* | *1* |

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/10/14 18:44 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/10/14 18:44 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/10/14 18:44 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/10/14 18:44 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/10/14 18:44 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/10/14 18:44 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/10/14 18:44 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/10/14 18:44 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/10/14 18:44 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/10/14 18:44 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/10/14 18:44 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/10/14 18:44 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/10/14 18:44 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/10/14 18:44 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/10/14 18:44 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/10/14 18:44 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/10/14 18:44 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/10/14 18:44 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/10/14 18:44 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/10/14 18:44 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/10/14 18:44 | 1 |
| 2-Butanone (MEK) | ND | * | 10 | | ug/L | | | 04/10/14 18:44 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/10/14 18:44 | 1 |
| 2-Hexanone | ND | * | 10 | | ug/L | | | 04/10/14 18:44 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/10/14 18:44 | 1 |

**Client Sample ID: MW-269Ma-20140405**
**Date Collected: 04/05/14 14:10**
**Date Received: 04/09/14 01:30**

**Lab Sample ID: 480-57495-16**
**Matrix: Water**

**Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/10/14 18:44 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/10/14 18:44 | 1 |
| Acetone | ND | | 50 | | ug/L | | | 04/10/14 18:44 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/10/14 18:44 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/10/14 18:44 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/10/14 18:44 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/10/14 18:44 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/10/14 18:44 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/10/14 18:44 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/10/14 18:44 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/10/14 18:44 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/10/14 18:44 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/10/14 18:44 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/10/14 18:44 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/10/14 18:44 | 1 |
| **cis-1,2-Dichloroethene** | **3.2** | | 1.0 | | ug/L | | | 04/10/14 18:44 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/10/14 18:44 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/10/14 18:44 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/10/14 18:44 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/10/14 18:44 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/10/14 18:44 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/10/14 18:44 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/10/14 18:44 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/10/14 18:44 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/10/14 18:44 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/10/14 18:44 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/10/14 18:44 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/10/14 18:44 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/10/14 18:44 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/10/14 18:44 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/10/14 18:44 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/10/14 18:44 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/10/14 18:44 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/10/14 18:44 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/10/14 18:44 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/10/14 18:44 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/10/14 18:44 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/10/14 18:44 | 1 |
| Tetrahydrofuran | ND | | 10 | | ug/L | | | 04/10/14 18:44 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 04/10/14 18:44 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/10/14 18:44 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/10/14 18:44 | 1 |
| **Trichloroethene** | **2.2** | | 1.0 | | ug/L | | | 04/10/14 18:44 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/10/14 18:44 | 1 |
| Vinyl chloride | ND | | 1.0 | | ug/L | | | 04/10/14 18:44 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/10/14 18:44 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *96* | | *70 - 130* | | *04/10/14 18:44* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *96* | | *70 - 130* | | *04/10/14 18:44* | *1* |

## Client Sample ID: MW-269Ma-20140405

**Lab Sample ID: 480-57495-16**

**Date Collected: 04/05/14 14:10**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene (Surr) | 99 | | 70 - 130 | | 04/10/14 18:44 | 1 |

## Client Sample ID: MW-551-20140408-01

**Lab Sample ID: 480-57495-17**

**Date Collected: 04/08/14 12:05**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 40 | | ug/L | | | 04/11/14 14:09 | 40 |
| 1,1,1-Trichloroethane | ND | | 40 | | ug/L | | | 04/11/14 14:09 | 40 |
| 1,1,2,2-Tetrachloroethane | ND | | 20 | | ug/L | | | 04/11/14 14:09 | 40 |
| 1,1,2-Trichloroethane | ND | | 40 | | ug/L | | | 04/11/14 14:09 | 40 |
| 1,1-Dichloroethane | ND | | 40 | | ug/L | | | 04/11/14 14:09 | 40 |
| 1,1-Dichloroethene | ND | | 40 | | ug/L | | | 04/11/14 14:09 | 40 |
| 1,1-Dichloropropene | ND | | 40 | | ug/L | | | 04/11/14 14:09 | 40 |
| 1,2,3-Trichlorobenzene | ND | | 40 | | ug/L | | | 04/11/14 14:09 | 40 |
| 1,2,3-Trichloropropane | ND | | 40 | | ug/L | | | 04/11/14 14:09 | 40 |
| 1,2,4-Trichlorobenzene | ND | | 40 | | ug/L | | | 04/11/14 14:09 | 40 |
| 1,2,4-Trimethylbenzene | ND | | 40 | | ug/L | | | 04/11/14 14:09 | 40 |
| 1,2-Dibromo-3-Chloropropane | ND | | 200 | | ug/L | | | 04/11/14 14:09 | 40 |
| 1,2-Dichlorobenzene | ND | | 40 | | ug/L | | | 04/11/14 14:09 | 40 |
| 1,2-Dichloroethane | ND | | 40 | | ug/L | | | 04/11/14 14:09 | 40 |
| 1,2-Dichloropropane | ND | | 40 | | ug/L | | | 04/11/14 14:09 | 40 |
| 1,3,5-Trimethylbenzene | ND | | 40 | | ug/L | | | 04/11/14 14:09 | 40 |
| 1,3-Dichlorobenzene | ND | | 40 | | ug/L | | | 04/11/14 14:09 | 40 |
| 1,3-Dichloropropane | ND | | 40 | | ug/L | | | 04/11/14 14:09 | 40 |
| 1,4-Dichlorobenzene | ND | | 40 | | ug/L | | | 04/11/14 14:09 | 40 |
| 1,4-Dioxane | ND | | 2000 | | ug/L | | | 04/11/14 14:09 | 40 |
| 2,2-Dichloropropane | ND | | 40 | | ug/L | | | 04/11/14 14:09 | 40 |
| 2-Butanone (MEK) | ND | | 400 | | ug/L | | | 04/11/14 14:09 | 40 |
| 2-Chlorotoluene | ND | | 40 | | ug/L | | | 04/11/14 14:09 | 40 |
| 2-Hexanone | ND | * | 400 | | ug/L | | | 04/11/14 14:09 | 40 |
| 4-Chlorotoluene | ND | | 40 | | ug/L | | | 04/11/14 14:09 | 40 |
| 4-Isopropyltoluene | ND | | 40 | | ug/L | | | 04/11/14 14:09 | 40 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 400 | | ug/L | | | 04/11/14 14:09 | 40 |
| **Acetone** | **15000** | | 2000 | | ug/L | | | 04/11/14 14:09 | 40 |
| Benzene | ND | | 40 | | ug/L | | | 04/11/14 14:09 | 40 |
| Bromobenzene | ND | | 40 | | ug/L | | | 04/11/14 14:09 | 40 |
| Bromoform | ND | | 40 | | ug/L | | | 04/11/14 14:09 | 40 |
| Bromomethane | ND | | 80 | | ug/L | | | 04/11/14 14:09 | 40 |
| Carbon disulfide | ND | | 400 | | ug/L | | | 04/11/14 14:09 | 40 |
| Carbon tetrachloride | ND | | 40 | | ug/L | | | 04/11/14 14:09 | 40 |
| Chlorobenzene | ND | | 40 | | ug/L | | | 04/11/14 14:09 | 40 |
| Chlorobromomethane | ND | | 40 | | ug/L | | | 04/11/14 14:09 | 40 |
| Chlorodibromomethane | ND | | 20 | | ug/L | | | 04/11/14 14:09 | 40 |
| Chloroethane | ND | | 80 | | ug/L | | | 04/11/14 14:09 | 40 |
| Chloroform | ND | | 40 | | ug/L | | | 04/11/14 14:09 | 40 |
| Chloromethane | ND | | 80 | | ug/L | | | 04/11/14 14:09 | 40 |
| cis-1,2-Dichloroethene | ND | | 40 | | ug/L | | | 04/11/14 14:09 | 40 |

## Client Sample ID: MW-551-20140408-01

**Lab Sample ID: 480-57495-17**

**Date Collected: 04/08/14 12:05**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| cis-1,3-Dichloropropene | ND | | 16 | | ug/L | | | 04/11/14 14:09 | 40 |
| Dichlorobromomethane | ND | | 20 | | ug/L | | | 04/11/14 14:09 | 40 |
| Dichlorodifluoromethane | ND | | 40 | | ug/L | | | 04/11/14 14:09 | 40 |
| Ethyl ether | ND | | 40 | | ug/L | | | 04/11/14 14:09 | 40 |
| Ethylbenzene | ND | | 40 | | ug/L | | | 04/11/14 14:09 | 40 |
| Ethylene Dibromide | ND | | 40 | | ug/L | | | 04/11/14 14:09 | 40 |
| Hexachlorobutadiene | ND | | 16 | | ug/L | | | 04/11/14 14:09 | 40 |
| Isopropyl ether | ND | | 400 | | ug/L | | | 04/11/14 14:09 | 40 |
| Isopropylbenzene | ND | | 40 | | ug/L | | | 04/11/14 14:09 | 40 |
| Methyl tert-butyl ether | ND | | 40 | | ug/L | | | 04/11/14 14:09 | 40 |
| Methylene Chloride | ND | | 40 | | ug/L | | | 04/11/14 14:09 | 40 |
| m-Xylene & p-Xylene | ND | | 80 | | ug/L | | | 04/11/14 14:09 | 40 |
| Naphthalene | ND | | 200 | | ug/L | | | 04/11/14 14:09 | 40 |
| n-Butylbenzene | ND | | 40 | | ug/L | | | 04/11/14 14:09 | 40 |
| N-Propylbenzene | ND | | 40 | | ug/L | | | 04/11/14 14:09 | 40 |
| o-Xylene | ND | | 40 | | ug/L | | | 04/11/14 14:09 | 40 |
| sec-Butylbenzene | ND | | 40 | | ug/L | | | 04/11/14 14:09 | 40 |
| Styrene | ND | | 40 | | ug/L | | | 04/11/14 14:09 | 40 |
| Tert-amyl methyl ether | ND | | 200 | | ug/L | | | 04/11/14 14:09 | 40 |
| Tert-butyl ethyl ether | ND | | 200 | | ug/L | | | 04/11/14 14:09 | 40 |
| tert-Butylbenzene | ND | | 40 | | ug/L | | | 04/11/14 14:09 | 40 |
| Tetrachloroethene | ND | | 40 | | ug/L | | | 04/11/14 14:09 | 40 |
| Tetrahydrofuran | ND | | 400 | | ug/L | | | 04/11/14 14:09 | 40 |
| Toluene | ND | | 40 | | ug/L | | | 04/11/14 14:09 | 40 |
| trans-1,2-Dichloroethene | ND | | 40 | | ug/L | | | 04/11/14 14:09 | 40 |
| trans-1,3-Dichloropropene | ND | | 16 | | ug/L | | | 04/11/14 14:09 | 40 |
| Trichloroethene | ND | | 40 | | ug/L | | | 04/11/14 14:09 | 40 |
| Trichlorofluoromethane | ND | | 40 | | ug/L | | | 04/11/14 14:09 | 40 |
| Vinyl chloride | ND | | 40 | | ug/L | | | 04/11/14 14:09 | 40 |
| Dibromomethane | ND | | 40 | | ug/L | | | 04/11/14 14:09 | 40 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *96* | | *70 - 130* | | *04/11/14 14:09* | *40* |
| *1,2-Dichloroethane-d4 (Surr)* | *96* | | *70 - 130* | | *04/11/14 14:09* | *40* |
| *4-Bromofluorobenzene (Surr)* | *100* | | *70 - 130* | | *04/11/14 14:09* | *40* |

## Client Sample ID: MW-552-20140407-01

**Lab Sample ID: 480-57495-18**

**Date Collected: 04/07/14 15:25**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | ND | | 3.2 | | ug/L | | | 04/12/14 02:48 | 2 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *TBA-d9 (Surr)* | *117* | | *50 - 150* | | *04/12/14 02:48* | *2* |
| *Dibromofluoromethane (Surr)* | *88* | | *50 - 150* | | *04/12/14 02:48* | *2* |

Client: Innovative Engineering Solutions, Inc
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57495-1

**Client Sample ID: MW-552-20140407-01**
**Date Collected: 04/07/14 15:25**
**Date Received: 04/09/14 01:30**

**Lab Sample ID: 480-57495-18**
**Matrix: Water**

**Method: 8260C - Volatile Organic Compounds (GC/MS)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 14:35 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 14:35 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/11/14 14:35 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 14:35 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 14:35 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 14:35 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/11/14 14:35 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 14:35 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 14:35 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 14:35 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 14:35 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/11/14 14:35 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 14:35 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 14:35 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 14:35 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 14:35 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 14:35 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 14:35 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 14:35 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/11/14 14:35 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 14:35 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 04/11/14 14:35 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/11/14 14:35 | 1 |
| 2-Hexanone | ND | * | 10 | | ug/L | | | 04/11/14 14:35 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/11/14 14:35 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/11/14 14:35 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/11/14 14:35 | 1 |
| **Acetone** | **120** | | 50 | | ug/L | | | 04/11/14 14:35 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/11/14 14:35 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 14:35 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/11/14 14:35 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/11/14 14:35 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/11/14 14:35 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/11/14 14:35 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 14:35 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/11/14 14:35 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/11/14 14:35 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/11/14 14:35 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/11/14 14:35 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/11/14 14:35 | 1 |
| **cis-1,2-Dichloroethene** | **2.6** | | 1.0 | | ug/L | | | 04/11/14 14:35 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/11/14 14:35 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/11/14 14:35 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/11/14 14:35 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/11/14 14:35 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 14:35 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/11/14 14:35 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/11/14 14:35 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/11/14 14:35 | 1 |

## Client Sample ID: MW-552-20140407-01

**Lab Sample ID: 480-57495-18**

**Date Collected: 04/07/14 15:25**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 14:35 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/11/14 14:35 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/11/14 14:35 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/11/14 14:35 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/11/14 14:35 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 14:35 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 14:35 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/11/14 14:35 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 14:35 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/11/14 14:35 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/11/14 14:35 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/11/14 14:35 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 14:35 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 14:35 | 1 |
| Tetrahydrofuran | ND | | 10 | | ug/L | | | 04/11/14 14:35 | 1 |
| **Toluene** | **2.4** | | 1.0 | | ug/L | | | 04/11/14 14:35 | 1 |
| **trans-1,2-Dichloroethene** | **2.8** | | 1.0 | | ug/L | | | 04/11/14 14:35 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/11/14 14:35 | 1 |
| Trichloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 14:35 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/11/14 14:35 | 1 |
| **Vinyl chloride** | **4.6** | | 1.0 | | ug/L | | | 04/11/14 14:35 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/11/14 14:35 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *96* | | *70 - 130* | | *04/11/14 14:35* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *94* | | *70 - 130* | | *04/11/14 14:35* | *1* |
| *4-Bromofluorobenzene (Surr)* | *100* | | *70 - 130* | | *04/11/14 14:35* | *1* |

## Client Sample ID: MW-553-20140407-01

**Lab Sample ID: 480-57495-19**

**Date Collected: 04/07/14 14:30**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 15:00 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 15:00 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/11/14 15:00 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 15:00 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 15:00 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 15:00 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/11/14 15:00 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 15:00 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 15:00 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 15:00 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 15:00 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/11/14 15:00 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 15:00 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 15:00 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 15:00 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 15:00 | 1 |

**Client Sample ID: MW-553-20140407-01**
**Date Collected: 04/07/14 14:30**
**Date Received: 04/09/14 01:30**

**Lab Sample ID: 480-57495-19**
**Matrix: Water**

**Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 15:00 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 15:00 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 15:00 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/11/14 15:00 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 15:00 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 04/11/14 15:00 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/11/14 15:00 | 1 |
| 2-Hexanone | ND | * | 10 | | ug/L | | | 04/11/14 15:00 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/11/14 15:00 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/11/14 15:00 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/11/14 15:00 | 1 |
| **Acetone** | **160** | | 50 | | ug/L | | | 04/11/14 15:00 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/11/14 15:00 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 15:00 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/11/14 15:00 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/11/14 15:00 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/11/14 15:00 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/11/14 15:00 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 15:00 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/11/14 15:00 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/11/14 15:00 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/11/14 15:00 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/11/14 15:00 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/11/14 15:00 | 1 |
| **cis-1,2-Dichloroethene** | **22** | | 1.0 | | ug/L | | | 04/11/14 15:00 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/11/14 15:00 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/11/14 15:00 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/11/14 15:00 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/11/14 15:00 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 15:00 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/11/14 15:00 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/11/14 15:00 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/11/14 15:00 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 15:00 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/11/14 15:00 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/11/14 15:00 | 1 |
| **m-Xylene & p-Xylene** | **2.6** | | 2.0 | | ug/L | | | 04/11/14 15:00 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/11/14 15:00 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 15:00 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 15:00 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/11/14 15:00 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 15:00 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/11/14 15:00 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/11/14 15:00 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/11/14 15:00 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 15:00 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 15:00 | 1 |
| **Tetrahydrofuran** | **10** | | 10 | | ug/L | | | 04/11/14 15:00 | 1 |
| **Toluene** | **3.9** | | 1.0 | | ug/L | | | 04/11/14 15:00 | 1 |

## Client Sample ID: MW-553-20140407-01

**Lab Sample ID: 480-57495-19**

**Date Collected: 04/07/14 14:30**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **trans-1,2-Dichloroethene** | **1.8** | | 1.0 | | ug/L | | | 04/11/14 15:00 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/11/14 15:00 | 1 |
| Trichloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 15:00 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/11/14 15:00 | 1 |
| **Vinyl chloride** | **28** | | 1.0 | | ug/L | | | 04/11/14 15:00 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/11/14 15:00 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *98* | | *70 - 130* | | *04/11/14 15:00* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *95* | | *70 - 130* | | *04/11/14 15:00* | *1* |
| *4-Bromofluorobenzene (Surr)* | *104* | | *70 - 130* | | *04/11/14 15:00* | *1* |

## Client Sample ID: MW-560-20140407-01

**Lab Sample ID: 480-57495-20**

**Date Collected: 04/07/14 11:10**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/10/14 20:26 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/10/14 20:26 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/10/14 20:26 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/10/14 20:26 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/10/14 20:26 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/10/14 20:26 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/10/14 20:26 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/10/14 20:26 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/10/14 20:26 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/10/14 20:26 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/10/14 20:26 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/10/14 20:26 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/10/14 20:26 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/10/14 20:26 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/10/14 20:26 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/10/14 20:26 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/10/14 20:26 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/10/14 20:26 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/10/14 20:26 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/10/14 20:26 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/10/14 20:26 | 1 |
| **2-Butanone (MEK)** | **210** | * | 10 | | ug/L | | | 04/10/14 20:26 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/10/14 20:26 | 1 |
| 2-Hexanone | ND | * | 10 | | ug/L | | | 04/10/14 20:26 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/10/14 20:26 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/10/14 20:26 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/10/14 20:26 | 1 |
| Acetone | ND | | 50 | | ug/L | | | 04/10/14 20:26 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/10/14 20:26 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/10/14 20:26 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/10/14 20:26 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/10/14 20:26 | 1 |

**Client Sample ID: MW-560-20140407-01**
**Date Collected: 04/07/14 11:10**
**Date Received: 04/09/14 01:30**

**Lab Sample ID: 480-57495-20**
**Matrix: Water**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/10/14 20:26 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/10/14 20:26 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/10/14 20:26 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/10/14 20:26 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/10/14 20:26 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/10/14 20:26 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/10/14 20:26 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/10/14 20:26 | 1 |
| **cis-1,2-Dichloroethene** | **48** | | 1.0 | | ug/L | | | 04/10/14 20:26 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/10/14 20:26 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/10/14 20:26 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/10/14 20:26 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/10/14 20:26 | 1 |
| **Ethylbenzene** | **1.8** | | 1.0 | | ug/L | | | 04/10/14 20:26 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/10/14 20:26 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/10/14 20:26 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/10/14 20:26 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/10/14 20:26 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/10/14 20:26 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/10/14 20:26 | 1 |
| **m-Xylene & p-Xylene** | **6.9** | | 2.0 | | ug/L | | | 04/10/14 20:26 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/10/14 20:26 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/10/14 20:26 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/10/14 20:26 | 1 |
| **o-Xylene** | **1.7** | | 1.0 | | ug/L | | | 04/10/14 20:26 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/10/14 20:26 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/10/14 20:26 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/10/14 20:26 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/10/14 20:26 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/10/14 20:26 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/10/14 20:26 | 1 |
| Tetrahydrofuran | ND | | 10 | | ug/L | | | 04/10/14 20:26 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/10/14 20:26 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/10/14 20:26 | 1 |
| Trichloroethene | ND | | 1.0 | | ug/L | | | 04/10/14 20:26 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/10/14 20:26 | 1 |
| **Vinyl chloride** | **42** | | 1.0 | | ug/L | | | 04/10/14 20:26 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/10/14 20:26 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *99* | | *70 - 130* | | *04/10/14 20:26* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *94* | | *70 - 130* | | *04/10/14 20:26* | *1* |
| *4-Bromofluorobenzene (Surr)* | *101* | | *70 - 130* | | *04/10/14 20:26* | *1* |

### Method: 8260C - Volatile Organic Compounds (GC/MS) - DL

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Toluene** | **200** | | 4.0 | | ug/L | | | 04/11/14 15:26 | 4 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *98* | | *70 - 130* | | *04/11/14 15:26* | *4* |

## Client Sample ID: MW-560-20140407-01

**Lab Sample ID: 480-57495-20**

**Date Collected: 04/07/14 11:10**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS) - DL (Continued)

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *94* | | *70 - 130* | | *04/11/14 15:26* | *4* |
| *4-Bromofluorobenzene (Surr)* | *102* | | *70 - 130* | | *04/11/14 15:26* | *4* |

## Client Sample ID: MW-561-20140407-01

**Lab Sample ID: 480-57495-21**

**Date Collected: 04/07/14 12:00**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 10 | | ug/L | | | 04/11/14 15:51 | 10 |
| 1,1,1-Trichloroethane | ND | | 10 | | ug/L | | | 04/11/14 15:51 | 10 |
| 1,1,2,2-Tetrachloroethane | ND | | 5.0 | | ug/L | | | 04/11/14 15:51 | 10 |
| 1,1,2-Trichloroethane | ND | | 10 | | ug/L | | | 04/11/14 15:51 | 10 |
| 1,1-Dichloroethane | ND | | 10 | | ug/L | | | 04/11/14 15:51 | 10 |
| 1,1-Dichloroethene | ND | | 10 | | ug/L | | | 04/11/14 15:51 | 10 |
| 1,1-Dichloropropene | ND | | 10 | | ug/L | | | 04/11/14 15:51 | 10 |
| 1,2,3-Trichlorobenzene | ND | | 10 | | ug/L | | | 04/11/14 15:51 | 10 |
| 1,2,3-Trichloropropane | ND | | 10 | | ug/L | | | 04/11/14 15:51 | 10 |
| 1,2,4-Trichlorobenzene | ND | | 10 | | ug/L | | | 04/11/14 15:51 | 10 |
| 1,2,4-Trimethylbenzene | ND | | 10 | | ug/L | | | 04/11/14 15:51 | 10 |
| 1,2-Dibromo-3-Chloropropane | ND | | 50 | | ug/L | | | 04/11/14 15:51 | 10 |
| 1,2-Dichlorobenzene | ND | | 10 | | ug/L | | | 04/11/14 15:51 | 10 |
| 1,2-Dichloroethane | ND | | 10 | | ug/L | | | 04/11/14 15:51 | 10 |
| 1,2-Dichloropropane | ND | | 10 | | ug/L | | | 04/11/14 15:51 | 10 |
| 1,3,5-Trimethylbenzene | ND | | 10 | | ug/L | | | 04/11/14 15:51 | 10 |
| 1,3-Dichlorobenzene | ND | | 10 | | ug/L | | | 04/11/14 15:51 | 10 |
| 1,3-Dichloropropane | ND | | 10 | | ug/L | | | 04/11/14 15:51 | 10 |
| 1,4-Dichlorobenzene | ND | | 10 | | ug/L | | | 04/11/14 15:51 | 10 |
| 1,4-Dioxane | ND | | 500 | | ug/L | | | 04/11/14 15:51 | 10 |
| 2,2-Dichloropropane | ND | | 10 | | ug/L | | | 04/11/14 15:51 | 10 |
| 2-Butanone (MEK) | ND | | 100 | | ug/L | | | 04/11/14 15:51 | 10 |
| 2-Chlorotoluene | ND | | 10 | | ug/L | | | 04/11/14 15:51 | 10 |
| 2-Hexanone | ND | * | 100 | | ug/L | | | 04/11/14 15:51 | 10 |
| 4-Chlorotoluene | ND | | 10 | | ug/L | | | 04/11/14 15:51 | 10 |
| 4-Isopropyltoluene | ND | | 10 | | ug/L | | | 04/11/14 15:51 | 10 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 100 | | ug/L | | | 04/11/14 15:51 | 10 |
| Acetone | ND | | 500 | | ug/L | | | 04/11/14 15:51 | 10 |
| Benzene | ND | | 10 | | ug/L | | | 04/11/14 15:51 | 10 |
| Bromobenzene | ND | | 10 | | ug/L | | | 04/11/14 15:51 | 10 |
| Bromoform | ND | | 10 | | ug/L | | | 04/11/14 15:51 | 10 |
| Bromomethane | ND | | 20 | | ug/L | | | 04/11/14 15:51 | 10 |
| Carbon disulfide | ND | | 100 | | ug/L | | | 04/11/14 15:51 | 10 |
| Carbon tetrachloride | ND | | 10 | | ug/L | | | 04/11/14 15:51 | 10 |
| Chlorobenzene | ND | | 10 | | ug/L | | | 04/11/14 15:51 | 10 |
| Chlorobromomethane | ND | | 10 | | ug/L | | | 04/11/14 15:51 | 10 |
| Chlorodibromomethane | ND | | 5.0 | | ug/L | | | 04/11/14 15:51 | 10 |
| Chloroethane | ND | | 20 | | ug/L | | | 04/11/14 15:51 | 10 |
| Chloroform | ND | | 10 | | ug/L | | | 04/11/14 15:51 | 10 |
| Chloromethane | ND | | 20 | | ug/L | | | 04/11/14 15:51 | 10 |

## Client Sample ID: MW-561-20140407-01

**Lab Sample ID: 480-57495-21**

**Date Collected: 04/07/14 12:00**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| cis-1,2-Dichloroethene | ND | | 10 | | ug/L | | | 04/11/14 15:51 | 10 |
| cis-1,3-Dichloropropene | ND | | 4.0 | | ug/L | | | 04/11/14 15:51 | 10 |
| Dichlorobromomethane | ND | | 5.0 | | ug/L | | | 04/11/14 15:51 | 10 |
| Dichlorodifluoromethane | ND | | 10 | | ug/L | | | 04/11/14 15:51 | 10 |
| Ethyl ether | ND | | 10 | | ug/L | | | 04/11/14 15:51 | 10 |
| Ethylbenzene | ND | | 10 | | ug/L | | | 04/11/14 15:51 | 10 |
| Ethylene Dibromide | ND | | 10 | | ug/L | | | 04/11/14 15:51 | 10 |
| Hexachlorobutadiene | ND | | 4.0 | | ug/L | | | 04/11/14 15:51 | 10 |
| Isopropyl ether | ND | | 100 | | ug/L | | | 04/11/14 15:51 | 10 |
| Isopropylbenzene | ND | | 10 | | ug/L | | | 04/11/14 15:51 | 10 |
| Methyl tert-butyl ether | ND | | 10 | | ug/L | | | 04/11/14 15:51 | 10 |
| Methylene Chloride | ND | | 10 | | ug/L | | | 04/11/14 15:51 | 10 |
| **m-Xylene & p-Xylene** | **21** | | 20 | | ug/L | | | 04/11/14 15:51 | 10 |
| Naphthalene | ND | | 50 | | ug/L | | | 04/11/14 15:51 | 10 |
| n-Butylbenzene | ND | | 10 | | ug/L | | | 04/11/14 15:51 | 10 |
| N-Propylbenzene | ND | | 10 | | ug/L | | | 04/11/14 15:51 | 10 |
| o-Xylene | ND | | 10 | | ug/L | | | 04/11/14 15:51 | 10 |
| sec-Butylbenzene | ND | | 10 | | ug/L | | | 04/11/14 15:51 | 10 |
| Styrene | ND | | 10 | | ug/L | | | 04/11/14 15:51 | 10 |
| Tert-amyl methyl ether | ND | | 50 | | ug/L | | | 04/11/14 15:51 | 10 |
| Tert-butyl ethyl ether | ND | | 50 | | ug/L | | | 04/11/14 15:51 | 10 |
| tert-Butylbenzene | ND | | 10 | | ug/L | | | 04/11/14 15:51 | 10 |
| Tetrachloroethene | ND | | 10 | | ug/L | | | 04/11/14 15:51 | 10 |
| Tetrahydrofuran | ND | | 100 | | ug/L | | | 04/11/14 15:51 | 10 |
| **Toluene** | **600** | | 10 | | ug/L | | | 04/11/14 15:51 | 10 |
| trans-1,2-Dichloroethene | ND | | 10 | | ug/L | | | 04/11/14 15:51 | 10 |
| trans-1,3-Dichloropropene | ND | | 4.0 | | ug/L | | | 04/11/14 15:51 | 10 |
| Trichloroethene | ND | | 10 | | ug/L | | | 04/11/14 15:51 | 10 |
| Trichlorofluoromethane | ND | | 10 | | ug/L | | | 04/11/14 15:51 | 10 |
| **Vinyl chloride** | **84** | | 10 | | ug/L | | | 04/11/14 15:51 | 10 |
| Dibromomethane | ND | | 10 | | ug/L | | | 04/11/14 15:51 | 10 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *96* | | *70 - 130* | | *04/11/14 15:51* | *10* |
| *1,2-Dichloroethane-d4 (Surr)* | *95* | | *70 - 130* | | *04/11/14 15:51* | *10* |
| *4-Bromofluorobenzene (Surr)* | *98* | | *70 - 130* | | *04/11/14 15:51* | *10* |

## Client Sample ID: MW-562-20140407-01

**Lab Sample ID: 480-57495-22**

**Date Collected: 04/07/14 13:30**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 2.0 | | ug/L | | | 04/11/14 02:04 | 2 |
| 1,1,1-Trichloroethane | ND | | 2.0 | | ug/L | | | 04/11/14 02:04 | 2 |
| 1,1,2,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 02:04 | 2 |
| 1,1,2-Trichloroethane | ND | | 2.0 | | ug/L | | | 04/11/14 02:04 | 2 |
| 1,1-Dichloroethane | ND | | 2.0 | | ug/L | | | 04/11/14 02:04 | 2 |
| 1,1-Dichloroethene | ND | | 2.0 | | ug/L | | | 04/11/14 02:04 | 2 |
| 1,1-Dichloropropene | ND | | 2.0 | | ug/L | | | 04/11/14 02:04 | 2 |

**Client Sample ID: MW-562-20140407-01**
**Date Collected: 04/07/14 13:30**
**Date Received: 04/09/14 01:30**

**Lab Sample ID: 480-57495-22**
**Matrix: Water**

**Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3-Trichlorobenzene | ND | | 2.0 | | ug/L | | | 04/11/14 02:04 | 2 |
| 1,2,3-Trichloropropane | ND | | 2.0 | | ug/L | | | 04/11/14 02:04 | 2 |
| 1,2,4-Trichlorobenzene | ND | | 2.0 | | ug/L | | | 04/11/14 02:04 | 2 |
| 1,2,4-Trimethylbenzene | ND | | 2.0 | | ug/L | | | 04/11/14 02:04 | 2 |
| 1,2-Dibromo-3-Chloropropane | ND | | 10 | | ug/L | | | 04/11/14 02:04 | 2 |
| 1,2-Dichlorobenzene | ND | | 2.0 | | ug/L | | | 04/11/14 02:04 | 2 |
| 1,2-Dichloroethane | ND | | 2.0 | | ug/L | | | 04/11/14 02:04 | 2 |
| 1,2-Dichloropropane | ND | | 2.0 | | ug/L | | | 04/11/14 02:04 | 2 |
| 1,3,5-Trimethylbenzene | ND | | 2.0 | | ug/L | | | 04/11/14 02:04 | 2 |
| 1,3-Dichlorobenzene | ND | | 2.0 | | ug/L | | | 04/11/14 02:04 | 2 |
| 1,3-Dichloropropane | ND | | 2.0 | | ug/L | | | 04/11/14 02:04 | 2 |
| 1,4-Dichlorobenzene | ND | | 2.0 | | ug/L | | | 04/11/14 02:04 | 2 |
| 1,4-Dioxane | ND | * | 100 | | ug/L | | | 04/11/14 02:04 | 2 |
| 2,2-Dichloropropane | ND | | 2.0 | | ug/L | | | 04/11/14 02:04 | 2 |
| **2-Butanone (MEK)** | **150** | | 20 | | ug/L | | | 04/11/14 02:04 | 2 |
| 2-Chlorotoluene | ND | | 2.0 | | ug/L | | | 04/11/14 02:04 | 2 |
| 2-Hexanone | ND | * | 20 | | ug/L | | | 04/11/14 02:04 | 2 |
| 4-Chlorotoluene | ND | | 2.0 | | ug/L | | | 04/11/14 02:04 | 2 |
| 4-Isopropyltoluene | ND | | 2.0 | | ug/L | | | 04/11/14 02:04 | 2 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 20 | | ug/L | | | 04/11/14 02:04 | 2 |
| Benzene | ND | | 2.0 | | ug/L | | | 04/11/14 02:04 | 2 |
| Bromobenzene | ND | | 2.0 | | ug/L | | | 04/11/14 02:04 | 2 |
| Bromoform | ND | | 2.0 | | ug/L | | | 04/11/14 02:04 | 2 |
| Bromomethane | ND | | 4.0 | | ug/L | | | 04/11/14 02:04 | 2 |
| Carbon disulfide | ND | | 20 | | ug/L | | | 04/11/14 02:04 | 2 |
| Carbon tetrachloride | ND | | 2.0 | | ug/L | | | 04/11/14 02:04 | 2 |
| Chlorobenzene | ND | | 2.0 | | ug/L | | | 04/11/14 02:04 | 2 |
| Chlorobromomethane | ND | | 2.0 | | ug/L | | | 04/11/14 02:04 | 2 |
| Chlorodibromomethane | ND | | 1.0 | | ug/L | | | 04/11/14 02:04 | 2 |
| Chloroethane | ND | | 4.0 | | ug/L | | | 04/11/14 02:04 | 2 |
| Chloroform | ND | | 2.0 | | ug/L | | | 04/11/14 02:04 | 2 |
| Chloromethane | ND | | 4.0 | | ug/L | | | 04/11/14 02:04 | 2 |
| cis-1,2-Dichloroethene | ND | | 2.0 | | ug/L | | | 04/11/14 02:04 | 2 |
| cis-1,3-Dichloropropene | ND | | 0.80 | | ug/L | | | 04/11/14 02:04 | 2 |
| Dichlorobromomethane | ND | | 1.0 | | ug/L | | | 04/11/14 02:04 | 2 |
| Dichlorodifluoromethane | ND | | 2.0 | | ug/L | | | 04/11/14 02:04 | 2 |
| Ethyl ether | ND | | 2.0 | | ug/L | | | 04/11/14 02:04 | 2 |
| **Ethylbenzene** | **6.6** | | 2.0 | | ug/L | | | 04/11/14 02:04 | 2 |
| Ethylene Dibromide | ND | | 2.0 | | ug/L | | | 04/11/14 02:04 | 2 |
| Hexachlorobutadiene | ND | | 0.80 | | ug/L | | | 04/11/14 02:04 | 2 |
| Isopropyl ether | ND | | 20 | | ug/L | | | 04/11/14 02:04 | 2 |
| Isopropylbenzene | ND | | 2.0 | | ug/L | | | 04/11/14 02:04 | 2 |
| Methyl tert-butyl ether | ND | | 2.0 | | ug/L | | | 04/11/14 02:04 | 2 |
| Methylene Chloride | ND | | 2.0 | | ug/L | | | 04/11/14 02:04 | 2 |
| **m-Xylene & p-Xylene** | **23** | | 4.0 | | ug/L | | | 04/11/14 02:04 | 2 |
| Naphthalene | ND | | 10 | | ug/L | | | 04/11/14 02:04 | 2 |
| n-Butylbenzene | ND | | 2.0 | | ug/L | | | 04/11/14 02:04 | 2 |
| N-Propylbenzene | ND | | 2.0 | | ug/L | | | 04/11/14 02:04 | 2 |
| **o-Xylene** | **7.2** | | 2.0 | | ug/L | | | 04/11/14 02:04 | 2 |

## Client Sample ID: MW-562-20140407-01

**Lab Sample ID: 480-57495-22**

**Date Collected: 04/07/14 13:30**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| sec-Butylbenzene | ND | | 2.0 | | ug/L | | | 04/11/14 02:04 | 2 |
| Styrene | ND | | 2.0 | | ug/L | | | 04/11/14 02:04 | 2 |
| Tert-amyl methyl ether | ND | | 10 | | ug/L | | | 04/11/14 02:04 | 2 |
| Tert-butyl ethyl ether | ND | | 10 | | ug/L | | | 04/11/14 02:04 | 2 |
| tert-Butylbenzene | ND | | 2.0 | | ug/L | | | 04/11/14 02:04 | 2 |
| Tetrachloroethene | ND | | 2.0 | | ug/L | | | 04/11/14 02:04 | 2 |
| Tetrahydrofuran | ND | | 20 | | ug/L | | | 04/11/14 02:04 | 2 |
| **Toluene** | **46** | | 2.0 | | ug/L | | | 04/11/14 02:04 | 2 |
| trans-1,2-Dichloroethene | ND | | 2.0 | | ug/L | | | 04/11/14 02:04 | 2 |
| trans-1,3-Dichloropropene | ND | | 0.80 | | ug/L | | | 04/11/14 02:04 | 2 |
| Trichloroethene | ND | | 2.0 | | ug/L | | | 04/11/14 02:04 | 2 |
| Trichlorofluoromethane | ND | | 2.0 | | ug/L | | | 04/11/14 02:04 | 2 |
| Vinyl chloride | ND | | 2.0 | | ug/L | | | 04/11/14 02:04 | 2 |
| Dibromomethane | ND | | 2.0 | | ug/L | | | 04/11/14 02:04 | 2 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *99* | | *70 - 130* | | *04/11/14 02:04* | *2* |
| *1,2-Dichloroethane-d4 (Surr)* | *94* | | *70 - 130* | | *04/11/14 02:04* | *2* |
| *4-Bromofluorobenzene (Surr)* | *104* | | *70 - 130* | | *04/11/14 02:04* | *2* |

### Method: 8260C - Volatile Organic Compounds (GC/MS) - DL

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Acetone** | **910** | | 200 | | ug/L | | | 04/11/14 16:16 | 4 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *98* | | *70 - 130* | | *04/11/14 16:16* | *4* |
| *1,2-Dichloroethane-d4 (Surr)* | *97* | | *70 - 130* | | *04/11/14 16:16* | *4* |
| *4-Bromofluorobenzene (Surr)* | *102* | | *70 - 130* | | *04/11/14 16:16* | *4* |

## Client Sample ID: MW-563-20140407-01

**Lab Sample ID: 480-57495-23**

**Date Collected: 04/07/14 10:20**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 4.0 | | ug/L | | | 04/11/14 02:29 | 4 |
| 1,1,1-Trichloroethane | ND | | 4.0 | | ug/L | | | 04/11/14 02:29 | 4 |
| 1,1,2,2-Tetrachloroethane | ND | | 2.0 | | ug/L | | | 04/11/14 02:29 | 4 |
| 1,1,2-Trichloroethane | ND | | 4.0 | | ug/L | | | 04/11/14 02:29 | 4 |
| 1,1-Dichloroethane | ND | | 4.0 | | ug/L | | | 04/11/14 02:29 | 4 |
| 1,1-Dichloroethene | ND | | 4.0 | | ug/L | | | 04/11/14 02:29 | 4 |
| 1,1-Dichloropropene | ND | | 4.0 | | ug/L | | | 04/11/14 02:29 | 4 |
| 1,2,3-Trichlorobenzene | ND | | 4.0 | | ug/L | | | 04/11/14 02:29 | 4 |
| 1,2,3-Trichloropropane | ND | | 4.0 | | ug/L | | | 04/11/14 02:29 | 4 |
| 1,2,4-Trichlorobenzene | ND | | 4.0 | | ug/L | | | 04/11/14 02:29 | 4 |
| 1,2,4-Trimethylbenzene | ND | | 4.0 | | ug/L | | | 04/11/14 02:29 | 4 |
| 1,2-Dibromo-3-Chloropropane | ND | | 20 | | ug/L | | | 04/11/14 02:29 | 4 |
| 1,2-Dichlorobenzene | ND | | 4.0 | | ug/L | | | 04/11/14 02:29 | 4 |
| 1,2-Dichloroethane | ND | | 4.0 | | ug/L | | | 04/11/14 02:29 | 4 |
| 1,2-Dichloropropane | ND | | 4.0 | | ug/L | | | 04/11/14 02:29 | 4 |

**Client Sample ID: MW-563-20140407-01**
**Date Collected: 04/07/14 10:20**
**Date Received: 04/09/14 01:30**

**Lab Sample ID: 480-57495-23**
**Matrix: Water**

**Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,3,5-Trimethylbenzene | ND | | 4.0 | | ug/L | | | 04/11/14 02:29 | 4 |
| 1,3-Dichlorobenzene | ND | | 4.0 | | ug/L | | | 04/11/14 02:29 | 4 |
| 1,3-Dichloropropane | ND | | 4.0 | | ug/L | | | 04/11/14 02:29 | 4 |
| 1,4-Dichlorobenzene | ND | | 4.0 | | ug/L | | | 04/11/14 02:29 | 4 |
| 1,4-Dioxane | ND | * | 200 | | ug/L | | | 04/11/14 02:29 | 4 |
| 2,2-Dichloropropane | ND | | 4.0 | | ug/L | | | 04/11/14 02:29 | 4 |
| **2-Butanone (MEK)** | **150** | | 40 | | ug/L | | | 04/11/14 02:29 | 4 |
| 2-Chlorotoluene | ND | | 4.0 | | ug/L | | | 04/11/14 02:29 | 4 |
| 2-Hexanone | ND | * | 40 | | ug/L | | | 04/11/14 02:29 | 4 |
| 4-Chlorotoluene | ND | | 4.0 | | ug/L | | | 04/11/14 02:29 | 4 |
| 4-Isopropyltoluene | ND | | 4.0 | | ug/L | | | 04/11/14 02:29 | 4 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 40 | | ug/L | | | 04/11/14 02:29 | 4 |
| Acetone | ND | | 200 | | ug/L | | | 04/11/14 02:29 | 4 |
| Benzene | ND | | 4.0 | | ug/L | | | 04/11/14 02:29 | 4 |
| Bromobenzene | ND | | 4.0 | | ug/L | | | 04/11/14 02:29 | 4 |
| Bromoform | ND | | 4.0 | | ug/L | | | 04/11/14 02:29 | 4 |
| Bromomethane | ND | | 8.0 | | ug/L | | | 04/11/14 02:29 | 4 |
| Carbon disulfide | ND | | 40 | | ug/L | | | 04/11/14 02:29 | 4 |
| Carbon tetrachloride | ND | | 4.0 | | ug/L | | | 04/11/14 02:29 | 4 |
| Chlorobenzene | ND | | 4.0 | | ug/L | | | 04/11/14 02:29 | 4 |
| Chlorobromomethane | ND | | 4.0 | | ug/L | | | 04/11/14 02:29 | 4 |
| Chlorodibromomethane | ND | | 2.0 | | ug/L | | | 04/11/14 02:29 | 4 |
| Chloroethane | ND | | 8.0 | | ug/L | | | 04/11/14 02:29 | 4 |
| Chloroform | ND | | 4.0 | | ug/L | | | 04/11/14 02:29 | 4 |
| Chloromethane | ND | | 8.0 | | ug/L | | | 04/11/14 02:29 | 4 |
| **cis-1,2-Dichloroethene** | **190** | | 4.0 | | ug/L | | | 04/11/14 02:29 | 4 |
| cis-1,3-Dichloropropene | ND | | 1.6 | | ug/L | | | 04/11/14 02:29 | 4 |
| Dichlorobromomethane | ND | | 2.0 | | ug/L | | | 04/11/14 02:29 | 4 |
| Dichlorodifluoromethane | ND | | 4.0 | | ug/L | | | 04/11/14 02:29 | 4 |
| Ethyl ether | ND | | 4.0 | | ug/L | | | 04/11/14 02:29 | 4 |
| Ethylbenzene | ND | | 4.0 | | ug/L | | | 04/11/14 02:29 | 4 |
| Ethylene Dibromide | ND | | 4.0 | | ug/L | | | 04/11/14 02:29 | 4 |
| Hexachlorobutadiene | ND | | 1.6 | | ug/L | | | 04/11/14 02:29 | 4 |
| Isopropyl ether | ND | | 40 | | ug/L | | | 04/11/14 02:29 | 4 |
| Isopropylbenzene | ND | | 4.0 | | ug/L | | | 04/11/14 02:29 | 4 |
| Methyl tert-butyl ether | ND | | 4.0 | | ug/L | | | 04/11/14 02:29 | 4 |
| Methylene Chloride | ND | | 4.0 | | ug/L | | | 04/11/14 02:29 | 4 |
| **m-Xylene & p-Xylene** | **11** | | 8.0 | | ug/L | | | 04/11/14 02:29 | 4 |
| Naphthalene | ND | | 20 | | ug/L | | | 04/11/14 02:29 | 4 |
| n-Butylbenzene | ND | | 4.0 | | ug/L | | | 04/11/14 02:29 | 4 |
| N-Propylbenzene | ND | | 4.0 | | ug/L | | | 04/11/14 02:29 | 4 |
| o-Xylene | ND | | 4.0 | | ug/L | | | 04/11/14 02:29 | 4 |
| sec-Butylbenzene | ND | | 4.0 | | ug/L | | | 04/11/14 02:29 | 4 |
| Styrene | ND | | 4.0 | | ug/L | | | 04/11/14 02:29 | 4 |
| Tert-amyl methyl ether | ND | | 20 | | ug/L | | | 04/11/14 02:29 | 4 |
| Tert-butyl ethyl ether | ND | | 20 | | ug/L | | | 04/11/14 02:29 | 4 |
| tert-Butylbenzene | ND | | 4.0 | | ug/L | | | 04/11/14 02:29 | 4 |
| Tetrachloroethene | ND | | 4.0 | | ug/L | | | 04/11/14 02:29 | 4 |
| Tetrahydrofuran | ND | | 40 | | ug/L | | | 04/11/14 02:29 | 4 |

## Client Sample ID: MW-563-20140407-01

**Lab Sample ID: 480-57495-23**

**Date Collected: 04/07/14 10:20**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Toluene** | **37** | | 4.0 | | ug/L | | | 04/11/14 02:29 | 4 |
| trans-1,2-Dichloroethene | ND | | 4.0 | | ug/L | | | 04/11/14 02:29 | 4 |
| trans-1,3-Dichloropropene | ND | | 1.6 | | ug/L | | | 04/11/14 02:29 | 4 |
| Trichloroethene | ND | | 4.0 | | ug/L | | | 04/11/14 02:29 | 4 |
| Trichlorofluoromethane | ND | | 4.0 | | ug/L | | | 04/11/14 02:29 | 4 |
| **Vinyl chloride** | **90** | | 4.0 | | ug/L | | | 04/11/14 02:29 | 4 |
| Dibromomethane | ND | | 4.0 | | ug/L | | | 04/11/14 02:29 | 4 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *97* | | *70 - 130* | | *04/11/14 02:29* | *4* |
| *1,2-Dichloroethane-d4 (Surr)* | *94* | | *70 - 130* | | *04/11/14 02:29* | *4* |
| *4-Bromofluorobenzene (Surr)* | *100* | | *70 - 130* | | *04/11/14 02:29* | *4* |

## Client Sample ID: REW-1-20140406-01

**Lab Sample ID: 480-57495-24**

**Date Collected: 04/06/14 13:45**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 5.0 | | ug/L | | | 04/11/14 16:42 | 5 |
| 1,1,1-Trichloroethane | ND | | 5.0 | | ug/L | | | 04/11/14 16:42 | 5 |
| 1,1,2,2-Tetrachloroethane | ND | | 2.5 | | ug/L | | | 04/11/14 16:42 | 5 |
| 1,1,2-Trichloroethane | ND | | 5.0 | | ug/L | | | 04/11/14 16:42 | 5 |
| 1,1-Dichloroethane | ND | | 5.0 | | ug/L | | | 04/11/14 16:42 | 5 |
| 1,1-Dichloroethene | ND | | 5.0 | | ug/L | | | 04/11/14 16:42 | 5 |
| 1,1-Dichloropropene | ND | | 5.0 | | ug/L | | | 04/11/14 16:42 | 5 |
| 1,2,3-Trichlorobenzene | ND | | 5.0 | | ug/L | | | 04/11/14 16:42 | 5 |
| 1,2,3-Trichloropropane | ND | | 5.0 | | ug/L | | | 04/11/14 16:42 | 5 |
| 1,2,4-Trichlorobenzene | ND | | 5.0 | | ug/L | | | 04/11/14 16:42 | 5 |
| 1,2,4-Trimethylbenzene | ND | | 5.0 | | ug/L | | | 04/11/14 16:42 | 5 |
| 1,2-Dibromo-3-Chloropropane | ND | | 25 | | ug/L | | | 04/11/14 16:42 | 5 |
| 1,2-Dichlorobenzene | ND | | 5.0 | | ug/L | | | 04/11/14 16:42 | 5 |
| 1,2-Dichloroethane | ND | | 5.0 | | ug/L | | | 04/11/14 16:42 | 5 |
| 1,2-Dichloropropane | ND | | 5.0 | | ug/L | | | 04/11/14 16:42 | 5 |
| 1,3,5-Trimethylbenzene | ND | | 5.0 | | ug/L | | | 04/11/14 16:42 | 5 |
| 1,3-Dichlorobenzene | ND | | 5.0 | | ug/L | | | 04/11/14 16:42 | 5 |
| 1,3-Dichloropropane | ND | | 5.0 | | ug/L | | | 04/11/14 16:42 | 5 |
| 1,4-Dichlorobenzene | ND | | 5.0 | | ug/L | | | 04/11/14 16:42 | 5 |
| 1,4-Dioxane | ND | | 250 | | ug/L | | | 04/11/14 16:42 | 5 |
| 2,2-Dichloropropane | ND | | 5.0 | | ug/L | | | 04/11/14 16:42 | 5 |
| 2-Butanone (MEK) | ND | | 50 | | ug/L | | | 04/11/14 16:42 | 5 |
| 2-Chlorotoluene | ND | | 5.0 | | ug/L | | | 04/11/14 16:42 | 5 |
| 2-Hexanone | ND | * | 50 | | ug/L | | | 04/11/14 16:42 | 5 |
| 4-Chlorotoluene | ND | | 5.0 | | ug/L | | | 04/11/14 16:42 | 5 |
| 4-Isopropyltoluene | ND | | 5.0 | | ug/L | | | 04/11/14 16:42 | 5 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 50 | | ug/L | | | 04/11/14 16:42 | 5 |
| **Acetone** | **1500** | | 250 | | ug/L | | | 04/11/14 16:42 | 5 |
| Benzene | ND | | 5.0 | | ug/L | | | 04/11/14 16:42 | 5 |
| Bromobenzene | ND | | 5.0 | | ug/L | | | 04/11/14 16:42 | 5 |
| Bromoform | ND | | 5.0 | | ug/L | | | 04/11/14 16:42 | 5 |

**Client Sample ID: REW-1-20140406-01**
**Date Collected: 04/06/14 13:45**
**Date Received: 04/09/14 01:30**

**Lab Sample ID: 480-57495-24**
**Matrix: Water**

**Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Bromomethane | ND | | 10 | | ug/L | | | 04/11/14 16:42 | 5 |
| Carbon disulfide | ND | | 50 | | ug/L | | | 04/11/14 16:42 | 5 |
| Carbon tetrachloride | ND | | 5.0 | | ug/L | | | 04/11/14 16:42 | 5 |
| Chlorobenzene | ND | | 5.0 | | ug/L | | | 04/11/14 16:42 | 5 |
| Chlorobromomethane | ND | | 5.0 | | ug/L | | | 04/11/14 16:42 | 5 |
| Chlorodibromomethane | ND | | 2.5 | | ug/L | | | 04/11/14 16:42 | 5 |
| Chloroethane | ND | | 10 | | ug/L | | | 04/11/14 16:42 | 5 |
| Chloroform | ND | | 5.0 | | ug/L | | | 04/11/14 16:42 | 5 |
| Chloromethane | ND | | 10 | | ug/L | | | 04/11/14 16:42 | 5 |
| **cis-1,2-Dichloroethene** | **6.0** | | 5.0 | | ug/L | | | 04/11/14 16:42 | 5 |
| cis-1,3-Dichloropropene | ND | | 2.0 | | ug/L | | | 04/11/14 16:42 | 5 |
| Dichlorobromomethane | ND | | 2.5 | | ug/L | | | 04/11/14 16:42 | 5 |
| Dichlorodifluoromethane | ND | | 5.0 | | ug/L | | | 04/11/14 16:42 | 5 |
| Ethyl ether | ND | | 5.0 | | ug/L | | | 04/11/14 16:42 | 5 |
| Ethylbenzene | ND | | 5.0 | | ug/L | | | 04/11/14 16:42 | 5 |
| Ethylene Dibromide | ND | | 5.0 | | ug/L | | | 04/11/14 16:42 | 5 |
| Hexachlorobutadiene | ND | | 2.0 | | ug/L | | | 04/11/14 16:42 | 5 |
| Isopropyl ether | ND | | 50 | | ug/L | | | 04/11/14 16:42 | 5 |
| Isopropylbenzene | ND | | 5.0 | | ug/L | | | 04/11/14 16:42 | 5 |
| Methyl tert-butyl ether | ND | | 5.0 | | ug/L | | | 04/11/14 16:42 | 5 |
| Methylene Chloride | ND | | 5.0 | | ug/L | | | 04/11/14 16:42 | 5 |
| m-Xylene & p-Xylene | ND | | 10 | | ug/L | | | 04/11/14 16:42 | 5 |
| Naphthalene | ND | | 25 | | ug/L | | | 04/11/14 16:42 | 5 |
| n-Butylbenzene | ND | | 5.0 | | ug/L | | | 04/11/14 16:42 | 5 |
| N-Propylbenzene | ND | | 5.0 | | ug/L | | | 04/11/14 16:42 | 5 |
| o-Xylene | ND | | 5.0 | | ug/L | | | 04/11/14 16:42 | 5 |
| sec-Butylbenzene | ND | | 5.0 | | ug/L | | | 04/11/14 16:42 | 5 |
| Styrene | ND | | 5.0 | | ug/L | | | 04/11/14 16:42 | 5 |
| Tert-amyl methyl ether | ND | | 25 | | ug/L | | | 04/11/14 16:42 | 5 |
| Tert-butyl ethyl ether | ND | | 25 | | ug/L | | | 04/11/14 16:42 | 5 |
| tert-Butylbenzene | ND | | 5.0 | | ug/L | | | 04/11/14 16:42 | 5 |
| Tetrachloroethene | ND | | 5.0 | | ug/L | | | 04/11/14 16:42 | 5 |
| Tetrahydrofuran | ND | | 50 | | ug/L | | | 04/11/14 16:42 | 5 |
| Toluene | ND | | 5.0 | | ug/L | | | 04/11/14 16:42 | 5 |
| trans-1,2-Dichloroethene | ND | | 5.0 | | ug/L | | | 04/11/14 16:42 | 5 |
| trans-1,3-Dichloropropene | ND | | 2.0 | | ug/L | | | 04/11/14 16:42 | 5 |
| Trichloroethene | ND | | 5.0 | | ug/L | | | 04/11/14 16:42 | 5 |
| Trichlorofluoromethane | ND | | 5.0 | | ug/L | | | 04/11/14 16:42 | 5 |
| Vinyl chloride | ND | | 5.0 | | ug/L | | | 04/11/14 16:42 | 5 |
| Dibromomethane | ND | | 5.0 | | ug/L | | | 04/11/14 16:42 | 5 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *96* | | *70 - 130* | | *04/11/14 16:42* | *5* |
| *1,2-Dichloroethane-d4 (Surr)* | *97* | | *70 - 130* | | *04/11/14 16:42* | *5* |
| *4-Bromofluorobenzene (Surr)* | *99* | | *70 - 130* | | *04/11/14 16:42* | *5* |

Client: Innovative Engineering Solutions, Inc
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57495-1

**Client Sample ID: REW-4-20140406-01**
**Date Collected: 04/06/14 15:20**
**Date Received: 04/09/14 01:30**

**Lab Sample ID: 480-57495-25**
**Matrix: Water**

**Method: 8260C - Volatile Organic Compounds (GC/MS)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 17:07 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 17:07 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/11/14 17:07 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 17:07 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 17:07 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 17:07 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/11/14 17:07 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 17:07 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 17:07 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 17:07 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 17:07 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/11/14 17:07 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 17:07 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 17:07 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 17:07 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 17:07 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 17:07 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 17:07 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 17:07 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/11/14 17:07 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 17:07 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 04/11/14 17:07 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/11/14 17:07 | 1 |
| 2-Hexanone | ND | * | 10 | | ug/L | | | 04/11/14 17:07 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/11/14 17:07 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/11/14 17:07 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/11/14 17:07 | 1 |
| Acetone | ND | | 50 | | ug/L | | | 04/11/14 17:07 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/11/14 17:07 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 17:07 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/11/14 17:07 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/11/14 17:07 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/11/14 17:07 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/11/14 17:07 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 17:07 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/11/14 17:07 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/11/14 17:07 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/11/14 17:07 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/11/14 17:07 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/11/14 17:07 | 1 |
| **cis-1,2-Dichloroethene** | **7.6** | | 1.0 | | ug/L | | | 04/11/14 17:07 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/11/14 17:07 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/11/14 17:07 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/11/14 17:07 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/11/14 17:07 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 17:07 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/11/14 17:07 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/11/14 17:07 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/11/14 17:07 | 1 |

## Client Sample ID: REW-4-20140406-01

**Lab Sample ID: 480-57495-25**

**Date Collected: 04/06/14 15:20**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 17:07 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/11/14 17:07 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/11/14 17:07 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/11/14 17:07 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/11/14 17:07 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 17:07 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 17:07 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/11/14 17:07 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 17:07 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/11/14 17:07 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/11/14 17:07 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/11/14 17:07 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 17:07 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 17:07 | 1 |
| Tetrahydrofuran | ND | | 10 | | ug/L | | | 04/11/14 17:07 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 04/11/14 17:07 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 17:07 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/11/14 17:07 | 1 |
| Trichloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 17:07 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/11/14 17:07 | 1 |
| **Vinyl chloride** | **4.0** | | 1.0 | | ug/L | | | 04/11/14 17:07 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/11/14 17:07 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *94* | | *70 - 130* | | *04/11/14 17:07* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *92* | | *70 - 130* | | *04/11/14 17:07* | *1* |
| *4-Bromofluorobenzene (Surr)* | *97* | | *70 - 130* | | *04/11/14 17:07* | *1* |

## Client Sample ID: REW-5-20140406-01

**Lab Sample ID: 480-57495-26**

**Date Collected: 04/06/14 14:30**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 17:33 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 17:33 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/11/14 17:33 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 17:33 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 17:33 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 17:33 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/11/14 17:33 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 17:33 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 17:33 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 17:33 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 17:33 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/11/14 17:33 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 17:33 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 17:33 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 17:33 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 17:33 | 1 |

**Client Sample ID: REW-5-20140406-01**
**Date Collected: 04/06/14 14:30**
**Date Received: 04/09/14 01:30**

**Lab Sample ID: 480-57495-26**
**Matrix: Water**

**Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 17:33 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 17:33 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 17:33 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/11/14 17:33 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 17:33 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 04/11/14 17:33 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/11/14 17:33 | 1 |
| 2-Hexanone | ND | * | 10 | | ug/L | | | 04/11/14 17:33 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/11/14 17:33 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/11/14 17:33 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/11/14 17:33 | 1 |
| Acetone | ND | | 50 | | ug/L | | | 04/11/14 17:33 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/11/14 17:33 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 17:33 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/11/14 17:33 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/11/14 17:33 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/11/14 17:33 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/11/14 17:33 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 17:33 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/11/14 17:33 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/11/14 17:33 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/11/14 17:33 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/11/14 17:33 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/11/14 17:33 | 1 |
| **cis-1,2-Dichloroethene** | **62** | | 1.0 | | ug/L | | | 04/11/14 17:33 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/11/14 17:33 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/11/14 17:33 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/11/14 17:33 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/11/14 17:33 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 17:33 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/11/14 17:33 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/11/14 17:33 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/11/14 17:33 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 17:33 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/11/14 17:33 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/11/14 17:33 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/11/14 17:33 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/11/14 17:33 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 17:33 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 17:33 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/11/14 17:33 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 17:33 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/11/14 17:33 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/11/14 17:33 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/11/14 17:33 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 17:33 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 17:33 | 1 |
| Tetrahydrofuran | ND | | 10 | | ug/L | | | 04/11/14 17:33 | 1 |
| **Toluene** | **3.2** | | 1.0 | | ug/L | | | 04/11/14 17:33 | 1 |

## Client Sample ID: REW-5-20140406-01

**Lab Sample ID: 480-57495-26**

**Date Collected: 04/06/14 14:30**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 17:33 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/11/14 17:33 | 1 |
| **Trichloroethene** | **5.4** | | 1.0 | | ug/L | | | 04/11/14 17:33 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/11/14 17:33 | 1 |
| **Vinyl chloride** | **3.8** | | 1.0 | | ug/L | | | 04/11/14 17:33 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/11/14 17:33 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *96* | | *70 - 130* | | *04/11/14 17:33* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *95* | | *70 - 130* | | *04/11/14 17:33* | *1* |
| *4-Bromofluorobenzene (Surr)* | *100* | | *70 - 130* | | *04/11/14 17:33* | *1* |

## Client Sample ID: REW-6-20140406-01

**Lab Sample ID: 480-57495-27**

**Date Collected: 04/06/14 09:05**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 5.0 | | ug/L | | | 04/11/14 04:10 | 5 |
| 1,1,1-Trichloroethane | ND | | 5.0 | | ug/L | | | 04/11/14 04:10 | 5 |
| 1,1,2,2-Tetrachloroethane | ND | | 2.5 | | ug/L | | | 04/11/14 04:10 | 5 |
| 1,1,2-Trichloroethane | ND | | 5.0 | | ug/L | | | 04/11/14 04:10 | 5 |
| 1,1-Dichloroethane | ND | | 5.0 | | ug/L | | | 04/11/14 04:10 | 5 |
| 1,1-Dichloroethene | ND | | 5.0 | | ug/L | | | 04/11/14 04:10 | 5 |
| 1,1-Dichloropropene | ND | | 5.0 | | ug/L | | | 04/11/14 04:10 | 5 |
| 1,2,3-Trichlorobenzene | ND | | 5.0 | | ug/L | | | 04/11/14 04:10 | 5 |
| 1,2,3-Trichloropropane | ND | | 5.0 | | ug/L | | | 04/11/14 04:10 | 5 |
| 1,2,4-Trichlorobenzene | ND | | 5.0 | | ug/L | | | 04/11/14 04:10 | 5 |
| 1,2,4-Trimethylbenzene | ND | | 5.0 | | ug/L | | | 04/11/14 04:10 | 5 |
| 1,2-Dibromo-3-Chloropropane | ND | | 25 | | ug/L | | | 04/11/14 04:10 | 5 |
| 1,2-Dichlorobenzene | ND | | 5.0 | | ug/L | | | 04/11/14 04:10 | 5 |
| 1,2-Dichloroethane | ND | | 5.0 | | ug/L | | | 04/11/14 04:10 | 5 |
| 1,2-Dichloropropane | ND | | 5.0 | | ug/L | | | 04/11/14 04:10 | 5 |
| 1,3,5-Trimethylbenzene | ND | | 5.0 | | ug/L | | | 04/11/14 04:10 | 5 |
| 1,3-Dichlorobenzene | ND | | 5.0 | | ug/L | | | 04/11/14 04:10 | 5 |
| 1,3-Dichloropropane | ND | | 5.0 | | ug/L | | | 04/11/14 04:10 | 5 |
| 1,4-Dichlorobenzene | ND | | 5.0 | | ug/L | | | 04/11/14 04:10 | 5 |
| 1,4-Dioxane | ND | * | 250 | | ug/L | | | 04/11/14 04:10 | 5 |
| 2,2-Dichloropropane | ND | | 5.0 | | ug/L | | | 04/11/14 04:10 | 5 |
| 2-Butanone (MEK) | ND | | 50 | | ug/L | | | 04/11/14 04:10 | 5 |
| 2-Chlorotoluene | ND | | 5.0 | | ug/L | | | 04/11/14 04:10 | 5 |
| 2-Hexanone | ND | * | 50 | | ug/L | | | 04/11/14 04:10 | 5 |
| 4-Chlorotoluene | ND | | 5.0 | | ug/L | | | 04/11/14 04:10 | 5 |
| 4-Isopropyltoluene | ND | | 5.0 | | ug/L | | | 04/11/14 04:10 | 5 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 50 | | ug/L | | | 04/11/14 04:10 | 5 |
| Acetone | ND | | 250 | | ug/L | | | 04/11/14 04:10 | 5 |
| Benzene | ND | | 5.0 | | ug/L | | | 04/11/14 04:10 | 5 |
| Bromobenzene | ND | | 5.0 | | ug/L | | | 04/11/14 04:10 | 5 |
| Bromoform | ND | | 5.0 | | ug/L | | | 04/11/14 04:10 | 5 |
| Bromomethane | ND | | 10 | | ug/L | | | 04/11/14 04:10 | 5 |

**Client Sample ID: REW-6-20140406-01**
**Date Collected: 04/06/14 09:05**
**Date Received: 04/09/14 01:30**

**Lab Sample ID: 480-57495-27**
**Matrix: Water**

**Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | ND | | 50 | | ug/L | | | 04/11/14 04:10 | 5 |
| Carbon tetrachloride | ND | | 5.0 | | ug/L | | | 04/11/14 04:10 | 5 |
| Chlorobenzene | ND | | 5.0 | | ug/L | | | 04/11/14 04:10 | 5 |
| Chlorobromomethane | ND | | 5.0 | | ug/L | | | 04/11/14 04:10 | 5 |
| Chlorodibromomethane | ND | | 2.5 | | ug/L | | | 04/11/14 04:10 | 5 |
| Chloroethane | ND | | 10 | | ug/L | | | 04/11/14 04:10 | 5 |
| Chloroform | ND | | 5.0 | | ug/L | | | 04/11/14 04:10 | 5 |
| Chloromethane | ND | | 10 | | ug/L | | | 04/11/14 04:10 | 5 |
| **cis-1,2-Dichloroethene** | **370** | | 5.0 | | ug/L | | | 04/11/14 04:10 | 5 |
| cis-1,3-Dichloropropene | ND | | 2.0 | | ug/L | | | 04/11/14 04:10 | 5 |
| Dichlorobromomethane | ND | | 2.5 | | ug/L | | | 04/11/14 04:10 | 5 |
| Dichlorodifluoromethane | ND | | 5.0 | | ug/L | | | 04/11/14 04:10 | 5 |
| Ethyl ether | ND | | 5.0 | | ug/L | | | 04/11/14 04:10 | 5 |
| Ethylbenzene | ND | | 5.0 | | ug/L | | | 04/11/14 04:10 | 5 |
| Ethylene Dibromide | ND | | 5.0 | | ug/L | | | 04/11/14 04:10 | 5 |
| Hexachlorobutadiene | ND | | 2.0 | | ug/L | | | 04/11/14 04:10 | 5 |
| Isopropyl ether | ND | | 50 | | ug/L | | | 04/11/14 04:10 | 5 |
| Isopropylbenzene | ND | | 5.0 | | ug/L | | | 04/11/14 04:10 | 5 |
| Methyl tert-butyl ether | ND | | 5.0 | | ug/L | | | 04/11/14 04:10 | 5 |
| Methylene Chloride | ND | | 5.0 | | ug/L | | | 04/11/14 04:10 | 5 |
| m-Xylene & p-Xylene | ND | | 10 | | ug/L | | | 04/11/14 04:10 | 5 |
| Naphthalene | ND | | 25 | | ug/L | | | 04/11/14 04:10 | 5 |
| n-Butylbenzene | ND | | 5.0 | | ug/L | | | 04/11/14 04:10 | 5 |
| N-Propylbenzene | ND | | 5.0 | | ug/L | | | 04/11/14 04:10 | 5 |
| o-Xylene | ND | | 5.0 | | ug/L | | | 04/11/14 04:10 | 5 |
| sec-Butylbenzene | ND | | 5.0 | | ug/L | | | 04/11/14 04:10 | 5 |
| Styrene | ND | | 5.0 | | ug/L | | | 04/11/14 04:10 | 5 |
| Tert-amyl methyl ether | ND | | 25 | | ug/L | | | 04/11/14 04:10 | 5 |
| Tert-butyl ethyl ether | ND | | 25 | | ug/L | | | 04/11/14 04:10 | 5 |
| tert-Butylbenzene | ND | | 5.0 | | ug/L | | | 04/11/14 04:10 | 5 |
| Tetrachloroethene | ND | | 5.0 | | ug/L | | | 04/11/14 04:10 | 5 |
| Tetrahydrofuran | ND | | 50 | | ug/L | | | 04/11/14 04:10 | 5 |
| **Toluene** | **170** | | 5.0 | | ug/L | | | 04/11/14 04:10 | 5 |
| trans-1,2-Dichloroethene | ND | | 5.0 | | ug/L | | | 04/11/14 04:10 | 5 |
| trans-1,3-Dichloropropene | ND | | 2.0 | | ug/L | | | 04/11/14 04:10 | 5 |
| **Trichloroethene** | **50** | | 5.0 | | ug/L | | | 04/11/14 04:10 | 5 |
| Trichlorofluoromethane | ND | | 5.0 | | ug/L | | | 04/11/14 04:10 | 5 |
| **Vinyl chloride** | **19** | | 5.0 | | ug/L | | | 04/11/14 04:10 | 5 |
| Dibromomethane | ND | | 5.0 | | ug/L | | | 04/11/14 04:10 | 5 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *98* | | *70 - 130* | | *04/11/14 04:10* | *5* |
| *1,2-Dichloroethane-d4 (Surr)* | *95* | | *70 - 130* | | *04/11/14 04:10* | *5* |
| *4-Bromofluorobenzene (Surr)* | *99* | | *70 - 130* | | *04/11/14 04:10* | *5* |

Client: Innovative Engineering Solutions, Inc
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57495-1

**Client Sample ID: REW-7-20140406-01**
**Date Collected: 04/06/14 09:35**
**Date Received: 04/09/14 01:30**

**Lab Sample ID: 480-57495-28**
**Matrix: Water**

**Method: 8260C - Volatile Organic Compounds (GC/MS)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 10 | | ug/L | | | 04/11/14 04:36 | 10 |
| 1,1,1-Trichloroethane | ND | | 10 | | ug/L | | | 04/11/14 04:36 | 10 |
| 1,1,2,2-Tetrachloroethane | ND | | 5.0 | | ug/L | | | 04/11/14 04:36 | 10 |
| 1,1,2-Trichloroethane | ND | | 10 | | ug/L | | | 04/11/14 04:36 | 10 |
| 1,1-Dichloroethane | ND | | 10 | | ug/L | | | 04/11/14 04:36 | 10 |
| 1,1-Dichloroethene | ND | | 10 | | ug/L | | | 04/11/14 04:36 | 10 |
| 1,1-Dichloropropene | ND | | 10 | | ug/L | | | 04/11/14 04:36 | 10 |
| 1,2,3-Trichlorobenzene | ND | | 10 | | ug/L | | | 04/11/14 04:36 | 10 |
| 1,2,3-Trichloropropane | ND | | 10 | | ug/L | | | 04/11/14 04:36 | 10 |
| 1,2,4-Trichlorobenzene | ND | | 10 | | ug/L | | | 04/11/14 04:36 | 10 |
| 1,2,4-Trimethylbenzene | ND | | 10 | | ug/L | | | 04/11/14 04:36 | 10 |
| 1,2-Dibromo-3-Chloropropane | ND | | 50 | | ug/L | | | 04/11/14 04:36 | 10 |
| 1,2-Dichlorobenzene | ND | | 10 | | ug/L | | | 04/11/14 04:36 | 10 |
| 1,2-Dichloroethane | ND | | 10 | | ug/L | | | 04/11/14 04:36 | 10 |
| 1,2-Dichloropropane | ND | | 10 | | ug/L | | | 04/11/14 04:36 | 10 |
| 1,3,5-Trimethylbenzene | ND | | 10 | | ug/L | | | 04/11/14 04:36 | 10 |
| 1,3-Dichlorobenzene | ND | | 10 | | ug/L | | | 04/11/14 04:36 | 10 |
| 1,3-Dichloropropane | ND | | 10 | | ug/L | | | 04/11/14 04:36 | 10 |
| 1,4-Dichlorobenzene | ND | | 10 | | ug/L | | | 04/11/14 04:36 | 10 |
| 1,4-Dioxane | ND | * | 500 | | ug/L | | | 04/11/14 04:36 | 10 |
| 2,2-Dichloropropane | ND | | 10 | | ug/L | | | 04/11/14 04:36 | 10 |
| 2-Butanone (MEK) | ND | | 100 | | ug/L | | | 04/11/14 04:36 | 10 |
| 2-Chlorotoluene | ND | | 10 | | ug/L | | | 04/11/14 04:36 | 10 |
| 2-Hexanone | ND | * | 100 | | ug/L | | | 04/11/14 04:36 | 10 |
| 4-Chlorotoluene | ND | | 10 | | ug/L | | | 04/11/14 04:36 | 10 |
| 4-Isopropyltoluene | ND | | 10 | | ug/L | | | 04/11/14 04:36 | 10 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 100 | | ug/L | | | 04/11/14 04:36 | 10 |
| Acetone | ND | | 500 | | ug/L | | | 04/11/14 04:36 | 10 |
| Benzene | ND | | 10 | | ug/L | | | 04/11/14 04:36 | 10 |
| Bromobenzene | ND | | 10 | | ug/L | | | 04/11/14 04:36 | 10 |
| Bromoform | ND | | 10 | | ug/L | | | 04/11/14 04:36 | 10 |
| Bromomethane | ND | | 20 | | ug/L | | | 04/11/14 04:36 | 10 |
| Carbon disulfide | ND | | 100 | | ug/L | | | 04/11/14 04:36 | 10 |
| Carbon tetrachloride | ND | | 10 | | ug/L | | | 04/11/14 04:36 | 10 |
| Chlorobenzene | ND | | 10 | | ug/L | | | 04/11/14 04:36 | 10 |
| Chlorobromomethane | ND | | 10 | | ug/L | | | 04/11/14 04:36 | 10 |
| Chlorodibromomethane | ND | | 5.0 | | ug/L | | | 04/11/14 04:36 | 10 |
| Chloroethane | ND | | 20 | | ug/L | | | 04/11/14 04:36 | 10 |
| Chloroform | ND | | 10 | | ug/L | | | 04/11/14 04:36 | 10 |
| Chloromethane | ND | | 20 | | ug/L | | | 04/11/14 04:36 | 10 |
| **cis-1,2-Dichloroethene** | **660** | | 10 | | ug/L | | | 04/11/14 04:36 | 10 |
| cis-1,3-Dichloropropene | ND | | 4.0 | | ug/L | | | 04/11/14 04:36 | 10 |
| Dichlorobromomethane | ND | | 5.0 | | ug/L | | | 04/11/14 04:36 | 10 |
| Dichlorodifluoromethane | ND | | 10 | | ug/L | | | 04/11/14 04:36 | 10 |
| Ethyl ether | ND | | 10 | | ug/L | | | 04/11/14 04:36 | 10 |
| Ethylbenzene | ND | | 10 | | ug/L | | | 04/11/14 04:36 | 10 |
| Ethylene Dibromide | ND | | 10 | | ug/L | | | 04/11/14 04:36 | 10 |
| Hexachlorobutadiene | ND | | 4.0 | | ug/L | | | 04/11/14 04:36 | 10 |
| Isopropyl ether | ND | | 100 | | ug/L | | | 04/11/14 04:36 | 10 |

## Client Sample ID: REW-7-20140406-01

**Lab Sample ID: 480-57495-28**

**Date Collected: 04/06/14 09:35**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Isopropylbenzene | ND | | 10 | | ug/L | | | 04/11/14 04:36 | 10 |
| Methyl tert-butyl ether | ND | | 10 | | ug/L | | | 04/11/14 04:36 | 10 |
| Methylene Chloride | ND | | 10 | | ug/L | | | 04/11/14 04:36 | 10 |
| m-Xylene & p-Xylene | ND | | 20 | | ug/L | | | 04/11/14 04:36 | 10 |
| Naphthalene | ND | | 50 | | ug/L | | | 04/11/14 04:36 | 10 |
| n-Butylbenzene | ND | | 10 | | ug/L | | | 04/11/14 04:36 | 10 |
| N-Propylbenzene | ND | | 10 | | ug/L | | | 04/11/14 04:36 | 10 |
| o-Xylene | ND | | 10 | | ug/L | | | 04/11/14 04:36 | 10 |
| sec-Butylbenzene | ND | | 10 | | ug/L | | | 04/11/14 04:36 | 10 |
| Styrene | ND | | 10 | | ug/L | | | 04/11/14 04:36 | 10 |
| Tert-amyl methyl ether | ND | | 50 | | ug/L | | | 04/11/14 04:36 | 10 |
| Tert-butyl ethyl ether | ND | | 50 | | ug/L | | | 04/11/14 04:36 | 10 |
| tert-Butylbenzene | ND | | 10 | | ug/L | | | 04/11/14 04:36 | 10 |
| Tetrachloroethene | ND | | 10 | | ug/L | | | 04/11/14 04:36 | 10 |
| Tetrahydrofuran | ND | | 100 | | ug/L | | | 04/11/14 04:36 | 10 |
| **Toluene** | **12** | | 10 | | ug/L | | | 04/11/14 04:36 | 10 |
| trans-1,2-Dichloroethene | ND | | 10 | | ug/L | | | 04/11/14 04:36 | 10 |
| trans-1,3-Dichloropropene | ND | | 4.0 | | ug/L | | | 04/11/14 04:36 | 10 |
| **Trichloroethene** | **65** | | 10 | | ug/L | | | 04/11/14 04:36 | 10 |
| Trichlorofluoromethane | ND | | 10 | | ug/L | | | 04/11/14 04:36 | 10 |
| **Vinyl chloride** | **99** | | 10 | | ug/L | | | 04/11/14 04:36 | 10 |
| Dibromomethane | ND | | 10 | | ug/L | | | 04/11/14 04:36 | 10 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *99* | | *70 - 130* | | *04/11/14 04:36* | *10* |
| *1,2-Dichloroethane-d4 (Surr)* | *94* | | *70 - 130* | | *04/11/14 04:36* | *10* |
| *4-Bromofluorobenzene (Surr)* | *99* | | *70 - 130* | | *04/11/14 04:36* | *10* |

## Client Sample ID: REW-8-20140406-01

**Lab Sample ID: 480-57495-29**

**Date Collected: 04/06/14 10:45**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 05:01 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 05:01 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/11/14 05:01 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 05:01 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 05:01 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 05:01 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/11/14 05:01 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 05:01 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 05:01 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 05:01 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 05:01 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/11/14 05:01 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 05:01 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 05:01 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 05:01 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 05:01 | 1 |

**Client Sample ID: REW-8-20140406-01**
**Date Collected: 04/06/14 10:45**
**Date Received: 04/09/14 01:30**

**Lab Sample ID: 480-57495-29**
**Matrix: Water**

**Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 05:01 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 05:01 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 05:01 | 1 |
| 1,4-Dioxane | ND | * | 50 | | ug/L | | | 04/11/14 05:01 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 05:01 | 1 |
| **2-Butanone (MEK)** | **75** | | 10 | | ug/L | | | 04/11/14 05:01 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/11/14 05:01 | 1 |
| 2-Hexanone | ND | * | 10 | | ug/L | | | 04/11/14 05:01 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/11/14 05:01 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/11/14 05:01 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/11/14 05:01 | 1 |
| Acetone | ND | | 50 | | ug/L | | | 04/11/14 05:01 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/11/14 05:01 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 05:01 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/11/14 05:01 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/11/14 05:01 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/11/14 05:01 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/11/14 05:01 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 05:01 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/11/14 05:01 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/11/14 05:01 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/11/14 05:01 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/11/14 05:01 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/11/14 05:01 | 1 |
| **cis-1,2-Dichloroethene** | **27** | | 1.0 | | ug/L | | | 04/11/14 05:01 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/11/14 05:01 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/11/14 05:01 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/11/14 05:01 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/11/14 05:01 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 05:01 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/11/14 05:01 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/11/14 05:01 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/11/14 05:01 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 05:01 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/11/14 05:01 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/11/14 05:01 | 1 |
| **m-Xylene & p-Xylene** | **2.4** | | 2.0 | | ug/L | | | 04/11/14 05:01 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/11/14 05:01 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 05:01 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 05:01 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/11/14 05:01 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 05:01 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/11/14 05:01 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/11/14 05:01 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/11/14 05:01 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 05:01 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 05:01 | 1 |
| Tetrahydrofuran | ND | | 10 | | ug/L | | | 04/11/14 05:01 | 1 |
| **Toluene** | **36** | | 1.0 | | ug/L | | | 04/11/14 05:01 | 1 |

## Client Sample ID: REW-8-20140406-01

**Lab Sample ID: 480-57495-29**

**Date Collected: 04/06/14 10:45**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 05:01 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/11/14 05:01 | 1 |
| Trichloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 05:01 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/11/14 05:01 | 1 |
| **Vinyl chloride** | **36** | | 1.0 | | ug/L | | | 04/11/14 05:01 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/11/14 05:01 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *97* | | *70 - 130* | | *04/11/14 05:01* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *97* | | *70 - 130* | | *04/11/14 05:01* | *1* |
| *4-Bromofluorobenzene (Surr)* | *102* | | *70 - 130* | | *04/11/14 05:01* | *1* |

## Client Sample ID: REW-9-20140406-01

**Lab Sample ID: 480-57495-30**

**Date Collected: 04/06/14 11:40**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 05:26 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 05:26 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/11/14 05:26 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 05:26 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 05:26 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 05:26 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/11/14 05:26 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 05:26 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 05:26 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 05:26 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 05:26 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/11/14 05:26 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 05:26 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 05:26 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 05:26 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 05:26 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 05:26 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 05:26 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 05:26 | 1 |
| 1,4-Dioxane | ND | * | 50 | | ug/L | | | 04/11/14 05:26 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 05:26 | 1 |
| **2-Butanone (MEK)** | **54** | | 10 | | ug/L | | | 04/11/14 05:26 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/11/14 05:26 | 1 |
| 2-Hexanone | ND | * | 10 | | ug/L | | | 04/11/14 05:26 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/11/14 05:26 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/11/14 05:26 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/11/14 05:26 | 1 |
| Acetone | ND | | 50 | | ug/L | | | 04/11/14 05:26 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/11/14 05:26 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 05:26 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/11/14 05:26 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/11/14 05:26 | 1 |

## Client Sample ID: REW-9-20140406-01

**Lab Sample ID: 480-57495-30**

**Date Collected: 04/06/14 11:40**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/11/14 05:26 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/11/14 05:26 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 05:26 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/11/14 05:26 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/11/14 05:26 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/11/14 05:26 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/11/14 05:26 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/11/14 05:26 | 1 |
| **cis-1,2-Dichloroethene** | **80** | | 1.0 | | ug/L | | | 04/11/14 05:26 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/11/14 05:26 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/11/14 05:26 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/11/14 05:26 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/11/14 05:26 | 1 |
| **Ethylbenzene** | **1.3** | | 1.0 | | ug/L | | | 04/11/14 05:26 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/11/14 05:26 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/11/14 05:26 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/11/14 05:26 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 05:26 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/11/14 05:26 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/11/14 05:26 | 1 |
| **m-Xylene & p-Xylene** | **4.8** | | 2.0 | | ug/L | | | 04/11/14 05:26 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/11/14 05:26 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 05:26 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 05:26 | 1 |
| **o-Xylene** | **1.1** | | 1.0 | | ug/L | | | 04/11/14 05:26 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 05:26 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/11/14 05:26 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/11/14 05:26 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/11/14 05:26 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 05:26 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 05:26 | 1 |
| Tetrahydrofuran | ND | | 10 | | ug/L | | | 04/11/14 05:26 | 1 |
| **Toluene** | **84** | | 1.0 | | ug/L | | | 04/11/14 05:26 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 05:26 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/11/14 05:26 | 1 |
| Trichloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 05:26 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/11/14 05:26 | 1 |
| **Vinyl chloride** | **26** | | 1.0 | | ug/L | | | 04/11/14 05:26 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/11/14 05:26 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *98* | | *70 - 130* | | *04/11/14 05:26* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *93* | | *70 - 130* | | *04/11/14 05:26* | *1* |
| *4-Bromofluorobenzene (Surr)* | *100* | | *70 - 130* | | *04/11/14 05:26* | *1* |

Client: Innovative Engineering Solutions, Inc
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57495-1

**Client Sample ID: REW-10-20140406-01**
**Date Collected: 04/06/14 12:25**
**Date Received: 04/09/14 01:30**

**Lab Sample ID: 480-57495-31**
**Matrix: Water**

**Method: 8260C - Volatile Organic Compounds (GC/MS)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 05:51 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 05:51 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/11/14 05:51 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 05:51 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 05:51 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 05:51 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/11/14 05:51 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 05:51 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 05:51 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 05:51 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 05:51 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/11/14 05:51 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 05:51 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 05:51 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 05:51 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 05:51 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 05:51 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 05:51 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 05:51 | 1 |
| 1,4-Dioxane | ND | * | 50 | | ug/L | | | 04/11/14 05:51 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 05:51 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 04/11/14 05:51 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/11/14 05:51 | 1 |
| 2-Hexanone | ND | * | 10 | | ug/L | | | 04/11/14 05:51 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/11/14 05:51 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/11/14 05:51 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/11/14 05:51 | 1 |
| Acetone | ND | | 50 | | ug/L | | | 04/11/14 05:51 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/11/14 05:51 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 05:51 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/11/14 05:51 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/11/14 05:51 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/11/14 05:51 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/11/14 05:51 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 05:51 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/11/14 05:51 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/11/14 05:51 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/11/14 05:51 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/11/14 05:51 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/11/14 05:51 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 05:51 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/11/14 05:51 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/11/14 05:51 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/11/14 05:51 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/11/14 05:51 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 05:51 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/11/14 05:51 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/11/14 05:51 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/11/14 05:51 | 1 |

## Client Sample ID: REW-10-20140406-01

**Lab Sample ID: 480-57495-31**

**Date Collected: 04/06/14 12:25**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 05:51 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/11/14 05:51 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/11/14 05:51 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/11/14 05:51 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/11/14 05:51 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 05:51 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 05:51 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/11/14 05:51 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 05:51 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/11/14 05:51 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/11/14 05:51 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/11/14 05:51 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 05:51 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 05:51 | 1 |
| Tetrahydrofuran | ND | | 10 | | ug/L | | | 04/11/14 05:51 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 04/11/14 05:51 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 05:51 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/11/14 05:51 | 1 |
| Trichloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 05:51 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/11/14 05:51 | 1 |
| Vinyl chloride | ND | | 1.0 | | ug/L | | | 04/11/14 05:51 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/11/14 05:51 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *97* | | *70 - 130* | | *04/11/14 05:51* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *98* | | *70 - 130* | | *04/11/14 05:51* | *1* |
| *4-Bromofluorobenzene (Surr)* | *98* | | *70 - 130* | | *04/11/14 05:51* | *1* |

## Client Sample ID: REW-11-20140406-01

**Lab Sample ID: 480-57495-32**

**Date Collected: 04/06/14 08:15**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 25 | | ug/L | | | 04/11/14 06:16 | 25 |
| 1,1,1-Trichloroethane | ND | | 25 | | ug/L | | | 04/11/14 06:16 | 25 |
| 1,1,2,2-Tetrachloroethane | ND | | 13 | | ug/L | | | 04/11/14 06:16 | 25 |
| 1,1,2-Trichloroethane | ND | | 25 | | ug/L | | | 04/11/14 06:16 | 25 |
| 1,1-Dichloroethane | ND | | 25 | | ug/L | | | 04/11/14 06:16 | 25 |
| 1,1-Dichloroethene | ND | | 25 | | ug/L | | | 04/11/14 06:16 | 25 |
| 1,1-Dichloropropene | ND | | 25 | | ug/L | | | 04/11/14 06:16 | 25 |
| 1,2,3-Trichlorobenzene | ND | | 25 | | ug/L | | | 04/11/14 06:16 | 25 |
| 1,2,3-Trichloropropane | ND | | 25 | | ug/L | | | 04/11/14 06:16 | 25 |
| 1,2,4-Trichlorobenzene | ND | | 25 | | ug/L | | | 04/11/14 06:16 | 25 |
| 1,2,4-Trimethylbenzene | ND | | 25 | | ug/L | | | 04/11/14 06:16 | 25 |
| 1,2-Dibromo-3-Chloropropane | ND | | 130 | | ug/L | | | 04/11/14 06:16 | 25 |
| 1,2-Dichlorobenzene | ND | | 25 | | ug/L | | | 04/11/14 06:16 | 25 |
| 1,2-Dichloroethane | ND | | 25 | | ug/L | | | 04/11/14 06:16 | 25 |
| 1,2-Dichloropropane | ND | | 25 | | ug/L | | | 04/11/14 06:16 | 25 |
| 1,3,5-Trimethylbenzene | ND | | 25 | | ug/L | | | 04/11/14 06:16 | 25 |

## Client Sample ID: REW-11-20140406-01

**Lab Sample ID: 480-57495-32**

**Date Collected: 04/06/14 08:15**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,3-Dichlorobenzene | ND | | 25 | | ug/L | | | 04/11/14 06:16 | 25 |
| 1,3-Dichloropropane | ND | | 25 | | ug/L | | | 04/11/14 06:16 | 25 |
| 1,4-Dichlorobenzene | ND | | 25 | | ug/L | | | 04/11/14 06:16 | 25 |
| 1,4-Dioxane | ND | * | 1300 | | ug/L | | | 04/11/14 06:16 | 25 |
| 2,2-Dichloropropane | ND | | 25 | | ug/L | | | 04/11/14 06:16 | 25 |
| 2-Butanone (MEK) | ND | | 250 | | ug/L | | | 04/11/14 06:16 | 25 |
| 2-Chlorotoluene | ND | | 25 | | ug/L | | | 04/11/14 06:16 | 25 |
| 2-Hexanone | ND | * | 250 | | ug/L | | | 04/11/14 06:16 | 25 |
| 4-Chlorotoluene | ND | | 25 | | ug/L | | | 04/11/14 06:16 | 25 |
| 4-Isopropyltoluene | ND | | 25 | | ug/L | | | 04/11/14 06:16 | 25 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 250 | | ug/L | | | 04/11/14 06:16 | 25 |
| Acetone | ND | | 1300 | | ug/L | | | 04/11/14 06:16 | 25 |
| Benzene | ND | | 25 | | ug/L | | | 04/11/14 06:16 | 25 |
| Bromobenzene | ND | | 25 | | ug/L | | | 04/11/14 06:16 | 25 |
| Bromoform | ND | | 25 | | ug/L | | | 04/11/14 06:16 | 25 |
| Bromomethane | ND | | 50 | | ug/L | | | 04/11/14 06:16 | 25 |
| Carbon disulfide | ND | | 250 | | ug/L | | | 04/11/14 06:16 | 25 |
| Carbon tetrachloride | ND | | 25 | | ug/L | | | 04/11/14 06:16 | 25 |
| Chlorobenzene | ND | | 25 | | ug/L | | | 04/11/14 06:16 | 25 |
| Chlorobromomethane | ND | | 25 | | ug/L | | | 04/11/14 06:16 | 25 |
| Chlorodibromomethane | ND | | 13 | | ug/L | | | 04/11/14 06:16 | 25 |
| Chloroethane | ND | | 50 | | ug/L | | | 04/11/14 06:16 | 25 |
| Chloroform | ND | | 25 | | ug/L | | | 04/11/14 06:16 | 25 |
| Chloromethane | ND | | 50 | | ug/L | | | 04/11/14 06:16 | 25 |
| **cis-1,2-Dichloroethene** | **1800** | | 25 | | ug/L | | | 04/11/14 06:16 | 25 |
| cis-1,3-Dichloropropene | ND | | 10 | | ug/L | | | 04/11/14 06:16 | 25 |
| Dichlorobromomethane | ND | | 13 | | ug/L | | | 04/11/14 06:16 | 25 |
| Dichlorodifluoromethane | ND | | 25 | | ug/L | | | 04/11/14 06:16 | 25 |
| Ethyl ether | ND | | 25 | | ug/L | | | 04/11/14 06:16 | 25 |
| Ethylbenzene | ND | | 25 | | ug/L | | | 04/11/14 06:16 | 25 |
| Ethylene Dibromide | ND | | 25 | | ug/L | | | 04/11/14 06:16 | 25 |
| Hexachlorobutadiene | ND | | 10 | | ug/L | | | 04/11/14 06:16 | 25 |
| Isopropyl ether | ND | | 250 | | ug/L | | | 04/11/14 06:16 | 25 |
| Isopropylbenzene | ND | | 25 | | ug/L | | | 04/11/14 06:16 | 25 |
| Methyl tert-butyl ether | ND | | 25 | | ug/L | | | 04/11/14 06:16 | 25 |
| Methylene Chloride | ND | | 25 | | ug/L | | | 04/11/14 06:16 | 25 |
| m-Xylene & p-Xylene | ND | | 50 | | ug/L | | | 04/11/14 06:16 | 25 |
| Naphthalene | ND | | 130 | | ug/L | | | 04/11/14 06:16 | 25 |
| n-Butylbenzene | ND | | 25 | | ug/L | | | 04/11/14 06:16 | 25 |
| N-Propylbenzene | ND | | 25 | | ug/L | | | 04/11/14 06:16 | 25 |
| o-Xylene | ND | | 25 | | ug/L | | | 04/11/14 06:16 | 25 |
| sec-Butylbenzene | ND | | 25 | | ug/L | | | 04/11/14 06:16 | 25 |
| Styrene | ND | | 25 | | ug/L | | | 04/11/14 06:16 | 25 |
| Tert-amyl methyl ether | ND | | 130 | | ug/L | | | 04/11/14 06:16 | 25 |
| Tert-butyl ethyl ether | ND | | 130 | | ug/L | | | 04/11/14 06:16 | 25 |
| tert-Butylbenzene | ND | | 25 | | ug/L | | | 04/11/14 06:16 | 25 |
| Tetrachloroethene | ND | | 25 | | ug/L | | | 04/11/14 06:16 | 25 |
| Tetrahydrofuran | ND | | 250 | | ug/L | | | 04/11/14 06:16 | 25 |
| Toluene | ND | | 25 | | ug/L | | | 04/11/14 06:16 | 25 |

## Client Sample ID: REW-11-20140406-01

**Lab Sample ID: 480-57495-32**

**Date Collected: 04/06/14 08:15**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| trans-1,2-Dichloroethene | ND | | 25 | | ug/L | | | 04/11/14 06:16 | 25 |
| trans-1,3-Dichloropropene | ND | | 10 | | ug/L | | | 04/11/14 06:16 | 25 |
| **Trichloroethene** | **460** | | 25 | | ug/L | | | 04/11/14 06:16 | 25 |
| Trichlorofluoromethane | ND | | 25 | | ug/L | | | 04/11/14 06:16 | 25 |
| **Vinyl chloride** | **120** | | 25 | | ug/L | | | 04/11/14 06:16 | 25 |
| Dibromomethane | ND | | 25 | | ug/L | | | 04/11/14 06:16 | 25 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *98* | | *70 - 130* | | *04/11/14 06:16* | *25* |
| *1,2-Dichloroethane-d4 (Surr)* | *98* | | *70 - 130* | | *04/11/14 06:16* | *25* |
| *4-Bromofluorobenzene (Surr)* | *100* | | *70 - 130* | | *04/11/14 06:16* | *25* |

## Client Sample ID: REW-12-20140406-01

**Lab Sample ID: 480-57495-33**

**Date Collected: 04/06/14 13:10**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 4.0 | | ug/L | | | 04/11/14 06:42 | 4 |
| 1,1,1-Trichloroethane | ND | | 4.0 | | ug/L | | | 04/11/14 06:42 | 4 |
| 1,1,2,2-Tetrachloroethane | ND | | 2.0 | | ug/L | | | 04/11/14 06:42 | 4 |
| 1,1,2-Trichloroethane | ND | | 4.0 | | ug/L | | | 04/11/14 06:42 | 4 |
| 1,1-Dichloroethane | ND | | 4.0 | | ug/L | | | 04/11/14 06:42 | 4 |
| 1,1-Dichloroethene | ND | | 4.0 | | ug/L | | | 04/11/14 06:42 | 4 |
| 1,1-Dichloropropene | ND | | 4.0 | | ug/L | | | 04/11/14 06:42 | 4 |
| 1,2,3-Trichlorobenzene | ND | | 4.0 | | ug/L | | | 04/11/14 06:42 | 4 |
| 1,2,3-Trichloropropane | ND | | 4.0 | | ug/L | | | 04/11/14 06:42 | 4 |
| 1,2,4-Trichlorobenzene | ND | | 4.0 | | ug/L | | | 04/11/14 06:42 | 4 |
| 1,2,4-Trimethylbenzene | ND | | 4.0 | | ug/L | | | 04/11/14 06:42 | 4 |
| 1,2-Dibromo-3-Chloropropane | ND | | 20 | | ug/L | | | 04/11/14 06:42 | 4 |
| 1,2-Dichlorobenzene | ND | | 4.0 | | ug/L | | | 04/11/14 06:42 | 4 |
| 1,2-Dichloroethane | ND | | 4.0 | | ug/L | | | 04/11/14 06:42 | 4 |
| 1,2-Dichloropropane | ND | | 4.0 | | ug/L | | | 04/11/14 06:42 | 4 |
| 1,3,5-Trimethylbenzene | ND | | 4.0 | | ug/L | | | 04/11/14 06:42 | 4 |
| 1,3-Dichlorobenzene | ND | | 4.0 | | ug/L | | | 04/11/14 06:42 | 4 |
| 1,3-Dichloropropane | ND | | 4.0 | | ug/L | | | 04/11/14 06:42 | 4 |
| 1,4-Dichlorobenzene | ND | | 4.0 | | ug/L | | | 04/11/14 06:42 | 4 |
| 1,4-Dioxane | ND | * | 200 | | ug/L | | | 04/11/14 06:42 | 4 |
| 2,2-Dichloropropane | ND | | 4.0 | | ug/L | | | 04/11/14 06:42 | 4 |
| 2-Butanone (MEK) | ND | | 40 | | ug/L | | | 04/11/14 06:42 | 4 |
| 2-Chlorotoluene | ND | | 4.0 | | ug/L | | | 04/11/14 06:42 | 4 |
| 2-Hexanone | ND | * | 40 | | ug/L | | | 04/11/14 06:42 | 4 |
| 4-Chlorotoluene | ND | | 4.0 | | ug/L | | | 04/11/14 06:42 | 4 |
| 4-Isopropyltoluene | ND | | 4.0 | | ug/L | | | 04/11/14 06:42 | 4 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 40 | | ug/L | | | 04/11/14 06:42 | 4 |
| Acetone | ND | | 200 | | ug/L | | | 04/11/14 06:42 | 4 |
| Benzene | ND | | 4.0 | | ug/L | | | 04/11/14 06:42 | 4 |
| Bromobenzene | ND | | 4.0 | | ug/L | | | 04/11/14 06:42 | 4 |
| Bromoform | ND | | 4.0 | | ug/L | | | 04/11/14 06:42 | 4 |
| Bromomethane | ND | | 8.0 | | ug/L | | | 04/11/14 06:42 | 4 |

**Client Sample ID: REW-12-20140406-01**
**Date Collected: 04/06/14 13:10**
**Date Received: 04/09/14 01:30**

**Lab Sample ID: 480-57495-33**
**Matrix: Water**

**Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | ND | | 40 | | ug/L | | | 04/11/14 06:42 | 4 |
| Carbon tetrachloride | ND | | 4.0 | | ug/L | | | 04/11/14 06:42 | 4 |
| Chlorobenzene | ND | | 4.0 | | ug/L | | | 04/11/14 06:42 | 4 |
| Chlorobromomethane | ND | | 4.0 | | ug/L | | | 04/11/14 06:42 | 4 |
| Chlorodibromomethane | ND | | 2.0 | | ug/L | | | 04/11/14 06:42 | 4 |
| Chloroethane | ND | | 8.0 | | ug/L | | | 04/11/14 06:42 | 4 |
| Chloroform | ND | | 4.0 | | ug/L | | | 04/11/14 06:42 | 4 |
| Chloromethane | ND | | 8.0 | | ug/L | | | 04/11/14 06:42 | 4 |
| **cis-1,2-Dichloroethene** | **310** | | 4.0 | | ug/L | | | 04/11/14 06:42 | 4 |
| cis-1,3-Dichloropropene | ND | | 1.6 | | ug/L | | | 04/11/14 06:42 | 4 |
| Dichlorobromomethane | ND | | 2.0 | | ug/L | | | 04/11/14 06:42 | 4 |
| Dichlorodifluoromethane | ND | | 4.0 | | ug/L | | | 04/11/14 06:42 | 4 |
| Ethyl ether | ND | | 4.0 | | ug/L | | | 04/11/14 06:42 | 4 |
| Ethylbenzene | ND | | 4.0 | | ug/L | | | 04/11/14 06:42 | 4 |
| Ethylene Dibromide | ND | | 4.0 | | ug/L | | | 04/11/14 06:42 | 4 |
| Hexachlorobutadiene | ND | | 1.6 | | ug/L | | | 04/11/14 06:42 | 4 |
| Isopropyl ether | ND | | 40 | | ug/L | | | 04/11/14 06:42 | 4 |
| Isopropylbenzene | ND | | 4.0 | | ug/L | | | 04/11/14 06:42 | 4 |
| Methyl tert-butyl ether | ND | | 4.0 | | ug/L | | | 04/11/14 06:42 | 4 |
| Methylene Chloride | ND | | 4.0 | | ug/L | | | 04/11/14 06:42 | 4 |
| m-Xylene & p-Xylene | ND | | 8.0 | | ug/L | | | 04/11/14 06:42 | 4 |
| Naphthalene | ND | | 20 | | ug/L | | | 04/11/14 06:42 | 4 |
| n-Butylbenzene | ND | | 4.0 | | ug/L | | | 04/11/14 06:42 | 4 |
| N-Propylbenzene | ND | | 4.0 | | ug/L | | | 04/11/14 06:42 | 4 |
| o-Xylene | ND | | 4.0 | | ug/L | | | 04/11/14 06:42 | 4 |
| sec-Butylbenzene | ND | | 4.0 | | ug/L | | | 04/11/14 06:42 | 4 |
| Styrene | ND | | 4.0 | | ug/L | | | 04/11/14 06:42 | 4 |
| Tert-amyl methyl ether | ND | | 20 | | ug/L | | | 04/11/14 06:42 | 4 |
| Tert-butyl ethyl ether | ND | | 20 | | ug/L | | | 04/11/14 06:42 | 4 |
| tert-Butylbenzene | ND | | 4.0 | | ug/L | | | 04/11/14 06:42 | 4 |
| Tetrachloroethene | ND | | 4.0 | | ug/L | | | 04/11/14 06:42 | 4 |
| Tetrahydrofuran | ND | | 40 | | ug/L | | | 04/11/14 06:42 | 4 |
| **Toluene** | **28** | | 4.0 | | ug/L | | | 04/11/14 06:42 | 4 |
| trans-1,2-Dichloroethene | ND | | 4.0 | | ug/L | | | 04/11/14 06:42 | 4 |
| trans-1,3-Dichloropropene | ND | | 1.6 | | ug/L | | | 04/11/14 06:42 | 4 |
| **Trichloroethene** | **50** | | 4.0 | | ug/L | | | 04/11/14 06:42 | 4 |
| Trichlorofluoromethane | ND | | 4.0 | | ug/L | | | 04/11/14 06:42 | 4 |
| **Vinyl chloride** | **55** | | 4.0 | | ug/L | | | 04/11/14 06:42 | 4 |
| Dibromomethane | ND | | 4.0 | | ug/L | | | 04/11/14 06:42 | 4 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *96* | | *70 - 130* | | *04/11/14 06:42* | *4* |
| *1,2-Dichloroethane-d4 (Surr)* | *97* | | *70 - 130* | | *04/11/14 06:42* | *4* |
| *4-Bromofluorobenzene (Surr)* | *97* | | *70 - 130* | | *04/11/14 06:42* | *4* |

**Client Sample ID: DupX1-20140405-01**
**Date Collected: 04/05/14 00:00**
**Date Received: 04/09/14 01:30**

**Lab Sample ID: 480-57495-34**
**Matrix: Water**

**Method: 8260C - Volatile Organic Compounds (GC/MS)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 07:06 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 07:06 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/11/14 07:06 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 07:06 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 07:06 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 07:06 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/11/14 07:06 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 07:06 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 07:06 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 07:06 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 07:06 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/11/14 07:06 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 07:06 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 07:06 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 07:06 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 07:06 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 07:06 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 07:06 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 07:06 | 1 |
| 1,4-Dioxane | ND | * | 50 | | ug/L | | | 04/11/14 07:06 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 07:06 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 04/11/14 07:06 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/11/14 07:06 | 1 |
| 2-Hexanone | ND | * | 10 | | ug/L | | | 04/11/14 07:06 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/11/14 07:06 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/11/14 07:06 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/11/14 07:06 | 1 |
| Acetone | ND | | 50 | | ug/L | | | 04/11/14 07:06 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/11/14 07:06 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 07:06 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/11/14 07:06 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/11/14 07:06 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/11/14 07:06 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/11/14 07:06 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 07:06 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/11/14 07:06 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/11/14 07:06 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/11/14 07:06 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/11/14 07:06 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/11/14 07:06 | 1 |
| **cis-1,2-Dichloroethene** | **58** | | 1.0 | | ug/L | | | 04/11/14 07:06 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/11/14 07:06 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/11/14 07:06 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/11/14 07:06 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/11/14 07:06 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 07:06 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/11/14 07:06 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/11/14 07:06 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/11/14 07:06 | 1 |

## Client Sample ID: DupX1-20140405-01

**Lab Sample ID: 480-57495-34**

**Date Collected: 04/05/14 00:00**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 07:06 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/11/14 07:06 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/11/14 07:06 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/11/14 07:06 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/11/14 07:06 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 07:06 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 07:06 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/11/14 07:06 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 07:06 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/11/14 07:06 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/11/14 07:06 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/11/14 07:06 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 07:06 | 1 |
| **Tetrachloroethene** | **10** | | 1.0 | | ug/L | | | 04/11/14 07:06 | 1 |
| Tetrahydrofuran | ND | | 10 | | ug/L | | | 04/11/14 07:06 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 04/11/14 07:06 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 07:06 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/11/14 07:06 | 1 |
| **Trichloroethene** | **37** | | 1.0 | | ug/L | | | 04/11/14 07:06 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/11/14 07:06 | 1 |
| **Vinyl chloride** | **43** | | 1.0 | | ug/L | | | 04/11/14 07:06 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/11/14 07:06 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *98* | | *70 - 130* | | *04/11/14 07:06* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *95* | | *70 - 130* | | *04/11/14 07:06* | *1* |
| *4-Bromofluorobenzene (Surr)* | *99* | | *70 - 130* | | *04/11/14 07:06* | *1* |

## Client Sample ID: DupX2-20140406-01

**Lab Sample ID: 480-57495-35**

**Date Collected: 04/06/14 00:00**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 07:31 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 07:31 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/11/14 07:31 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 07:31 | 1 |
| **1,1-Dichloroethane** | **5.5** | | 1.0 | | ug/L | | | 04/11/14 07:31 | 1 |
| **1,1-Dichloroethene** | **2.5** | | 1.0 | | ug/L | | | 04/11/14 07:31 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/11/14 07:31 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 07:31 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 07:31 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 07:31 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 07:31 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/11/14 07:31 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 07:31 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 07:31 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 07:31 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 07:31 | 1 |

**Client Sample ID: DupX2-20140406-01** **Lab Sample ID: 480-57495-35**

**Date Collected: 04/06/14 00:00** **Matrix: Water**

**Date Received: 04/09/14 01:30**

**Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 07:31 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 07:31 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 07:31 | 1 |
| 1,4-Dioxane | ND | * | 50 | | ug/L | | | 04/11/14 07:31 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 07:31 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 04/11/14 07:31 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/11/14 07:31 | 1 |
| 2-Hexanone | ND | * | 10 | | ug/L | | | 04/11/14 07:31 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/11/14 07:31 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/11/14 07:31 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/11/14 07:31 | 1 |
| Acetone | ND | | 50 | | ug/L | | | 04/11/14 07:31 | 1 |
| **Benzene** | **1.5** | | 1.0 | | ug/L | | | 04/11/14 07:31 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 07:31 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/11/14 07:31 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/11/14 07:31 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/11/14 07:31 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/11/14 07:31 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 07:31 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/11/14 07:31 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/11/14 07:31 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/11/14 07:31 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/11/14 07:31 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/11/14 07:31 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/11/14 07:31 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/11/14 07:31 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/11/14 07:31 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/11/14 07:31 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 07:31 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/11/14 07:31 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/11/14 07:31 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/11/14 07:31 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 07:31 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/11/14 07:31 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/11/14 07:31 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/11/14 07:31 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/11/14 07:31 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 07:31 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 07:31 | 1 |
| **o-Xylene** | **1.1** | | 1.0 | | ug/L | | | 04/11/14 07:31 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 07:31 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/11/14 07:31 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/11/14 07:31 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/11/14 07:31 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 07:31 | 1 |
| **Tetrachloroethene** | **16** | | 1.0 | | ug/L | | | 04/11/14 07:31 | 1 |
| Tetrahydrofuran | ND | | 10 | | ug/L | | | 04/11/14 07:31 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 04/11/14 07:31 | 1 |
| **trans-1,2-Dichloroethene** | **3.3** | | 1.0 | | ug/L | | | 04/11/14 07:31 | 1 |

## Client Sample ID: DupX2-20140406-01

**Lab Sample ID: 480-57495-35**

**Date Collected: 04/06/14 00:00**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/11/14 07:31 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/11/14 07:31 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/11/14 07:31 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *101* | | *70 - 130* | | *04/11/14 07:31* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *93* | | *70 - 130* | | *04/11/14 07:31* | *1* |
| *4-Bromofluorobenzene (Surr)* | *100* | | *70 - 130* | | *04/11/14 07:31* | *1* |

### Method: 8260C - Volatile Organic Compounds (GC/MS) - DL

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **cis-1,2-Dichloroethene** | **1500** | | 25 | | ug/L | | | 04/11/14 17:58 | 25 |
| **Trichloroethene** | **390** | | 25 | | ug/L | | | 04/11/14 17:58 | 25 |
| **Vinyl chloride** | **97** | | 25 | | ug/L | | | 04/11/14 17:58 | 25 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *97* | | *70 - 130* | | *04/11/14 17:58* | *25* |
| *1,2-Dichloroethane-d4 (Surr)* | *95* | | *70 - 130* | | *04/11/14 17:58* | *25* |
| *4-Bromofluorobenzene (Surr)* | *99* | | *70 - 130* | | *04/11/14 17:58* | *25* |

## Client Sample ID: DupX3-20140408-01

**Lab Sample ID: 480-57495-36**

**Date Collected: 04/08/14 00:00**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | ND | | 3.2 | | ug/L | | | 04/12/14 03:12 | 2 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *TBA-d9 (Surr)* | *134* | | *50 - 150* | | *04/12/14 03:12* | *2* |
| *Dibromofluoromethane (Surr)* | *86* | | *50 - 150* | | *04/12/14 03:12* | *2* |

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 07:57 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 07:57 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/11/14 07:57 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 07:57 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 07:57 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 07:57 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/11/14 07:57 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 07:57 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 07:57 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 07:57 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 07:57 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/11/14 07:57 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 07:57 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 07:57 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 07:57 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 07:57 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 07:57 | 1 |

**Client Sample ID: DupX3-20140408-01** **Lab Sample ID: 480-57495-36**

**Date Collected: 04/08/14 00:00** **Matrix: Water**

**Date Received: 04/09/14 01:30**

**Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 07:57 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 07:57 | 1 |
| 1,4-Dioxane | ND | * | 50 | | ug/L | | | 04/11/14 07:57 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 07:57 | 1 |
| **2-Butanone (MEK)** | **160** | | 10 | | ug/L | | | 04/11/14 07:57 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/11/14 07:57 | 1 |
| 2-Hexanone | ND | * | 10 | | ug/L | | | 04/11/14 07:57 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/11/14 07:57 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/11/14 07:57 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/11/14 07:57 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/11/14 07:57 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 07:57 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/11/14 07:57 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/11/14 07:57 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/11/14 07:57 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/11/14 07:57 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 07:57 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/11/14 07:57 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/11/14 07:57 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/11/14 07:57 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/11/14 07:57 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/11/14 07:57 | 1 |
| **cis-1,2-Dichloroethene** | **7.3** | | 1.0 | | ug/L | | | 04/11/14 07:57 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/11/14 07:57 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/11/14 07:57 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/11/14 07:57 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/11/14 07:57 | 1 |
| **Ethylbenzene** | **3.3** | | 1.0 | | ug/L | | | 04/11/14 07:57 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/11/14 07:57 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/11/14 07:57 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/11/14 07:57 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 07:57 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/11/14 07:57 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/11/14 07:57 | 1 |
| **m-Xylene & p-Xylene** | **11** | | 2.0 | | ug/L | | | 04/11/14 07:57 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/11/14 07:57 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 07:57 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 07:57 | 1 |
| **o-Xylene** | **2.1** | | 1.0 | | ug/L | | | 04/11/14 07:57 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 07:57 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/11/14 07:57 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/11/14 07:57 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/11/14 07:57 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 07:57 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 07:57 | 1 |
| **Tetrahydrofuran** | **18** | | 10 | | ug/L | | | 04/11/14 07:57 | 1 |
| **Toluene** | **20** | | 1.0 | | ug/L | | | 04/11/14 07:57 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 07:57 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/11/14 07:57 | 1 |

## Client Sample ID: DupX3-20140408-01

**Lab Sample ID: 480-57495-36**

**Date Collected: 04/08/14 00:00**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Trichloroethene** | **2.6** | | 1.0 | | ug/L | | | 04/11/14 07:57 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/11/14 07:57 | 1 |
| **Vinyl chloride** | **2.2** | | 1.0 | | ug/L | | | 04/11/14 07:57 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/11/14 07:57 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *96* | | *70 - 130* | | *04/11/14 07:57* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *95* | | *70 - 130* | | *04/11/14 07:57* | *1* |
| *4-Bromofluorobenzene (Surr)* | *104* | | *70 - 130* | | *04/11/14 07:57* | *1* |

### Method: 8260C - Volatile Organic Compounds (GC/MS) - DL

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Acetone** | **14000** | | 2000 | | ug/L | | | 04/14/14 00:11 | 40 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *99* | | *70 - 130* | | *04/14/14 00:11* | *40* |
| *1,2-Dichloroethane-d4 (Surr)* | *106* | | *70 - 130* | | *04/14/14 00:11* | *40* |
| *4-Bromofluorobenzene (Surr)* | *96* | | *70 - 130* | | *04/14/14 00:11* | *40* |

## Client Sample ID: Trip Blanks

**Lab Sample ID: 480-57495-37**

**Date Collected: 04/08/14 00:00**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 13:43 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 13:43 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/11/14 13:43 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 13:43 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 13:43 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 13:43 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/11/14 13:43 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 13:43 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 13:43 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 13:43 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 13:43 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/11/14 13:43 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 13:43 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 13:43 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 13:43 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 13:43 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 13:43 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 13:43 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 13:43 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/11/14 13:43 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 13:43 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 04/11/14 13:43 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/11/14 13:43 | 1 |
| 2-Hexanone | ND | * | 10 | | ug/L | | | 04/11/14 13:43 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/11/14 13:43 | 1 |

## Client Sample ID: Trip Blanks

**Lab Sample ID: 480-57495-37**

**Date Collected: 04/08/14 00:00**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/11/14 13:43 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/11/14 13:43 | 1 |
| Acetone | ND | | 50 | | ug/L | | | 04/11/14 13:43 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/11/14 13:43 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 13:43 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/11/14 13:43 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/11/14 13:43 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/11/14 13:43 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/11/14 13:43 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 13:43 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/11/14 13:43 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/11/14 13:43 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/11/14 13:43 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/11/14 13:43 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/11/14 13:43 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 13:43 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/11/14 13:43 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/11/14 13:43 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/11/14 13:43 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/11/14 13:43 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 13:43 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/11/14 13:43 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/11/14 13:43 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/11/14 13:43 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 13:43 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/11/14 13:43 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/11/14 13:43 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/11/14 13:43 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/11/14 13:43 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 13:43 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 13:43 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/11/14 13:43 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 13:43 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/11/14 13:43 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/11/14 13:43 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/11/14 13:43 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 13:43 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 13:43 | 1 |
| Tetrahydrofuran | ND | | 10 | | ug/L | | | 04/11/14 13:43 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 04/11/14 13:43 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 13:43 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/11/14 13:43 | 1 |
| Trichloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 13:43 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/11/14 13:43 | 1 |
| Vinyl chloride | ND | | 1.0 | | ug/L | | | 04/11/14 13:43 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/11/14 13:43 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *97* | | *70 - 130* | | *04/11/14 13:43* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *95* | | *70 - 130* | | *04/11/14 13:43* | *1* |

# Client Sample Results

Client: Innovative Engineering Solutions, Inc
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57495-1

## Client Sample ID: Trip Blanks

**Lab Sample ID: 480-57495-37**

**Date Collected: 04/08/14 00:00**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene (Surr) | 101 | | 70 - 130 | | 04/11/14 13:43 | 1 |

# Surrogate Summary

Client: Innovative Engineering Solutions, Inc
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57495-1

## Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

**Matrix: Water** **Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Lab Sample ID | Client Sample ID | BA-d9 (Sur (50-150) | DBFM (50-150) | | | | | | |
| 480-57495-3 | MW-261S-20140408-01 | 144 | 85 | | | | | | |
| 480-57495-7 | MW-265M-20140408-01 | 136 | 86 | | | | | | |
| 480-57495-9 | MW-266Ma-20140405-01 | 120 | 92 | | | | | | |
| 480-57495-11 | MW-267S-20140405-01 | 137 | 85 | | | | | | |
| 480-57495-12 | MW-267M-20140405-01 | 118 | 86 | | | | | | |
| 480-57495-13 | MW-268S-20140407 | 112 | 90 | | | | | | |
| 480-57495-14 | MW-268M-20140407 | 80 | 83 | | | | | | |
| 480-57495-16 | MW-269Ma-20140405 | 111 | 92 | | | | | | |
| 480-57495-18 | MW-552-20140407-01 | 117 | 88 | | | | | | |
| 480-57495-36 | DupX3-20140408-01 | 134 | 86 | | | | | | |
| LCS 480-175364/4 | Lab Control Sample | 97 | 84 | | | | | | |
| LCSD 480-175364/5 | Lab Control Sample Dup | 104 | 84 | | | | | | |
| MB 480-175364/6 | Method Blank | 122 | 91 | | | | | | |

**Surrogate Legend**

TBA-d9 (Surr) = TBA-d9 (Surr)

DBFM = Dibromofluoromethane (Surr)

## Method: 8260C - Volatile Organic Compounds (GC/MS)

**Matrix: Water** **Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Lab Sample ID | Client Sample ID | TOL (70-130) | 12DCE (70-130) | BFB (70-130) | | | | | |
| 480-57495-1 | DEP-19M-20140405-01 | 98 | 103 | 98 | | | | | |
| 480-57495-2 | DEP-21-20140405-01 | 101 | 102 | 100 | | | | | |
| 480-57495-3 | MW-261S-20140408-01 | 101 | 101 | 97 | | | | | |
| 480-57495-4 | MW-263M-20140408-01 | 101 | 103 | 98 | | | | | |
| 480-57495-5 | MW-264M-20140408-01 | 98 | 103 | 96 | | | | | |
| 480-57495-6 | MW-265S-20140408-01 | 99 | 102 | 97 | | | | | |
| 480-57495-7 | MW-265M-20140408-01 | 100 | 97 | 99 | | | | | |
| 480-57495-7 - DL | MW-265M-20140408-01 | 96 | 94 | 102 | | | | | |
| 480-57495-8 | MW-265D-20140408-01 | 95 | 97 | 98 | | | | | |
| 480-57495-9 | MW-266Ma-20140405-01 | 99 | 102 | 97 | | | | | |
| 480-57495-10 | MW-266Mb-20140405-01 | 98 | 103 | 95 | | | | | |
| 480-57495-11 | MW-267S-20140405-01 | 98 | 93 | 99 | | | | | |
| 480-57495-12 | MW-267M-20140405-01 | 95 | 94 | 98 | | | | | |
| 480-57495-13 | MW-268S-20140407 | 99 | 94 | 101 | | | | | |
| 480-57495-14 | MW-268M-20140407 | 98 | 94 | 99 | | | | | |
| 480-57495-15 | MW-268D-20140405 | 95 | 95 | 97 | | | | | |
| 480-57495-16 | MW-269Ma-20140405 | 96 | 96 | 99 | | | | | |
| 480-57495-17 | MW-551-20140408-01 | 96 | 96 | 100 | | | | | |
| 480-57495-17 MS | MW-551-20140408-01 | 99 | 103 | 102 | | | | | |
| 480-57495-17 MSD | MW-551-20140408-01 | 99 | 99 | 105 | | | | | |
| 480-57495-18 | MW-552-20140407-01 | 96 | 94 | 100 | | | | | |
| 480-57495-19 | MW-553-20140407-01 | 98 | 95 | 104 | | | | | |
| 480-57495-20 | MW-560-20140407-01 | 99 | 94 | 101 | | | | | |
| 480-57495-20 - DL | MW-560-20140407-01 | 98 | 94 | 102 | | | | | |
| 480-57495-21 | MW-561-20140407-01 | 96 | 95 | 98 | | | | | |

# Surrogate Summary

Client: Innovative Engineering Solutions, Inc
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57495-1

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Matrix: Water** **Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | | |
|---|---|---|---|---|
| | | TOL | 12DCE | BFB |
| Lab Sample ID | Client Sample ID | (70-130) | (70-130) | (70-130) |
| 480-57495-22 | MW-562-20140407-01 | 99 | 94 | 104 |
| 480-57495-22 - DL | MW-562-20140407-01 | 98 | 97 | 102 |
| 480-57495-23 | MW-563-20140407-01 | 97 | 94 | 100 |
| 480-57495-24 | REW-1-20140406-01 | 96 | 97 | 99 |
| 480-57495-25 | REW-4-20140406-01 | 94 | 92 | 97 |
| 480-57495-26 | REW-5-20140406-01 | 96 | 95 | 100 |
| 480-57495-27 | REW-6-20140406-01 | 98 | 95 | 99 |
| 480-57495-28 | REW-7-20140406-01 | 99 | 94 | 99 |
| 480-57495-29 | REW-8-20140406-01 | 97 | 97 | 102 |
| 480-57495-30 | REW-9-20140406-01 | 98 | 93 | 100 |
| 480-57495-31 | REW-10-20140406-01 | 97 | 98 | 98 |
| 480-57495-32 | REW-11-20140406-01 | 98 | 98 | 100 |
| 480-57495-33 | REW-12-20140406-01 | 96 | 97 | 97 |
| 480-57495-33 MS | REW-12-20140406-01 | 100 | 103 | 101 |
| 480-57495-33 MSD | REW-12-20140406-01 | 97 | 95 | 102 |
| 480-57495-34 | DupX1-20140405-01 | 98 | 95 | 99 |
| 480-57495-35 | DupX2-20140406-01 | 101 | 93 | 100 |
| 480-57495-35 - DL | DupX2-20140406-01 | 97 | 95 | 99 |
| 480-57495-36 | DupX3-20140408-01 | 96 | 95 | 104 |
| 480-57495-36 - DL | DupX3-20140408-01 | 99 | 106 | 96 |
| 480-57495-37 | Trip Blanks | 97 | 95 | 101 |
| LCS 480-174684/6 | Lab Control Sample | 100 | 102 | 102 |
| LCS 480-174949/5 | Lab Control Sample | 100 | 105 | 104 |
| LCS 480-175074/5 | Lab Control Sample | 99 | 106 | 103 |
| LCS 480-175163/5 | Lab Control Sample | 101 | 103 | 103 |
| LCS 480-175485/6 | Lab Control Sample | 98 | 105 | 99 |
| LCSD 480-174684/7 | Lab Control Sample Dup | 101 | 101 | 103 |
| LCSD 480-174949/6 | Lab Control Sample Dup | 97 | 103 | 101 |
| LCSD 480-175074/6 | Lab Control Sample Dup | 99 | 104 | 102 |
| LCSD 480-175163/6 | Lab Control Sample Dup | 100 | 103 | 104 |
| LCSD 480-175485/7 | Lab Control Sample Dup | 96 | 106 | 96 |
| MB 480-174684/9 | Method Blank | 100 | 101 | 96 |
| MB 480-174949/8 | Method Blank | 95 | 94 | 99 |
| MB 480-175074/8 | Method Blank | 97 | 95 | 99 |
| MB 480-175163/8 | Method Blank | 97 | 92 | 101 |
| MB 480-175485/9 | Method Blank | 99 | 105 | 96 |

**Surrogate Legend**

TOL = Toluene-d8 (Surr)

12DCE = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

## Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 480-175364/6** — **Client Sample ID: Method Blank**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 175364**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | ND | | 1.6 | | ug/L | | | 04/11/14 23:06 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *TBA-d9 (Surr)* | *122* | | *50 - 150* | | *04/11/14 23:06* | *1* |
| *Dibromofluoromethane (Surr)* | *91* | | *50 - 150* | | *04/11/14 23:06* | *1* |

**Lab Sample ID: LCS 480-175364/4** — **Client Sample ID: Lab Control Sample**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 175364**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | 16.0 | 16.0 | | ug/L | | 100 | 50 - 150 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *TBA-d9 (Surr)* | *97* | | *50 - 150* |
| *Dibromofluoromethane (Surr)* | *84* | | *50 - 150* |

**Lab Sample ID: LCSD 480-175364/5** — **Client Sample ID: Lab Control Sample Dup**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 175364**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | 16.0 | 17.0 | | ug/L | | 106 | 50 - 150 | 6 | 20 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *TBA-d9 (Surr)* | *104* | | *50 - 150* |
| *Dibromofluoromethane (Surr)* | *84* | | *50 - 150* |

## Method: 8260C - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 480-174684/9** — **Client Sample ID: Method Blank**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 174684**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/09/14 12:40 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/09/14 12:40 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/09/14 12:40 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/09/14 12:40 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/09/14 12:40 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/09/14 12:40 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/09/14 12:40 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/09/14 12:40 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/09/14 12:40 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/09/14 12:40 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 12:40 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/09/14 12:40 | 1 |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 480-174684/9**
**Matrix: Water**
**Analysis Batch: 174684**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/09/14 12:40 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/09/14 12:40 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/09/14 12:40 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 12:40 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/09/14 12:40 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/09/14 12:40 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/09/14 12:40 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/09/14 12:40 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/09/14 12:40 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 04/09/14 12:40 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/09/14 12:40 | 1 |
| 2-Hexanone | ND | | 10 | | ug/L | | | 04/09/14 12:40 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/09/14 12:40 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/09/14 12:40 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/09/14 12:40 | 1 |
| Acetone | ND | | 50 | | ug/L | | | 04/09/14 12:40 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/09/14 12:40 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/09/14 12:40 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/09/14 12:40 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/09/14 12:40 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/09/14 12:40 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/09/14 12:40 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/09/14 12:40 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/09/14 12:40 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/09/14 12:40 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/09/14 12:40 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/09/14 12:40 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/09/14 12:40 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/09/14 12:40 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/09/14 12:40 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/09/14 12:40 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/09/14 12:40 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/09/14 12:40 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 12:40 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/09/14 12:40 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/09/14 12:40 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/09/14 12:40 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 12:40 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/09/14 12:40 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/09/14 12:40 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/09/14 12:40 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/09/14 12:40 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 12:40 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 12:40 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/09/14 12:40 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 12:40 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/09/14 12:40 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/09/14 12:40 | 1 |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 480-174684/9**
**Matrix: Water**
**Analysis Batch: 174684**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/09/14 12:40 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/09/14 12:40 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/09/14 12:40 | 1 |
| Tetrahydrofuran | ND | | 10 | | ug/L | | | 04/09/14 12:40 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 04/09/14 12:40 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/09/14 12:40 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/09/14 12:40 | 1 |
| Trichloroethene | ND | | 1.0 | | ug/L | | | 04/09/14 12:40 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/09/14 12:40 | 1 |
| Vinyl chloride | ND | | 1.0 | | ug/L | | | 04/09/14 12:40 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/09/14 12:40 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *100* | | *70 - 130* | | *04/09/14 12:40* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *101* | | *70 - 130* | | *04/09/14 12:40* | *1* |
| *4-Bromofluorobenzene (Surr)* | *96* | | *70 - 130* | | *04/09/14 12:40* | *1* |

**Lab Sample ID: LCS 480-174684/6**
**Matrix: Water**
**Analysis Batch: 174684**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 25.0 | 26.9 | | ug/L | | 108 | 70 - 130 |
| 1,1,1-Trichloroethane | 25.0 | 26.3 | | ug/L | | 105 | 70 - 130 |
| 1,1,2,2-Tetrachloroethane | 25.0 | 26.5 | | ug/L | | 106 | 70 - 130 |
| 1,1,2-Trichloroethane | 25.0 | 26.3 | | ug/L | | 105 | 70 - 130 |
| 1,1-Dichloroethane | 25.0 | 25.8 | | ug/L | | 103 | 70 - 130 |
| 1,1-Dichloroethene | 25.0 | 26.3 | | ug/L | | 105 | 70 - 130 |
| 1,1-Dichloropropene | 25.0 | 26.5 | | ug/L | | 106 | 70 - 130 |
| 1,2,3-Trichlorobenzene | 25.0 | 27.0 | | ug/L | | 108 | 70 - 130 |
| 1,2,3-Trichloropropane | 25.0 | 25.7 | | ug/L | | 103 | 70 - 130 |
| 1,2,4-Trichlorobenzene | 25.0 | 27.1 | | ug/L | | 108 | 70 - 130 |
| 1,2,4-Trimethylbenzene | 25.0 | 26.1 | | ug/L | | 104 | 70 - 130 |
| 1,2-Dibromo-3-Chloropropane | 25.0 | 26.6 | | ug/L | | 106 | 70 - 130 |
| 1,2-Dichlorobenzene | 25.0 | 26.5 | | ug/L | | 106 | 70 - 130 |
| 1,2-Dichloroethane | 25.0 | 26.3 | | ug/L | | 105 | 70 - 130 |
| 1,2-Dichloropropane | 25.0 | 26.6 | | ug/L | | 106 | 70 - 130 |
| 1,3,5-Trimethylbenzene | 25.0 | 25.7 | | ug/L | | 103 | 70 - 130 |
| 1,3-Dichlorobenzene | 25.0 | 26.3 | | ug/L | | 105 | 70 - 130 |
| 1,3-Dichloropropane | 25.0 | 25.8 | | ug/L | | 103 | 70 - 130 |
| 1,4-Dichlorobenzene | 25.0 | 25.7 | | ug/L | | 103 | 70 - 130 |
| 1,4-Dioxane | 500 | 510 | | ug/L | | 102 | 70 - 130 |
| 2,2-Dichloropropane | 25.0 | 25.2 | | ug/L | | 101 | 70 - 130 |
| 2-Butanone (MEK) | 125 | 138 | | ug/L | | 111 | 70 - 130 |
| 2-Chlorotoluene | 25.0 | 26.3 | | ug/L | | 105 | 70 - 130 |
| 2-Hexanone | 125 | 133 | | ug/L | | 107 | 70 - 130 |
| 4-Chlorotoluene | 25.0 | 23.9 | | ug/L | | 96 | 70 - 130 |
| 4-Isopropyltoluene | 25.0 | 26.7 | | ug/L | | 107 | 70 - 130 |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 480-174684/6**
**Matrix: Water**
**Analysis Batch: 174684**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 4-Methyl-2-pentanone (MIBK) | 125 | 129 | | ug/L | | 103 | 70 - 130 |
| Acetone | 125 | 129 | | ug/L | | 103 | 70 - 130 |
| Benzene | 25.0 | 26.3 | | ug/L | | 105 | 70 - 130 |
| Bromobenzene | 25.0 | 25.8 | | ug/L | | 103 | 70 - 130 |
| Bromoform | 25.0 | 24.0 | | ug/L | | 96 | 70 - 130 |
| Bromomethane | 25.0 | 26.8 | | ug/L | | 107 | 70 - 130 |
| Carbon disulfide | 25.0 | 25.7 | | ug/L | | 103 | 70 - 130 |
| Carbon tetrachloride | 25.0 | 27.0 | | ug/L | | 108 | 70 - 130 |
| Chlorobenzene | 25.0 | 26.0 | | ug/L | | 104 | 70 - 130 |
| Chlorobromomethane | 25.0 | 26.1 | | ug/L | | 104 | 70 - 130 |
| Chlorodibromomethane | 24.5 | 26.2 | | ug/L | | 107 | 70 - 130 |
| Chloroethane | 25.0 | 26.3 | | ug/L | | 105 | 70 - 130 |
| Chloroform | 25.0 | 25.9 | | ug/L | | 104 | 70 - 130 |
| Chloromethane | 25.0 | 25.1 | | ug/L | | 100 | 70 - 130 |
| cis-1,2-Dichloroethene | 25.0 | 25.3 | | ug/L | | 101 | 70 - 130 |
| cis-1,3-Dichloropropene | 25.0 | 26.6 | | ug/L | | 106 | 70 - 130 |
| Dichlorobromomethane | 25.0 | 26.5 | | ug/L | | 106 | 70 - 130 |
| Dichlorodifluoromethane | 25.0 | 27.1 | | ug/L | | 108 | 70 - 130 |
| Ethyl ether | 25.0 | 26.6 | | ug/L | | 106 | 70 - 130 |
| Ethylbenzene | 25.0 | 25.9 | | ug/L | | 104 | 70 - 130 |
| Ethylene Dibromide | 25.0 | 26.1 | | ug/L | | 105 | 70 - 130 |
| Hexachlorobutadiene | 25.0 | 28.6 | | ug/L | | 114 | 70 - 130 |
| Isopropyl ether | 25.0 | 26.0 | | ug/L | | 104 | 70 - 130 |
| Isopropylbenzene | 25.0 | 26.2 | | ug/L | | 105 | 70 - 130 |
| Methyl tert-butyl ether | 25.0 | 25.6 | | ug/L | | 102 | 70 - 130 |
| Methylene Chloride | 25.0 | 25.7 | | ug/L | | 103 | 70 - 130 |
| m-Xylene & p-Xylene | 25.0 | 26.1 | | ug/L | | 104 | 70 - 130 |
| Naphthalene | 25.0 | 27.5 | | ug/L | | 110 | 70 - 130 |
| n-Butylbenzene | 25.0 | 27.1 | | ug/L | | 108 | 70 - 130 |
| N-Propylbenzene | 25.0 | 25.5 | | ug/L | | 102 | 70 - 130 |
| o-Xylene | 25.0 | 25.8 | | ug/L | | 103 | 70 - 130 |
| sec-Butylbenzene | 25.0 | 26.5 | | ug/L | | 106 | 70 - 130 |
| Styrene | 25.0 | 26.3 | | ug/L | | 105 | 70 - 130 |
| Tert-amyl methyl ether | 25.0 | 25.9 | | ug/L | | 104 | 70 - 130 |
| Tert-butyl ethyl ether | 25.0 | 25.4 | | ug/L | | 101 | 70 - 130 |
| tert-Butylbenzene | 25.0 | 25.6 | | ug/L | | 103 | 70 - 130 |
| Tetrachloroethene | 25.0 | 29.5 | | ug/L | | 118 | 70 - 130 |
| Tetrahydrofuran | 50.0 | 67.3 | * | ug/L | | 135 | 70 - 130 |
| Toluene | 25.0 | 25.5 | | ug/L | | 102 | 70 - 130 |
| trans-1,2-Dichloroethene | 25.0 | 25.9 | | ug/L | | 103 | 70 - 130 |
| trans-1,3-Dichloropropene | 25.0 | 25.9 | | ug/L | | 104 | 70 - 130 |
| Trichloroethene | 25.0 | 26.1 | | ug/L | | 105 | 70 - 130 |
| Trichlorofluoromethane | 25.0 | 27.3 | | ug/L | | 109 | 70 - 130 |
| Vinyl chloride | 25.0 | 24.7 | | ug/L | | 99 | 70 - 130 |
| Dibromomethane | 25.0 | 26.4 | | ug/L | | 105 | 70 - 130 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Toluene-d8 (Surr)* | *100* | | *70 - 130* |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 480-174684/6**
**Matrix: Water**
**Analysis Batch: 174684**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *102* | | *70 - 130* |
| *4-Bromofluorobenzene (Surr)* | *102* | | *70 - 130* |

**Lab Sample ID: LCSD 480-174684/7**
**Matrix: Water**
**Analysis Batch: 174684**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 25.0 | 26.5 | | ug/L | | 106 | 70 - 130 | 2 | 20 |
| 1,1,1-Trichloroethane | 25.0 | 25.2 | | ug/L | | 101 | 70 - 130 | 4 | 20 |
| 1,1,2,2-Tetrachloroethane | 25.0 | 26.0 | | ug/L | | 104 | 70 - 130 | 2 | 20 |
| 1,1,2-Trichloroethane | 25.0 | 26.0 | | ug/L | | 104 | 70 - 130 | 1 | 20 |
| 1,1-Dichloroethane | 25.0 | 25.4 | | ug/L | | 102 | 70 - 130 | 2 | 20 |
| 1,1-Dichloroethene | 25.0 | 27.2 | | ug/L | | 109 | 70 - 130 | 3 | 20 |
| 1,1-Dichloropropene | 25.0 | 25.6 | | ug/L | | 103 | 70 - 130 | 3 | 20 |
| 1,2,3-Trichlorobenzene | 25.0 | 26.7 | | ug/L | | 107 | 70 - 130 | 1 | 20 |
| 1,2,3-Trichloropropane | 25.0 | 26.6 | | ug/L | | 106 | 70 - 130 | 3 | 20 |
| 1,2,4-Trichlorobenzene | 25.0 | 26.8 | | ug/L | | 107 | 70 - 130 | 1 | 20 |
| 1,2,4-Trimethylbenzene | 25.0 | 25.7 | | ug/L | | 103 | 70 - 130 | 2 | 20 |
| 1,2-Dibromo-3-Chloropropane | 25.0 | 25.1 | | ug/L | | 101 | 70 - 130 | 5 | 20 |
| 1,2-Dichlorobenzene | 25.0 | 26.2 | | ug/L | | 105 | 70 - 130 | 1 | 20 |
| 1,2-Dichloroethane | 25.0 | 26.0 | | ug/L | | 104 | 70 - 130 | 1 | 20 |
| 1,2-Dichloropropane | 25.0 | 25.8 | | ug/L | | 103 | 70 - 130 | 3 | 20 |
| 1,3,5-Trimethylbenzene | 25.0 | 25.3 | | ug/L | | 101 | 70 - 130 | 1 | 20 |
| 1,3-Dichlorobenzene | 25.0 | 25.8 | | ug/L | | 103 | 70 - 130 | 2 | 20 |
| 1,3-Dichloropropane | 25.0 | 26.0 | | ug/L | | 104 | 70 - 130 | 1 | 20 |
| 1,4-Dichlorobenzene | 25.0 | 25.4 | | ug/L | | 102 | 70 - 130 | 1 | 20 |
| 1,4-Dioxane | 500 | 514 | | ug/L | | 103 | 70 - 130 | 1 | 20 |
| 2,2-Dichloropropane | 25.0 | 24.0 | | ug/L | | 96 | 70 - 130 | 5 | 20 |
| 2-Butanone (MEK) | 125 | 141 | | ug/L | | 113 | 70 - 130 | 2 | 20 |
| 2-Chlorotoluene | 25.0 | 25.5 | | ug/L | | 102 | 70 - 130 | 3 | 20 |
| 2-Hexanone | 125 | 131 | | ug/L | | 105 | 70 - 130 | 1 | 20 |
| 4-Chlorotoluene | 25.0 | 23.5 | | ug/L | | 94 | 70 - 130 | 2 | 20 |
| 4-Isopropyltoluene | 25.0 | 26.0 | | ug/L | | 104 | 70 - 130 | 2 | 20 |
| 4-Methyl-2-pentanone (MIBK) | 125 | 129 | | ug/L | | 104 | 70 - 130 | 0 | 20 |
| Acetone | 125 | 125 | | ug/L | | 100 | 70 - 130 | 3 | 20 |
| Benzene | 25.0 | 25.5 | | ug/L | | 102 | 70 - 130 | 3 | 20 |
| Bromobenzene | 25.0 | 25.5 | | ug/L | | 102 | 70 - 130 | 1 | 20 |
| Bromoform | 25.0 | 23.8 | | ug/L | | 95 | 70 - 130 | 1 | 20 |
| Bromomethane | 25.0 | 26.0 | | ug/L | | 104 | 70 - 130 | 3 | 20 |
| Carbon disulfide | 25.0 | 24.8 | | ug/L | | 99 | 70 - 130 | 4 | 20 |
| Carbon tetrachloride | 25.0 | 26.0 | | ug/L | | 104 | 70 - 130 | 4 | 20 |
| Chlorobenzene | 25.0 | 25.8 | | ug/L | | 103 | 70 - 130 | 1 | 20 |
| Chlorobromomethane | 25.0 | 25.6 | | ug/L | | 102 | 70 - 130 | 2 | 20 |
| Chlorodibromomethane | 24.5 | 25.9 | | ug/L | | 106 | 70 - 130 | 1 | 20 |
| Chloroethane | 25.0 | 25.2 | | ug/L | | 101 | 70 - 130 | 4 | 20 |
| Chloroform | 25.0 | 25.4 | | ug/L | | 101 | 70 - 130 | 2 | 20 |
| Chloromethane | 25.0 | 24.6 | | ug/L | | 98 | 70 - 130 | 2 | 20 |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 480-174684/7**
**Matrix: Water**
**Analysis Batch: 174684**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| cis-1,2-Dichloroethene | 25.0 | 24.3 | | ug/L | | 97 | 70 - 130 | 4 | 20 |
| cis-1,3-Dichloropropene | 25.0 | 26.3 | | ug/L | | 105 | 70 - 130 | 1 | 20 |
| Dichlorobromomethane | 25.0 | 25.7 | | ug/L | | 103 | 70 - 130 | 3 | 20 |
| Dichlorodifluoromethane | 25.0 | 25.5 | | ug/L | | 102 | 70 - 130 | 6 | 20 |
| Ethyl ether | 25.0 | 25.9 | | ug/L | | 104 | 70 - 130 | 3 | 20 |
| Ethylbenzene | 25.0 | 26.0 | | ug/L | | 104 | 70 - 130 | 0 | 20 |
| Ethylene Dibromide | 25.0 | 26.3 | | ug/L | | 105 | 70 - 130 | 1 | 20 |
| Hexachlorobutadiene | 25.0 | 27.3 | | ug/L | | 109 | 70 - 130 | 4 | 20 |
| Isopropyl ether | 25.0 | 25.2 | | ug/L | | 101 | 70 - 130 | 3 | 20 |
| Isopropylbenzene | 25.0 | 25.3 | | ug/L | | 101 | 70 - 130 | 3 | 20 |
| Methyl tert-butyl ether | 25.0 | 25.1 | | ug/L | | 101 | 70 - 130 | 2 | 20 |
| Methylene Chloride | 25.0 | 24.6 | | ug/L | | 98 | 70 - 130 | 5 | 20 |
| m-Xylene & p-Xylene | 25.0 | 25.8 | | ug/L | | 103 | 70 - 130 | 1 | 20 |
| Naphthalene | 25.0 | 27.2 | | ug/L | | 109 | 70 - 130 | 1 | 20 |
| n-Butylbenzene | 25.0 | 26.4 | | ug/L | | 106 | 70 - 130 | 2 | 20 |
| N-Propylbenzene | 25.0 | 25.6 | | ug/L | | 102 | 70 - 130 | 0 | 20 |
| o-Xylene | 25.0 | 25.5 | | ug/L | | 102 | 70 - 130 | 1 | 20 |
| sec-Butylbenzene | 25.0 | 25.4 | | ug/L | | 102 | 70 - 130 | 4 | 20 |
| Styrene | 25.0 | 26.3 | | ug/L | | 105 | 70 - 130 | 0 | 20 |
| Tert-amyl methyl ether | 25.0 | 25.4 | | ug/L | | 102 | 70 - 130 | 2 | 20 |
| Tert-butyl ethyl ether | 25.0 | 25.2 | | ug/L | | 101 | 70 - 130 | 1 | 20 |
| tert-Butylbenzene | 25.0 | 26.1 | | ug/L | | 104 | 70 - 130 | 2 | 20 |
| Tetrachloroethene | 25.0 | 29.9 | | ug/L | | 120 | 70 - 130 | 2 | 20 |
| Tetrahydrofuran | 50.0 | 64.6 | | ug/L | | 129 | 70 - 130 | 4 | 20 |
| Toluene | 25.0 | 25.6 | | ug/L | | 102 | 70 - 130 | 0 | 20 |
| trans-1,2-Dichloroethene | 25.0 | 24.9 | | ug/L | | 99 | 70 - 130 | 4 | 20 |
| trans-1,3-Dichloropropene | 25.0 | 25.8 | | ug/L | | 103 | 70 - 130 | 0 | 20 |
| Trichloroethene | 25.0 | 25.4 | | ug/L | | 101 | 70 - 130 | 3 | 20 |
| Trichlorofluoromethane | 25.0 | 25.7 | | ug/L | | 103 | 70 - 130 | 6 | 20 |
| Vinyl chloride | 25.0 | 24.1 | | ug/L | | 96 | 70 - 130 | 3 | 20 |
| Dibromomethane | 25.0 | 26.2 | | ug/L | | 105 | 70 - 130 | 1 | 20 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *Toluene-d8 (Surr)* | *101* | | *70 - 130* |
| *1,2-Dichloroethane-d4 (Surr)* | *101* | | *70 - 130* |
| *4-Bromofluorobenzene (Surr)* | *103* | | *70 - 130* |

**Lab Sample ID: MB 480-174949/8**
**Matrix: Water**
**Analysis Batch: 174949**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/10/14 13:25 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/10/14 13:25 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/10/14 13:25 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/10/14 13:25 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/10/14 13:25 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/10/14 13:25 | 1 |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 480-174949/8**
**Matrix: Water**
**Analysis Batch: 174949**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/10/14 13:25 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/10/14 13:25 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/10/14 13:25 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/10/14 13:25 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/10/14 13:25 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/10/14 13:25 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/10/14 13:25 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/10/14 13:25 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/10/14 13:25 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/10/14 13:25 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/10/14 13:25 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/10/14 13:25 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/10/14 13:25 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/10/14 13:25 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/10/14 13:25 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 04/10/14 13:25 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/10/14 13:25 | 1 |
| 2-Hexanone | ND | | 10 | | ug/L | | | 04/10/14 13:25 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/10/14 13:25 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/10/14 13:25 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/10/14 13:25 | 1 |
| Acetone | ND | | 50 | | ug/L | | | 04/10/14 13:25 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/10/14 13:25 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/10/14 13:25 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/10/14 13:25 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/10/14 13:25 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/10/14 13:25 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/10/14 13:25 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/10/14 13:25 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/10/14 13:25 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/10/14 13:25 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/10/14 13:25 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/10/14 13:25 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/10/14 13:25 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/10/14 13:25 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/10/14 13:25 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/10/14 13:25 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/10/14 13:25 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/10/14 13:25 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/10/14 13:25 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/10/14 13:25 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/10/14 13:25 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/10/14 13:25 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/10/14 13:25 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/10/14 13:25 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/10/14 13:25 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/10/14 13:25 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/10/14 13:25 | 1 |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 480-174949/8**
**Matrix: Water**
**Analysis Batch: 174949**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/10/14 13:25 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/10/14 13:25 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/10/14 13:25 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/10/14 13:25 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/10/14 13:25 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/10/14 13:25 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/10/14 13:25 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/10/14 13:25 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/10/14 13:25 | 1 |
| Tetrahydrofuran | ND | | 10 | | ug/L | | | 04/10/14 13:25 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 04/10/14 13:25 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/10/14 13:25 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/10/14 13:25 | 1 |
| Trichloroethene | ND | | 1.0 | | ug/L | | | 04/10/14 13:25 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/10/14 13:25 | 1 |
| Vinyl chloride | ND | | 1.0 | | ug/L | | | 04/10/14 13:25 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/10/14 13:25 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *95* | | *70 - 130* | | *04/10/14 13:25* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *94* | | *70 - 130* | | *04/10/14 13:25* | *1* |
| *4-Bromofluorobenzene (Surr)* | *99* | | *70 - 130* | | *04/10/14 13:25* | *1* |

**Lab Sample ID: LCS 480-174949/5**
**Matrix: Water**
**Analysis Batch: 174949**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 25.0 | 26.5 | | ug/L | | 106 | 70 - 130 |
| 1,1,1-Trichloroethane | 25.0 | 24.0 | | ug/L | | 96 | 70 - 130 |
| 1,1,2,2-Tetrachloroethane | 25.0 | 25.3 | | ug/L | | 101 | 70 - 130 |
| 1,1,2-Trichloroethane | 25.0 | 25.1 | | ug/L | | 100 | 70 - 130 |
| 1,1-Dichloroethane | 25.0 | 25.0 | | ug/L | | 100 | 70 - 130 |
| 1,1-Dichloroethene | 25.0 | 24.0 | | ug/L | | 96 | 70 - 130 |
| 1,1-Dichloropropene | 25.0 | 24.9 | | ug/L | | 99 | 70 - 130 |
| 1,2,3-Trichlorobenzene | 25.0 | 25.8 | | ug/L | | 103 | 70 - 130 |
| 1,2,3-Trichloropropane | 25.0 | 25.5 | | ug/L | | 102 | 70 - 130 |
| 1,2,4-Trichlorobenzene | 25.0 | 25.3 | | ug/L | | 101 | 70 - 130 |
| 1,2,4-Trimethylbenzene | 25.0 | 27.0 | | ug/L | | 108 | 70 - 130 |
| 1,2-Dibromo-3-Chloropropane | 25.0 | 26.7 | | ug/L | | 107 | 70 - 130 |
| 1,2-Dichlorobenzene | 25.0 | 25.5 | | ug/L | | 102 | 70 - 130 |
| 1,2-Dichloroethane | 25.0 | 22.9 | | ug/L | | 92 | 70 - 130 |
| 1,2-Dichloropropane | 25.0 | 25.0 | | ug/L | | 100 | 70 - 130 |
| 1,3,5-Trimethylbenzene | 25.0 | 26.6 | | ug/L | | 107 | 70 - 130 |
| 1,3-Dichlorobenzene | 25.0 | 25.6 | | ug/L | | 103 | 70 - 130 |
| 1,3-Dichloropropane | 25.0 | 25.3 | | ug/L | | 101 | 70 - 130 |
| 1,4-Dichlorobenzene | 25.0 | 25.9 | | ug/L | | 104 | 70 - 130 |
| 1,4-Dioxane | 500 | 440 | | ug/L | | 88 | 70 - 130 |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 480-174949/5**
**Matrix: Water**
**Analysis Batch: 174949**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 2,2-Dichloropropane | 25.0 | 25.6 | | ug/L | | 102 | 70 - 130 |
| 2-Butanone (MEK) | 125 | 167 | * | ug/L | | 134 | 70 - 130 |
| 2-Chlorotoluene | 25.0 | 26.5 | | ug/L | | 106 | 70 - 130 |
| 2-Hexanone | 125 | 190 | * | ug/L | | 152 | 70 - 130 |
| 4-Chlorotoluene | 25.0 | 28.0 | | ug/L | | 112 | 70 - 130 |
| 4-Isopropyltoluene | 25.0 | 27.1 | | ug/L | | 108 | 70 - 130 |
| 4-Methyl-2-pentanone (MIBK) | 125 | 130 | | ug/L | | 104 | 70 - 130 |
| Acetone | 125 | 108 | | ug/L | | 87 | 70 - 130 |
| Benzene | 25.0 | 24.6 | | ug/L | | 98 | 70 - 130 |
| Bromobenzene | 25.0 | 25.4 | | ug/L | | 101 | 70 - 130 |
| Bromoform | 25.0 | 24.6 | | ug/L | | 99 | 70 - 130 |
| Bromomethane | 25.0 | 21.4 | | ug/L | | 86 | 70 - 130 |
| Carbon disulfide | 25.0 | 25.5 | | ug/L | | 102 | 70 - 130 |
| Carbon tetrachloride | 25.0 | 25.2 | | ug/L | | 101 | 70 - 130 |
| Chlorobenzene | 25.0 | 25.6 | | ug/L | | 102 | 70 - 130 |
| Chlorobromomethane | 25.0 | 25.5 | | ug/L | | 102 | 70 - 130 |
| Chlorodibromomethane | 24.5 | 26.7 | | ug/L | | 109 | 70 - 130 |
| Chloroethane | 25.0 | 22.5 | | ug/L | | 90 | 70 - 130 |
| Chloroform | 25.0 | 23.8 | | ug/L | | 95 | 70 - 130 |
| Chloromethane | 25.0 | 22.4 | | ug/L | | 90 | 70 - 130 |
| cis-1,2-Dichloroethene | 25.0 | 25.3 | | ug/L | | 101 | 70 - 130 |
| cis-1,3-Dichloropropene | 25.0 | 25.6 | | ug/L | | 102 | 70 - 130 |
| Dichlorobromomethane | 25.0 | 24.9 | | ug/L | | 100 | 70 - 130 |
| Dichlorodifluoromethane | 25.0 | 23.0 | | ug/L | | 92 | 70 - 130 |
| Ethyl ether | 25.0 | 24.9 | | ug/L | | 100 | 70 - 130 |
| Ethylbenzene | 25.0 | 25.6 | | ug/L | | 102 | 70 - 130 |
| Ethylene Dibromide | 25.0 | 25.4 | | ug/L | | 101 | 70 - 130 |
| Hexachlorobutadiene | 25.0 | 28.5 | | ug/L | | 114 | 70 - 130 |
| Isopropyl ether | 25.0 | 23.0 | | ug/L | | 92 | 70 - 130 |
| Isopropylbenzene | 25.0 | 25.8 | | ug/L | | 103 | 70 - 130 |
| Methyl tert-butyl ether | 25.0 | 24.2 | | ug/L | | 97 | 70 - 130 |
| Methylene Chloride | 25.0 | 24.2 | | ug/L | | 97 | 70 - 130 |
| m-Xylene & p-Xylene | 25.0 | 26.2 | | ug/L | | 105 | 70 - 130 |
| Naphthalene | 25.0 | 24.8 | | ug/L | | 99 | 70 - 130 |
| n-Butylbenzene | 25.0 | 26.1 | | ug/L | | 105 | 70 - 130 |
| N-Propylbenzene | 25.0 | 25.5 | | ug/L | | 102 | 70 - 130 |
| o-Xylene | 25.0 | 26.3 | | ug/L | | 105 | 70 - 130 |
| sec-Butylbenzene | 25.0 | 25.9 | | ug/L | | 104 | 70 - 130 |
| Styrene | 25.0 | 26.1 | | ug/L | | 104 | 70 - 130 |
| Tert-amyl methyl ether | 25.0 | 23.0 | | ug/L | | 92 | 70 - 130 |
| Tert-butyl ethyl ether | 25.0 | 22.4 | | ug/L | | 90 | 70 - 130 |
| tert-Butylbenzene | 25.0 | 26.5 | | ug/L | | 106 | 70 - 130 |
| Tetrachloroethene | 25.0 | 26.3 | | ug/L | | 105 | 70 - 130 |
| Tetrahydrofuran | 50.0 | 49.8 | | ug/L | | 100 | 70 - 130 |
| Toluene | 25.0 | 26.1 | | ug/L | | 104 | 70 - 130 |
| trans-1,2-Dichloroethene | 25.0 | 24.9 | | ug/L | | 100 | 70 - 130 |
| trans-1,3-Dichloropropene | 25.0 | 26.4 | | ug/L | | 106 | 70 - 130 |
| Trichloroethene | 25.0 | 25.2 | | ug/L | | 101 | 70 - 130 |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 480-174949/5**
**Matrix: Water**
**Analysis Batch: 174949**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Trichlorofluoromethane | 25.0 | 21.3 | | ug/L | | 85 | 70 - 130 |
| Vinyl chloride | 25.0 | 21.9 | | ug/L | | 88 | 70 - 130 |
| Dibromomethane | 25.0 | 23.5 | | ug/L | | 94 | 70 - 130 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Toluene-d8 (Surr)* | *100* | | *70 - 130* |
| *1,2-Dichloroethane-d4 (Surr)* | *105* | | *70 - 130* |
| *4-Bromofluorobenzene (Surr)* | *104* | | *70 - 130* |

**Lab Sample ID: LCSD 480-174949/6**
**Matrix: Water**
**Analysis Batch: 174949**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 25.0 | 26.1 | | ug/L | | 105 | 70 - 130 | 1 | 20 |
| 1,1,1-Trichloroethane | 25.0 | 23.1 | | ug/L | | 93 | 70 - 130 | 4 | 20 |
| 1,1,2,2-Tetrachloroethane | 25.0 | 25.1 | | ug/L | | 101 | 70 - 130 | 1 | 20 |
| 1,1,2-Trichloroethane | 25.0 | 24.8 | | ug/L | | 99 | 70 - 130 | 1 | 20 |
| 1,1-Dichloroethane | 25.0 | 24.2 | | ug/L | | 97 | 70 - 130 | 3 | 20 |
| 1,1-Dichloroethene | 25.0 | 22.9 | | ug/L | | 92 | 70 - 130 | 5 | 20 |
| 1,1-Dichloropropene | 25.0 | 23.6 | | ug/L | | 94 | 70 - 130 | 5 | 20 |
| 1,2,3-Trichlorobenzene | 25.0 | 26.3 | | ug/L | | 105 | 70 - 130 | 2 | 20 |
| 1,2,3-Trichloropropane | 25.0 | 25.4 | | ug/L | | 101 | 70 - 130 | 1 | 20 |
| 1,2,4-Trichlorobenzene | 25.0 | 26.0 | | ug/L | | 104 | 70 - 130 | 3 | 20 |
| 1,2,4-Trimethylbenzene | 25.0 | 26.5 | | ug/L | | 106 | 70 - 130 | 2 | 20 |
| 1,2-Dibromo-3-Chloropropane | 25.0 | 26.3 | | ug/L | | 105 | 70 - 130 | 1 | 20 |
| 1,2-Dichlorobenzene | 25.0 | 25.4 | | ug/L | | 102 | 70 - 130 | 0 | 20 |
| 1,2-Dichloroethane | 25.0 | 22.6 | | ug/L | | 90 | 70 - 130 | 1 | 20 |
| 1,2-Dichloropropane | 25.0 | 24.3 | | ug/L | | 97 | 70 - 130 | 3 | 20 |
| 1,3,5-Trimethylbenzene | 25.0 | 26.1 | | ug/L | | 105 | 70 - 130 | 2 | 20 |
| 1,3-Dichlorobenzene | 25.0 | 25.5 | | ug/L | | 102 | 70 - 130 | 0 | 20 |
| 1,3-Dichloropropane | 25.0 | 24.7 | | ug/L | | 99 | 70 - 130 | 2 | 20 |
| 1,4-Dichlorobenzene | 25.0 | 25.7 | | ug/L | | 103 | 70 - 130 | 1 | 20 |
| 1,4-Dioxane | 500 | 495 | | ug/L | | 99 | 70 - 130 | 12 | 20 |
| 2,2-Dichloropropane | 25.0 | 24.8 | | ug/L | | 99 | 70 - 130 | 3 | 20 |
| 2-Butanone (MEK) | 125 | 161 | | ug/L | | 129 | 70 - 130 | 4 | 20 |
| 2-Chlorotoluene | 25.0 | 26.3 | | ug/L | | 105 | 70 - 130 | 1 | 20 |
| 2-Hexanone | 125 | 186 | * | ug/L | | 149 | 70 - 130 | 2 | 20 |
| 4-Chlorotoluene | 25.0 | 27.6 | | ug/L | | 110 | 70 - 130 | 2 | 20 |
| 4-Isopropyltoluene | 25.0 | 26.6 | | ug/L | | 106 | 70 - 130 | 2 | 20 |
| 4-Methyl-2-pentanone (MIBK) | 125 | 127 | | ug/L | | 102 | 70 - 130 | 2 | 20 |
| Acetone | 125 | 106 | | ug/L | | 85 | 70 - 130 | 3 | 20 |
| Benzene | 25.0 | 23.6 | | ug/L | | 94 | 70 - 130 | 4 | 20 |
| Bromobenzene | 25.0 | 25.4 | | ug/L | | 102 | 70 - 130 | 0 | 20 |
| Bromoform | 25.0 | 24.3 | | ug/L | | 97 | 70 - 130 | 2 | 20 |
| Bromomethane | 25.0 | 20.3 | | ug/L | | 81 | 70 - 130 | 5 | 20 |
| Carbon disulfide | 25.0 | 23.6 | | ug/L | | 94 | 70 - 130 | 8 | 20 |
| Carbon tetrachloride | 25.0 | 24.2 | | ug/L | | 97 | 70 - 130 | 4 | 20 |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 480-174949/6**
**Matrix: Water**
**Analysis Batch: 174949**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Chlorobenzene | 25.0 | 24.7 | | ug/L | | 99 | 70 - 130 | 3 | 20 |
| Chlorobromomethane | 25.0 | 24.6 | | ug/L | | 99 | 70 - 130 | 4 | 20 |
| Chlorodibromomethane | 24.5 | 26.3 | | ug/L | | 107 | 70 - 130 | 2 | 20 |
| Chloroethane | 25.0 | 21.4 | | ug/L | | 86 | 70 - 130 | 5 | 20 |
| Chloroform | 25.0 | 23.2 | | ug/L | | 93 | 70 - 130 | 2 | 20 |
| Chloromethane | 25.0 | 21.0 | | ug/L | | 84 | 70 - 130 | 6 | 20 |
| cis-1,2-Dichloroethene | 25.0 | 24.3 | | ug/L | | 97 | 70 - 130 | 4 | 20 |
| cis-1,3-Dichloropropene | 25.0 | 25.0 | | ug/L | | 100 | 70 - 130 | 2 | 20 |
| Dichlorobromomethane | 25.0 | 24.5 | | ug/L | | 98 | 70 - 130 | 2 | 20 |
| Dichlorodifluoromethane | 25.0 | 21.8 | | ug/L | | 87 | 70 - 130 | 5 | 20 |
| Ethyl ether | 25.0 | 24.2 | | ug/L | | 97 | 70 - 130 | 3 | 20 |
| Ethylbenzene | 25.0 | 24.7 | | ug/L | | 99 | 70 - 130 | 3 | 20 |
| Ethylene Dibromide | 25.0 | 24.8 | | ug/L | | 99 | 70 - 130 | 2 | 20 |
| Hexachlorobutadiene | 25.0 | 28.5 | | ug/L | | 114 | 70 - 130 | 0 | 20 |
| Isopropyl ether | 25.0 | 22.5 | | ug/L | | 90 | 70 - 130 | 2 | 20 |
| Isopropylbenzene | 25.0 | 25.6 | | ug/L | | 102 | 70 - 130 | 1 | 20 |
| Methyl tert-butyl ether | 25.0 | 23.7 | | ug/L | | 95 | 70 - 130 | 2 | 20 |
| Methylene Chloride | 25.0 | 23.5 | | ug/L | | 94 | 70 - 130 | 3 | 20 |
| m-Xylene & p-Xylene | 25.0 | 25.6 | | ug/L | | 102 | 70 - 130 | 2 | 20 |
| Naphthalene | 25.0 | 25.9 | | ug/L | | 103 | 70 - 130 | 4 | 20 |
| n-Butylbenzene | 25.0 | 25.7 | | ug/L | | 103 | 70 - 130 | 2 | 20 |
| N-Propylbenzene | 25.0 | 25.2 | | ug/L | | 101 | 70 - 130 | 1 | 20 |
| o-Xylene | 25.0 | 25.7 | | ug/L | | 103 | 70 - 130 | 3 | 20 |
| sec-Butylbenzene | 25.0 | 25.6 | | ug/L | | 102 | 70 - 130 | 1 | 20 |
| Styrene | 25.0 | 25.6 | | ug/L | | 103 | 70 - 130 | 2 | 20 |
| Tert-amyl methyl ether | 25.0 | 22.8 | | ug/L | | 91 | 70 - 130 | 1 | 20 |
| Tert-butyl ethyl ether | 25.0 | 22.1 | | ug/L | | 88 | 70 - 130 | 2 | 20 |
| tert-Butylbenzene | 25.0 | 26.2 | | ug/L | | 105 | 70 - 130 | 1 | 20 |
| Tetrachloroethene | 25.0 | 26.1 | | ug/L | | 104 | 70 - 130 | 1 | 20 |
| Tetrahydrofuran | 50.0 | 48.5 | | ug/L | | 97 | 70 - 130 | 3 | 20 |
| Toluene | 25.0 | 24.9 | | ug/L | | 100 | 70 - 130 | 5 | 20 |
| trans-1,2-Dichloroethene | 25.0 | 23.8 | | ug/L | | 95 | 70 - 130 | 4 | 20 |
| trans-1,3-Dichloropropene | 25.0 | 26.4 | | ug/L | | 105 | 70 - 130 | 0 | 20 |
| Trichloroethene | 25.0 | 24.8 | | ug/L | | 99 | 70 - 130 | 2 | 20 |
| Trichlorofluoromethane | 25.0 | 20.0 | | ug/L | | 80 | 70 - 130 | 6 | 20 |
| Vinyl chloride | 25.0 | 20.5 | | ug/L | | 82 | 70 - 130 | 6 | 20 |
| Dibromomethane | 25.0 | 22.9 | | ug/L | | 91 | 70 - 130 | 3 | 20 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *Toluene-d8 (Surr)* | *97* | | *70 - 130* |
| *1,2-Dichloroethane-d4 (Surr)* | *103* | | *70 - 130* |
| *4-Bromofluorobenzene (Surr)* | *101* | | *70 - 130* |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 480-175074/8**
**Matrix: Water**
**Analysis Batch: 175074**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 01:02 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 01:02 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/11/14 01:02 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 01:02 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 01:02 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 01:02 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/11/14 01:02 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 01:02 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 01:02 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 01:02 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 01:02 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/11/14 01:02 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 01:02 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 01:02 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 01:02 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 01:02 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 01:02 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 01:02 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 01:02 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/11/14 01:02 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 01:02 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 04/11/14 01:02 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/11/14 01:02 | 1 |
| 2-Hexanone | ND | | 10 | | ug/L | | | 04/11/14 01:02 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/11/14 01:02 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/11/14 01:02 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/11/14 01:02 | 1 |
| Acetone | ND | | 50 | | ug/L | | | 04/11/14 01:02 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/11/14 01:02 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 01:02 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/11/14 01:02 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/11/14 01:02 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/11/14 01:02 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/11/14 01:02 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 01:02 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/11/14 01:02 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/11/14 01:02 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/11/14 01:02 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/11/14 01:02 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/11/14 01:02 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 01:02 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/11/14 01:02 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/11/14 01:02 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/11/14 01:02 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/11/14 01:02 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 01:02 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/11/14 01:02 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/11/14 01:02 | 1 |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 480-175074/8**
**Matrix: Water**
**Analysis Batch: 175074**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/11/14 01:02 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 01:02 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/11/14 01:02 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/11/14 01:02 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/11/14 01:02 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/11/14 01:02 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 01:02 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 01:02 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/11/14 01:02 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 01:02 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/11/14 01:02 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/11/14 01:02 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/11/14 01:02 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 01:02 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 01:02 | 1 |
| Tetrahydrofuran | ND | | 10 | | ug/L | | | 04/11/14 01:02 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 04/11/14 01:02 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 01:02 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/11/14 01:02 | 1 |
| Trichloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 01:02 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/11/14 01:02 | 1 |
| Vinyl chloride | ND | | 1.0 | | ug/L | | | 04/11/14 01:02 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/11/14 01:02 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *97* | | *70 - 130* | | *04/11/14 01:02* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *95* | | *70 - 130* | | *04/11/14 01:02* | *1* |
| *4-Bromofluorobenzene (Surr)* | *99* | | *70 - 130* | | *04/11/14 01:02* | *1* |

**Lab Sample ID: LCS 480-175074/5**
**Matrix: Water**
**Analysis Batch: 175074**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 25.0 | 25.5 | | ug/L | | 102 | 70 - 130 |
| 1,1,1-Trichloroethane | 25.0 | 22.7 | | ug/L | | 91 | 70 - 130 |
| 1,1,2,2-Tetrachloroethane | 25.0 | 23.8 | | ug/L | | 95 | 70 - 130 |
| 1,1,2-Trichloroethane | 25.0 | 23.8 | | ug/L | | 95 | 70 - 130 |
| 1,1-Dichloroethane | 25.0 | 23.8 | | ug/L | | 95 | 70 - 130 |
| 1,1-Dichloroethene | 25.0 | 22.8 | | ug/L | | 91 | 70 - 130 |
| 1,1-Dichloropropene | 25.0 | 23.6 | | ug/L | | 94 | 70 - 130 |
| 1,2,3-Trichlorobenzene | 25.0 | 24.4 | | ug/L | | 98 | 70 - 130 |
| 1,2,3-Trichloropropane | 25.0 | 23.6 | | ug/L | | 94 | 70 - 130 |
| 1,2,4-Trichlorobenzene | 25.0 | 24.2 | | ug/L | | 97 | 70 - 130 |
| 1,2,4-Trimethylbenzene | 25.0 | 25.7 | | ug/L | | 103 | 70 - 130 |
| 1,2-Dibromo-3-Chloropropane | 25.0 | 24.5 | | ug/L | | 98 | 70 - 130 |
| 1,2-Dichlorobenzene | 25.0 | 24.4 | | ug/L | | 97 | 70 - 130 |
| 1,2-Dichloroethane | 25.0 | 21.9 | | ug/L | | 88 | 70 - 130 |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 480-175074/5**
**Matrix: Water**
**Analysis Batch: 175074**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,2-Dichloropropane | 25.0 | 24.1 | | ug/L | | 97 | 70 - 130 |
| 1,3,5-Trimethylbenzene | 25.0 | 25.4 | | ug/L | | 102 | 70 - 130 |
| 1,3-Dichlorobenzene | 25.0 | 24.6 | | ug/L | | 98 | 70 - 130 |
| 1,3-Dichloropropane | 25.0 | 23.8 | | ug/L | | 95 | 70 - 130 |
| 1,4-Dichlorobenzene | 25.0 | 24.5 | | ug/L | | 98 | 70 - 130 |
| 1,4-Dioxane | 500 | 360 | | ug/L | | 72 | 70 - 130 |
| 2,2-Dichloropropane | 25.0 | 23.8 | | ug/L | | 95 | 70 - 130 |
| 2-Butanone (MEK) | 125 | 127 | | ug/L | | 102 | 70 - 130 |
| 2-Chlorotoluene | 25.0 | 25.3 | | ug/L | | 101 | 70 - 130 |
| 2-Hexanone | 125 | 177 | * | ug/L | | 142 | 70 - 130 |
| 4-Chlorotoluene | 25.0 | 26.4 | | ug/L | | 106 | 70 - 130 |
| 4-Isopropyltoluene | 25.0 | 25.7 | | ug/L | | 103 | 70 - 130 |
| 4-Methyl-2-pentanone (MIBK) | 125 | 120 | | ug/L | | 96 | 70 - 130 |
| Acetone | 125 | 99.6 | | ug/L | | 80 | 70 - 130 |
| Benzene | 25.0 | 23.6 | | ug/L | | 94 | 70 - 130 |
| Bromobenzene | 25.0 | 24.4 | | ug/L | | 98 | 70 - 130 |
| Bromoform | 25.0 | 23.2 | | ug/L | | 93 | 70 - 130 |
| Bromomethane | 25.0 | 20.9 | | ug/L | | 84 | 70 - 130 |
| Carbon disulfide | 25.0 | 24.1 | | ug/L | | 96 | 70 - 130 |
| Carbon tetrachloride | 25.0 | 24.1 | | ug/L | | 97 | 70 - 130 |
| Chlorobenzene | 25.0 | 24.3 | | ug/L | | 97 | 70 - 130 |
| Chlorobromomethane | 25.0 | 24.3 | | ug/L | | 97 | 70 - 130 |
| Chlorodibromomethane | 24.5 | 25.1 | | ug/L | | 103 | 70 - 130 |
| Chloroethane | 25.0 | 22.4 | | ug/L | | 89 | 70 - 130 |
| Chloroform | 25.0 | 22.9 | | ug/L | | 92 | 70 - 130 |
| Chloromethane | 25.0 | 21.8 | | ug/L | | 87 | 70 - 130 |
| cis-1,2-Dichloroethene | 25.0 | 24.1 | | ug/L | | 96 | 70 - 130 |
| cis-1,3-Dichloropropene | 25.0 | 24.1 | | ug/L | | 96 | 70 - 130 |
| Dichlorobromomethane | 25.0 | 23.7 | | ug/L | | 95 | 70 - 130 |
| Dichlorodifluoromethane | 25.0 | 22.6 | | ug/L | | 90 | 70 - 130 |
| Ethyl ether | 25.0 | 23.9 | | ug/L | | 96 | 70 - 130 |
| Ethylbenzene | 25.0 | 24.1 | | ug/L | | 96 | 70 - 130 |
| Ethylene Dibromide | 25.0 | 24.1 | | ug/L | | 97 | 70 - 130 |
| Hexachlorobutadiene | 25.0 | 27.1 | | ug/L | | 108 | 70 - 130 |
| Isopropyl ether | 25.0 | 23.0 | | ug/L | | 92 | 70 - 130 |
| Isopropylbenzene | 25.0 | 24.7 | | ug/L | | 99 | 70 - 130 |
| Methyl tert-butyl ether | 25.0 | 23.0 | | ug/L | | 92 | 70 - 130 |
| Methylene Chloride | 25.0 | 23.4 | | ug/L | | 94 | 70 - 130 |
| m-Xylene & p-Xylene | 25.0 | 25.1 | | ug/L | | 100 | 70 - 130 |
| Naphthalene | 25.0 | 23.5 | | ug/L | | 94 | 70 - 130 |
| n-Butylbenzene | 25.0 | 25.2 | | ug/L | | 101 | 70 - 130 |
| N-Propylbenzene | 25.0 | 24.3 | | ug/L | | 97 | 70 - 130 |
| o-Xylene | 25.0 | 24.7 | | ug/L | | 99 | 70 - 130 |
| sec-Butylbenzene | 25.0 | 24.8 | | ug/L | | 99 | 70 - 130 |
| Styrene | 25.0 | 24.7 | | ug/L | | 99 | 70 - 130 |
| Tert-amyl methyl ether | 25.0 | 22.8 | | ug/L | | 91 | 70 - 130 |
| Tert-butyl ethyl ether | 25.0 | 22.2 | | ug/L | | 89 | 70 - 130 |
| tert-Butylbenzene | 25.0 | 25.7 | | ug/L | | 103 | 70 - 130 |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 480-175074/5**
**Matrix: Water**
**Analysis Batch: 175074**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 25.0 | 26.5 | | ug/L | | 106 | 70 - 130 |
| Tetrahydrofuran | 50.0 | 47.2 | | ug/L | | 94 | 70 - 130 |
| Toluene | 25.0 | 24.5 | | ug/L | | 98 | 70 - 130 |
| trans-1,2-Dichloroethene | 25.0 | 23.7 | | ug/L | | 95 | 70 - 130 |
| trans-1,3-Dichloropropene | 25.0 | 24.9 | | ug/L | | 100 | 70 - 130 |
| Trichloroethene | 25.0 | 24.7 | | ug/L | | 99 | 70 - 130 |
| Trichlorofluoromethane | 25.0 | 20.9 | | ug/L | | 84 | 70 - 130 |
| Vinyl chloride | 25.0 | 21.3 | | ug/L | | 85 | 70 - 130 |
| Dibromomethane | 25.0 | 22.8 | | ug/L | | 91 | 70 - 130 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Toluene-d8 (Surr)* | *99* | | *70 - 130* |
| *1,2-Dichloroethane-d4 (Surr)* | *106* | | *70 - 130* |
| *4-Bromofluorobenzene (Surr)* | *103* | | *70 - 130* |

**Lab Sample ID: LCSD 480-175074/6**
**Matrix: Water**
**Analysis Batch: 175074**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 25.0 | 25.4 | | ug/L | | 102 | 70 - 130 | 0 | 20 |
| 1,1,1-Trichloroethane | 25.0 | 22.5 | | ug/L | | 90 | 70 - 130 | 1 | 20 |
| 1,1,2,2-Tetrachloroethane | 25.0 | 23.8 | | ug/L | | 95 | 70 - 130 | 0 | 20 |
| 1,1,2-Trichloroethane | 25.0 | 24.1 | | ug/L | | 96 | 70 - 130 | 1 | 20 |
| 1,1-Dichloroethane | 25.0 | 23.5 | | ug/L | | 94 | 70 - 130 | 2 | 20 |
| 1,1-Dichloroethene | 25.0 | 22.4 | | ug/L | | 90 | 70 - 130 | 2 | 20 |
| 1,1-Dichloropropene | 25.0 | 23.3 | | ug/L | | 93 | 70 - 130 | 1 | 20 |
| 1,2,3-Trichlorobenzene | 25.0 | 24.9 | | ug/L | | 100 | 70 - 130 | 2 | 20 |
| 1,2,3-Trichloropropane | 25.0 | 24.1 | | ug/L | | 96 | 70 - 130 | 2 | 20 |
| 1,2,4-Trichlorobenzene | 25.0 | 24.5 | | ug/L | | 98 | 70 - 130 | 1 | 20 |
| 1,2,4-Trimethylbenzene | 25.0 | 25.1 | | ug/L | | 100 | 70 - 130 | 3 | 20 |
| 1,2-Dibromo-3-Chloropropane | 25.0 | 25.4 | | ug/L | | 102 | 70 - 130 | 4 | 20 |
| 1,2-Dichlorobenzene | 25.0 | 24.0 | | ug/L | | 96 | 70 - 130 | 1 | 20 |
| 1,2-Dichloroethane | 25.0 | 21.9 | | ug/L | | 88 | 70 - 130 | 0 | 20 |
| 1,2-Dichloropropane | 25.0 | 23.7 | | ug/L | | 95 | 70 - 130 | 2 | 20 |
| 1,3,5-Trimethylbenzene | 25.0 | 24.7 | | ug/L | | 99 | 70 - 130 | 3 | 20 |
| 1,3-Dichlorobenzene | 25.0 | 24.0 | | ug/L | | 96 | 70 - 130 | 2 | 20 |
| 1,3-Dichloropropane | 25.0 | 23.6 | | ug/L | | 94 | 70 - 130 | 1 | 20 |
| 1,4-Dichlorobenzene | 25.0 | 24.2 | | ug/L | | 97 | 70 - 130 | 1 | 20 |
| 1,4-Dioxane | 500 | 462 | * | ug/L | | 92 | 70 - 130 | 25 | 20 |
| 2,2-Dichloropropane | 25.0 | 23.1 | | ug/L | | 92 | 70 - 130 | 3 | 20 |
| 2-Butanone (MEK) | 125 | 154 | | ug/L | | 123 | 70 - 130 | 19 | 20 |
| 2-Chlorotoluene | 25.0 | 24.9 | | ug/L | | 99 | 70 - 130 | 2 | 20 |
| 2-Hexanone | 125 | 181 | * | ug/L | | 145 | 70 - 130 | 2 | 20 |
| 4-Chlorotoluene | 25.0 | 25.4 | | ug/L | | 102 | 70 - 130 | 4 | 20 |
| 4-Isopropyltoluene | 25.0 | 25.0 | | ug/L | | 100 | 70 - 130 | 3 | 20 |
| 4-Methyl-2-pentanone (MIBK) | 125 | 123 | | ug/L | | 98 | 70 - 130 | 2 | 20 |
| Acetone | 125 | 103 | | ug/L | | 82 | 70 - 130 | 3 | 20 |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 480-175074/6**
**Matrix: Water**
**Analysis Batch: 175074**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | 25.0 | 22.9 | | ug/L | | 92 | 70 - 130 | 3 | 20 |
| Bromobenzene | 25.0 | 24.1 | | ug/L | | 97 | 70 - 130 | 1 | 20 |
| Bromoform | 25.0 | 23.4 | | ug/L | | 94 | 70 - 130 | 1 | 20 |
| Bromomethane | 25.0 | 20.3 | | ug/L | | 81 | 70 - 130 | 3 | 20 |
| Carbon disulfide | 25.0 | 23.1 | | ug/L | | 92 | 70 - 130 | 4 | 20 |
| Carbon tetrachloride | 25.0 | 23.7 | | ug/L | | 95 | 70 - 130 | 2 | 20 |
| Chlorobenzene | 25.0 | 23.9 | | ug/L | | 96 | 70 - 130 | 1 | 20 |
| Chlorobromomethane | 25.0 | 24.2 | | ug/L | | 97 | 70 - 130 | 1 | 20 |
| Chlorodibromomethane | 24.5 | 24.9 | | ug/L | | 102 | 70 - 130 | 1 | 20 |
| Chloroethane | 25.0 | 21.6 | | ug/L | | 86 | 70 - 130 | 4 | 20 |
| Chloroform | 25.0 | 22.5 | | ug/L | | 90 | 70 - 130 | 2 | 20 |
| Chloromethane | 25.0 | 21.3 | | ug/L | | 85 | 70 - 130 | 2 | 20 |
| cis-1,2-Dichloroethene | 25.0 | 23.8 | | ug/L | | 95 | 70 - 130 | 2 | 20 |
| cis-1,3-Dichloropropene | 25.0 | 24.0 | | ug/L | | 96 | 70 - 130 | 0 | 20 |
| Dichlorobromomethane | 25.0 | 23.5 | | ug/L | | 94 | 70 - 130 | 1 | 20 |
| Dichlorodifluoromethane | 25.0 | 22.1 | | ug/L | | 88 | 70 - 130 | 2 | 20 |
| Ethyl ether | 25.0 | 23.5 | | ug/L | | 94 | 70 - 130 | 2 | 20 |
| Ethylbenzene | 25.0 | 23.6 | | ug/L | | 94 | 70 - 130 | 2 | 20 |
| Ethylene Dibromide | 25.0 | 23.7 | | ug/L | | 95 | 70 - 130 | 2 | 20 |
| Hexachlorobutadiene | 25.0 | 26.5 | | ug/L | | 106 | 70 - 130 | 2 | 20 |
| Isopropyl ether | 25.0 | 22.7 | | ug/L | | 91 | 70 - 130 | 2 | 20 |
| Isopropylbenzene | 25.0 | 24.0 | | ug/L | | 96 | 70 - 130 | 3 | 20 |
| Methyl tert-butyl ether | 25.0 | 23.4 | | ug/L | | 94 | 70 - 130 | 2 | 20 |
| Methylene Chloride | 25.0 | 22.7 | | ug/L | | 91 | 70 - 130 | 3 | 20 |
| m-Xylene & p-Xylene | 25.0 | 24.2 | | ug/L | | 97 | 70 - 130 | 3 | 20 |
| Naphthalene | 25.0 | 24.4 | | ug/L | | 98 | 70 - 130 | 4 | 20 |
| n-Butylbenzene | 25.0 | 24.0 | | ug/L | | 96 | 70 - 130 | 5 | 20 |
| N-Propylbenzene | 25.0 | 23.5 | | ug/L | | 94 | 70 - 130 | 3 | 20 |
| o-Xylene | 25.0 | 24.6 | | ug/L | | 98 | 70 - 130 | 0 | 20 |
| sec-Butylbenzene | 25.0 | 23.9 | | ug/L | | 96 | 70 - 130 | 3 | 20 |
| Styrene | 25.0 | 24.8 | | ug/L | | 99 | 70 - 130 | 0 | 20 |
| Tert-amyl methyl ether | 25.0 | 22.9 | | ug/L | | 91 | 70 - 130 | 0 | 20 |
| Tert-butyl ethyl ether | 25.0 | 22.3 | | ug/L | | 89 | 70 - 130 | 0 | 20 |
| tert-Butylbenzene | 25.0 | 24.8 | | ug/L | | 99 | 70 - 130 | 4 | 20 |
| Tetrachloroethene | 25.0 | 27.0 | | ug/L | | 108 | 70 - 130 | 2 | 20 |
| Tetrahydrofuran | 50.0 | 45.9 | | ug/L | | 92 | 70 - 130 | 3 | 20 |
| Toluene | 25.0 | 24.3 | | ug/L | | 97 | 70 - 130 | 1 | 20 |
| trans-1,2-Dichloroethene | 25.0 | 23.1 | | ug/L | | 92 | 70 - 130 | 3 | 20 |
| trans-1,3-Dichloropropene | 25.0 | 24.9 | | ug/L | | 100 | 70 - 130 | 0 | 20 |
| Trichloroethene | 25.0 | 24.1 | | ug/L | | 97 | 70 - 130 | 2 | 20 |
| Trichlorofluoromethane | 25.0 | 20.5 | | ug/L | | 82 | 70 - 130 | 2 | 20 |
| Vinyl chloride | 25.0 | 20.4 | | ug/L | | 81 | 70 - 130 | 4 | 20 |
| Dibromomethane | 25.0 | 22.6 | | ug/L | | 91 | 70 - 130 | 1 | 20 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *Toluene-d8 (Surr)* | *99* | | *70 - 130* |
| *1,2-Dichloroethane-d4 (Surr)* | *104* | | *70 - 130* |
| *4-Bromofluorobenzene (Surr)* | *102* | | *70 - 130* |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 480-57495-33 MS**
**Matrix: Water**
**Analysis Batch: 175074**

**Client Sample ID: REW-12-20140406-01**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 100 | 81.2 | | ug/L | | 81 | 70 - 130 |
| 1,1,1-Trichloroethane | ND | | 100 | 62.2 | F1 | ug/L | | 62 | 70 - 130 |
| 1,1,2,2-Tetrachloroethane | ND | | 100 | 92.0 | | ug/L | | 92 | 70 - 130 |
| 1,1,2-Trichloroethane | ND | | 100 | 86.2 | | ug/L | | 86 | 70 - 130 |
| 1,1-Dichloroethane | ND | | 100 | 70.1 | | ug/L | | 70 | 70 - 130 |
| 1,1-Dichloroethene | ND | | 100 | 59.6 | F1 | ug/L | | 60 | 70 - 130 |
| 1,1-Dichloropropene | ND | | 100 | 61.7 | F1 | ug/L | | 62 | 70 - 130 |
| 1,2,3-Trichlorobenzene | ND | | 100 | 80.9 | | ug/L | | 81 | 70 - 130 |
| 1,2,3-Trichloropropane | ND | | 100 | 92.3 | | ug/L | | 92 | 70 - 130 |
| 1,2,4-Trichlorobenzene | ND | | 100 | 74.6 | | ug/L | | 75 | 70 - 130 |
| 1,2,4-Trimethylbenzene | ND | | 100 | 72.9 | | ug/L | | 73 | 70 - 130 |
| 1,2-Dibromo-3-Chloropropane | ND | | 100 | 98.1 | | ug/L | | 98 | 70 - 130 |
| 1,2-Dichlorobenzene | ND | | 100 | 78.0 | | ug/L | | 78 | 70 - 130 |
| 1,2-Dichloroethane | ND | | 100 | 74.7 | | ug/L | | 75 | 70 - 130 |
| 1,2-Dichloropropane | ND | | 100 | 75.6 | | ug/L | | 76 | 70 - 130 |
| 1,3,5-Trimethylbenzene | ND | | 100 | 69.4 | F1 | ug/L | | 69 | 70 - 130 |
| 1,3-Dichlorobenzene | ND | | 100 | 74.5 | | ug/L | | 74 | 70 - 130 |
| 1,3-Dichloropropane | ND | | 100 | 84.6 | | ug/L | | 85 | 70 - 130 |
| 1,4-Dichlorobenzene | ND | | 100 | 75.6 | | ug/L | | 76 | 70 - 130 |
| 1,4-Dioxane | ND | * | 2000 | 1520 | | ug/L | | 76 | 70 - 130 |
| 2,2-Dichloropropane | ND | | 100 | 55.3 | F1 | ug/L | | 55 | 70 - 130 |
| 2-Butanone (MEK) | ND | | 500 | 504 | | ug/L | | 101 | 70 - 130 |
| 2-Chlorotoluene | ND | | 100 | 72.9 | | ug/L | | 73 | 70 - 130 |
| 2-Hexanone | ND | * | 500 | 703 | F1 | ug/L | | 141 | 70 - 130 |
| 4-Chlorotoluene | ND | | 100 | 76.3 | | ug/L | | 76 | 70 - 130 |
| 4-Isopropyltoluene | ND | | 100 | 67.8 | F1 | ug/L | | 68 | 70 - 130 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 500 | 485 | | ug/L | | 97 | 70 - 130 |
| Acetone | ND | | 500 | 422 | | ug/L | | 84 | 70 - 130 |
| Benzene | ND | | 100 | 69.2 | F1 | ug/L | | 69 | 70 - 130 |
| Bromobenzene | ND | | 100 | 75.8 | | ug/L | | 76 | 70 - 130 |
| Bromoform | ND | | 100 | 84.4 | | ug/L | | 84 | 70 - 130 |
| Bromomethane | ND | | 100 | 61.2 | F1 | ug/L | | 61 | 70 - 130 |
| Carbon disulfide | ND | | 100 | 62.3 | F1 | ug/L | | 62 | 70 - 130 |
| Carbon tetrachloride | ND | | 100 | 62.0 | F1 | ug/L | | 62 | 70 - 130 |
| Chlorobenzene | ND | | 100 | 72.4 | | ug/L | | 72 | 70 - 130 |
| Chlorobromomethane | ND | | 100 | 83.0 | | ug/L | | 83 | 70 - 130 |
| Chlorodibromomethane | ND | | 98.0 | 85.8 | | ug/L | | 88 | 70 - 130 |
| Chloroethane | ND | | 100 | 62.2 | F1 | ug/L | | 62 | 70 - 130 |
| Chloroform | ND | | 100 | 69.4 | F1 | ug/L | | 69 | 70 - 130 |
| Chloromethane | ND | | 100 | 61.7 | F1 | ug/L | | 62 | 70 - 130 |
| cis-1,2-Dichloroethene | 310 | | 100 | 382 | | ug/L | | 76 | 70 - 130 |
| cis-1,3-Dichloropropene | ND | | 100 | 72.2 | | ug/L | | 72 | 70 - 130 |
| Dichlorobromomethane | ND | | 100 | 76.8 | | ug/L | | 77 | 70 - 130 |
| Dichlorodifluoromethane | ND | | 100 | 50.8 | F1 | ug/L | | 51 | 70 - 130 |
| Ethyl ether | ND | | 100 | 82.8 | | ug/L | | 83 | 70 - 130 |
| Ethylbenzene | ND | | 100 | 66.6 | F1 | ug/L | | 67 | 70 - 130 |
| Ethylene Dibromide | ND | | 100 | 86.9 | | ug/L | | 87 | 70 - 130 |
| Hexachlorobutadiene | ND | | 100 | 72.5 | | ug/L | | 73 | 70 - 130 |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 480-57495-33 MS**
**Matrix: Water**
**Analysis Batch: 175074**

**Client Sample ID: REW-12-20140406-01**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Isopropyl ether | ND | | 100 | 72.8 | | ug/L | | 73 | 70 - 130 |
| Isopropylbenzene | ND | | 100 | 65.0 | F1 | ug/L | | 65 | 70 - 130 |
| Methyl tert-butyl ether | ND | | 100 | 84.3 | | ug/L | | 84 | 70 - 130 |
| Methylene Chloride | ND | | 100 | 74.3 | | ug/L | | 74 | 70 - 130 |
| m-Xylene & p-Xylene | ND | | 100 | 70.5 | | ug/L | | 71 | 70 - 130 |
| Naphthalene | ND | | 100 | 85.8 | | ug/L | | 86 | 70 - 130 |
| n-Butylbenzene | ND | | 100 | 65.6 | F1 | ug/L | | 66 | 70 - 130 |
| N-Propylbenzene | ND | | 100 | 64.2 | F1 | ug/L | | 64 | 70 - 130 |
| o-Xylene | ND | | 100 | 72.4 | | ug/L | | 72 | 70 - 130 |
| sec-Butylbenzene | ND | | 100 | 65.1 | F1 | ug/L | | 65 | 70 - 130 |
| Styrene | ND | | 100 | 74.7 | | ug/L | | 75 | 70 - 130 |
| Tert-amyl methyl ether | ND | | 100 | 79.3 | | ug/L | | 79 | 70 - 130 |
| Tert-butyl ethyl ether | ND | | 100 | 73.8 | | ug/L | | 74 | 70 - 130 |
| tert-Butylbenzene | ND | | 100 | 66.5 | F1 | ug/L | | 67 | 70 - 130 |
| Tetrachloroethene | ND | | 100 | 66.5 | F1 | ug/L | | 64 | 70 - 130 |
| Tetrahydrofuran | ND | | 200 | 194 | | ug/L | | 97 | 70 - 130 |
| Toluene | 28 | | 100 | 98.6 | | ug/L | | 71 | 70 - 130 |
| trans-1,2-Dichloroethene | ND | | 100 | 68.1 | F1 | ug/L | | 68 | 70 - 130 |
| trans-1,3-Dichloropropene | ND | | 100 | 80.6 | | ug/L | | 81 | 70 - 130 |
| Trichloroethene | 50 | | 100 | 118 | F1 | ug/L | | 68 | 70 - 130 |
| Trichlorofluoromethane | ND | | 100 | 51.8 | F1 | ug/L | | 52 | 70 - 130 |
| Vinyl chloride | 55 | | 100 | 108 | F1 | ug/L | | 52 | 70 - 130 |
| Dibromomethane | ND | | 100 | 80.5 | | ug/L | | 81 | 70 - 130 |

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *Toluene-d8 (Surr)* | *100* | | *70 - 130* |
| *1,2-Dichloroethane-d4 (Surr)* | *103* | | *70 - 130* |
| *4-Bromofluorobenzene (Surr)* | *101* | | *70 - 130* |

**Lab Sample ID: 480-57495-33 MSD**
**Matrix: Water**
**Analysis Batch: 175074**

**Client Sample ID: REW-12-20140406-01**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 100 | 84.0 | | ug/L | | 84 | 70 - 130 | 3 | 20 |
| 1,1,1-Trichloroethane | ND | | 100 | 66.7 | F1 | ug/L | | 67 | 70 - 130 | 7 | 20 |
| 1,1,2,2-Tetrachloroethane | ND | | 100 | 92.8 | | ug/L | | 93 | 70 - 130 | 1 | 20 |
| 1,1,2-Trichloroethane | ND | | 100 | 87.1 | | ug/L | | 87 | 70 - 130 | 1 | 20 |
| 1,1-Dichloroethane | ND | | 100 | 74.1 | | ug/L | | 74 | 70 - 130 | 6 | 20 |
| 1,1-Dichloroethene | ND | | 100 | 64.6 | F1 | ug/L | | 65 | 70 - 130 | 8 | 20 |
| 1,1-Dichloropropene | ND | | 100 | 68.2 | F1 | ug/L | | 68 | 70 - 130 | 10 | 20 |
| 1,2,3-Trichlorobenzene | ND | | 100 | 87.2 | | ug/L | | 87 | 70 - 130 | 7 | 20 |
| 1,2,3-Trichloropropane | ND | | 100 | 93.7 | | ug/L | | 94 | 70 - 130 | 2 | 20 |
| 1,2,4-Trichlorobenzene | ND | | 100 | 80.6 | | ug/L | | 81 | 70 - 130 | 8 | 20 |
| 1,2,4-Trimethylbenzene | ND | | 100 | 78.0 | | ug/L | | 78 | 70 - 130 | 7 | 20 |
| 1,2-Dibromo-3-Chloropropane | ND | | 100 | 98.6 | | ug/L | | 99 | 70 - 130 | 1 | 20 |
| 1,2-Dichlorobenzene | ND | | 100 | 81.8 | | ug/L | | 82 | 70 - 130 | 5 | 20 |
| 1,2-Dichloroethane | ND | | 100 | 76.6 | | ug/L | | 77 | 70 - 130 | 3 | 20 |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 480-57495-33 MSD**
**Matrix: Water**
**Analysis Batch: 175074**

**Client Sample ID: REW-12-20140406-01**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichloropropane | ND | | 100 | 80.4 | | ug/L | | 80 | 70 - 130 | 6 | 20 |
| 1,3,5-Trimethylbenzene | ND | | 100 | 74.6 | | ug/L | | 75 | 70 - 130 | 7 | 20 |
| 1,3-Dichlorobenzene | ND | | 100 | 79.7 | | ug/L | | 80 | 70 - 130 | 7 | 20 |
| 1,3-Dichloropropane | ND | | 100 | 87.7 | | ug/L | | 88 | 70 - 130 | 4 | 20 |
| 1,4-Dichlorobenzene | ND | | 100 | 80.2 | | ug/L | | 80 | 70 - 130 | 6 | 20 |
| 1,4-Dioxane | ND | * | 2000 | 1810 | | ug/L | | 90 | 70 - 130 | 18 | 20 |
| 2,2-Dichloropropane | ND | | 100 | 58.6 | F1 | ug/L | | 59 | 70 - 130 | 6 | 20 |
| 2-Butanone (MEK) | ND | | 500 | 512 | | ug/L | | 102 | 70 - 130 | 1 | 20 |
| 2-Chlorotoluene | ND | | 100 | 77.5 | | ug/L | | 77 | 70 - 130 | 6 | 20 |
| 2-Hexanone | ND | * | 500 | 699 | F1 | ug/L | | 140 | 70 - 130 | 1 | 20 |
| 4-Chlorotoluene | ND | | 100 | 81.9 | | ug/L | | 82 | 70 - 130 | 7 | 20 |
| 4-Isopropyltoluene | ND | | 100 | 74.4 | | ug/L | | 74 | 70 - 130 | 9 | 20 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 500 | 478 | | ug/L | | 96 | 70 - 130 | 1 | 20 |
| Acetone | ND | | 500 | 390 | | ug/L | | 78 | 70 - 130 | 8 | 20 |
| Benzene | ND | | 100 | 73.0 | | ug/L | | 73 | 70 - 130 | 5 | 20 |
| Bromobenzene | ND | | 100 | 82.2 | | ug/L | | 82 | 70 - 130 | 8 | 20 |
| Bromoform | ND | | 100 | 88.1 | | ug/L | | 88 | 70 - 130 | 4 | 20 |
| Bromomethane | ND | | 100 | 66.2 | F1 | ug/L | | 66 | 70 - 130 | 8 | 20 |
| Carbon disulfide | ND | | 100 | 68.7 | F1 | ug/L | | 69 | 70 - 130 | 10 | 20 |
| Carbon tetrachloride | ND | | 100 | 68.2 | F1 | ug/L | | 68 | 70 - 130 | 10 | 20 |
| Chlorobenzene | ND | | 100 | 78.0 | | ug/L | | 78 | 70 - 130 | 8 | 20 |
| Chlorobromomethane | ND | | 100 | 84.6 | | ug/L | | 85 | 70 - 130 | 2 | 20 |
| Chlorodibromomethane | ND | | 98.0 | 88.8 | | ug/L | | 91 | 70 - 130 | 3 | 20 |
| Chloroethane | ND | | 100 | 70.6 | | ug/L | | 71 | 70 - 130 | 13 | 20 |
| Chloroform | ND | | 100 | 73.1 | | ug/L | | 73 | 70 - 130 | 5 | 20 |
| Chloromethane | ND | | 100 | 69.9 | | ug/L | | 70 | 70 - 130 | 12 | 20 |
| cis-1,2-Dichloroethene | 310 | | 100 | 373 | F1 | ug/L | | 68 | 70 - 130 | 2 | 20 |
| cis-1,3-Dichloropropene | ND | | 100 | 76.9 | | ug/L | | 77 | 70 - 130 | 6 | 20 |
| Dichlorobromomethane | ND | | 100 | 80.3 | | ug/L | | 80 | 70 - 130 | 5 | 20 |
| Dichlorodifluoromethane | ND | | 100 | 59.2 | F1 | ug/L | | 59 | 70 - 130 | 15 | 20 |
| Ethyl ether | ND | | 100 | 84.9 | | ug/L | | 85 | 70 - 130 | 2 | 20 |
| Ethylbenzene | ND | | 100 | 71.9 | | ug/L | | 72 | 70 - 130 | 8 | 20 |
| Ethylene Dibromide | ND | | 100 | 89.5 | | ug/L | | 89 | 70 - 130 | 3 | 20 |
| Hexachlorobutadiene | ND | | 100 | 81.5 | | ug/L | | 82 | 70 - 130 | 12 | 20 |
| Isopropyl ether | ND | | 100 | 71.6 | | ug/L | | 72 | 70 - 130 | 2 | 20 |
| Isopropylbenzene | ND | | 100 | 70.4 | | ug/L | | 70 | 70 - 130 | 8 | 20 |
| Methyl tert-butyl ether | ND | | 100 | 84.7 | | ug/L | | 85 | 70 - 130 | 0 | 20 |
| Methylene Chloride | ND | | 100 | 76.2 | | ug/L | | 76 | 70 - 130 | 2 | 20 |
| m-Xylene & p-Xylene | ND | | 100 | 76.3 | | ug/L | | 76 | 70 - 130 | 8 | 20 |
| Naphthalene | ND | | 100 | 89.7 | | ug/L | | 90 | 70 - 130 | 4 | 20 |
| n-Butylbenzene | ND | | 100 | 72.0 | | ug/L | | 72 | 70 - 130 | 9 | 20 |
| N-Propylbenzene | ND | | 100 | 69.8 | | ug/L | | 70 | 70 - 130 | 8 | 20 |
| o-Xylene | ND | | 100 | 77.7 | | ug/L | | 78 | 70 - 130 | 7 | 20 |
| sec-Butylbenzene | ND | | 100 | 70.9 | | ug/L | | 71 | 70 - 130 | 9 | 20 |
| Styrene | ND | | 100 | 79.3 | | ug/L | | 79 | 70 - 130 | 6 | 20 |
| Tert-amyl methyl ether | ND | | 100 | 78.6 | | ug/L | | 79 | 70 - 130 | 1 | 20 |
| Tert-butyl ethyl ether | ND | | 100 | 71.9 | | ug/L | | 72 | 70 - 130 | 3 | 20 |
| tert-Butylbenzene | ND | | 100 | 73.6 | | ug/L | | 74 | 70 - 130 | 10 | 20 |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 480-57495-33 MSD**
**Matrix: Water**
**Analysis Batch: 175074**

**Client Sample ID: REW-12-20140406-01**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | ND | | 100 | 72.7 | | ug/L | | 70 | 70 - 130 | 9 | 20 |
| Tetrahydrofuran | ND | | 200 | 188 | | ug/L | | 94 | 70 - 130 | 3 | 20 |
| Toluene | 28 | | 100 | 103 | | ug/L | | 76 | 70 - 130 | 5 | 20 |
| trans-1,2-Dichloroethene | ND | | 100 | 70.8 | | ug/L | | 71 | 70 - 130 | 4 | 20 |
| trans-1,3-Dichloropropene | ND | | 100 | 83.6 | | ug/L | | 84 | 70 - 130 | 4 | 20 |
| Trichloroethene | 50 | | 100 | 122 | | ug/L | | 72 | 70 - 130 | 4 | 20 |
| Trichlorofluoromethane | ND | | 100 | 60.8 | F1 | ug/L | | 61 | 70 - 130 | 16 | 20 |
| Vinyl chloride | 55 | | 100 | 112 | F1 | ug/L | | 57 | 70 - 130 | 4 | 20 |
| Dibromomethane | ND | | 100 | 83.2 | | ug/L | | 83 | 70 - 130 | 3 | 20 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *Toluene-d8 (Surr)* | *97* | | *70 - 130* |
| *1,2-Dichloroethane-d4 (Surr)* | *95* | | *70 - 130* |
| *4-Bromofluorobenzene (Surr)* | *102* | | *70 - 130* |

**Lab Sample ID: MB 480-175163/8**
**Matrix: Water**
**Analysis Batch: 175163**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/11/14 12:27 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/11/14 12:27 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 04/11/14 12:27 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| 2-Hexanone | ND | | 10 | | ug/L | | | 04/11/14 12:27 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/11/14 12:27 | 1 |
| Acetone | ND | | 50 | | ug/L | | | 04/11/14 12:27 | 1 |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 480-175163/8**
**Matrix: Water**
**Analysis Batch: 175163**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/11/14 12:27 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/11/14 12:27 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/11/14 12:27 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/11/14 12:27 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/11/14 12:27 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/11/14 12:27 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| Tetrahydrofuran | ND | | 10 | | ug/L | | | 04/11/14 12:27 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/11/14 12:27 | 1 |
| Trichloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| Vinyl chloride | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *97* | | *70 - 130* | | *04/11/14 12:27* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *92* | | *70 - 130* | | *04/11/14 12:27* | *1* |
| *4-Bromofluorobenzene (Surr)* | *101* | | *70 - 130* | | *04/11/14 12:27* | *1* |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 480-175163/5**
**Matrix: Water**
**Analysis Batch: 175163**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 25.0 | 26.3 | | ug/L | | 105 | 70 - 130 |
| 1,1,1-Trichloroethane | 25.0 | 23.6 | | ug/L | | 94 | 70 - 130 |
| 1,1,2,2-Tetrachloroethane | 25.0 | 24.9 | | ug/L | | 100 | 70 - 130 |
| 1,1,2-Trichloroethane | 25.0 | 24.7 | | ug/L | | 99 | 70 - 130 |
| 1,1-Dichloroethane | 25.0 | 24.3 | | ug/L | | 97 | 70 - 130 |
| 1,1-Dichloroethene | 25.0 | 23.3 | | ug/L | | 93 | 70 - 130 |
| 1,1-Dichloropropene | 25.0 | 24.1 | | ug/L | | 96 | 70 - 130 |
| 1,2,3-Trichlorobenzene | 25.0 | 26.0 | | ug/L | | 104 | 70 - 130 |
| 1,2,3-Trichloropropane | 25.0 | 25.2 | | ug/L | | 101 | 70 - 130 |
| 1,2,4-Trichlorobenzene | 25.0 | 25.6 | | ug/L | | 103 | 70 - 130 |
| 1,2,4-Trimethylbenzene | 25.0 | 26.9 | | ug/L | | 108 | 70 - 130 |
| 1,2-Dibromo-3-Chloropropane | 25.0 | 25.5 | | ug/L | | 102 | 70 - 130 |
| 1,2-Dichlorobenzene | 25.0 | 25.5 | | ug/L | | 102 | 70 - 130 |
| 1,2-Dichloroethane | 25.0 | 22.2 | | ug/L | | 89 | 70 - 130 |
| 1,2-Dichloropropane | 25.0 | 24.9 | | ug/L | | 100 | 70 - 130 |
| 1,3,5-Trimethylbenzene | 25.0 | 26.6 | | ug/L | | 106 | 70 - 130 |
| 1,3-Dichlorobenzene | 25.0 | 25.7 | | ug/L | | 103 | 70 - 130 |
| 1,3-Dichloropropane | 25.0 | 24.7 | | ug/L | | 99 | 70 - 130 |
| 1,4-Dichlorobenzene | 25.0 | 25.5 | | ug/L | | 102 | 70 - 130 |
| 1,4-Dioxane | 500 | 395 | | ug/L | | 79 | 70 - 130 |
| 2,2-Dichloropropane | 25.0 | 25.0 | | ug/L | | 100 | 70 - 130 |
| 2-Butanone (MEK) | 125 | 131 | | ug/L | | 105 | 70 - 130 |
| 2-Chlorotoluene | 25.0 | 26.4 | | ug/L | | 106 | 70 - 130 |
| 2-Hexanone | 125 | 182 | * | ug/L | | 145 | 70 - 130 |
| 4-Chlorotoluene | 25.0 | 28.0 | | ug/L | | 112 | 70 - 130 |
| 4-Isopropyltoluene | 25.0 | 26.8 | | ug/L | | 107 | 70 - 130 |
| 4-Methyl-2-pentanone (MIBK) | 125 | 126 | | ug/L | | 101 | 70 - 130 |
| Acetone | 125 | 104 | | ug/L | | 83 | 70 - 130 |
| Benzene | 25.0 | 24.2 | | ug/L | | 97 | 70 - 130 |
| Bromobenzene | 25.0 | 25.4 | | ug/L | | 101 | 70 - 130 |
| Bromoform | 25.0 | 23.9 | | ug/L | | 95 | 70 - 130 |
| Bromomethane | 25.0 | 20.9 | | ug/L | | 83 | 70 - 130 |
| Carbon disulfide | 25.0 | 24.7 | | ug/L | | 99 | 70 - 130 |
| Carbon tetrachloride | 25.0 | 24.5 | | ug/L | | 98 | 70 - 130 |
| Chlorobenzene | 25.0 | 25.4 | | ug/L | | 102 | 70 - 130 |
| Chlorobromomethane | 25.0 | 25.1 | | ug/L | | 100 | 70 - 130 |
| Chlorodibromomethane | 24.5 | 25.8 | | ug/L | | 105 | 70 - 130 |
| Chloroethane | 25.0 | 22.1 | | ug/L | | 89 | 70 - 130 |
| Chloroform | 25.0 | 23.3 | | ug/L | | 93 | 70 - 130 |
| Chloromethane | 25.0 | 22.7 | | ug/L | | 91 | 70 - 130 |
| cis-1,2-Dichloroethene | 25.0 | 25.3 | | ug/L | | 101 | 70 - 130 |
| cis-1,3-Dichloropropene | 25.0 | 24.8 | | ug/L | | 99 | 70 - 130 |
| Dichlorobromomethane | 25.0 | 24.5 | | ug/L | | 98 | 70 - 130 |
| Dichlorodifluoromethane | 25.0 | 24.2 | | ug/L | | 97 | 70 - 130 |
| Ethyl ether | 25.0 | 24.7 | | ug/L | | 99 | 70 - 130 |
| Ethylbenzene | 25.0 | 24.9 | | ug/L | | 100 | 70 - 130 |
| Ethylene Dibromide | 25.0 | 25.0 | | ug/L | | 100 | 70 - 130 |
| Hexachlorobutadiene | 25.0 | 27.8 | | ug/L | | 111 | 70 - 130 |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 480-175163/5**
**Matrix: Water**
**Analysis Batch: 175163**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Isopropyl ether | 25.0 | 22.5 | | ug/L | | 90 | 70 - 130 |
| Isopropylbenzene | 25.0 | 25.7 | | ug/L | | 103 | 70 - 130 |
| Methyl tert-butyl ether | 25.0 | 23.8 | | ug/L | | 95 | 70 - 130 |
| Methylene Chloride | 25.0 | 23.9 | | ug/L | | 95 | 70 - 130 |
| m-Xylene & p-Xylene | 25.0 | 25.9 | | ug/L | | 104 | 70 - 130 |
| Naphthalene | 25.0 | 25.0 | | ug/L | | 100 | 70 - 130 |
| n-Butylbenzene | 25.0 | 25.7 | | ug/L | | 103 | 70 - 130 |
| N-Propylbenzene | 25.0 | 25.3 | | ug/L | | 101 | 70 - 130 |
| o-Xylene | 25.0 | 25.9 | | ug/L | | 104 | 70 - 130 |
| sec-Butylbenzene | 25.0 | 25.5 | | ug/L | | 102 | 70 - 130 |
| Styrene | 25.0 | 26.0 | | ug/L | | 104 | 70 - 130 |
| Tert-amyl methyl ether | 25.0 | 22.6 | | ug/L | | 91 | 70 - 130 |
| Tert-butyl ethyl ether | 25.0 | 21.9 | | ug/L | | 88 | 70 - 130 |
| tert-Butylbenzene | 25.0 | 26.6 | | ug/L | | 106 | 70 - 130 |
| Tetrachloroethene | 25.0 | 25.9 | | ug/L | | 104 | 70 - 130 |
| Tetrahydrofuran | 50.0 | 47.9 | | ug/L | | 96 | 70 - 130 |
| Toluene | 25.0 | 25.5 | | ug/L | | 102 | 70 - 130 |
| trans-1,2-Dichloroethene | 25.0 | 24.2 | | ug/L | | 97 | 70 - 130 |
| trans-1,3-Dichloropropene | 25.0 | 25.9 | | ug/L | | 104 | 70 - 130 |
| Trichloroethene | 25.0 | 25.1 | | ug/L | | 100 | 70 - 130 |
| Trichlorofluoromethane | 25.0 | 20.6 | | ug/L | | 83 | 70 - 130 |
| Vinyl chloride | 25.0 | 21.3 | | ug/L | | 85 | 70 - 130 |
| Dibromomethane | 25.0 | 23.0 | | ug/L | | 92 | 70 - 130 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Toluene-d8 (Surr)* | *101* | | *70 - 130* |
| *1,2-Dichloroethane-d4 (Surr)* | *103* | | *70 - 130* |
| *4-Bromofluorobenzene (Surr)* | *103* | | *70 - 130* |

**Lab Sample ID: LCSD 480-175163/6**
**Matrix: Water**
**Analysis Batch: 175163**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 25.0 | 25.8 | | ug/L | | 103 | 70 - 130 | 2 | 20 |
| 1,1,1-Trichloroethane | 25.0 | 23.0 | | ug/L | | 92 | 70 - 130 | 3 | 20 |
| 1,1,2,2-Tetrachloroethane | 25.0 | 24.9 | | ug/L | | 100 | 70 - 130 | 0 | 20 |
| 1,1,2-Trichloroethane | 25.0 | 24.5 | | ug/L | | 98 | 70 - 130 | 1 | 20 |
| 1,1-Dichloroethane | 25.0 | 23.8 | | ug/L | | 95 | 70 - 130 | 2 | 20 |
| 1,1-Dichloroethene | 25.0 | 22.5 | | ug/L | | 90 | 70 - 130 | 4 | 20 |
| 1,1-Dichloropropene | 25.0 | 23.2 | | ug/L | | 93 | 70 - 130 | 4 | 20 |
| 1,2,3-Trichlorobenzene | 25.0 | 25.9 | | ug/L | | 104 | 70 - 130 | 0 | 20 |
| 1,2,3-Trichloropropane | 25.0 | 25.1 | | ug/L | | 100 | 70 - 130 | 0 | 20 |
| 1,2,4-Trichlorobenzene | 25.0 | 25.5 | | ug/L | | 102 | 70 - 130 | 1 | 20 |
| 1,2,4-Trimethylbenzene | 25.0 | 26.2 | | ug/L | | 105 | 70 - 130 | 3 | 20 |
| 1,2-Dibromo-3-Chloropropane | 25.0 | 25.8 | | ug/L | | 103 | 70 - 130 | 1 | 20 |
| 1,2-Dichlorobenzene | 25.0 | 25.1 | | ug/L | | 101 | 70 - 130 | 2 | 20 |
| 1,2-Dichloroethane | 25.0 | 22.3 | | ug/L | | 89 | 70 - 130 | 0 | 20 |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 480-175163/6**
**Matrix: Water**
**Analysis Batch: 175163**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichloropropane | 25.0 | 24.4 | | ug/L | | 98 | 70 - 130 | 2 | 20 |
| 1,3,5-Trimethylbenzene | 25.0 | 26.0 | | ug/L | | 104 | 70 - 130 | 2 | 20 |
| 1,3-Dichlorobenzene | 25.0 | 25.3 | | ug/L | | 101 | 70 - 130 | 2 | 20 |
| 1,3-Dichloropropane | 25.0 | 24.4 | | ug/L | | 98 | 70 - 130 | 1 | 20 |
| 1,4-Dichlorobenzene | 25.0 | 25.2 | | ug/L | | 101 | 70 - 130 | 1 | 20 |
| 1,4-Dioxane | 500 | 466 | | ug/L | | 93 | 70 - 130 | 16 | 20 |
| 2,2-Dichloropropane | 25.0 | 23.9 | | ug/L | | 96 | 70 - 130 | 5 | 20 |
| 2-Butanone (MEK) | 125 | 127 | | ug/L | | 101 | 70 - 130 | 3 | 20 |
| 2-Chlorotoluene | 25.0 | 26.0 | | ug/L | | 104 | 70 - 130 | 2 | 20 |
| 2-Hexanone | 125 | 182 | * | ug/L | | 145 | 70 - 130 | 0 | 20 |
| 4-Chlorotoluene | 25.0 | 26.7 | | ug/L | | 107 | 70 - 130 | 5 | 20 |
| 4-Isopropyltoluene | 25.0 | 26.0 | | ug/L | | 104 | 70 - 130 | 3 | 20 |
| 4-Methyl-2-pentanone (MIBK) | 125 | 125 | | ug/L | | 100 | 70 - 130 | 1 | 20 |
| Acetone | 125 | 103 | | ug/L | | 82 | 70 - 130 | 1 | 20 |
| Benzene | 25.0 | 23.6 | | ug/L | | 95 | 70 - 130 | 3 | 20 |
| Bromobenzene | 25.0 | 25.4 | | ug/L | | 102 | 70 - 130 | 0 | 20 |
| Bromoform | 25.0 | 24.1 | | ug/L | | 96 | 70 - 130 | 1 | 20 |
| Bromomethane | 25.0 | 20.3 | | ug/L | | 81 | 70 - 130 | 3 | 20 |
| Carbon disulfide | 25.0 | 24.0 | | ug/L | | 96 | 70 - 130 | 3 | 20 |
| Carbon tetrachloride | 25.0 | 23.8 | | ug/L | | 95 | 70 - 130 | 3 | 20 |
| Chlorobenzene | 25.0 | 24.5 | | ug/L | | 98 | 70 - 130 | 4 | 20 |
| Chlorobromomethane | 25.0 | 24.4 | | ug/L | | 97 | 70 - 130 | 3 | 20 |
| Chlorodibromomethane | 24.5 | 25.7 | | ug/L | | 105 | 70 - 130 | 0 | 20 |
| Chloroethane | 25.0 | 21.3 | | ug/L | | 85 | 70 - 130 | 4 | 20 |
| Chloroform | 25.0 | 22.8 | | ug/L | | 91 | 70 - 130 | 2 | 20 |
| Chloromethane | 25.0 | 21.5 | | ug/L | | 86 | 70 - 130 | 5 | 20 |
| cis-1,2-Dichloroethene | 25.0 | 24.7 | | ug/L | | 99 | 70 - 130 | 2 | 20 |
| cis-1,3-Dichloropropene | 25.0 | 24.7 | | ug/L | | 99 | 70 - 130 | 0 | 20 |
| Dichlorobromomethane | 25.0 | 24.0 | | ug/L | | 96 | 70 - 130 | 2 | 20 |
| Dichlorodifluoromethane | 25.0 | 22.6 | | ug/L | | 90 | 70 - 130 | 7 | 20 |
| Ethyl ether | 25.0 | 24.4 | | ug/L | | 98 | 70 - 130 | 1 | 20 |
| Ethylbenzene | 25.0 | 24.3 | | ug/L | | 97 | 70 - 130 | 2 | 20 |
| Ethylene Dibromide | 25.0 | 24.2 | | ug/L | | 97 | 70 - 130 | 3 | 20 |
| Hexachlorobutadiene | 25.0 | 27.6 | | ug/L | | 111 | 70 - 130 | 0 | 20 |
| Isopropyl ether | 25.0 | 22.1 | | ug/L | | 88 | 70 - 130 | 2 | 20 |
| Isopropylbenzene | 25.0 | 24.9 | | ug/L | | 99 | 70 - 130 | 3 | 20 |
| Methyl tert-butyl ether | 25.0 | 24.0 | | ug/L | | 96 | 70 - 130 | 1 | 20 |
| Methylene Chloride | 25.0 | 23.2 | | ug/L | | 93 | 70 - 130 | 3 | 20 |
| m-Xylene & p-Xylene | 25.0 | 25.2 | | ug/L | | 101 | 70 - 130 | 3 | 20 |
| Naphthalene | 25.0 | 25.5 | | ug/L | | 102 | 70 - 130 | 2 | 20 |
| n-Butylbenzene | 25.0 | 25.4 | | ug/L | | 102 | 70 - 130 | 1 | 20 |
| N-Propylbenzene | 25.0 | 24.5 | | ug/L | | 98 | 70 - 130 | 3 | 20 |
| o-Xylene | 25.0 | 25.2 | | ug/L | | 101 | 70 - 130 | 3 | 20 |
| sec-Butylbenzene | 25.0 | 25.0 | | ug/L | | 100 | 70 - 130 | 2 | 20 |
| Styrene | 25.0 | 25.4 | | ug/L | | 102 | 70 - 130 | 2 | 20 |
| Tert-amyl methyl ether | 25.0 | 22.3 | | ug/L | | 89 | 70 - 130 | 1 | 20 |
| Tert-butyl ethyl ether | 25.0 | 21.6 | | ug/L | | 86 | 70 - 130 | 1 | 20 |
| tert-Butylbenzene | 25.0 | 25.7 | | ug/L | | 103 | 70 - 130 | 3 | 20 |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 480-175163/6**
**Matrix: Water**
**Analysis Batch: 175163**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | | | 25.0 | 25.5 | | ug/L | | 102 | 70 - 130 | 2 | 20 |
| Tetrahydrofuran | | | 50.0 | 47.5 | | ug/L | | 95 | 70 - 130 | 1 | 20 |
| Toluene | | | 25.0 | 24.8 | | ug/L | | 99 | 70 - 130 | 3 | 20 |
| trans-1,2-Dichloroethene | | | 25.0 | 23.2 | | ug/L | | 93 | 70 - 130 | 4 | 20 |
| trans-1,3-Dichloropropene | | | 25.0 | 25.4 | | ug/L | | 102 | 70 - 130 | 2 | 20 |
| Trichloroethene | | | 25.0 | 24.1 | | ug/L | | 96 | 70 - 130 | 4 | 20 |
| Trichlorofluoromethane | | | 25.0 | 19.6 | | ug/L | | 78 | 70 - 130 | 5 | 20 |
| Vinyl chloride | | | 25.0 | 20.3 | | ug/L | | 81 | 70 - 130 | 5 | 20 |
| Dibromomethane | | | 25.0 | 23.0 | | ug/L | | 92 | 70 - 130 | 0 | 20 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *Toluene-d8 (Surr)* | *100* | | *70 - 130* |
| *1,2-Dichloroethane-d4 (Surr)* | *103* | | *70 - 130* |
| *4-Bromofluorobenzene (Surr)* | *104* | | *70 - 130* |

**Lab Sample ID: 480-57495-17 MS**
**Matrix: Water**
**Analysis Batch: 175163**

**Client Sample ID: MW-551-20140408-01**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1000 | 1070 | | ug/L | | 107 | 70 - 130 | | |
| 1,1,1-Trichloroethane | ND | | 1000 | 980 | | ug/L | | 98 | 70 - 130 | | |
| 1,1,2,2-Tetrachloroethane | ND | | 1000 | 992 | | ug/L | | 99 | 70 - 130 | | |
| 1,1,2-Trichloroethane | ND | | 1000 | 985 | | ug/L | | 99 | 70 - 130 | | |
| 1,1-Dichloroethane | ND | | 1000 | 1010 | | ug/L | | 101 | 70 - 130 | | |
| 1,1-Dichloroethene | ND | | 1000 | 987 | | ug/L | | 99 | 70 - 130 | | |
| 1,1-Dichloropropene | ND | | 1000 | 994 | | ug/L | | 99 | 70 - 130 | | |
| 1,2,3-Trichlorobenzene | ND | | 1000 | 1010 | | ug/L | | 101 | 70 - 130 | | |
| 1,2,3-Trichloropropane | ND | | 1000 | 995 | | ug/L | | 99 | 70 - 130 | | |
| 1,2,4-Trichlorobenzene | ND | | 1000 | 975 | | ug/L | | 97 | 70 - 130 | | |
| 1,2,4-Trimethylbenzene | ND | | 1000 | 1050 | | ug/L | | 105 | 70 - 130 | | |
| 1,2-Dibromo-3-Chloropropane | ND | | 1000 | 975 | | ug/L | | 97 | 70 - 130 | | |
| 1,2-Dichlorobenzene | ND | | 1000 | 1010 | | ug/L | | 101 | 70 - 130 | | |
| 1,2-Dichloroethane | ND | | 1000 | 907 | | ug/L | | 91 | 70 - 130 | | |
| 1,2-Dichloropropane | ND | | 1000 | 1020 | | ug/L | | 102 | 70 - 130 | | |
| 1,3,5-Trimethylbenzene | ND | | 1000 | 1040 | | ug/L | | 104 | 70 - 130 | | |
| 1,3-Dichlorobenzene | ND | | 1000 | 1020 | | ug/L | | 102 | 70 - 130 | | |
| 1,3-Dichloropropane | ND | | 1000 | 993 | | ug/L | | 99 | 70 - 130 | | |
| 1,4-Dichlorobenzene | ND | | 1000 | 1010 | | ug/L | | 101 | 70 - 130 | | |
| 1,4-Dioxane | ND | | 20000 | 15000 | | ug/L | | 75 | 70 - 130 | | |
| 2,2-Dichloropropane | ND | | 1000 | 881 | | ug/L | | 88 | 70 - 130 | | |
| 2-Butanone (MEK) | ND | | 5000 | 6380 | | ug/L | | 124 | 70 - 130 | | |
| 2-Chlorotoluene | ND | | 1000 | 1050 | | ug/L | | 105 | 70 - 130 | | |
| 2-Hexanone | ND | * | 5000 | 7010 | F1 | ug/L | | 140 | 70 - 130 | | |
| 4-Chlorotoluene | ND | | 1000 | 1080 | | ug/L | | 108 | 70 - 130 | | |
| 4-Isopropyltoluene | ND | | 1000 | 1050 | | ug/L | | 105 | 70 - 130 | | |
| 4-Methyl-2-pentanone (MIBK) | ND | | 5000 | 4930 | | ug/L | | 99 | 70 - 130 | | |
| Acetone | 15000 | | 5000 | 19300 | | ug/L | | 92 | 70 - 130 | | |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 480-57495-17 MS**
**Matrix: Water**
**Analysis Batch: 175163**

**Client Sample ID: MW-551-20140408-01**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | ND | | 1000 | 1000 | | ug/L | | 100 | 70 - 130 |
| Bromobenzene | ND | | 1000 | 1020 | | ug/L | | 102 | 70 - 130 |
| Bromoform | ND | | 1000 | 938 | | ug/L | | 94 | 70 - 130 |
| Bromomethane | ND | | 1000 | 904 | | ug/L | | 90 | 70 - 130 |
| Carbon disulfide | ND | | 1000 | 1000 | | ug/L | | 100 | 70 - 130 |
| Carbon tetrachloride | ND | | 1000 | 1020 | | ug/L | | 102 | 70 - 130 |
| Chlorobenzene | ND | | 1000 | 1010 | | ug/L | | 101 | 70 - 130 |
| Chlorobromomethane | ND | | 1000 | 1040 | | ug/L | | 104 | 70 - 130 |
| Chlorodibromomethane | ND | | 980 | 1020 | | ug/L | | 104 | 70 - 130 |
| Chloroethane | ND | | 1000 | 966 | | ug/L | | 97 | 70 - 130 |
| Chloroform | ND | | 1000 | 972 | | ug/L | | 97 | 70 - 130 |
| Chloromethane | ND | | 1000 | 989 | | ug/L | | 99 | 70 - 130 |
| cis-1,2-Dichloroethene | ND | | 1000 | 1030 | | ug/L | | 103 | 70 - 130 |
| cis-1,3-Dichloropropene | ND | | 1000 | 948 | | ug/L | | 95 | 70 - 130 |
| Dichlorobromomethane | ND | | 1000 | 994 | | ug/L | | 99 | 70 - 130 |
| Dichlorodifluoromethane | ND | | 1000 | 1040 | | ug/L | | 104 | 70 - 130 |
| Ethyl ether | ND | | 1000 | 997 | | ug/L | | 100 | 70 - 130 |
| Ethylbenzene | ND | | 1000 | 1000 | | ug/L | | 100 | 70 - 130 |
| Ethylene Dibromide | ND | | 1000 | 992 | | ug/L | | 99 | 70 - 130 |
| Hexachlorobutadiene | ND | | 1000 | 1100 | | ug/L | | 110 | 70 - 130 |
| Isopropyl ether | ND | | 1000 | 903 | | ug/L | | 90 | 70 - 130 |
| Isopropylbenzene | ND | | 1000 | 1010 | | ug/L | | 101 | 70 - 130 |
| Methyl tert-butyl ether | ND | | 1000 | 970 | | ug/L | | 97 | 70 - 130 |
| Methylene Chloride | ND | | 1000 | 1010 | | ug/L | | 101 | 70 - 130 |
| m-Xylene & p-Xylene | ND | | 1000 | 1040 | | ug/L | | 104 | 70 - 130 |
| Naphthalene | ND | | 1000 | 952 | | ug/L | | 95 | 70 - 130 |
| n-Butylbenzene | ND | | 1000 | 1010 | | ug/L | | 101 | 70 - 130 |
| N-Propylbenzene | ND | | 1000 | 988 | | ug/L | | 99 | 70 - 130 |
| o-Xylene | ND | | 1000 | 1040 | | ug/L | | 104 | 70 - 130 |
| sec-Butylbenzene | ND | | 1000 | 1020 | | ug/L | | 102 | 70 - 130 |
| Styrene | ND | | 1000 | 1030 | | ug/L | | 103 | 70 - 130 |
| Tert-amyl methyl ether | ND | | 1000 | 898 | | ug/L | | 90 | 70 - 130 |
| Tert-butyl ethyl ether | ND | | 1000 | 878 | | ug/L | | 88 | 70 - 130 |
| tert-Butylbenzene | ND | | 1000 | 1050 | | ug/L | | 105 | 70 - 130 |
| Tetrachloroethene | ND | | 1000 | 1020 | | ug/L | | 102 | 70 - 130 |
| Tetrahydrofuran | ND | | 2000 | 1910 | | ug/L | | 95 | 70 - 130 |
| Toluene | ND | | 1000 | 1030 | | ug/L | | 103 | 70 - 130 |
| trans-1,2-Dichloroethene | ND | | 1000 | 1020 | | ug/L | | 102 | 70 - 130 |
| trans-1,3-Dichloropropene | ND | | 1000 | 979 | | ug/L | | 98 | 70 - 130 |
| Trichloroethene | ND | | 1000 | 1030 | | ug/L | | 103 | 70 - 130 |
| Trichlorofluoromethane | ND | | 1000 | 894 | | ug/L | | 89 | 70 - 130 |
| Vinyl chloride | ND | | 1000 | 966 | | ug/L | | 97 | 70 - 130 |
| Dibromomethane | ND | | 1000 | 945 | | ug/L | | 94 | 70 - 130 |

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *Toluene-d8 (Surr)* | *99* | | *70 - 130* |
| *1,2-Dichloroethane-d4 (Surr)* | *103* | | *70 - 130* |
| *4-Bromofluorobenzene (Surr)* | *102* | | *70 - 130* |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 480-57495-17 MSD**
**Matrix: Water**
**Analysis Batch: 175163**

**Client Sample ID: MW-551-20140408-01**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1000 | 1030 | | ug/L | | 103 | 70 - 130 | 4 | 20 |
| 1,1,1-Trichloroethane | ND | | 1000 | 931 | | ug/L | | 93 | 70 - 130 | 5 | 20 |
| 1,1,2,2-Tetrachloroethane | ND | | 1000 | 985 | | ug/L | | 98 | 70 - 130 | 1 | 20 |
| 1,1,2-Trichloroethane | ND | | 1000 | 978 | | ug/L | | 98 | 70 - 130 | 1 | 20 |
| 1,1-Dichloroethane | ND | | 1000 | 974 | | ug/L | | 97 | 70 - 130 | 4 | 20 |
| 1,1-Dichloroethene | ND | | 1000 | 923 | | ug/L | | 92 | 70 - 130 | 7 | 20 |
| 1,1-Dichloropropene | ND | | 1000 | 961 | | ug/L | | 96 | 70 - 130 | 3 | 20 |
| 1,2,3-Trichlorobenzene | ND | | 1000 | 1020 | | ug/L | | 102 | 70 - 130 | 1 | 20 |
| 1,2,3-Trichloropropane | ND | | 1000 | 973 | | ug/L | | 97 | 70 - 130 | 2 | 20 |
| 1,2,4-Trichlorobenzene | ND | | 1000 | 985 | | ug/L | | 98 | 70 - 130 | 1 | 20 |
| 1,2,4-Trimethylbenzene | ND | | 1000 | 1030 | | ug/L | | 103 | 70 - 130 | 2 | 20 |
| 1,2-Dibromo-3-Chloropropane | ND | | 1000 | 1010 | | ug/L | | 101 | 70 - 130 | 4 | 20 |
| 1,2-Dichlorobenzene | ND | | 1000 | 996 | | ug/L | | 100 | 70 - 130 | 1 | 20 |
| 1,2-Dichloroethane | ND | | 1000 | 898 | | ug/L | | 90 | 70 - 130 | 1 | 20 |
| 1,2-Dichloropropane | ND | | 1000 | 994 | | ug/L | | 99 | 70 - 130 | 2 | 20 |
| 1,3,5-Trimethylbenzene | ND | | 1000 | 1020 | | ug/L | | 102 | 70 - 130 | 2 | 20 |
| 1,3-Dichlorobenzene | ND | | 1000 | 1010 | | ug/L | | 101 | 70 - 130 | 2 | 20 |
| 1,3-Dichloropropane | ND | | 1000 | 982 | | ug/L | | 98 | 70 - 130 | 1 | 20 |
| 1,4-Dichlorobenzene | ND | | 1000 | 999 | | ug/L | | 100 | 70 - 130 | 1 | 20 |
| 1,4-Dioxane | ND | | 20000 | 18400 | F2 | ug/L | | 92 | 70 - 130 | 21 | 20 |
| 2,2-Dichloropropane | ND | | 1000 | 839 | | ug/L | | 84 | 70 - 130 | 5 | 20 |
| 2-Butanone (MEK) | ND | | 5000 | 6550 | | ug/L | | 127 | 70 - 130 | 3 | 20 |
| 2-Chlorotoluene | ND | | 1000 | 1030 | | ug/L | | 103 | 70 - 130 | 2 | 20 |
| 2-Hexanone | ND | * | 5000 | 7160 | F1 | ug/L | | 143 | 70 - 130 | 2 | 20 |
| 4-Chlorotoluene | ND | | 1000 | 1070 | | ug/L | | 107 | 70 - 130 | 2 | 20 |
| 4-Isopropyltoluene | ND | | 1000 | 1020 | | ug/L | | 102 | 70 - 130 | 3 | 20 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 5000 | 4950 | | ug/L | | 99 | 70 - 130 | 0 | 20 |
| Acetone | 15000 | | 5000 | 19000 | | ug/L | | 85 | 70 - 130 | 2 | 20 |
| Benzene | ND | | 1000 | 966 | | ug/L | | 97 | 70 - 130 | 4 | 20 |
| Bromobenzene | ND | | 1000 | 1000 | | ug/L | | 100 | 70 - 130 | 2 | 20 |
| Bromoform | ND | | 1000 | 943 | | ug/L | | 94 | 70 - 130 | 0 | 20 |
| Bromomethane | ND | | 1000 | 832 | | ug/L | | 83 | 70 - 130 | 8 | 20 |
| Carbon disulfide | ND | | 1000 | 987 | | ug/L | | 99 | 70 - 130 | 2 | 20 |
| Carbon tetrachloride | ND | | 1000 | 971 | | ug/L | | 97 | 70 - 130 | 4 | 20 |
| Chlorobenzene | ND | | 1000 | 1000 | | ug/L | | 100 | 70 - 130 | 1 | 20 |
| Chlorobromomethane | ND | | 1000 | 1010 | | ug/L | | 101 | 70 - 130 | 4 | 20 |
| Chlorodibromomethane | ND | | 980 | 1010 | | ug/L | | 103 | 70 - 130 | 1 | 20 |
| Chloroethane | ND | | 1000 | 884 | | ug/L | | 88 | 70 - 130 | 9 | 20 |
| Chloroform | ND | | 1000 | 932 | | ug/L | | 93 | 70 - 130 | 4 | 20 |
| Chloromethane | ND | | 1000 | 893 | | ug/L | | 89 | 70 - 130 | 10 | 20 |
| cis-1,2-Dichloroethene | ND | | 1000 | 1000 | | ug/L | | 100 | 70 - 130 | 3 | 20 |
| cis-1,3-Dichloropropene | ND | | 1000 | 960 | | ug/L | | 96 | 70 - 130 | 1 | 20 |
| Dichlorobromomethane | ND | | 1000 | 988 | | ug/L | | 99 | 70 - 130 | 1 | 20 |
| Dichlorodifluoromethane | ND | | 1000 | 941 | | ug/L | | 94 | 70 - 130 | 10 | 20 |
| Ethyl ether | ND | | 1000 | 983 | | ug/L | | 98 | 70 - 130 | 1 | 20 |
| Ethylbenzene | ND | | 1000 | 981 | | ug/L | | 98 | 70 - 130 | 2 | 20 |
| Ethylene Dibromide | ND | | 1000 | 981 | | ug/L | | 98 | 70 - 130 | 1 | 20 |
| Hexachlorobutadiene | ND | | 1000 | 1070 | | ug/L | | 107 | 70 - 130 | 3 | 20 |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 480-57495-17 MSD**
**Matrix: Water**
**Analysis Batch: 175163**

**Client Sample ID: MW-551-20140408-01**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Isopropyl ether | ND | | 1000 | 892 | | ug/L | | 89 | 70 - 130 | 1 | 20 |
| Isopropylbenzene | ND | | 1000 | 983 | | ug/L | | 98 | 70 - 130 | 2 | 20 |
| Methyl tert-butyl ether | ND | | 1000 | 954 | | ug/L | | 95 | 70 - 130 | 2 | 20 |
| Methylene Chloride | ND | | 1000 | 965 | | ug/L | | 96 | 70 - 130 | 4 | 20 |
| m-Xylene & p-Xylene | ND | | 1000 | 1020 | | ug/L | | 102 | 70 - 130 | 2 | 20 |
| Naphthalene | ND | | 1000 | 979 | | ug/L | | 98 | 70 - 130 | 3 | 20 |
| n-Butylbenzene | ND | | 1000 | 971 | | ug/L | | 97 | 70 - 130 | 4 | 20 |
| N-Propylbenzene | ND | | 1000 | 975 | | ug/L | | 98 | 70 - 130 | 1 | 20 |
| o-Xylene | ND | | 1000 | 1010 | | ug/L | | 101 | 70 - 130 | 3 | 20 |
| sec-Butylbenzene | ND | | 1000 | 990 | | ug/L | | 99 | 70 - 130 | 3 | 20 |
| Styrene | ND | | 1000 | 1030 | | ug/L | | 103 | 70 - 130 | 1 | 20 |
| Tert-amyl methyl ether | ND | | 1000 | 897 | | ug/L | | 90 | 70 - 130 | 0 | 20 |
| Tert-butyl ethyl ether | ND | | 1000 | 865 | | ug/L | | 87 | 70 - 130 | 1 | 20 |
| tert-Butylbenzene | ND | | 1000 | 1040 | | ug/L | | 104 | 70 - 130 | 1 | 20 |
| Tetrachloroethene | ND | | 1000 | 991 | | ug/L | | 99 | 70 - 130 | 3 | 20 |
| Tetrahydrofuran | ND | | 2000 | 1940 | | ug/L | | 97 | 70 - 130 | 2 | 20 |
| Toluene | ND | | 1000 | 1010 | | ug/L | | 101 | 70 - 130 | 2 | 20 |
| trans-1,2-Dichloroethene | ND | | 1000 | 971 | | ug/L | | 97 | 70 - 130 | 5 | 20 |
| trans-1,3-Dichloropropene | ND | | 1000 | 976 | | ug/L | | 98 | 70 - 130 | 0 | 20 |
| Trichloroethene | ND | | 1000 | 998 | | ug/L | | 100 | 70 - 130 | 3 | 20 |
| Trichlorofluoromethane | ND | | 1000 | 821 | | ug/L | | 82 | 70 - 130 | 9 | 20 |
| Vinyl chloride | ND | | 1000 | 874 | | ug/L | | 87 | 70 - 130 | 10 | 20 |
| Dibromomethane | ND | | 1000 | 947 | | ug/L | | 95 | 70 - 130 | 0 | 20 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *Toluene-d8 (Surr)* | *99* | | *70 - 130* |
| *1,2-Dichloroethane-d4 (Surr)* | *99* | | *70 - 130* |
| *4-Bromofluorobenzene (Surr)* | *105* | | *70 - 130* |

**Lab Sample ID: MB 480-175485/9**
**Matrix: Water**
**Analysis Batch: 175485**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/13/14 22:07 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 480-175485/9**
**Matrix: Water**
**Analysis Batch: 175485**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/13/14 22:07 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 04/13/14 22:07 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 2-Hexanone | ND | | 10 | | ug/L | | | 04/13/14 22:07 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/13/14 22:07 | 1 |
| Acetone | ND | | 50 | | ug/L | | | 04/13/14 22:07 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/13/14 22:07 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/13/14 22:07 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/13/14 22:07 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/13/14 22:07 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/13/14 22:07 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/13/14 22:07 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 480-175485/9**
**Matrix: Water**
**Analysis Batch: 175485**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Tetrahydrofuran | ND | | 10 | | ug/L | | | 04/13/14 22:07 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/13/14 22:07 | 1 |
| Trichloroethene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Vinyl chloride | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *99* | | *70 - 130* | | *04/13/14 22:07* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *105* | | *70 - 130* | | *04/13/14 22:07* | *1* |
| *4-Bromofluorobenzene (Surr)* | *96* | | *70 - 130* | | *04/13/14 22:07* | *1* |

**Lab Sample ID: LCS 480-175485/6**
**Matrix: Water**
**Analysis Batch: 175485**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 25.0 | 24.4 | | ug/L | | 97 | 70 - 130 |
| 1,1,1-Trichloroethane | 25.0 | 24.8 | | ug/L | | 99 | 70 - 130 |
| 1,1,2,2-Tetrachloroethane | 25.0 | 24.9 | | ug/L | | 100 | 70 - 130 |
| 1,1,2-Trichloroethane | 25.0 | 24.9 | | ug/L | | 99 | 70 - 130 |
| 1,1-Dichloroethane | 25.0 | 24.7 | | ug/L | | 99 | 70 - 130 |
| 1,1-Dichloroethene | 25.0 | 23.8 | | ug/L | | 95 | 70 - 130 |
| 1,1-Dichloropropene | 25.0 | 25.5 | | ug/L | | 102 | 70 - 130 |
| 1,2,3-Trichlorobenzene | 25.0 | 25.2 | | ug/L | | 101 | 70 - 130 |
| 1,2,3-Trichloropropane | 25.0 | 24.3 | | ug/L | | 97 | 70 - 130 |
| 1,2,4-Trichlorobenzene | 25.0 | 25.3 | | ug/L | | 101 | 70 - 130 |
| 1,2,4-Trimethylbenzene | 25.0 | 24.6 | | ug/L | | 98 | 70 - 130 |
| 1,2-Dibromo-3-Chloropropane | 25.0 | 23.3 | | ug/L | | 93 | 70 - 130 |
| 1,2-Dichlorobenzene | 25.0 | 24.9 | | ug/L | | 99 | 70 - 130 |
| 1,2-Dichloroethane | 25.0 | 26.4 | | ug/L | | 106 | 70 - 130 |
| 1,2-Dichloropropane | 25.0 | 26.1 | | ug/L | | 104 | 70 - 130 |
| 1,3,5-Trimethylbenzene | 25.0 | 24.2 | | ug/L | | 97 | 70 - 130 |
| 1,3-Dichlorobenzene | 25.0 | 24.9 | | ug/L | | 100 | 70 - 130 |
| 1,3-Dichloropropane | 25.0 | 24.4 | | ug/L | | 98 | 70 - 130 |
| 1,4-Dichlorobenzene | 25.0 | 24.1 | | ug/L | | 97 | 70 - 130 |
| 1,4-Dioxane | 500 | 452 | | ug/L | | 90 | 70 - 130 |
| 2,2-Dichloropropane | 25.0 | 23.3 | | ug/L | | 93 | 70 - 130 |
| 2-Butanone (MEK) | 125 | 142 | | ug/L | | 113 | 70 - 130 |
| 2-Chlorotoluene | 25.0 | 24.4 | | ug/L | | 98 | 70 - 130 |
| 2-Hexanone | 125 | 125 | | ug/L | | 100 | 70 - 130 |
| 4-Chlorotoluene | 25.0 | 22.0 | | ug/L | | 88 | 70 - 130 |
| 4-Isopropyltoluene | 25.0 | 24.9 | | ug/L | | 100 | 70 - 130 |
| 4-Methyl-2-pentanone (MIBK) | 125 | 124 | | ug/L | | 99 | 70 - 130 |
| Acetone | 125 | 125 | | ug/L | | 100 | 70 - 130 |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 480-175485/6**
**Matrix: Water**
**Analysis Batch: 175485**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Benzene | 25.0 | 24.9 | | ug/L | | 100 | 70 - 130 |
| Bromobenzene | 25.0 | 24.3 | | ug/L | | 97 | 70 - 130 |
| Bromoform | 25.0 | 21.2 | | ug/L | | 85 | 70 - 130 |
| Bromomethane | 25.0 | 29.6 | | ug/L | | 118 | 70 - 130 |
| Carbon disulfide | 25.0 | 21.1 | | ug/L | | 84 | 70 - 130 |
| Carbon tetrachloride | 25.0 | 25.3 | | ug/L | | 101 | 70 - 130 |
| Chlorobenzene | 25.0 | 24.9 | | ug/L | | 99 | 70 - 130 |
| Chlorobromomethane | 25.0 | 25.3 | | ug/L | | 101 | 70 - 130 |
| Chlorodibromomethane | 24.5 | 24.5 | | ug/L | | 100 | 70 - 130 |
| Chloroethane | 25.0 | 28.9 | | ug/L | | 116 | 70 - 130 |
| Chloroform | 25.0 | 25.1 | | ug/L | | 100 | 70 - 130 |
| Chloromethane | 25.0 | 24.2 | | ug/L | | 97 | 70 - 130 |
| cis-1,2-Dichloroethene | 25.0 | 24.7 | | ug/L | | 99 | 70 - 130 |
| cis-1,3-Dichloropropene | 25.0 | 26.2 | | ug/L | | 105 | 70 - 130 |
| Dichlorobromomethane | 25.0 | 25.5 | | ug/L | | 102 | 70 - 130 |
| Dichlorodifluoromethane | 25.0 | 22.6 | | ug/L | | 90 | 70 - 130 |
| Ethyl ether | 25.0 | 25.0 | | ug/L | | 100 | 70 - 130 |
| Ethylbenzene | 25.0 | 24.2 | | ug/L | | 97 | 70 - 130 |
| Ethylene Dibromide | 25.0 | 24.8 | | ug/L | | 99 | 70 - 130 |
| Hexachlorobutadiene | 25.0 | 25.5 | | ug/L | | 102 | 70 - 130 |
| Isopropyl ether | 25.0 | 26.3 | | ug/L | | 105 | 70 - 130 |
| Isopropylbenzene | 25.0 | 24.1 | | ug/L | | 96 | 70 - 130 |
| Methyl tert-butyl ether | 25.0 | 24.3 | | ug/L | | 97 | 70 - 130 |
| Methylene Chloride | 25.0 | 23.7 | | ug/L | | 95 | 70 - 130 |
| m-Xylene & p-Xylene | 25.0 | 24.7 | | ug/L | | 99 | 70 - 130 |
| Naphthalene | 25.0 | 25.8 | | ug/L | | 103 | 70 - 130 |
| n-Butylbenzene | 25.0 | 25.4 | | ug/L | | 102 | 70 - 130 |
| N-Propylbenzene | 25.0 | 24.2 | | ug/L | | 97 | 70 - 130 |
| o-Xylene | 25.0 | 24.1 | | ug/L | | 96 | 70 - 130 |
| sec-Butylbenzene | 25.0 | 24.7 | | ug/L | | 99 | 70 - 130 |
| Styrene | 25.0 | 24.9 | | ug/L | | 99 | 70 - 130 |
| Tert-amyl methyl ether | 25.0 | 25.7 | | ug/L | | 103 | 70 - 130 |
| Tert-butyl ethyl ether | 25.0 | 25.4 | | ug/L | | 101 | 70 - 130 |
| tert-Butylbenzene | 25.0 | 24.0 | | ug/L | | 96 | 70 - 130 |
| Tetrachloroethene | 25.0 | 26.1 | | ug/L | | 104 | 70 - 130 |
| Tetrahydrofuran | 50.0 | 65.3 | * | ug/L | | 131 | 70 - 130 |
| Toluene | 25.0 | 24.2 | | ug/L | | 97 | 70 - 130 |
| trans-1,2-Dichloroethene | 25.0 | 24.1 | | ug/L | | 96 | 70 - 130 |
| trans-1,3-Dichloropropene | 25.0 | 23.7 | | ug/L | | 95 | 70 - 130 |
| Trichloroethene | 25.0 | 24.0 | | ug/L | | 96 | 70 - 130 |
| Trichlorofluoromethane | 25.0 | 27.1 | | ug/L | | 108 | 70 - 130 |
| Vinyl chloride | 25.0 | 23.8 | | ug/L | | 95 | 70 - 130 |
| Dibromomethane | 25.0 | 26.1 | | ug/L | | 104 | 70 - 130 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Toluene-d8 (Surr)* | *98* | | *70 - 130* |
| *1,2-Dichloroethane-d4 (Surr)* | *105* | | *70 - 130* |
| *4-Bromofluorobenzene (Surr)* | *99* | | *70 - 130* |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 480-175485/7**
**Matrix: Water**
**Analysis Batch: 175485**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 25.0 | 24.1 | | ug/L | | 96 | 70 - 130 | 1 | 20 |
| 1,1,1-Trichloroethane | 25.0 | 24.3 | | ug/L | | 97 | 70 - 130 | 2 | 20 |
| 1,1,2,2-Tetrachloroethane | 25.0 | 24.2 | | ug/L | | 97 | 70 - 130 | 3 | 20 |
| 1,1,2-Trichloroethane | 25.0 | 24.9 | | ug/L | | 100 | 70 - 130 | 0 | 20 |
| 1,1-Dichloroethane | 25.0 | 24.6 | | ug/L | | 98 | 70 - 130 | 1 | 20 |
| 1,1-Dichloroethene | 25.0 | 24.1 | | ug/L | | 96 | 70 - 130 | 1 | 20 |
| 1,1-Dichloropropene | 25.0 | 24.6 | | ug/L | | 98 | 70 - 130 | 4 | 20 |
| 1,2,3-Trichlorobenzene | 25.0 | 25.2 | | ug/L | | 101 | 70 - 130 | 0 | 20 |
| 1,2,3-Trichloropropane | 25.0 | 24.2 | | ug/L | | 97 | 70 - 130 | 0 | 20 |
| 1,2,4-Trichlorobenzene | 25.0 | 25.1 | | ug/L | | 101 | 70 - 130 | 1 | 20 |
| 1,2,4-Trimethylbenzene | 25.0 | 23.1 | | ug/L | | 92 | 70 - 130 | 6 | 20 |
| 1,2-Dibromo-3-Chloropropane | 25.0 | 22.7 | | ug/L | | 91 | 70 - 130 | 2 | 20 |
| 1,2-Dichlorobenzene | 25.0 | 23.9 | | ug/L | | 96 | 70 - 130 | 4 | 20 |
| 1,2-Dichloroethane | 25.0 | 25.9 | | ug/L | | 104 | 70 - 130 | 2 | 20 |
| 1,2-Dichloropropane | 25.0 | 25.8 | | ug/L | | 103 | 70 - 130 | 1 | 20 |
| 1,3,5-Trimethylbenzene | 25.0 | 23.1 | | ug/L | | 92 | 70 - 130 | 4 | 20 |
| 1,3-Dichlorobenzene | 25.0 | 23.8 | | ug/L | | 95 | 70 - 130 | 4 | 20 |
| 1,3-Dichloropropane | 25.0 | 24.4 | | ug/L | | 98 | 70 - 130 | 0 | 20 |
| 1,4-Dichlorobenzene | 25.0 | 23.2 | | ug/L | | 93 | 70 - 130 | 4 | 20 |
| 1,4-Dioxane | 500 | 463 | | ug/L | | 93 | 70 - 130 | 2 | 20 |
| 2,2-Dichloropropane | 25.0 | 22.8 | | ug/L | | 91 | 70 - 130 | 2 | 20 |
| 2-Butanone (MEK) | 125 | 135 | | ug/L | | 108 | 70 - 130 | 4 | 20 |
| 2-Chlorotoluene | 25.0 | 23.8 | | ug/L | | 95 | 70 - 130 | 2 | 20 |
| 2-Hexanone | 125 | 123 | | ug/L | | 99 | 70 - 130 | 1 | 20 |
| 4-Chlorotoluene | 25.0 | 21.2 | | ug/L | | 85 | 70 - 130 | 4 | 20 |
| 4-Isopropyltoluene | 25.0 | 24.0 | | ug/L | | 96 | 70 - 130 | 4 | 20 |
| 4-Methyl-2-pentanone (MIBK) | 125 | 121 | | ug/L | | 97 | 70 - 130 | 2 | 20 |
| Acetone | 125 | 126 | | ug/L | | 101 | 70 - 130 | 0 | 20 |
| Benzene | 25.0 | 24.7 | | ug/L | | 99 | 70 - 130 | 1 | 20 |
| Bromobenzene | 25.0 | 23.6 | | ug/L | | 95 | 70 - 130 | 3 | 20 |
| Bromoform | 25.0 | 21.4 | | ug/L | | 86 | 70 - 130 | 1 | 20 |
| Bromomethane | 25.0 | 30.4 | | ug/L | | 122 | 70 - 130 | 3 | 20 |
| Carbon disulfide | 25.0 | 20.4 | | ug/L | | 82 | 70 - 130 | 3 | 20 |
| Carbon tetrachloride | 25.0 | 24.7 | | ug/L | | 99 | 70 - 130 | 2 | 20 |
| Chlorobenzene | 25.0 | 23.8 | | ug/L | | 95 | 70 - 130 | 5 | 20 |
| Chlorobromomethane | 25.0 | 24.8 | | ug/L | | 99 | 70 - 130 | 2 | 20 |
| Chlorodibromomethane | 24.5 | 24.0 | | ug/L | | 98 | 70 - 130 | 2 | 20 |
| Chloroethane | 25.0 | 28.7 | | ug/L | | 115 | 70 - 130 | 1 | 20 |
| Chloroform | 25.0 | 25.0 | | ug/L | | 100 | 70 - 130 | 0 | 20 |
| Chloromethane | 25.0 | 24.6 | | ug/L | | 98 | 70 - 130 | 2 | 20 |
| cis-1,2-Dichloroethene | 25.0 | 24.2 | | ug/L | | 97 | 70 - 130 | 2 | 20 |
| cis-1,3-Dichloropropene | 25.0 | 26.2 | | ug/L | | 105 | 70 - 130 | 0 | 20 |
| Dichlorobromomethane | 25.0 | 25.6 | | ug/L | | 102 | 70 - 130 | 0 | 20 |
| Dichlorodifluoromethane | 25.0 | 23.1 | | ug/L | | 92 | 70 - 130 | 2 | 20 |
| Ethyl ether | 25.0 | 25.1 | | ug/L | | 100 | 70 - 130 | 0 | 20 |
| Ethylbenzene | 25.0 | 24.0 | | ug/L | | 96 | 70 - 130 | 1 | 20 |
| Ethylene Dibromide | 25.0 | 24.2 | | ug/L | | 97 | 70 - 130 | 2 | 20 |
| Hexachlorobutadiene | 25.0 | 24.3 | | ug/L | | 97 | 70 - 130 | 5 | 20 |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 480-175485/7**
**Matrix: Water**
**Analysis Batch: 175485**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Isopropyl ether | | | 25.0 | 26.0 | | ug/L | | 104 | 70 - 130 | 1 | 20 |
| Isopropylbenzene | | | 25.0 | 23.1 | | ug/L | | 93 | 70 - 130 | 4 | 20 |
| Methyl tert-butyl ether | | | 25.0 | 24.5 | | ug/L | | 98 | 70 - 130 | 1 | 20 |
| Methylene Chloride | | | 25.0 | 23.9 | | ug/L | | 95 | 70 - 130 | 1 | 20 |
| m-Xylene & p-Xylene | | | 25.0 | 24.0 | | ug/L | | 96 | 70 - 130 | 3 | 20 |
| Naphthalene | | | 25.0 | 25.0 | | ug/L | | 100 | 70 - 130 | 3 | 20 |
| n-Butylbenzene | | | 25.0 | 23.9 | | ug/L | | 96 | 70 - 130 | 6 | 20 |
| N-Propylbenzene | | | 25.0 | 23.3 | | ug/L | | 93 | 70 - 130 | 4 | 20 |
| o-Xylene | | | 25.0 | 23.7 | | ug/L | | 95 | 70 - 130 | 2 | 20 |
| sec-Butylbenzene | | | 25.0 | 23.5 | | ug/L | | 94 | 70 - 130 | 5 | 20 |
| Styrene | | | 25.0 | 24.1 | | ug/L | | 96 | 70 - 130 | 3 | 20 |
| Tert-amyl methyl ether | | | 25.0 | 25.9 | | ug/L | | 103 | 70 - 130 | 1 | 20 |
| Tert-butyl ethyl ether | | | 25.0 | 26.0 | | ug/L | | 104 | 70 - 130 | 2 | 20 |
| tert-Butylbenzene | | | 25.0 | 23.3 | | ug/L | | 93 | 70 - 130 | 3 | 20 |
| Tetrachloroethene | | | 25.0 | 24.5 | | ug/L | | 98 | 70 - 130 | 6 | 20 |
| Tetrahydrofuran | | | 50.0 | 66.1 | * | ug/L | | 132 | 70 - 130 | 1 | 20 |
| Toluene | | | 25.0 | 23.3 | | ug/L | | 93 | 70 - 130 | 4 | 20 |
| trans-1,2-Dichloroethene | | | 25.0 | 23.8 | | ug/L | | 95 | 70 - 130 | 1 | 20 |
| trans-1,3-Dichloropropene | | | 25.0 | 23.9 | | ug/L | | 95 | 70 - 130 | 1 | 20 |
| Trichloroethene | | | 25.0 | 24.1 | | ug/L | | 96 | 70 - 130 | 1 | 20 |
| Trichlorofluoromethane | | | 25.0 | 26.2 | | ug/L | | 105 | 70 - 130 | 3 | 20 |
| Vinyl chloride | | | 25.0 | 23.2 | | ug/L | | 93 | 70 - 130 | 3 | 20 |
| Dibromomethane | | | 25.0 | 25.6 | | ug/L | | 103 | 70 - 130 | 2 | 20 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *Toluene-d8 (Surr)* | *96* | | *70 - 130* |
| *1,2-Dichloroethane-d4 (Surr)* | *106* | | *70 - 130* |
| *4-Bromofluorobenzene (Surr)* | *96* | | *70 - 130* |

## GC/MS VOA

### Analysis Batch: 174684

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 480-57495-1 | DEP-19M-20140405-01 | Total/NA | Water | 8260C | |
| 480-57495-2 | DEP-21-20140405-01 | Total/NA | Water | 8260C | |
| 480-57495-3 | MW-261S-20140408-01 | Total/NA | Water | 8260C | |
| 480-57495-4 | MW-263M-20140408-01 | Total/NA | Water | 8260C | |
| 480-57495-5 | MW-264M-20140408-01 | Total/NA | Water | 8260C | |
| 480-57495-6 | MW-265S-20140408-01 | Total/NA | Water | 8260C | |
| 480-57495-7 | MW-265M-20140408-01 | Total/NA | Water | 8260C | |
| 480-57495-9 | MW-266Ma-20140405-01 | Total/NA | Water | 8260C | |
| 480-57495-10 | MW-266Mb-20140405-01 | Total/NA | Water | 8260C | |
| LCS 480-174684/6 | Lab Control Sample | Total/NA | Water | 8260C | |
| LCSD 480-174684/7 | Lab Control Sample Dup | Total/NA | Water | 8260C | |
| MB 480-174684/9 | Method Blank | Total/NA | Water | 8260C | |

### Analysis Batch: 174949

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 480-57495-7 - DL | MW-265M-20140408-01 | Total/NA | Water | 8260C | |
| 480-57495-8 | MW-265D-20140408-01 | Total/NA | Water | 8260C | |
| 480-57495-11 | MW-267S-20140405-01 | Total/NA | Water | 8260C | |
| 480-57495-12 | MW-267M-20140405-01 | Total/NA | Water | 8260C | |
| 480-57495-13 | MW-268S-20140407 | Total/NA | Water | 8260C | |
| 480-57495-14 | MW-268M-20140407 | Total/NA | Water | 8260C | |
| 480-57495-15 | MW-268D-20140405 | Total/NA | Water | 8260C | |
| 480-57495-16 | MW-269Ma-20140405 | Total/NA | Water | 8260C | |
| 480-57495-20 | MW-560-20140407-01 | Total/NA | Water | 8260C | |
| LCS 480-174949/5 | Lab Control Sample | Total/NA | Water | 8260C | |
| LCSD 480-174949/6 | Lab Control Sample Dup | Total/NA | Water | 8260C | |
| MB 480-174949/8 | Method Blank | Total/NA | Water | 8260C | |

### Analysis Batch: 175074

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 480-57495-22 | MW-562-20140407-01 | Total/NA | Water | 8260C | |
| 480-57495-23 | MW-563-20140407-01 | Total/NA | Water | 8260C | |
| 480-57495-27 | REW-6-20140406-01 | Total/NA | Water | 8260C | |
| 480-57495-28 | REW-7-20140406-01 | Total/NA | Water | 8260C | |
| 480-57495-29 | REW-8-20140406-01 | Total/NA | Water | 8260C | |
| 480-57495-30 | REW-9-20140406-01 | Total/NA | Water | 8260C | |
| 480-57495-31 | REW-10-20140406-01 | Total/NA | Water | 8260C | |
| 480-57495-32 | REW-11-20140406-01 | Total/NA | Water | 8260C | |
| 480-57495-33 | REW-12-20140406-01 | Total/NA | Water | 8260C | |
| 480-57495-33 MS | REW-12-20140406-01 | Total/NA | Water | 8260C | |
| 480-57495-33 MSD | REW-12-20140406-01 | Total/NA | Water | 8260C | |
| 480-57495-34 | DupX1-20140405-01 | Total/NA | Water | 8260C | |
| 480-57495-35 | DupX2-20140406-01 | Total/NA | Water | 8260C | |
| 480-57495-36 | DupX3-20140408-01 | Total/NA | Water | 8260C | |
| LCS 480-175074/5 | Lab Control Sample | Total/NA | Water | 8260C | |
| LCSD 480-175074/6 | Lab Control Sample Dup | Total/NA | Water | 8260C | |
| MB 480-175074/8 | Method Blank | Total/NA | Water | 8260C | |

### Analysis Batch: 175163

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 480-57495-17 | MW-551-20140408-01 | Total/NA | Water | 8260C | |

## GC/MS VOA (Continued)

### Analysis Batch: 175163 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 480-57495-17 MS | MW-551-20140408-01 | Total/NA | Water | 8260C | |
| 480-57495-17 MSD | MW-551-20140408-01 | Total/NA | Water | 8260C | |
| 480-57495-18 | MW-552-20140407-01 | Total/NA | Water | 8260C | |
| 480-57495-19 | MW-553-20140407-01 | Total/NA | Water | 8260C | |
| 480-57495-20 - DL | MW-560-20140407-01 | Total/NA | Water | 8260C | |
| 480-57495-21 | MW-561-20140407-01 | Total/NA | Water | 8260C | |
| 480-57495-22 - DL | MW-562-20140407-01 | Total/NA | Water | 8260C | |
| 480-57495-24 | REW-1-20140406-01 | Total/NA | Water | 8260C | |
| 480-57495-25 | REW-4-20140406-01 | Total/NA | Water | 8260C | |
| 480-57495-26 | REW-5-20140406-01 | Total/NA | Water | 8260C | |
| 480-57495-35 - DL | DupX2-20140406-01 | Total/NA | Water | 8260C | |
| 480-57495-37 | Trip Blanks | Total/NA | Water | 8260C | |
| LCS 480-175163/5 | Lab Control Sample | Total/NA | Water | 8260C | |
| LCSD 480-175163/6 | Lab Control Sample Dup | Total/NA | Water | 8260C | |
| MB 480-175163/8 | Method Blank | Total/NA | Water | 8260C | |

### Analysis Batch: 175364

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 480-57495-3 | MW-261S-20140408-01 | Total/NA | Water | 8260B SIM | |
| 480-57495-7 | MW-265M-20140408-01 | Total/NA | Water | 8260B SIM | |
| 480-57495-9 | MW-266Ma-20140405-01 | Total/NA | Water | 8260B SIM | |
| 480-57495-11 | MW-267S-20140405-01 | Total/NA | Water | 8260B SIM | |
| 480-57495-12 | MW-267M-20140405-01 | Total/NA | Water | 8260B SIM | |
| 480-57495-13 | MW-268S-20140407 | Total/NA | Water | 8260B SIM | |
| 480-57495-14 | MW-268M-20140407 | Total/NA | Water | 8260B SIM | |
| 480-57495-16 | MW-269Ma-20140405 | Total/NA | Water | 8260B SIM | |
| 480-57495-18 | MW-552-20140407-01 | Total/NA | Water | 8260B SIM | |
| 480-57495-36 | DupX3-20140408-01 | Total/NA | Water | 8260B SIM | |
| LCS 480-175364/4 | Lab Control Sample | Total/NA | Water | 8260B SIM | |
| LCSD 480-175364/5 | Lab Control Sample Dup | Total/NA | Water | 8260B SIM | |
| MB 480-175364/6 | Method Blank | Total/NA | Water | 8260B SIM | |

### Analysis Batch: 175485

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 480-57495-36 - DL | DupX3-20140408-01 | Total/NA | Water | 8260C | |
| LCS 480-175485/6 | Lab Control Sample | Total/NA | Water | 8260C | |
| LCSD 480-175485/7 | Lab Control Sample Dup | Total/NA | Water | 8260C | |
| MB 480-175485/9 | Method Blank | Total/NA | Water | 8260C | |

# Lab Chronicle

Client: Innovative Engineering Solutions, Inc
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57495-1

## Client Sample ID: DEP-19M-20140405-01 — Lab Sample ID: 480-57495-1

**Date Collected: 04/05/14 10:30** — **Matrix: Water**
**Date Received: 04/09/14 01:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 174684 | 04/09/14 17:26 | LCH | TAL BUF |

## Client Sample ID: DEP-21-20140405-01 — Lab Sample ID: 480-57495-2

**Date Collected: 04/05/14 11:25** — **Matrix: Water**
**Date Received: 04/09/14 01:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 174684 | 04/09/14 17:50 | LCH | TAL BUF |

## Client Sample ID: MW-261S-20140408-01 — Lab Sample ID: 480-57495-3

**Date Collected: 04/08/14 07:20** — **Matrix: Water**
**Date Received: 04/09/14 01:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260B SIM | | 2 | 175364 | 04/11/14 23:36 | CDC | TAL BUF |
| Total/NA | Analysis | 8260C | | 50 | 174684 | 04/09/14 18:14 | LCH | TAL BUF |

## Client Sample ID: MW-263M-20140408-01 — Lab Sample ID: 480-57495-4

**Date Collected: 04/08/14 11:45** — **Matrix: Water**
**Date Received: 04/09/14 01:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 174684 | 04/09/14 18:37 | LCH | TAL BUF |

## Client Sample ID: MW-264M-20140408-01 — Lab Sample ID: 480-57495-5

**Date Collected: 04/08/14 10:30** — **Matrix: Water**
**Date Received: 04/09/14 01:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 174684 | 04/09/14 19:01 | LCH | TAL BUF |

## Client Sample ID: MW-265S-20140408-01 — Lab Sample ID: 480-57495-6

**Date Collected: 04/08/14 09:25** — **Matrix: Water**
**Date Received: 04/09/14 01:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 174684 | 04/09/14 19:25 | LCH | TAL BUF |

# Lab Chronicle

Client: Innovative Engineering Solutions, Inc
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57495-1

## Client Sample ID: MW-265M-20140408-01 — Lab Sample ID: 480-57495-7

**Date Collected: 04/08/14 08:45** — **Matrix: Water**
**Date Received: 04/09/14 01:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260B SIM | | 2 | 175364 | 04/12/14 00:00 | CDC | TAL BUF |
| Total/NA | Analysis | 8260C | DL | 5 | 174949 | 04/10/14 15:48 | NMD1 | TAL BUF |
| Total/NA | Analysis | 8260C | | 1 | 174684 | 04/09/14 19:49 | LCH | TAL BUF |

## Client Sample ID: MW-265D-20140408-01 — Lab Sample ID: 480-57495-8

**Date Collected: 04/08/14 08:15** — **Matrix: Water**
**Date Received: 04/09/14 01:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 174949 | 04/10/14 16:14 | NMD1 | TAL BUF |

## Client Sample ID: MW-266Ma-20140405-01 — Lab Sample ID: 480-57495-9

**Date Collected: 04/05/14 14:50** — **Matrix: Water**
**Date Received: 04/09/14 01:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260B SIM | | 1 | 175364 | 04/12/14 00:23 | CDC | TAL BUF |
| Total/NA | Analysis | 8260C | | 1 | 174684 | 04/09/14 20:37 | LCH | TAL BUF |

## Client Sample ID: MW-266Mb-20140405-01 — Lab Sample ID: 480-57495-10

**Date Collected: 04/05/14 15:20** — **Matrix: Water**
**Date Received: 04/09/14 01:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 174684 | 04/09/14 21:00 | LCH | TAL BUF |

## Client Sample ID: MW-267S-20140405-01 — Lab Sample ID: 480-57495-11

**Date Collected: 04/05/14 13:20** — **Matrix: Water**
**Date Received: 04/09/14 01:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260B SIM | | 2 | 175364 | 04/12/14 00:48 | CDC | TAL BUF |
| Total/NA | Analysis | 8260C | | 5 | 174949 | 04/10/14 16:39 | NMD1 | TAL BUF |

## Client Sample ID: MW-267M-20140405-01 — Lab Sample ID: 480-57495-12

**Date Collected: 04/05/14 12:50** — **Matrix: Water**
**Date Received: 04/09/14 01:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260B SIM | | 2 | 175364 | 04/12/14 01:11 | CDC | TAL BUF |
| Total/NA | Analysis | 8260C | | 10 | 174949 | 04/10/14 17:04 | NMD1 | TAL BUF |

# Lab Chronicle

Client: Innovative Engineering Solutions, Inc
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57495-1

## Client Sample ID: MW-268S-20140407 — Lab Sample ID: 480-57495-13

**Date Collected: 04/07/14 08:45** — **Matrix: Water**
**Date Received: 04/09/14 01:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260B SIM | | 1 | 175364 | 04/12/14 01:36 | CDC | TAL BUF |
| Total/NA | Analysis | 8260C | | 1 | 174949 | 04/10/14 17:29 | NMD1 | TAL BUF |

## Client Sample ID: MW-268M-20140407 — Lab Sample ID: 480-57495-14

**Date Collected: 04/07/14 09:25** — **Matrix: Water**
**Date Received: 04/09/14 01:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260B SIM | | 1 | 175364 | 04/12/14 02:00 | CDC | TAL BUF |
| Total/NA | Analysis | 8260C | | 40 | 174949 | 04/10/14 17:54 | NMD1 | TAL BUF |

## Client Sample ID: MW-268D-20140405 — Lab Sample ID: 480-57495-15

**Date Collected: 04/05/14 12:20** — **Matrix: Water**
**Date Received: 04/09/14 01:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 174949 | 04/10/14 18:19 | NMD1 | TAL BUF |

## Client Sample ID: MW-269Ma-20140405 — Lab Sample ID: 480-57495-16

**Date Collected: 04/05/14 14:10** — **Matrix: Water**
**Date Received: 04/09/14 01:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260B SIM | | 1 | 175364 | 04/12/14 02:24 | CDC | TAL BUF |
| Total/NA | Analysis | 8260C | | 1 | 174949 | 04/10/14 18:44 | NMD1 | TAL BUF |

## Client Sample ID: MW-551-20140408-01 — Lab Sample ID: 480-57495-17

**Date Collected: 04/08/14 12:05** — **Matrix: Water**
**Date Received: 04/09/14 01:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 40 | 175163 | 04/11/14 14:09 | NMD1 | TAL BUF |

## Client Sample ID: MW-552-20140407-01 — Lab Sample ID: 480-57495-18

**Date Collected: 04/07/14 15:25** — **Matrix: Water**
**Date Received: 04/09/14 01:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260B SIM | | 2 | 175364 | 04/12/14 02:48 | CDC | TAL BUF |
| Total/NA | Analysis | 8260C | | 1 | 175163 | 04/11/14 14:35 | NMD1 | TAL BUF |

# Lab Chronicle

Client: Innovative Engineering Solutions, Inc
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57495-1

## Client Sample ID: MW-553-20140407-01 — Lab Sample ID: 480-57495-19

**Date Collected: 04/07/14 14:30** — **Matrix: Water**
**Date Received: 04/09/14 01:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 175163 | 04/11/14 15:00 | NMD1 | TAL BUF |

## Client Sample ID: MW-560-20140407-01 — Lab Sample ID: 480-57495-20

**Date Collected: 04/07/14 11:10** — **Matrix: Water**
**Date Received: 04/09/14 01:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 174949 | 04/10/14 20:26 | NMD1 | TAL BUF |
| Total/NA | Analysis | 8260C | DL | 4 | 175163 | 04/11/14 15:26 | NMD1 | TAL BUF |

## Client Sample ID: MW-561-20140407-01 — Lab Sample ID: 480-57495-21

**Date Collected: 04/07/14 12:00** — **Matrix: Water**
**Date Received: 04/09/14 01:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 10 | 175163 | 04/11/14 15:51 | NMD1 | TAL BUF |

## Client Sample ID: MW-562-20140407-01 — Lab Sample ID: 480-57495-22

**Date Collected: 04/07/14 13:30** — **Matrix: Water**
**Date Received: 04/09/14 01:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 2 | 175074 | 04/11/14 02:04 | LCH | TAL BUF |
| Total/NA | Analysis | 8260C | DL | 4 | 175163 | 04/11/14 16:16 | NMD1 | TAL BUF |

## Client Sample ID: MW-563-20140407-01 — Lab Sample ID: 480-57495-23

**Date Collected: 04/07/14 10:20** — **Matrix: Water**
**Date Received: 04/09/14 01:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 4 | 175074 | 04/11/14 02:29 | LCH | TAL BUF |

## Client Sample ID: REW-1-20140406-01 — Lab Sample ID: 480-57495-24

**Date Collected: 04/06/14 13:45** — **Matrix: Water**
**Date Received: 04/09/14 01:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 5 | 175163 | 04/11/14 16:42 | NMD1 | TAL BUF |

# Lab Chronicle

Client: Innovative Engineering Solutions, Inc
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57495-1

## Client Sample ID: REW-4-20140406-01 — Lab Sample ID: 480-57495-25

**Date Collected: 04/06/14 15:20** — **Matrix: Water**
**Date Received: 04/09/14 01:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 175163 | 04/11/14 17:07 | NMD1 | TAL BUF |

## Client Sample ID: REW-5-20140406-01 — Lab Sample ID: 480-57495-26

**Date Collected: 04/06/14 14:30** — **Matrix: Water**
**Date Received: 04/09/14 01:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 175163 | 04/11/14 17:33 | NMD1 | TAL BUF |

## Client Sample ID: REW-6-20140406-01 — Lab Sample ID: 480-57495-27

**Date Collected: 04/06/14 09:05** — **Matrix: Water**
**Date Received: 04/09/14 01:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 5 | 175074 | 04/11/14 04:10 | LCH | TAL BUF |

## Client Sample ID: REW-7-20140406-01 — Lab Sample ID: 480-57495-28

**Date Collected: 04/06/14 09:35** — **Matrix: Water**
**Date Received: 04/09/14 01:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 10 | 175074 | 04/11/14 04:36 | LCH | TAL BUF |

## Client Sample ID: REW-8-20140406-01 — Lab Sample ID: 480-57495-29

**Date Collected: 04/06/14 10:45** — **Matrix: Water**
**Date Received: 04/09/14 01:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 175074 | 04/11/14 05:01 | LCH | TAL BUF |

## Client Sample ID: REW-9-20140406-01 — Lab Sample ID: 480-57495-30

**Date Collected: 04/06/14 11:40** — **Matrix: Water**
**Date Received: 04/09/14 01:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 175074 | 04/11/14 05:26 | LCH | TAL BUF |

# Lab Chronicle

Client: Innovative Engineering Solutions, Inc
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57495-1

## Client Sample ID: REW-10-20140406-01 — Lab Sample ID: 480-57495-31

**Date Collected: 04/06/14 12:25** — **Matrix: Water**
**Date Received: 04/09/14 01:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 175074 | 04/11/14 05:51 | LCH | TAL BUF |

## Client Sample ID: REW-11-20140406-01 — Lab Sample ID: 480-57495-32

**Date Collected: 04/06/14 08:15** — **Matrix: Water**
**Date Received: 04/09/14 01:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 25 | 175074 | 04/11/14 06:16 | LCH | TAL BUF |

## Client Sample ID: REW-12-20140406-01 — Lab Sample ID: 480-57495-33

**Date Collected: 04/06/14 13:10** — **Matrix: Water**
**Date Received: 04/09/14 01:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 4 | 175074 | 04/11/14 06:42 | LCH | TAL BUF |

## Client Sample ID: DupX1-20140405-01 — Lab Sample ID: 480-57495-34

**Date Collected: 04/05/14 00:00** — **Matrix: Water**
**Date Received: 04/09/14 01:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 175074 | 04/11/14 07:06 | LCH | TAL BUF |

## Client Sample ID: DupX2-20140406-01 — Lab Sample ID: 480-57495-35

**Date Collected: 04/06/14 00:00** — **Matrix: Water**
**Date Received: 04/09/14 01:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 175074 | 04/11/14 07:31 | LCH | TAL BUF |
| Total/NA | Analysis | 8260C | DL | 25 | 175163 | 04/11/14 17:58 | NMD1 | TAL BUF |

## Client Sample ID: DupX3-20140408-01 — Lab Sample ID: 480-57495-36

**Date Collected: 04/08/14 00:00** — **Matrix: Water**
**Date Received: 04/09/14 01:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260B SIM | | 2 | 175364 | 04/12/14 03:12 | CDC | TAL BUF |
| Total/NA | Analysis | 8260C | | 1 | 175074 | 04/11/14 07:57 | LCH | TAL BUF |
| Total/NA | Analysis | 8260C | DL | 40 | 175485 | 04/14/14 00:11 | LCH | TAL BUF |

# Lab Chronicle

Client: Innovative Engineering Solutions, Inc
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57495-1

## Client Sample ID: Trip Blanks

**Lab Sample ID: 480-57495-37**

**Date Collected: 04/08/14 00:00**

**Matrix: Water**

**Date Received: 04/09/14 01:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 175163 | 04/11/14 13:43 | NMD1 | TAL BUF |

**Laboratory References:**

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

# Certification Summary

Client: Innovative Engineering Solutions, Inc
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57495-1

## Laboratory: TestAmerica Buffalo

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

| Authority | Program | EPA Region | Certification ID | Expiration Date |
|---|---|---|---|---|
| Arkansas DEQ | State Program | 6 | 88-0686 | 07-06-14 |
| California | State Program | 9 | 1169CA | 09-30-14 |
| Connecticut | State Program | 1 | PH-0568 | 09-30-14 |
| Florida | NELAP | 4 | E87672 | 06-30-14 |
| Georgia | State Program | 4 | N/A | 03-31-15 |
| Illinois | NELAP | 5 | 200003 | 09-30-14 |
| Iowa | State Program | 7 | 374 | 03-01-15 |
| Kansas | NELAP | 7 | E-10187 | 01-31-15 * |
| Kentucky (DW) | State Program | 4 | 90029 | 12-31-14 |
| Kentucky (UST) | State Program | 4 | 30 | 03-31-15 |
| Louisiana | NELAP | 6 | 02031 | 06-30-14 |
| Maine | State Program | 1 | NY00044 | 12-04-14 |
| Maryland | State Program | 3 | 294 | 03-31-15 |
| Massachusetts | State Program | 1 | M-NY044 | 06-30-14 |
| Michigan | State Program | 5 | 9937 | 03-31-15 |
| Minnesota | NELAP | 5 | 036-999-337 | 12-31-14 |
| New Hampshire | NELAP | 1 | 2337 | 11-17-14 |
| New Jersey | NELAP | 2 | NY455 | 06-30-14 |
| New York | NELAP | 2 | 10026 | 03-31-15 |
| North Dakota | State Program | 8 | R-176 | 03-31-14 * |
| Oklahoma | State Program | 6 | 9421 | 08-31-14 |
| Oregon | NELAP | 10 | NY200003 | 06-09-14 |
| Pennsylvania | NELAP | 3 | 68-00281 | 07-31-14 |
| Rhode Island | State Program | 1 | LAO00328 | 12-30-14 |
| Tennessee | State Program | 4 | TN02970 | 03-31-15 |
| Texas | NELAP | 6 | T104704412-11-2 | 07-31-14 |
| USDA | Federal | | P330-11-00386 | 11-22-14 |
| Virginia | NELAP | 3 | 460185 | 09-14-14 |
| Washington | State Program | 10 | C784 | 02-10-15 |
| West Virginia DEP | State Program | 3 | 252 | 05-31-14 |
| Wisconsin | State Program | 5 | 998310390 | 08-31-14 |

* Expired certification is currently pending renewal and is considered valid.

# Method Summary

Client: Innovative Engineering Solutions, Inc
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57495-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 8260B SIM | Volatile Organic Compounds (GC/MS) | SW846 | TAL BUF |
| 8260C | Volatile Organic Compounds (GC/MS) | MA DEP | TAL BUF |

**Protocol References:**

MA DEP = Massachusetts Department Of Environmental Protection

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

# Sample Summary

Client: Innovative Engineering Solutions, Inc
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57495-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 480-57495-1 | DEP-19M-20140405-01 | Water | 04/05/14 10:30 | 04/09/14 01:30 |
| 480-57495-2 | DEP-21-20140405-01 | Water | 04/05/14 11:25 | 04/09/14 01:30 |
| 480-57495-3 | MW-261S-20140408-01 | Water | 04/08/14 07:20 | 04/09/14 01:30 |
| 480-57495-4 | MW-263M-20140408-01 | Water | 04/08/14 11:45 | 04/09/14 01:30 |
| 480-57495-5 | MW-264M-20140408-01 | Water | 04/08/14 10:30 | 04/09/14 01:30 |
| 480-57495-6 | MW-265S-20140408-01 | Water | 04/08/14 09:25 | 04/09/14 01:30 |
| 480-57495-7 | MW-265M-20140408-01 | Water | 04/08/14 08:45 | 04/09/14 01:30 |
| 480-57495-8 | MW-265D-20140408-01 | Water | 04/08/14 08:15 | 04/09/14 01:30 |
| 480-57495-9 | MW-266Ma-20140405-01 | Water | 04/05/14 14:50 | 04/09/14 01:30 |
| 480-57495-10 | MW-266Mb-20140405-01 | Water | 04/05/14 15:20 | 04/09/14 01:30 |
| 480-57495-11 | MW-267S-20140405-01 | Water | 04/05/14 13:20 | 04/09/14 01:30 |
| 480-57495-12 | MW-267M-20140405-01 | Water | 04/05/14 12:50 | 04/09/14 01:30 |
| 480-57495-13 | MW-268S-20140407 | Water | 04/07/14 08:45 | 04/09/14 01:30 |
| 480-57495-14 | MW-268M-20140407 | Water | 04/07/14 09:25 | 04/09/14 01:30 |
| 480-57495-15 | MW-268D-20140405 | Water | 04/05/14 12:20 | 04/09/14 01:30 |
| 480-57495-16 | MW-269Ma-20140405 | Water | 04/05/14 14:10 | 04/09/14 01:30 |
| 480-57495-17 | MW-551-20140408-01 | Water | 04/08/14 12:05 | 04/09/14 01:30 |
| 480-57495-18 | MW-552-20140407-01 | Water | 04/07/14 15:25 | 04/09/14 01:30 |
| 480-57495-19 | MW-553-20140407-01 | Water | 04/07/14 14:30 | 04/09/14 01:30 |
| 480-57495-20 | MW-560-20140407-01 | Water | 04/07/14 11:10 | 04/09/14 01:30 |
| 480-57495-21 | MW-561-20140407-01 | Water | 04/07/14 12:00 | 04/09/14 01:30 |
| 480-57495-22 | MW-562-20140407-01 | Water | 04/07/14 13:30 | 04/09/14 01:30 |
| 480-57495-23 | MW-563-20140407-01 | Water | 04/07/14 10:20 | 04/09/14 01:30 |
| 480-57495-24 | REW-1-20140406-01 | Water | 04/06/14 13:45 | 04/09/14 01:30 |
| 480-57495-25 | REW-4-20140406-01 | Water | 04/06/14 15:20 | 04/09/14 01:30 |
| 480-57495-26 | REW-5-20140406-01 | Water | 04/06/14 14:30 | 04/09/14 01:30 |
| 480-57495-27 | REW-6-20140406-01 | Water | 04/06/14 09:05 | 04/09/14 01:30 |
| 480-57495-28 | REW-7-20140406-01 | Water | 04/06/14 09:35 | 04/09/14 01:30 |
| 480-57495-29 | REW-8-20140406-01 | Water | 04/06/14 10:45 | 04/09/14 01:30 |
| 480-57495-30 | REW-9-20140406-01 | Water | 04/06/14 11:40 | 04/09/14 01:30 |
| 480-57495-31 | REW-10-20140406-01 | Water | 04/06/14 12:25 | 04/09/14 01:30 |
| 480-57495-32 | REW-11-20140406-01 | Water | 04/06/14 08:15 | 04/09/14 01:30 |
| 480-57495-33 | REW-12-20140406-01 | Water | 04/06/14 13:10 | 04/09/14 01:30 |
| 480-57495-34 | DupX1-20140405-01 | Water | 04/05/14 00:00 | 04/09/14 01:30 |
| 480-57495-35 | DupX2-20140406-01 | Water | 04/06/14 00:00 | 04/09/14 01:30 |
| 480-57495-36 | DupX3-20140408-01 | Water | 04/08/14 00:00 | 04/09/14 01:30 |
| 480-57495-37 | Trip Blanks | Water | 04/08/14 00:00 | 04/09/14 01:30 |

# Login Sample Receipt Checklist

Client: Innovative Engineering Solutions, Inc

Job Number: 480-57495-1

**Login Number: 57495**

**List Source: TestAmerica Buffalo**

**List Number: 1**

**Creator: Wienke, Robert K**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity either was not measured or, if measured, is at or below background | True | |
| The cooler's custody seal, if present, is intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the sample IDs on the containers and the COC. | True | |
| Samples are received within Holding Time. | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified | N/A | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter. | True | |
| If necessary, staff have been informed of any short hold time or quick TAT needs | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Sampling Company provided. | True | |
| Samples received within 48 hours of sampling. | True | |
| Samples requiring field filtration have been filtered in the field. | N/A | |
| Chlorine Residual checked. | N/A | |

# Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☒

480-57495 Chain of Custody

ica L TESTING

TAL-4124 (1007)

| Client | Project Manager | Date | Chain of Custody Number |
|---|---|---|---|
| Innovative Engineering Solutions Inc | Vicki Phrisner | 4/8/14 | 261779 |

| Address | Telephone Number (Area Code)/Fax Number | Lab Number | Page 1 of 4 |
|---|---|---|---|
| 25 Spring St | 508-668-0033 / 5173 | | |

| City | State | Zip Code | Site Contact | Lab Contact |
|---|---|---|---|---|
| Walpole | MA | 02081 | Dave Jones | |

| Project Name and Location (State) | Carrier/Waybill Number |
|---|---|
| Raytheon Wayland / Wayland MA | |

Contract/Purchase Order/Quote No.: RA-008

Analysis (Attach list if more space is needed): 8260B, 8260SIM

Special Instructions/ Conditions of Receipt: Note: detection limit for dioxane must be at least 3 ppb

| Sample I.D. No. and Description (Containers for each sample may be combined on one line) | Date | Time | Matrix: Air | Aqueous | Sed. | Soil | Containers & Preservatives: Unpres. | H2SO4 | HNO3 | HCl | NaOH | ZnAc/NaOH | 8260B | 8260SIM |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DEP-19m-20140405-01 | 4/5/14 | 1030 | | X | | | | | | 3 | | | X | |
| DEP-21-20140405-01 | 4/5/14 | 1125 | | X | | | | | | 3 | | | X | |
| MW-261S-20140408-01 | 4/8/14 | 0720 | | X | | | | | | 5 | | | X | X |
| MW-263M-20140408-01 | 4/8/14 | 1145 | | X | | | | | | 3 | | | X | |
| MW-264M-20140408-01 | 4/8/14 | 1030 | | X | | | | | | 3 | | | X | |
| MW-265S-20140408-01 | 4/8/14 | ~~0805~~ 0925 | | X | | | | | | 3 | | | X | |
| MW-263M-20140408-01 | 4/8/14 | 0845 | | X | | | | | | 5 | | | X | X |
| MW-265D-20140408-01 | 4/8/14 | 0815 | | X | | | | | | 3 | | | X | |
| MW-266Mb-20140405-01 | 4/5/14 | 1450 | | X | | | | | | 5 | | | X | X |
| MW-266Mb-20140405-01 | 4/5/14 | 1520 | | X | | | | | | 3 | | | X | |
| MW-267S-20140405-01 | 4/5/14 | 1320 | | X | | | | | | 5 | | | X | X |
| MW-267M-20140405-01 | 4/5/14 | 1250 | | X | | | | | | 5 | | | X | X |

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☒ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

| | Date | Time | | Date | Time |
|---|---|---|---|---|---|
| 1. Relinquished By | 4/8/14 | 1300 | 1. Received By | 4/8/14 | 1300 |
| 2. Relinquished By | 4/8/4 | 1630 | 2. Received By TAL | 4-8-14 | 0130 |
| 3. Relinquished By | | | 3. Received By | | |

Comments: 2, 3, 2, (#1)

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

# Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☒

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1007)

| Client | Project Manager | Date | Chain of Custody Number |
|---|---|---|---|
| Innovative Engineering Solutions Inc | Vicki Parsons | 4/8/14 | 261780 |
| **Address** | **Telephone Number (Area Code)/Fax Number** | **Lab Number** | **Page 2 of 4** |
| 25 Spring St | 508-668-0033 / 5175 | | |

| City | State | Zip Code | Site Contact | Lab Contact |
|---|---|---|---|---|
| Walpole | MA | 02081 | Dave Jones | |

| Project Name and Location (State) | Carrier/Waybill Number |
|---|---|
| Raytheon Wayland, Wayland MA | |

Contract/Purchase Order/Quote No.: RA-008

| Sample I.D. No. and Description (Containers for each sample may be combined on one line) | Date | Time | Matrix: Air | Aqueous | Sed. | Soil | Containers & Preservatives: Unpres. | H2SO4 | HNO3 | HCl | NaOH | ZnAc/NaOH | Analysis: 8260B | 8260SIM | Special Instructions/ Conditions of Receipt |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-368S-20140407 -01 | 4/7/14 | 0845 | | X | | | | | | 5 | | | X | X | Note: detection limit for dioxane must be at least 3 ppb. |
| MW-368M-20140407 -01 | 4/7/14 | 0925 | | X | | | | | | 5 | | | X | X | |
| MW-368D-20140405 -01 | 4/5/14 | 1320 | | X | | | | | | 3 | | | X | | |
| MW-369MW-20140405 -01 | 4/5/14 | 1410 | | X | | | | | | 5 | | | X | X | |
| MW-551-20140408 -01 | 4/8/14 | 1205 | | X | | | | | | 3 | | | X | | |
| MW-552-20140407 -01 | 4/7/14 | 1525 | | X | | | | | | 5 | | | X | X | |
| MW-553-20140407 -01 | 4/7/14 | 1430 | | X | | | | | | 3 | | | X | | |
| MW-560-20140407 -01 | 4/7/14 | 1110 | | X | | | | | | 3 | | | X | | |
| MW-561-20140407 -01 | 4/7/14 | 1200 | | X | | | | | | 3 | | | X | | |
| MW-562-20140407 -01 | 4/7/14 | 1330 | | X | | | | | | 3 | | | X | | |
| MW-563-20140407 -01 | 4/7/14 | 1020 | | X | | | | | | 3 | | | X | | |
| REW-1-20140406 -01 | 4/06/14 | 1345 | | X | | | | | | 3 | | | X | | |

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☒ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

| | Date | Time | | Date | Time |
|---|---|---|---|---|---|
| 1. Relinquished By: 4/8/14 | 4/8/14 | 1300 | 1. Received By: | 4/8/14 | 1300 |
| 2. Relinquished By: | 4/8/14 | 1628 | 2. Received By: TAL | 4-9-14 | 0130 |
| 3. Relinquished By: | | | 3. Received By: | | |

Comments: 2.3, 2.1 #1

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

# Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☒

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1007)

| Client | Project Manager | Date | Chain of Custody Number |
|---|---|---|---|
| Innovative Engineering Solutions Inc | Vicki Parsons | 4/8/14 | 261784 |
| **Address** | **Telephone Number (Area Code)/Fax Number** | **Lab Number** | **Page 3 of 4** |
| 25 Spring St | 508-668-0033 / 5175 | | |
| **City / State / Zip Code** | **Site Contact / Lab Contact** | | |
| Wellesley / MA / 02081 | Dave Jones | | |
| **Project Name and Location (State)** | **Carrier/Waybill Number** | | |
| Raytheon Wayland / Wayland MA | | | |
| **Contract/Purchase Order/Quote No.** | | | |
| RA-008 | | | |

| Sample I.D. No. and Description (Containers for each sample may be combined on one line) | Date | Time | Air | Aqueous | Sed. | Soil | Unpres. | H2SO4 | HNO3 | HCl | NaOH | ZnAc/NaOH | Sample Disposal | Wipe Sample | Special Instructions/ Conditions of Receipt |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| REW-4-20140406 -01 | 4/6/14 | 1520 | | X | | | | | | 3 | | | X | | Note: Lab detection limit for dioxane must be at least 3 ppb. |
| REW-5-20140406 -01 | 4/6/14 | 1430 | | X | | | | | | 3 | | | X | | |
| REW-6-20140406 -01 | 4/6/14 | 0905 | | X | | | | | | 3 | | | X | | |
| REW-7-20140406 -01 | 4/6/14 | 0935 | | X | | | | | | 3 | | | X | | |
| REW-8-20140406 -01 | 4/6/14 | 1045 | | X | | | | | | 3 | | | X | | |
| REW-9-20140406 -01 | 4/6/14 | 1140 | | X | | | | | | 3 | | | X | | |
| REW-10-20140406 -01 | 4/6/14 | 1225 | | X | | | | | | 3 | | | X | | |
| REW-11-20140406 -01 | 4/6/14 | 0815 | | X | | | | | | 3 | | | X | | |
| REW-12-20140406 -01 | 4/6/14 | 1310 | | X | | | | | | 3 | | | X | | |
| DupX1-20140405 -01 | — | — | | X | | | | | | 3 | | | X | | |
| DupX2-20140406 -01 | — | — | | X | | | | | | 3 | | | X | | |
| DupX3-20140408 -01 | — | — | | X | | | | | | 5 | | | X | X | |

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☒ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

| | Date | Time | | Date | Time |
|---|---|---|---|---|---|
| 1. Relinquished By | 4/8/14 | 1300 | 1. Received By | 4/8/14 | 1300 |
| 2. Relinquished By | 4/8/14 | 1638 | 2. Received By TAL | 4-9-14 | 0130 |
| 3. Relinquished By | | | 3. Received By | | |

Comments: 1.3, 2.1 #1

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☒

TAL-4124 (1007)

| | | | |
|---|---|---|---|
| Client: Innovative Engineering Solutions Inc | Project Manager: Vicki Perrino | Date: 4/8/14 | Chain of Custody Number: 261782 |
| Address: 25 Spring St | Telephone Number (Area Code)/Fax Number: 508-668-0033 / 5175 | Lab Number | Page 4 of 4 |
| City: Walpole; State: MA; Zip Code: 02081 | Site Contact: Dany Jones | Lab Contact | |
| Project Name and Location (State): Raytheon Wayland / Wayland MA | Carrier/Waybill Number | | |
| Contract/Purchase Order/Quote No.: RA-008 | | | |

| Sample I.D. No. and Description (Containers for each sample may be combined on one line) | Date | Time | Matrix: Air | Aqueous | Sed. | Soil | | Containers & Preservatives: Unpres. | H2SO4 | HNO3 | HCl | NaOH | ZnAc/NaOH | | Analysis (Attach list if more space is needed): 8260B | Special Instructions/ Conditions of Receipt |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trip Blanks | — | — | | X | | | | | | | X | | | | X | Note: detection limit for dioxane must be at least 3 ppb |

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☒ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

| | Date | Time | | Date | Time |
|---|---|---|---|---|---|
| 1. Relinquished By | 4/8/14 | 1300 | 1. Received By | 4/8/14 | 130 |
| 2. Relinquished By | 4/8/14 | 1630 | 2. Received By | 4.9.14 | 0830 |
| 3. Relinquished By | | | 3. Received By | | |

Comments: 2.3, 2.1 #1

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Report Date:
12-Feb-14 17:14

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

- [x] Final Report
- [ ] Re-Issued Report
- [ ] Revised Report

# *Laboratory Report*

Innovative Engineering Solutions, Inc.
25 Spring Street
Walpole, MA 02081

Attn: Sami Fam

Work Order: N0134
Project : Raytheon - Wayland
Project #:

| Laboratory ID | Client Sample ID | Matrix | Date Sampled | Date Received |
|---|---|---|---|---|
| N0134-01 | MW-267S-20140130-01 | Aqueous | 30-Jan-14 12:50 | 31-Jan-14 11:08 |
| N0134-02 | MW-267M-20140130-01 | Aqueous | 30-Jan-14 12:10 | 31-Jan-14 11:08 |
| N0134-03 | MW-268M-20140130-01 | Aqueous | 30-Jan-14 11:25 | 31-Jan-14 11:08 |
| N0134-04 | MW-561-20140130-01 | Aqueous | 30-Jan-14 09:10 | 31-Jan-14 11:08 |
| N0134-05 | MW-553-20140130-01 | Aqueous | 30-Jan-14 10:30 | 31-Jan-14 11:08 |
| N0134-06 | REW-6-20140130-01 | Aqueous | 30-Jan-14 09:55 | 31-Jan-14 11:08 |
| N0134-07 | REW-7-20140130-01 | Aqueous | 30-Jan-14 10:50 | 31-Jan-14 11:08 |
| N0134-08 | REW-8-20140130-01 | Aqueous | 30-Jan-14 12:55 | 31-Jan-14 11:08 |
| N0134-09 | REW-9-20140130-01 | Aqueous | 30-Jan-14 12:15 | 31-Jan-14 11:08 |
| N0134-10 | REW-12-20140130-01 | Aqueous | 30-Jan-14 09:10 | 31-Jan-14 11:08 |
| N0134-11 | TRIPBLANK | Aqueous | 30-Jan-14 00:00 | 31-Jan-14 11:08 |

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. The results relate only to the samples(s) as received. This report may not be reproduced, except in full, without written approval from Spectrum Analytical.

All applicable NELAC or USEPA CLP requirments have been meet.

Spectrum Analytical (Rhode Island) is accredited under the National Environmental Laboratory Approval Program (NELAP) and DoD Environmental Laboratory Accreditation Program (ELAP), holds Organic and Inorganic contracts under the USEPA CLP Program and is certified under several states. The current list of our laboratory approvals and certifications is available on the Certifications page on our web site at www.spectrum-analytical.com.

Please contact the Laboratory or Technical Director at 401-732-3400 with any questions regarding the data contained in the laboratory report.

| | |
|---|---|
| Department of Defense | N/A |
| Connecticut | PH-0153 |
| Delaware | N/A |
| Florida | E87664 |
| Maine | 2007037 |
| Massachusetts | M-RI907 |
| New Hampshire | 2631 |
| New Jersey | RI001 |
| New York | 11522 |
| North Carolina | 581 |
| Rhode Island | LAI00301 |
| USDA | P330-08-00023 |
| USEPA - ISM | EP-W-09-039 |
| USEPA - SOM | EP-W-11-033 |

NELAP ACCREDITED TNI LABORATORY

LABORATORY ACCREDITATION BUREAU ACCREDITED
Certificate # L2247 Testing

Authorized by:

Yihai Ding
Laboratory Director

# REPORT NARRATIVE

Spectrum Analytical, Inc.  Featuring Hanibal Technology, RI Division.

Client : Innovative Engineering Solutions, Inc.

Project: Raytheon - Wayland

Laboratory Workorder / SDG #: N0134

RSK175, Dissolved Gases by GC-FID

## I. SAMPLE RECEIPT

No exceptions or unusual conditions were encountered unless a Sample Condition Notification Form, or other record of communication is included with the Sample Receipt Documentation.

## II. HOLDING TIMES

### A. Sample Preparation:

All samples were prepared within the method-specified holding times.

### B. Sample Analysis:

All samples were analyzed within the method-specified holding times.

## III. METHODS

Samples were analyzed following procedures in laboratory test code: RSK175

## IV. PREPARATION

Aqueous Samples were prepared following procedures in laboratory test code: SW5030B

## V. INSTRUMENTATION

The following instrumentation was used to perform

Instrument Code: V7
Instrument Type: GC-FID

Description: HP5890 II
Manufacturer: Hewlett-Packard
Model: 5890
GC Column used: 30 m X 0.53 mm ID [ um thickness] CARBOXEM 1006 capillary column.

## VI. ANALYSIS

### A. Calibration:

Calibrations met the method/SOP acceptance criteria.

### B. Blanks:

All method blanks were within the acceptance criteria.

### C. Surrogates:

N/A.

### D. Spikes:

#### 1. Laboratory Control Spikes (LCS):

Percent recoveries for lab control samples were within the QC limits.

#### 2. Matrix Spike / Matrix Spike Duplicate (MS/MSD):

No client-requested MS/MSD analyses were included in this SDG.

### E. Internal Standards:

NA.

### F. Dilutions:

The following samples were analyzed at dilution:

MW-267S-20140130-01 (N0134-01BDL) : Dilution Factor: 5
MW-267M-20140130-01 (N0134-02BDL) : Dilution Factor: 50
MW-268M-20140130-01 (N0134-03BDL) : Dilution Factor: 5
MW-561-20140130-01 (N0134-04BDL) : Dilution Factor: 10
MW-553-20140130-01 (N0134-05BDL) : Dilution Factor: 20
REW-6-20140130-01 (N0134-06BDL) : Dilution Factor: 10
REW-7-20140130-01 (N0134-07BDL) : Dilution Factor: 4
REW-9-20140130-01 (N0134-09BDL) : Dilution Factor: 2

REW-12-20140130-01 (N0134-10BDL) : Dilution Factor: 5

## G. Samples:

No other unusual occurrences were noted during sample analysis.

## H. Manual Integration

Where needed, manual integrations were performed to improve data quality. The corrections were reviewed and associated hardcopies generated and reported as required. Manual integrations are coded to provide the data reviewer justification for such action. The codes are labeled on the ion chromatogram signal (GC/MS signal) and chromatogram for GC based analysis as follows:

· M1 peak tailing or fronting
· M2 peak co-elution
· M3 rising or falling baseline
· M4 retention time shift
· M5 miscellaneous - under this category, the justification is explained
· M6 software did not integrate peak
· M7 partial peak integration

The following samples were manually integrated:

REW-7-20140130-01 (N0134-07B) Methane due to M7

VSTD005U7 Ethane , Ethene, Methane due to M7

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Signed:_____ _____

Date:_____2/12/2014_____

# REPORT NARRATIVE

Spectrum Analytical, Inc. Featuring Hanibal Technology, RI Division.

Client : Innovative Engineering Solutions, Inc.

Project: Raytheon - Wayland

Laboratory Workorder / SDG #: N0134

SW846 6010C

## I. SAMPLE RECEIPT

No exceptions or unusual conditions were encountered unless a Sample Condition Notification Form, or other record of communication is included with the Sample Receipt Documentation.

## II. HOLDING TIMES

### A. Sample Preparation:

All samples were prepared within the method-specified holding times.

### B. Sample Analysis:

All samples were analyzed within the method-specified holding times.

## III. METHODS

Samples were analyzed following procedures in laboratory test code: SW846 6010C

## IV. PREPARATION

Aqueous Samples were prepared following procedures in laboratory test code: SW3005A

## V. INSTRUMENTATION

The following instrumentation was used:

Instrument Code: OPTIMA3
Instrument Type: ICP

Description: Optima ICP-OES
Manufacturer: Perkin-Elmer
Model: 4300 DV

## VI. ANALYSIS

### A. Calibration:

Calibrations met the method/SOP acceptance criteria.

### B. Blanks:

All method blanks were within the acceptance criteria.

### C. Spikes:

#### 1. Laboratory Control Spikes (LCS):

Percent recoveries for laboratory control samples were within the QC limits.

#### 2. Matrix spike (MS):

A matrix spike was not performed on any sample in this SDG.

### D. Post Digestion Spike (PDS):

A post-digestion spike was not performed on any sample in this SDG.

### E. Duplicate sample:

A duplicate analysis was not performed on any sample in this SDG.

### F. Serial Dilution (SD):

Serial Dilution analysis was performed on sample: REW-12-20140130-01 (N0134-10ESD).

Percent difference was within the QC limits.

### G. Samples:

No other unusual occurrences were noted during sample analysis.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Signed: _____

Date: 02/06/14

# REPORT NARRATIVE

Spectrum Analytical, Inc. Featuring Hanibal Technology, RI Division.

Client : Innovative Engineering Solutions, Inc.

Project: Raytheon - Wayland

Laboratory Workorder / SDG #: N0134

EPA 300.0, EPA 300.0 Modified, SM 2320B, SM 4500 H+ B,
SM 4500P-E OP, SM 5310B TOC

## I. SAMPLE RECEIPT

No exceptions or unusual conditions were encountered unless a Sample Condition Notification Form or other record of communication is included with the Sample Receipt Documentation.

## II. HOLDING TIMES

### A. Sample Preparation:

All samples were prepared within the method-specified holding times.

### B. Sample Analysis:

All samples were analyzed within the method-specified holding times.

## III. METHODS

Samples were analyzed following procedures in laboratory test code: EPA 300.0, EPA 300.0 Modified, SM 2320B, SM 4500 H+ B, SM 4500P-E OP, SM 5310B TOC

## IV. PREPARATION

Samples were prepared following procedures in laboratory test code: EPA 300.0, EPA 300.0 Modified, SM 2320B, SM 4500 H+ B, SM 4500P-E OP, SM 5310B TOC

## V. INSTRUMENTATION

The following instrumentation was used:

Instrument Code: IC1
Instrument Type: IC
Description: DX-500
Manufacturer: Dionex
Model: DX-500
GC Column used: 0.25 m X 4 mm ID [ um thickness] AS14A-7 capillary column.

Instrument Code: SPEC2
Instrument Type: SP
Description: Spectronic 20 Genesys
Manufacturer: Spectronic Instruments
Model: 4004-000

Instrument Code: TOC1
Instrument Type: TOC
Description: TOC
Manufacturer: Tekmar Dohrman
Model: Apollo 9000

Instrument Code: WC03
Instrument Type: Probe
Description: pH Meter
Manufacturer: Oakton Instruments
Model: Bench 2700 Series

## VI. ANALYSIS

### A. Calibration:

Calibrations met the method/SOP acceptance criteria.

### B. Blanks:

All method blanks were within the acceptance criteria.

### C. Spikes:

#### 1. Laboratory Control Spikes (LCS):

Percent recoveries for lab control samples were within the QC limits with the following exceptions. Please note that most test procedures allow for several compounds outside of the QC limits for the LCS, although this may indicate a bias for this specific compound.

The LCS/LCSD-75885 for SM 5310B TOC analysis method control limit is 20 while these LCS duplicates had a 20.05% RPD. Due to forms limitations, this result is R flagged.

2. **Matrix Spike / Matrix Spike Duplicate (MS/MSD):**

Matrix spikes were performed on samples: MW-268M-20140130-01 (N0134-03AMS), MW-268M-20140130-01 (N0134-03AMSD), MW-561-20140130-01 (N0134-04DMS), MW-561-20140130-01 (N0134-04DMSD), REW-8-20140130-01 (N0134-08AMS) and REW-8-20140130-01 (N0134-08AMSD).

Percent recoveries were within the QC limits.

Replicate RPDs were within the advisory QC limits.

## D. Duplicate sample:

No client-requested laboratory duplicate analyses were included in this SDG.

## E. Dilutions:

The following samples were analyzed at dilution:

MW-267S-20140130-01 (N0134-01A), dilution factor: 10 for Acetic Acid
MW-267M-20140130-01 (N0134-02A), dilution factor: 10 for Acetic Acid
MW-267M-20140130-01 (N0134-02D), dilution factor: 2 for Alkalinity, Total (As CaCO3) and Orthophosphate (As PO4)
MW-561-20140130-01 (N0134-04A), dilution factor: 10 for Acetic Acid
MW-561-20140130-01 (N0134-04C), dilution factor: 5 for Organic Carbon, Total
MW-553-20140130-01 (N0134-05A), dilution factor: 10 for Acetic Acid
REW-6-20140130-01 (N0134-06A), dilution factor: 10 for Acetic Acid
REW-7-20140130-01 (N0134-07A), dilution factor: 3 for Acetic Acid
REW-8-20140130-01 (N0134-08D), dilution factor: 2 for Orthophosphate (As PO4)
REW-9-20140130-01 (N0134-09A), dilution factor: 10 for Acetic Acid
REW-9-20140130-01 (N0134-09D), dilution factor: 2 for Orthophosphate (As PO4)

## F. Samples:

No other unusual occurrences were noted during sample analysis.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Signed: Sharon B Lawler

Date: 02/12/2014

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*02/12/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** MW-267S-20140130-01 **Project:** Raytheon - Wayland
**Lab ID:** N0134-01 **Collection Date:** 01/30/14 12:50

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **RSK175 -- Dissolved Gases by GC-FID** | | | | | | | **RSK175** |
| Methane | 3000 | E | 0.58 | µg/L | 1 | 02/07/2014 10:56 | 75852 |
| Ethane | ND | | 1.2 | µg/L | 1 | 02/07/2014 10:56 | 75852 |
| Ethene | 15 | | 1.5 | µg/L | 1 | 02/07/2014 10:56 | 75852 |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*02/12/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** MW-267S-20140130-01 **Project:** Raytheon - Wayland
**Lab ID:** N0134-01 **Collection Date:** 01/30/14 12:50

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **RSK175 -- Dissolved Gases by GC-FID** | | | | | | | **RSK175** |
| Methane | 4400 | | 3.1 | µg/L | 5 | 02/07/2014 13:50 | 75852 |
| Ethane | ND | | 6.3 | µg/L | 5 | 02/07/2014 13:50 | 75852 |
| Ethene | ND | | 7.9 | µg/L | 5 | 02/07/2014 13:50 | 75852 |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*02/12/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** MW-267M-20140130-01 **Project:** Raytheon - Wayland
**Lab ID:** N0134-02 **Collection Date:** 01/30/14 12:10

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **RSK175 -- Dissolved Gases by GC-FID** | | | | | | | **RSK175** |
| Methane | 24000 | E | 0.58 | µg/L | 1 | 02/07/2014 11:03 | 75852 |
| Ethane | ND | | 1.2 | µg/L | 1 | 02/07/2014 11:03 | 75852 |
| Ethene | 5.5 | | 1.5 | µg/L | 1 | 02/07/2014 11:03 | 75852 |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*02/12/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** MW-267M-20140130-01 **Project:** Raytheon - Wayland
**Lab ID:** N0134-02 **Collection Date:** 01/30/14 12:10

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **RSK175 -- Dissolved Gases by GC-FID** | | | | | | | **RSK175** |
| Methane | 27000 | | 31 | µg/L | 50 | 02/07/2014 13:00 | 75852 |
| Ethane | ND | | 63 | µg/L | 50 | 02/07/2014 13:00 | 75852 |
| Ethene | 170 | | 79 | µg/L | 50 | 02/07/2014 13:00 | 75852 |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*02/12/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** MW-268M-20140130-01 **Project:** Raytheon - Wayland
**Lab ID:** N0134-03 **Collection Date:** 01/30/14 11:25

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **RSK175 -- Dissolved Gases by GC-FID** | | | | | | | **RSK175** |
| Methane | 2600 | E | 0.58 | µg/L | 1 | 02/07/2014 11:11 | 75852 |
| Ethane | 44 | | 1.2 | µg/L | 1 | 02/07/2014 11:11 | 75852 |
| Ethene | 9.6 | | 1.5 | µg/L | 1 | 02/07/2014 11:11 | 75852 |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*02/12/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** MW-268M-20140130-01 **Project:** Raytheon - Wayland
**Lab ID:** N0134-03 **Collection Date:** 01/30/14 11:25

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **RSK175 -- Dissolved Gases by GC-FID** | | | | | | | **RSK175** |
| Methane | 1900 | | 3.1 | µg/L | 5 | 02/07/2014 13:20 | 75852 |
| Ethane | ND | | 6.3 | µg/L | 5 | 02/07/2014 13:20 | 75852 |
| Ethene | 21 | | 7.9 | µg/L | 5 | 02/07/2014 13:20 | 75852 |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*02/12/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** MW-561-20140130-01 **Project:** Raytheon - Wayland
**Lab ID:** N0134-04 **Collection Date:** 01/30/14 9:10

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **RSK175 -- Dissolved Gases by GC-FID** | | | | | | | **RSK175** |
| Methane | 10000 | E | 0.58 | µg/L | 1 | 02/07/2014 11:20 | 75852 |
| Ethane | 43 | | 1.2 | µg/L | 1 | 02/07/2014 11:20 | 75852 |
| Ethene | 21 | | 1.5 | µg/L | 1 | 02/07/2014 11:20 | 75852 |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*02/12/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** MW-561-20140130-01 **Project:** Raytheon - Wayland
**Lab ID:** N0134-04 **Collection Date:** 01/30/14 9:10

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **RSK175 -- Dissolved Gases by GC-FID** | | | | | | | **RSK175** |
| Methane | 7000 | | 6.1 | µg/L | 10 | 02/07/2014 13:27 | 75852 |
| Ethane | ND | | 13 | µg/L | 10 | 02/07/2014 13:27 | 75852 |
| Ethene | 19 | | 16 | µg/L | 10 | 02/07/2014 13:27 | 75852 |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*02/12/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** MW-553-20140130-01 **Project:** Raytheon - Wayland
**Lab ID:** N0134-05 **Collection Date:** 01/30/14 10:30

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **RSK175 -- Dissolved Gases by GC-FID** | | | | | | | **RSK175** |
| Methane | 20000 | E | 0.58 | µg/L | 1 | 02/07/2014 11:28 | 75852 |
| Ethane | 45 | | 1.2 | µg/L | 1 | 02/07/2014 11:28 | 75852 |
| Ethene | ND | | 1.5 | µg/L | 1 | 02/07/2014 11:28 | 75852 |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*02/12/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** MW-553-20140130-01 **Project:** Raytheon - Wayland
**Lab ID:** N0134-05 **Collection Date:** 01/30/14 10:30

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **RSK175 -- Dissolved Gases by GC-FID** | | | | | | | **RSK175** |
| Methane | 18000 | | 12 | µg/L | 20 | 02/07/2014 15:20 | 75852 |
| Ethane | ND | | 25 | µg/L | 20 | 02/07/2014 15:20 | 75852 |
| Ethene | ND | | 32 | µg/L | 20 | 02/07/2014 15:20 | 75852 |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*02/12/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** REW-6-20140130-01 **Project:** Raytheon - Wayland
**Lab ID:** N0134-06 **Collection Date:** 01/30/14 9:55

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **RSK175 -- Dissolved Gases by GC-FID** | | | | | | | **RSK175** |
| Methane | 9100 | E | 0.58 | µg/L | 1 | 02/07/2014 11:36 | 75852 |
| Ethane | 49 | | 1.2 | µg/L | 1 | 02/07/2014 11:36 | 75852 |
| Ethene | 3.3 | | 1.5 | µg/L | 1 | 02/07/2014 11:36 | 75852 |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*02/12/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** REW-6-20140130-01 **Project:** Raytheon - Wayland
**Lab ID:** N0134-06 **Collection Date:** 01/30/14 9:55

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **RSK175 -- Dissolved Gases by GC-FID** | | | | | | | **RSK175** |
| Methane | 7200 | | 6.1 | µg/L | 10 | 02/07/2014 14:23 | 75852 |
| Ethane | ND | | 13 | µg/L | 10 | 02/07/2014 14:23 | 75852 |
| Ethene | ND | | 16 | µg/L | 10 | 02/07/2014 14:23 | 75852 |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*02/12/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** REW-7-20140130-01 **Project:** Raytheon - Wayland
**Lab ID:** N0134-07 **Collection Date:** 01/30/14 10:50

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **RSK175 -- Dissolved Gases by GC-FID** | | | | | | | **RSK175** |
| Methane | 4100 | E | 0.58 | µg/L | 1 | 02/07/2014 11:45 | 75852 |
| Ethane | 89 | | 1.2 | µg/L | 1 | 02/07/2014 11:45 | 75852 |
| Ethene | 61 | | 1.5 | µg/L | 1 | 02/07/2014 11:45 | 75852 |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*02/12/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** REW-7-20140130-01 **Project:** Raytheon - Wayland
**Lab ID:** N0134-07 **Collection Date:** 01/30/14 10:50

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **RSK175 -- Dissolved Gases by GC-FID** | | | | | | | **RSK175** |
| Methane | 4100 | | 2.5 | µg/L | 4 | 02/07/2014 14:31 | 75852 |
| Ethane | ND | | 5.1 | µg/L | 4 | 02/07/2014 14:31 | 75852 |
| Ethene | 36 | | 6.3 | µg/L | 4 | 02/07/2014 14:31 | 75852 |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*02/12/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** REW-8-20140130-01 **Project:** Raytheon - Wayland
**Lab ID:** N0134-08 **Collection Date:** 01/30/14 12:55

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **RSK175 -- Dissolved Gases by GC-FID** | | | | | | | **RSK175** |
| Methane | 830 | | 0.61 | µg/L | 1 | 02/10/2014 11:20 | 75868 |
| Ethane | ND | | 1.3 | µg/L | 1 | 02/10/2014 11:20 | 75868 |
| Ethene | ND | | 1.6 | µg/L | 1 | 02/10/2014 11:20 | 75868 |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*02/12/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** REW-9-20140130-01 **Project:** Raytheon - Wayland
**Lab ID:** N0134-09 **Collection Date:** 01/30/14 12:15

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **RSK175 -- Dissolved Gases by GC-FID** | | | | | | | **RSK175** |
| Methane | 1400 | E | 0.61 | µg/L | 1 | 02/10/2014 11:32 | 75868 |
| Ethane | ND | | 1.3 | µg/L | 1 | 02/10/2014 11:32 | 75868 |
| Ethene | ND | | 1.6 | µg/L | 1 | 02/10/2014 11:32 | 75868 |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*02/12/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** REW-9-20140130-01 **Project:** Raytheon - Wayland
**Lab ID:** N0134-09 **Collection Date:** 01/30/14 12:15

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **RSK175 -- Dissolved Gases by GC-FID** | | | | | | | **RSK175** |
| Methane | 1900 | | 1.2 | µg/L | 2 | 02/10/2014 12:08 | 75868 |
| Ethane | ND | | 2.5 | µg/L | 2 | 02/10/2014 12:08 | 75868 |
| Ethene | ND | | 3.2 | µg/L | 2 | 02/10/2014 12:08 | 75868 |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*02/12/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** REW-12-20140130-01 **Project:** Raytheon - Wayland
**Lab ID:** N0134-10 **Collection Date:** 01/30/14 9:10

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **RSK175 -- Dissolved Gases by GC-FID** | | | | | | | **RSK175** |
| Methane | 1200 | E | 0.61 | µg/L | 1 | 02/10/2014 11:40 | 75868 |
| Ethane | ND | | 1.3 | µg/L | 1 | 02/10/2014 11:40 | 75868 |
| Ethene | 2.6 | | 1.6 | µg/L | 1 | 02/10/2014 11:40 | 75868 |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*02/12/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** REW-12-20140130-01 **Project:** Raytheon - Wayland
**Lab ID:** N0134-10 **Collection Date:** 01/30/14 9:10

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **RSK175 -- Dissolved Gases by GC-FID** | | | | | | | **RSK175** |
| Methane | 1400 | | 3.1 | µg/L | 5 | 02/10/2014 13:09 | 75868 |
| Ethane | ND | | 6.3 | µg/L | 5 | 02/10/2014 13:09 | 75868 |
| Ethene | ND | | 7.9 | µg/L | 5 | 02/10/2014 13:09 | 75868 |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*02/12/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** TRIPBLANK
**Lab ID:** N0134-11
**Project:** Raytheon - Wayland
**Collection Date:** 01/30/14 0:00

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **RSK175 -- Dissolved Gases by GC-FID** | | | | | | | **RSK175** |
| Methane | 1.1 | | 0.60 | µg/L | 1 | 02/10/2014 11:07 | 75868 |
| Ethane | ND | | 1.2 | µg/L | 1 | 02/10/2014 11:07 | 75868 |
| Ethene | ND | | 1.5 | µg/L | 1 | 02/10/2014 11:07 | 75868 |

**Qualifiers:**

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

**CLIENT:** Innovative Engineering Solutions, Inc.
**Work Order:** N0134
**Project:** Raytheon - Wayland

# ANALYTICAL QC SUMMARY REPORT

**RSK175**

**RSK175 -- Dissolved Gases by GC-FID**

Sample ID: **MB-75852** SampType: **MBLK** TestCode: **RSK175** Prep Date: **02/07/14 7:03** Run ID: **V7_140207A**
Client ID: **MB-75852** Batch ID: **75852** Units: **µg/L** Analysis Date: **02/07/14 9:39** SeqNo: **2045614**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Methane | ND | 0.37 | 0.61 | | | | | | | | | |
| Ethane | ND | 0.53 | 1.3 | | | | | | | | | |
| Ethene | ND | 0.73 | 1.6 | | | | | | | | | |

Sample ID: **MB-75868** SampType: **MBLK** TestCode: **RSK175** Prep Date: **02/10/14 8:46** Run ID: **V7_140210A**
Client ID: **MB-75868** Batch ID: **75868** Units: **µg/L** Analysis Date: **02/10/14 9:57** SeqNo: **2045625**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Methane | ND | 0.36 | 0.60 | | | | | | | | | |
| Ethane | ND | 0.51 | 1.2 | | | | | | | | | |
| Ethene | ND | 0.71 | 1.5 | | | | | | | | | |

Sample ID: **LCS-75852** SampType: **LCS** TestCode: **RSK175** Prep Date: **02/07/14 7:03** Run ID: **V7_140207A**
Client ID: **LCS-75852** Batch ID: **75852** Units: **µg/L** Analysis Date: **02/07/14 8:54** SeqNo: **2045612**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Methane | 45.09 | 0.36 | 0.60 | 46.29 | 0 | 97.4 | 75 | 125 | 0 | | | |
| Ethane | 106.0 | 0.51 | 1.2 | 87.43 | 0 | 121 | 75 | 125 | 0 | | | |
| Ethene | 66.77 | 0.71 | 1.5 | 81.26 | 0 | 82.2 | 75 | 125 | 0 | | | |

Sample ID: **LCS-75868** SampType: **LCS** TestCode: **RSK175** Prep Date: **02/10/14 8:46** Run ID: **V7_140210A**
Client ID: **LCS-75868** Batch ID: **75868** Units: **µg/L** Analysis Date: **02/10/14 9:21** SeqNo: **2045623**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Methane | 36.50 | 0.36 | 0.60 | 46.29 | 0 | 78.9 | 75 | 125 | 0 | | | |
| Ethane | 106.1 | 0.51 | 1.2 | 87.43 | 0 | 121 | 75 | 125 | 0 | | | |
| Ethene | 72.97 | 0.71 | 1.5 | 81.26 | 0 | 89.8 | 75 | 125 | 0 | | | |

Sample ID: **LCSD-75852** SampType: **LCSD** TestCode: **RSK175** Prep Date: **02/07/14 7:03** Run ID: **V7_140207A**
Client ID: **LCSD-75852** Batch ID: **75852** Units: **µg/L** Analysis Date: **02/07/14 9:13** SeqNo: **2045613**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Methane | 36.56 | 0.36 | 0.60 | 46.29 | 0 | 79.0 | 75 | 125 | 45.09 | 20.9 | 30 | |
| Ethane | 108.2 | 0.51 | 1.2 | 87.43 | 0 | 124 | 75 | 125 | 106.0 | 2.04 | 30 | |
| Ethene | 68.67 | 0.71 | 1.5 | 81.26 | 0 | 84.5 | 75 | 125 | 66.77 | 2.81 | 30 | |

**Qualifiers:** ND - Not Detected at the MDL; S - Recovery outside accepted recovery limits; MDL - Method Detection Limit; B - Analyte detected in the associated Method Blank; J - Analyte detected below quanititation limits; R - RPD outside accepted recovery limits; RL - Reporting Limit

**CLIENT:** Innovative Engineering Solutions, Inc.
**Work Order:** N0134
**Project:** Raytheon - Wayland

# ANALYTICAL QC SUMMARY REPORT

**RSK175**

**RSK175 -- Dissolved Gases by GC-FID**

Sample ID: **LCSD-75868** SampType: **LCSD** TestCode: **RSK175** Prep Date: **02/10/14 8:46** Run ID: **V7_140210A**
Client ID: **LCSD-75868** Batch ID: **75868** Units: **µg/L** Analysis Date: **02/10/14 9:39** SeqNo: **2045624**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Methane | 36.78 | 0.36 | 0.60 | 46.29 | 0 | 79.5 | 75 | 125 | 36.50 | 0.753 | 30 | |
| Ethane | 104.5 | 0.51 | 1.2 | 87.43 | 0 | 120 | 75 | 125 | 106.1 | 1.52 | 30 | |
| Ethene | 68.96 | 0.71 | 1.5 | 81.26 | 0 | 84.9 | 75 | 125 | 72.97 | 5.65 | 30 | |

**Qualifiers:** ND - Not Detected at the MDL; S - Recovery outside accepted recovery limits; MDL - Method Detection Limit; B - Analyte detected in the associated Method Blank
J - Analyte detected below quanititation limits; R - RPD outside accepted recovery limits; RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*02/06/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** MW-267S-20140130-01 **Project:** Raytheon - Wayland
**Lab ID:** N0134-01 **Collection Date:** 01/30/14 12:50

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **SW846 6010C -- Metals by ICP** | | | | | | | **SW6010_W** |
| Iron | 53000 | | 200 | ug/L | 1 | 02/03/2014 16:01 | 75820 |

**Qualifiers:**

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*02/06/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** MW-267M-20140130-01 **Project:** Raytheon - Wayland
**Lab ID:** N0134-02 **Collection Date:** 01/30/14 12:10

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **SW846 6010C -- Metals by ICP** | | | | | | | **SW6010_W** |
| Iron | 140000 | | 200 | ug/L | 1 | 02/03/2014 16:04 | 75820 |

**Qualifiers:**

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*02/06/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** MW-268M-20140130-01 **Project:** Raytheon - Wayland
**Lab ID:** N0134-03 **Collection Date:** 01/30/14 11:25

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **SW846 6010C -- Metals by ICP** | | | | | | | **SW6010_W** |
| Iron | 23000 | | 200 | ug/L | 1 | 02/03/2014 16:08 | 75820 |

**Qualifiers:**

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*02/06/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** MW-561-20140130-01 **Project:** Raytheon - Wayland
**Lab ID:** N0134-04 **Collection Date:** 01/30/14 9:10

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **SW846 6010C -- Metals by ICP** | | | | | | | **SW6010_W** |
| Iron | 26000 | | 200 | ug/L | 1 | 02/03/2014 16:11 | 75820 |

**Qualifiers:**

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*02/06/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** MW-553-20140130-01 **Project:** Raytheon - Wayland
**Lab ID:** N0134-05 **Collection Date:** 01/30/14 10:30

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **SW846 6010C -- Metals by ICP** | | | | | | | **SW6010_W** |
| Iron | 79000 | | 200 | ug/L | 1 | 02/03/2014 16:15 | 75820 |

**Qualifiers:**

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*02/06/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** REW-6-20140130-01 **Project:** Raytheon - Wayland
**Lab ID:** N0134-06 **Collection Date:** 01/30/14 9:55

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **SW846 6010C -- Metals by ICP** | | | | | | | **SW6010_W** |
| Iron | 63000 | | 200 | ug/L | 1 | 02/03/2014 16:25 | 75820 |

**Qualifiers:**

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*02/06/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** REW-7-20140130-01 **Project:** Raytheon - Wayland
**Lab ID:** N0134-07 **Collection Date:** 01/30/14 10:50

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **SW846 6010C -- Metals by ICP** | | | | | | | **SW6010_W** |
| Iron | 29000 | | 200 | ug/L | 1 | 02/03/2014 16:29 | 75820 |

**Qualifiers:**

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*02/06/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** REW-8-20140130-01 **Project:** Raytheon - Wayland
**Lab ID:** N0134-08 **Collection Date:** 01/30/14 12:55

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **SW846 6010C -- Metals by ICP** | | | | | | | **SW6010_W** |
| Iron | 8600 | | 200 | ug/L | 1 | 02/03/2014 16:33 | 75820 |

**Qualifiers:**

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*02/06/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** REW-9-20140130-01 **Project:** Raytheon - Wayland
**Lab ID:** N0134-09 **Collection Date:** 01/30/14 12:15

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **SW846 6010C -- Metals by ICP** | | | | | | | **SW6010_W** |
| Iron | 32000 | | 200 | ug/L | 1 | 02/03/2014 16:36 | 75820 |

**Qualifiers:**

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*02/06/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** REW-12-20140130-01 **Project:** Raytheon - Wayland
**Lab ID:** N0134-10 **Collection Date:** 01/30/14 9:10

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **SW846 6010C -- Metals by ICP** | | | | | | | **SW6010_W** |
| Iron | 30000 | | 200 | ug/L | 1 | 02/03/2014 16:40 | 75820 |

**Qualifiers:**

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

**CLIENT:** Innovative Engineering Solutions, Inc.
**Work Order:** N0134
**Project:** Raytheon - Wayland

# ANALYTICAL QC SUMMARY REPORT

## SW6010_W

## SW846 6010C -- Metals by ICP

Sample ID: **MB-75820** SampType: **MBLK** TestCode: **SW6010_W** Prep Date: **02/03/14 9:35** Run ID: **OPTIMA3_140203E**
Client ID: **MB-75820** Batch ID: **75820** Units: **ug/L** Analysis Date: **02/03/14 15:50** SeqNo: **2044245**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Iron | ND | 31 | 200 | | | | | | | | | |

Sample ID: **LCS-75820** SampType: **LCS** TestCode: **SW6010_W** Prep Date: **02/03/14 9:35** Run ID: **OPTIMA3_140203E**
Client ID: **LCS-75820** Batch ID: **75820** Units: **ug/L** Analysis Date: **02/03/14 15:54** SeqNo: **2044246**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Iron | 4543 | 31 | 200 | 4550 | 0 | 99.8 | 80 | 120 | 0 | | | |

Sample ID: **LCSD-75820** SampType: **LCSD** TestCode: **SW6010_W** Prep Date: **02/03/14 9:35** Run ID: **OPTIMA3_140203E**
Client ID: **LCSD-75820** Batch ID: **75820** Units: **ug/L** Analysis Date: **02/03/14 15:57** SeqNo: **2044247**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Iron | 4858 | 31 | 200 | 4550 | 0 | 107 | 80 | 120 | 4543 | 6.7 | 20 | |

Sample ID: **N0134-10ESD** SampType: **SD** TestCode: **SW6010_W** Prep Date: **02/03/14 9:35** Run ID: **OPTIMA3_140203E**
Client ID: **REW-12-20140130-0** Batch ID: **75820** Units: **ug/L** Analysis Date: **02/03/14 16:43** SeqNo: **2044260**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Iron | 29300 | 160 | 1000 | 0 | 0 | 0 | 0 | 0 | 29870 | 1.93 | 10 | |

**Qualifiers:** ND - Not Detected at the MDL; S - Recovery outside accepted recovery limits; MDL - Method Detection Limit; B - Analyte detected in the associated Method Blank
J - Analyte detected below quanititation limits; R - RPD outside accepted recovery limits; RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*02/12/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** MW-267S-20140130-01 **Project:** Raytheon - Wayland
**Lab ID:** N0134-01 **Collection Date:** 01/30/14 12:50

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **EPA 300.0 Modified -- Volatile Organic Acids** | | | | | | | **E300_VOA_W** |
| Lactic Acid | 0.72 | BJ | 5.0 | mg/L | 1 | 02/06/2014 12:33 | 75833 |
| Acetic Acid | 400 | | 50 | mg/L | 10 | 02/07/2014 9:38 | 75833 |
| Propionic Acid | ND | | 5.0 | mg/L | 1 | 02/06/2014 12:33 | 75833 |
| Butyric Acid | 1.3 | J | 5.0 | mg/L | 1 | 02/06/2014 12:33 | 75833 |
| **EPA 300.0 -- Anions by Ion Chromotography (LOW)** | | | | | | | **E300IC_W** |
| Chloride | 44 | B | 2.0 | mg/L | 1 | 01/31/2014 13:29 | 75813 |
| Nitrogen, Nitrate (As N) | 0.067 | BJ | 0.13 | mg/L | 1 | 01/31/2014 13:29 | 75813 |
| Sulfate | ND | | 5.0 | mg/L | 1 | 01/31/2014 13:29 | 75813 |
| **SM 2320B -- Alkalinity (Total)** | | | | | | | **SM2320_W** |
| Alkalinity, Total (As CaCO3) | 210 | | 20 | mg/L CaCO3 | 1 | 02/03/2014 10:45 | 75816 |
| **SM 4500 H+ B -- pH VALUE** | | | | | | | **SM4500_H+** |
| pH | 5.8 | | 1.0 | S.U. | 1 | 01/31/2014 12:00 | R79606 |
| **SM 4500P-E OP -- Orthophosphate** | | | | | | | **SM4500_OP_W** |
| Orthophosphate (As PO4) | 0.45 | | 0.050 | mg/L | 1 | 01/31/2014 15:47 | 75815 |
| **SM 5310B TOC -- Total Organic Carbon by combustion** | | | | | | | **SM5310B_TOC_W** |
| Organic Carbon, Total | 250 | | 10 | mg/L | 1 | 02/11/2014 12:54 | 75885 |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*02/12/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** MW-267M-20140130-01 **Project:** Raytheon - Wayland
**Lab ID:** N0134-02 **Collection Date:** 01/30/14 12:10

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **EPA 300.0 Modified -- Volatile Organic Acids** | | | | | | | **E300_VOA_W** |
| Lactic Acid | ND | | 5.0 | mg/L | 1 | 02/06/2014 12:55 | 75833 |
| Acetic Acid | 550 | | 50 | mg/L | 10 | 02/07/2014 11:11 | 75833 |
| Propionic Acid | 9.6 | | 5.0 | mg/L | 1 | 02/06/2014 12:55 | 75833 |
| Butyric Acid | 6.7 | | 5.0 | mg/L | 1 | 02/06/2014 12:55 | 75833 |
| **EPA 300.0 -- Anions by Ion Chromotography (LOW)** | | | | | | | **E300IC_W** |
| Chloride | 32 | B | 2.0 | mg/L | 1 | 01/31/2014 13:41 | 75813 |
| Nitrogen, Nitrate (As N) | 0.081 | BJ | 0.13 | mg/L | 1 | 01/31/2014 13:41 | 75813 |
| Sulfate | 0.74 | J | 5.0 | mg/L | 1 | 01/31/2014 13:41 | 75813 |
| **SM 2320B -- Alkalinity (Total)** | | | | | | | **SM2320_W** |
| Alkalinity, Total (As CaCO3) | 350 | | 40 | mg/L CaCO3 | 2 | 02/03/2014 10:45 | 75816 |
| **SM 4500 H+ B -- pH VALUE** | | | | | | | **SM4500_H+** |
| pH | 6.2 | | 1.0 | S.U. | 1 | 01/31/2014 12:03 | R79606 |
| **SM 4500P-E OP -- Orthophosphate** | | | | | | | **SM4500_OP_W** |
| Orthophosphate (As PO4) | 0.39 | | 0.10 | mg/L | 2 | 01/31/2014 15:47 | 75815 |
| **SM 5310B TOC -- Total Organic Carbon by combustion** | | | | | | | **SM5310B_TOC_W** |
| Organic Carbon, Total | 140 | | 10 | mg/L | 1 | 02/11/2014 13:17 | 75885 |

**Qualifiers:**

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*02/12/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** MW-268M-20140130-01 **Project:** Raytheon - Wayland
**Lab ID:** N0134-03 **Collection Date:** 01/30/14 11:25

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **EPA 300.0 Modified -- Volatile Organic Acids** | | | | | | | **E300_VOA_W** |
| Lactic Acid | ND | | 5.0 | mg/L | 1 | 02/06/2014 13:16 | 75833 |
| Acetic Acid | 1.5 | J | 5.0 | mg/L | 1 | 02/06/2014 13:16 | 75833 |
| Propionic Acid | ND | | 5.0 | mg/L | 1 | 02/06/2014 13:16 | 75833 |
| Butyric Acid | ND | | 5.0 | mg/L | 1 | 02/06/2014 13:16 | 75833 |
| **EPA 300.0 -- Anions by Ion Chromotography (LOW)** | | | | | | | **E300IC_W** |
| Chloride | 21 | B | 2.0 | mg/L | 1 | 01/31/2014 13:53 | 75813 |
| Nitrogen, Nitrate (As N) | 0.069 | BJ | 0.13 | mg/L | 1 | 01/31/2014 13:53 | 75813 |
| Sulfate | 41 | | 5.0 | mg/L | 1 | 01/31/2014 13:53 | 75813 |
| **SM 2320B -- Alkalinity (Total)** | | | | | | | **SM2320_W** |
| Alkalinity, Total (As CaCO3) | 84 | | 20 | mg/L CaCO3 | 1 | 02/03/2014 10:45 | 75816 |
| **SM 4500 H+ B -- pH VALUE** | | | | | | | **SM4500_H+** |
| pH | 6.6 | | 1.0 | S.U. | 1 | 01/31/2014 12:06 | R79606 |
| **SM 4500P-E OP -- Orthophosphate** | | | | | | | **SM4500_OP_W** |
| Orthophosphate (As PO4) | 0.31 | | 0.050 | mg/L | 1 | 01/31/2014 15:47 | 75815 |
| **SM 5310B TOC -- Total Organic Carbon by combustion** | | | | | | | **SM5310B_TOC_W** |
| Organic Carbon, Total | 2.8 | J | 10 | mg/L | 1 | 02/11/2014 13:40 | 75885 |

**Qualifiers:**

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*02/12/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** MW-561-20140130-01 **Project:** Raytheon - Wayland
**Lab ID:** N0134-04 **Collection Date:** 01/30/14 9:10

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **EPA 300.0 Modified -- Volatile Organic Acids** | | | | | | | **E300_VOA_W** |
| Lactic Acid | 0.52 | BJ | 5.0 | mg/L | 1 | 02/06/2014 14:20 | 75833 |
| Acetic Acid | 320 | | 50 | mg/L | 10 | 02/07/2014 10:21 | 75833 |
| Propionic Acid | 1.1 | J | 5.0 | mg/L | 1 | 02/06/2014 14:20 | 75833 |
| Butyric Acid | 2.8 | J | 5.0 | mg/L | 1 | 02/06/2014 14:20 | 75833 |
| **EPA 300.0 -- Anions by Ion Chromotography (LOW)** | | | | | | | **E300IC_W** |
| Chloride | 27 | B | 2.0 | mg/L | 1 | 01/31/2014 14:05 | 75813 |
| Nitrogen, Nitrate (As N) | 0.070 | BJ | 0.13 | mg/L | 1 | 01/31/2014 14:05 | 75813 |
| Sulfate | ND | | 5.0 | mg/L | 1 | 01/31/2014 14:05 | 75813 |
| **SM 2320B -- Alkalinity (Total)** | | | | | | | **SM2320_W** |
| Alkalinity, Total (As CaCO3) | 210 | | 20 | mg/L CaCO3 | 1 | 02/03/2014 10:45 | 75816 |
| **SM 4500 H+ B -- pH VALUE** | | | | | | | **SM4500_H+** |
| pH | 6.5 | | 1.0 | S.U. | 1 | 01/31/2014 12:09 | R79606 |
| **SM 4500P-E OP -- Orthophosphate** | | | | | | | **SM4500_OP_W** |
| Orthophosphate (As PO4) | 0.28 | | 0.050 | mg/L | 1 | 01/31/2014 15:47 | 75815 |
| **SM 5310B TOC -- Total Organic Carbon by combustion** | | | | | | | **SM5310B_TOC_W** |
| Organic Carbon, Total | 500 | | 50 | mg/L | 5 | 02/11/2014 17:17 | 75885 |

**Qualifiers:**

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*02/12/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** MW-553-20140130-01 **Project:** Raytheon - Wayland
**Lab ID:** N0134-05 **Collection Date:** 01/30/14 10:30

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **EPA 300.0 Modified -- Volatile Organic Acids** | | | | | | | **E300_VOA_W** |
| Lactic Acid | 1.6 | J | 5.0 | mg/L | 1 | 02/07/2014 13:17 | 75848 |
| Acetic Acid | 510 | | 50 | mg/L | 10 | 02/10/2014 8:37 | 75848 |
| Propionic Acid | 7.8 | | 5.0 | mg/L | 1 | 02/07/2014 13:17 | 75848 |
| Butyric Acid | 16 | | 5.0 | mg/L | 1 | 02/07/2014 13:17 | 75848 |
| **EPA 300.0 -- Anions by Ion Chromotography (LOW)** | | | | | | | **E300IC_W** |
| Chloride | 27 | B | 2.0 | mg/L | 1 | 01/31/2014 15:03 | 75813 |
| Nitrogen, Nitrate (As N) | 0.067 | BJ | 0.13 | mg/L | 1 | 01/31/2014 15:03 | 75813 |
| Sulfate | ND | | 5.0 | mg/L | 1 | 01/31/2014 15:03 | 75813 |
| **SM 2320B -- Alkalinity (Total)** | | | | | | | **SM2320_W** |
| Alkalinity, Total (As CaCO3) | 230 | | 20 | mg/L CaCO3 | 1 | 02/03/2014 10:45 | 75816 |
| **SM 4500 H+ B -- pH VALUE** | | | | | | | **SM4500_H+** |
| pH | 5.8 | | 1.0 | S.U. | 1 | 01/31/2014 12:12 | R79606 |
| **SM 4500P-E OP -- Orthophosphate** | | | | | | | **SM4500_OP_W** |
| Orthophosphate (As PO4) | 0.22 | | 0.050 | mg/L | 1 | 01/31/2014 15:47 | 75815 |
| **SM 5310B TOC -- Total Organic Carbon by combustion** | | | | | | | **SM5310B_TOC_W** |
| Organic Carbon, Total | 160 | | 10 | mg/L | 1 | 02/11/2014 15:11 | 75885 |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*02/12/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** REW-6-20140130-01 **Project:** Raytheon - Wayland
**Lab ID:** N0134-06 **Collection Date:** 01/30/14 9:55

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **EPA 300.0 Modified -- Volatile Organic Acids** | | | | | | | **E300_VOA_W** |
| Lactic Acid | 0.71 | J | 5.0 | mg/L | 1 | 02/07/2014 13:39 | 75848 |
| Acetic Acid | 310 | | 50 | mg/L | 10 | 02/10/2014 8:59 | 75848 |
| Propionic Acid | 0.54 | J | 5.0 | mg/L | 1 | 02/07/2014 13:39 | 75848 |
| Butyric Acid | 4.8 | J | 5.0 | mg/L | 1 | 02/07/2014 13:39 | 75848 |
| **EPA 300.0 -- Anions by Ion Chromotography (LOW)** | | | | | | | **E300IC_W** |
| Chloride | 37 | B | 2.0 | mg/L | 1 | 01/31/2014 15:15 | 75813 |
| Nitrogen, Nitrate (As N) | 0.071 | BJ | 0.13 | mg/L | 1 | 01/31/2014 15:15 | 75813 |
| Sulfate | 14 | | 5.0 | mg/L | 1 | 01/31/2014 15:15 | 75813 |
| **SM 2320B -- Alkalinity (Total)** | | | | | | | **SM2320_W** |
| Alkalinity, Total (As CaCO3) | 130 | | 20 | mg/L CaCO3 | 1 | 02/06/2014 9:30 | 75838 |
| **SM 4500 H+ B -- pH VALUE** | | | | | | | **SM4500_H+** |
| pH | 6.4 | | 1.0 | S.U. | 1 | 01/31/2014 12:15 | R79606 |
| **SM 4500P-E OP -- Orthophosphate** | | | | | | | **SM4500_OP_W** |
| Orthophosphate (As PO4) | 0.36 | | 0.050 | mg/L | 1 | 01/31/2014 15:47 | 75815 |
| **SM 5310B TOC -- Total Organic Carbon by combustion** | | | | | | | **SM5310B_TOC_W** |
| Organic Carbon, Total | 110 | | 10 | mg/L | 1 | 02/11/2014 15:33 | 75885 |

**Qualifiers:**

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*02/12/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** REW-7-20140130-01 **Project:** Raytheon - Wayland
**Lab ID:** N0134-07 **Collection Date:** 01/30/14 10:50

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **EPA 300.0 Modified -- Volatile Organic Acids** | | | | | | | **E300_VOA_W** |
| Lactic Acid | 0.37 | J | 5.0 | mg/L | 1 | 02/07/2014 14:00 | 75848 |
| Acetic Acid | 140 | | 15 | mg/L | 3 | 02/10/2014 9:20 | 75848 |
| Propionic Acid | 0.89 | J | 5.0 | mg/L | 1 | 02/07/2014 14:00 | 75848 |
| Butyric Acid | 0.70 | J | 5.0 | mg/L | 1 | 02/07/2014 14:00 | 75848 |
| **EPA 300.0 -- Anions by Ion Chromotography (LOW)** | | | | | | | **E300IC_W** |
| Chloride | 20 | B | 2.0 | mg/L | 1 | 01/31/2014 15:27 | 75813 |
| Nitrogen, Nitrate (As N) | 0.074 | BJ | 0.13 | mg/L | 1 | 01/31/2014 15:27 | 75813 |
| Sulfate | 14 | | 5.0 | mg/L | 1 | 01/31/2014 15:27 | 75813 |
| **SM 2320B -- Alkalinity (Total)** | | | | | | | **SM2320_W** |
| Alkalinity, Total (As CaCO3) | 92 | | 20 | mg/L CaCO3 | 1 | 02/06/2014 9:30 | 75838 |
| **SM 4500 H+ B -- pH VALUE** | | | | | | | **SM4500_H+** |
| pH | 6.6 | | 1.0 | S.U. | 1 | 01/31/2014 12:18 | R79606 |
| **SM 4500P-E OP -- Orthophosphate** | | | | | | | **SM4500_OP_W** |
| Orthophosphate (As PO4) | 0.45 | | 0.050 | mg/L | 1 | 01/31/2014 15:47 | 75815 |
| **SM 5310B TOC -- Total Organic Carbon by combustion** | | | | | | | **SM5310B_TOC_W** |
| Organic Carbon, Total | 40 | | 10 | mg/L | 1 | 02/11/2014 15:54 | 75885 |

**Qualifiers:**

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*02/12/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** REW-8-20140130-01 **Project:** Raytheon - Wayland
**Lab ID:** N0134-08 **Collection Date:** 01/30/14 12:55

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **EPA 300.0 Modified -- Volatile Organic Acids** | | | | | | | **E300_VOA_W** |
| Lactic Acid | ND | | 5.0 | mg/L | 1 | 02/07/2014 14:22 | 75848 |
| Acetic Acid | ND | | 5.0 | mg/L | 1 | 02/07/2014 14:22 | 75848 |
| Propionic Acid | ND | | 5.0 | mg/L | 1 | 02/07/2014 14:22 | 75848 |
| Butyric Acid | ND | | 5.0 | mg/L | 1 | 02/07/2014 14:22 | 75848 |
| **EPA 300.0 -- Anions by Ion Chromotography (LOW)** | | | | | | | **E300IC_W** |
| Chloride | 1.4 | BJ | 2.0 | mg/L | 1 | 01/31/2014 15:39 | 75813 |
| Nitrogen, Nitrate (As N) | 0.080 | BJ | 0.13 | mg/L | 1 | 01/31/2014 15:39 | 75813 |
| Sulfate | 8.7 | | 5.0 | mg/L | 1 | 01/31/2014 15:39 | 75813 |
| **SM 2320B -- Alkalinity (Total)** | | | | | | | **SM2320_W** |
| Alkalinity, Total (As CaCO3) | ND | | 20 | mg/L CaCO3 | 1 | 02/06/2014 9:30 | 75838 |
| **SM 4500 H+ B -- pH VALUE** | | | | | | | **SM4500_H+** |
| pH | 6.4 | | 1.0 | S.U. | 1 | 01/31/2014 12:21 | R79606 |
| **SM 4500P-E OP -- Orthophosphate** | | | | | | | **SM4500_OP_W** |
| Orthophosphate (As PO4) | 0.45 | | 0.10 | mg/L | 2 | 01/31/2014 15:47 | 75815 |
| **SM 5310B TOC -- Total Organic Carbon by combustion** | | | | | | | **SM5310B_TOC_W** |
| Organic Carbon, Total | 13 | | 10 | mg/L | 1 | 02/11/2014 16:15 | 75885 |

**Qualifiers:**

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*02/12/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** REW-9-20140130-01 **Project:** Raytheon - Wayland
**Lab ID:** N0134-09 **Collection Date:** 01/30/14 12:15

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **EPA 300.0 Modified -- Volatile Organic Acids** | | | | | | | **E300_VOA_W** |
| Lactic Acid | ND | | 5.0 | mg/L | 1 | 02/07/2014 15:47 | 75848 |
| Acetic Acid | 280 | | 50 | mg/L | 10 | 02/10/2014 9:42 | 75848 |
| Propionic Acid | 2.1 | J | 5.0 | mg/L | 1 | 02/07/2014 15:47 | 75848 |
| Butyric Acid | 9.1 | | 5.0 | mg/L | 1 | 02/07/2014 15:47 | 75848 |
| **EPA 300.0 -- Anions by Ion Chromotography (LOW)** | | | | | | | **E300IC_W** |
| Chloride | 22 | B | 2.0 | mg/L | 1 | 01/31/2014 15:50 | 75813 |
| Nitrogen, Nitrate (As N) | 0.066 | BJ | 0.13 | mg/L | 1 | 01/31/2014 15:50 | 75813 |
| Sulfate | ND | | 5.0 | mg/L | 1 | 01/31/2014 15:50 | 75813 |
| **SM 2320B -- Alkalinity (Total)** | | | | | | | **SM2320_W** |
| Alkalinity, Total (As CaCO3) | 170 | | 20 | mg/L CaCO3 | 1 | 02/06/2014 9:30 | 75838 |
| **SM 4500 H+ B -- pH VALUE** | | | | | | | **SM4500_H+** |
| pH | 5.9 | | 1.0 | S.U. | 1 | 01/31/2014 12:24 | R79606 |
| **SM 4500P-E OP -- Orthophosphate** | | | | | | | **SM4500_OP_W** |
| Orthophosphate (As PO4) | 0.23 | | 0.10 | mg/L | 2 | 01/31/2014 15:47 | 75815 |
| **SM 5310B TOC -- Total Organic Carbon by combustion** | | | | | | | **SM5310B_TOC_W** |
| Organic Carbon, Total | 85 | | 10 | mg/L | 1 | 02/11/2014 16:35 | 75885 |

**Qualifiers:**

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*02/12/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** REW-12-20140130-01 **Project:** Raytheon - Wayland
**Lab ID:** N0134-10 **Collection Date:** 01/30/14 9:10

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **EPA 300.0 Modified -- Volatile Organic Acids** | | | | | | | **E300_VOA_W** |
| Lactic Acid | 0.67 | J | 5.0 | mg/L | 1 | 02/07/2014 15:26 | 75848 |
| Acetic Acid | 83 | | 5.0 | mg/L | 1 | 02/07/2014 15:26 | 75848 |
| Propionic Acid | 0.54 | J | 5.0 | mg/L | 1 | 02/07/2014 15:26 | 75848 |
| Butyric Acid | 1.1 | J | 5.0 | mg/L | 1 | 02/07/2014 15:26 | 75848 |
| **EPA 300.0 -- Anions by Ion Chromotography (LOW)** | | | | | | | **E300IC_W** |
| Chloride | 33 | B | 2.0 | mg/L | 1 | 01/31/2014 16:02 | 75813 |
| Nitrogen, Nitrate (As N) | 0.095 | BJ | 0.13 | mg/L | 1 | 01/31/2014 16:02 | 75813 |
| Sulfate | 31 | | 5.0 | mg/L | 1 | 01/31/2014 16:02 | 75813 |
| **SM 2320B -- Alkalinity (Total)** | | | | | | | **SM2320_W** |
| Alkalinity, Total (As CaCO3) | 100 | | 20 | mg/L CaCO3 | 1 | 02/06/2014 9:30 | 75838 |
| **SM 4500 H+ B -- pH VALUE** | | | | | | | **SM4500_H+** |
| pH | 6.4 | | 1.0 | S.U. | 1 | 01/31/2014 12:27 | R79606 |
| **SM 4500P-E OP -- Orthophosphate** | | | | | | | **SM4500_OP_W** |
| Orthophosphate (As PO4) | 0.24 | | 0.050 | mg/L | 1 | 01/31/2014 15:47 | 75815 |
| **SM 5310B TOC -- Total Organic Carbon by combustion** | | | | | | | **SM5310B_TOC_W** |
| Organic Carbon, Total | 25 | | 10 | mg/L | 1 | 02/11/2014 16:57 | 75885 |

**Qualifiers:**

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

**CLIENT:** Innovative Engineering Solutions, Inc.
**Work Order:** N0134
**Project:** Raytheon - Wayland

# ANALYTICAL QC SUMMARY REPORT

## E300_VOA_W

## EPA 300.0 Modified -- Volatile Organic Acids

Sample ID: **MB-75833** SampType: **MBLK** TestCode: **E300_VOA_W** Prep Date: **02/06/14 8:22** Run ID: **IC1_140206A**
Client ID: **MB-75833** Batch ID: **75833** Units: **mg/L** Analysis Date: **02/06/14 8:58** SeqNo: **2045222**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lactic Acid | 1.380 | 0.18 | 5.0 | | | | | | | | | J |
| Acetic Acid | ND | 0.20 | 5.0 | | | | | | | | | |
| Propionic Acid | ND | 0.22 | 5.0 | | | | | | | | | |
| Butyric Acid | ND | 0.33 | 5.0 | | | | | | | | | |

Sample ID: **MB-75848** SampType: **MBLK** TestCode: **E300_VOA_W** Prep Date: **02/07/14 8:07** Run ID: **IC1_140207A**
Client ID: **MB-75848** Batch ID: **75848** Units: **mg/L** Analysis Date: **02/07/14 12:15** SeqNo: **2045643**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lactic Acid | ND | 0.18 | 5.0 | | | | | | | | | |
| Acetic Acid | ND | 0.20 | 5.0 | | | | | | | | | |
| Propionic Acid | ND | 0.22 | 5.0 | | | | | | | | | |
| Butyric Acid | ND | 0.33 | 5.0 | | | | | | | | | |

Sample ID: **LCS-75833** SampType: **LCS** TestCode: **E300_VOA_W** Prep Date: **02/06/14 8:22** Run ID: **IC1_140206A**
Client ID: **LCS-75833** Batch ID: **75833** Units: **mg/L** Analysis Date: **02/06/14 9:20** SeqNo: **2045223**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lactic Acid | 51.54 | 0.18 | 5.0 | 50.00 | 0 | 103 | 75 | 125 | 0 | | | B |
| Acetic Acid | 47.08 | 0.20 | 5.0 | 50.00 | 0 | 94.2 | 75 | 125 | 0 | | | |
| Propionic Acid | 45.95 | 0.22 | 5.0 | 50.00 | 0 | 91.9 | 75 | 125 | 0 | | | |
| Butyric Acid | 46.57 | 0.33 | 5.0 | 50.00 | 0 | 93.1 | 75 | 125 | 0 | | | |

Sample ID: **LCS-75848** SampType: **LCS** TestCode: **E300_VOA_W** Prep Date: **02/07/14 8:07** Run ID: **IC1_140207A**
Client ID: **LCS-75848** Batch ID: **75848** Units: **mg/L** Analysis Date: **02/07/14 12:56** SeqNo: **2045644**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lactic Acid | 57.16 | 0.18 | 5.0 | 50.00 | 0 | 114 | 75 | 125 | 0 | | | |
| Acetic Acid | 50.15 | 0.20 | 5.0 | 50.00 | 0 | 100 | 75 | 125 | 0 | | | |
| Propionic Acid | 48.68 | 0.22 | 5.0 | 50.00 | 0 | 97.4 | 75 | 125 | 0 | | | |
| Butyric Acid | 46.77 | 0.33 | 5.0 | 50.00 | 0 | 93.5 | 75 | 125 | 0 | | | |

**Qualifiers:** ND - Not Detected at the MDL; S - Recovery outside accepted recovery limits; MDL - Method Detection Limit; B - Analyte detected in the associated Method Blank
J - Analyte detected below quanititation limits; R - RPD outside accepted recovery limits; RL - Reporting Limit

**CLIENT:** Innovative Engineering Solutions, Inc.
**Work Order:** N0134
**Project:** Raytheon - Wayland

# ANALYTICAL QC SUMMARY REPORT

## E300_VOA_W

## EPA 300.0 Modified -- Volatile Organic Acids

Sample ID: **N0134-03AMS** SampType: **MS** TestCode: **E300_VOA_W** Prep Date: **02/06/14 8:22** Run ID: **IC1_140206A**
Client ID: **MW-268M-20140130** Batch ID: **75833** Units: **mg/L** Analysis Date: **02/06/14 13:37** SeqNo: **2045206**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lactic Acid | 59.49 | 0.18 | 5.0 | 50.00 | 0 | 119 | 75 | 125 | 0 | | | B |
| Acetic Acid | 49.53 | 0.20 | 5.0 | 50.00 | 1.494 | 96.1 | 75 | 125 | 0 | | | |
| Propionic Acid | 45.67 | 0.22 | 5.0 | 50.00 | 0 | 91.3 | 75 | 125 | 0 | | | |
| Butyric Acid | 47.34 | 0.33 | 5.0 | 50.00 | 0 | 94.7 | 75 | 125 | 0 | | | |

Sample ID: **N0134-08AMS** SampType: **MS** TestCode: **E300_VOA_W** Prep Date: **02/07/14 8:07** Run ID: **IC1_140207A**
Client ID: **REW-8-20140130-01** Batch ID: **75848** Units: **mg/L** Analysis Date: **02/07/14 14:43** SeqNo: **2045647**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lactic Acid | 59.46 | 0.18 | 5.0 | 50.00 | 0 | 119 | 75 | 125 | 0 | | | |
| Acetic Acid | 49.87 | 0.20 | 5.0 | 50.00 | 0 | 99.7 | 75 | 125 | 0 | | | |
| Propionic Acid | 47.76 | 0.22 | 5.0 | 50.00 | 0 | 95.5 | 75 | 125 | 0 | | | |
| Butyric Acid | 46.77 | 0.33 | 5.0 | 50.00 | 0 | 93.5 | 75 | 125 | 0 | | | |

Sample ID: **N0134-03AMSD** SampType: **MSD** TestCode: **E300_VOA_W** Prep Date: **02/06/14 8:22** Run ID: **IC1_140206A**
Client ID: **MW-268M-20140130** Batch ID: **75833** Units: **mg/L** Analysis Date: **02/06/14 13:59** SeqNo: **2045207**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lactic Acid | 60.86 | 0.18 | 5.0 | 50.00 | 0 | 122 | 75 | 125 | 59.49 | 2.28 | 25 | B |
| Acetic Acid | 50.29 | 0.20 | 5.0 | 50.00 | 1.494 | 97.6 | 75 | 125 | 49.53 | 1.51 | 25 | |
| Propionic Acid | 46.93 | 0.22 | 5.0 | 50.00 | 0 | 93.9 | 75 | 125 | 45.67 | 2.72 | 25 | |
| Butyric Acid | 48.68 | 0.33 | 5.0 | 50.00 | 0 | 97.4 | 75 | 125 | 47.34 | 2.79 | 25 | |

Sample ID: **N0134-08AMSD** SampType: **MSD** TestCode: **E300_VOA_W** Prep Date: **02/07/14 8:07** Run ID: **IC1_140207A**
Client ID: **REW-8-20140130-01** Batch ID: **75848** Units: **mg/L** Analysis Date: **02/07/14 15:04** SeqNo: **2045648**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lactic Acid | 60.47 | 0.18 | 5.0 | 50.00 | 0 | 121 | 75 | 125 | 59.46 | 1.69 | 25 | |
| Acetic Acid | 50.24 | 0.20 | 5.0 | 50.00 | 0 | 100 | 75 | 125 | 49.87 | 0.741 | 25 | |
| Propionic Acid | 47.92 | 0.22 | 5.0 | 50.00 | 0 | 95.8 | 75 | 125 | 47.76 | 0.337 | 25 | |
| Butyric Acid | 46.88 | 0.33 | 5.0 | 50.00 | 0 | 93.8 | 75 | 125 | 46.77 | 0.244 | 25 | |

**Qualifiers:** ND - Not Detected at the MDL; S - Recovery outside accepted recovery limits; MDL - Method Detection Limit; B - Analyte detected in the associated Method Blank
J - Analyte detected below quanititation limits; R - RPD outside accepted recovery limits; RL - Reporting Limit

**CLIENT:** Innovative Engineering Solutions, Inc.
**Work Order:** N0134
**Project:** Raytheon - Wayland

# ANALYTICAL QC SUMMARY REPORT

## E300IC_W

## EPA 300.0 -- Anions by Ion Chromotography (LOW)

Sample ID: **MB-75813** SampType: **MBLK** TestCode: **E300IC_W** Prep Date: **01/31/14 11:25** Run ID: **IC1_140131A**
Client ID: **MB-75813** Batch ID: **75813** Units: **mg/L** Analysis Date: **01/31/14 13:06** SeqNo: **2044059**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 0.3631 | 0.078 | 2.0 | | | | | | | | | J |
| Nitrogen, Nitrate (As N) | 0.08116 | 0.023 | 0.13 | | | | | | | | | J |
| Sulfate | ND | 0.61 | 5.0 | | | | | | | | | |

Sample ID: **LCS-75813** SampType: **LCS** TestCode: **E300IC_W** Prep Date: **01/31/14 11:25** Run ID: **IC1_140131A**
Client ID: **LCS-75813** Batch ID: **75813** Units: **mg/L** Analysis Date: **01/31/14 13:18** SeqNo: **2044060**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 15.18 | 0.078 | 2.0 | 16.00 | 0 | 94.9 | 90 | 110 | 0 | | | B |
| Nitrogen, Nitrate (As N) | 0.9385 | 0.023 | 0.13 | 1.000 | 0 | 93.9 | 90 | 110 | 0 | | | B |
| Sulfate | 37.74 | 0.61 | 5.0 | 40.00 | 0 | 94.3 | 90 | 110 | 0 | | | |

Sample ID: **N0134-04DMS** SampType: **MS** TestCode: **E300IC_W** Prep Date: **01/31/14 11:25** Run ID: **IC1_140131A**
Client ID: **MW-561-20140130-0** Batch ID: **75813** Units: **mg/L** Analysis Date: **01/31/14 14:16** SeqNo: **2044068**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 41.86 | 0.078 | 2.0 | 16.00 | 26.66 | 95.0 | 80 | 120 | 0 | | | B |
| Nitrogen, Nitrate (As N) | 0.9656 | 0.023 | 0.13 | 1.000 | 0.07002 | 89.6 | 80 | 120 | 0 | | | B |
| Sulfate | 39.10 | 0.61 | 5.0 | 40.00 | 0 | 97.7 | 80 | 120 | 0 | | | |

Sample ID: **N0134-04DMSD** SampType: **MSD** TestCode: **E300IC_W** Prep Date: **01/31/14 11:25** Run ID: **IC1_140131A**
Client ID: **MW-561-20140130-0** Batch ID: **75813** Units: **mg/L** Analysis Date: **01/31/14 14:28** SeqNo: **2044069**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 42.60 | 0.078 | 2.0 | 16.00 | 26.66 | 99.6 | 80 | 120 | 41.86 | 1.74 | 20 | B |
| Nitrogen, Nitrate (As N) | 0.9915 | 0.023 | 0.13 | 1.000 | 0.07002 | 92.1 | 80 | 120 | 0.9656 | 2.65 | 20 | B |
| Sulfate | 40.39 | 0.61 | 5.0 | 40.00 | 0 | 101 | 80 | 120 | 39.10 | 3.25 | 20 | |

**Qualifiers:** ND - Not Detected at the MDL; S - Recovery outside accepted recovery limits; MDL - Method Detection Limit; B - Analyte detected in the associated Method Blank; J - Analyte detected below quanititation limits; R - RPD outside accepted recovery limits; RL - Reporting Limit

**CLIENT:** Innovative Engineering Solutions, Inc.
**Work Order:** N0134
**Project:** Raytheon - Wayland

# ANALYTICAL QC SUMMARY REPORT

## SM2320_W

## SM 2320B -- Alkalinity (Total)

Sample ID: **MB-75816** SampType: **MBLK** TestCode: **SM2320_W** Prep Date: **02/03/14 10:45** Run ID: **MANUAL_140203A**
Client ID: **MB-75816** Batch ID: **75816** Units: **mg/L CaCO3** Analysis Date: **02/03/14 10:45** SeqNo: **2044136**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | ND | 20 | 20 | | | | | | | | | |

Sample ID: **MB-75838** SampType: **MBLK** TestCode: **SM2320_W** Prep Date: **02/06/14 9:30** Run ID: **MANUAL_140206A**
Client ID: **MB-75838** Batch ID: **75838** Units: **mg/L CaCO3** Analysis Date: **02/06/14 9:30** SeqNo: **2045005**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | ND | 20 | 20 | | | | | | | | | |

Sample ID: **LCS-75816** SampType: **LCS** TestCode: **SM2320_W** Prep Date: **02/03/14 10:45** Run ID: **MANUAL_140203A**
Client ID: **LCS-75816** Batch ID: **75816** Units: **mg/L CaCO3** Analysis Date: **02/03/14 10:45** SeqNo: **2044134**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 101.0 | 20 | 20 | 100.0 | 0 | 101 | 80 | 120 | 0 | | | |

Sample ID: **LCS-75838** SampType: **LCS** TestCode: **SM2320_W** Prep Date: **02/06/14 9:30** Run ID: **MANUAL_140206A**
Client ID: **LCS-75838** Batch ID: **75838** Units: **mg/L CaCO3** Analysis Date: **02/06/14 9:30** SeqNo: **2045003**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 97.00 | 20 | 20 | 100.0 | 0 | 97.0 | 80 | 120 | 0 | | | |

Sample ID: **LCSD-75816** SampType: **LCSD** TestCode: **SM2320_W** Prep Date: **02/03/14 10:45** Run ID: **MANUAL_140203A**
Client ID: **LCSD-75816** Batch ID: **75816** Units: **mg/L CaCO3** Analysis Date: **02/03/14 10:45** SeqNo: **2044135**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 99.00 | 20 | 20 | 100.0 | 0 | 99.0 | 80 | 120 | 101.0 | 2.0 | 20 | |

Sample ID: **LCSD-75838** SampType: **LCSD** TestCode: **SM2320_W** Prep Date: **02/06/14 9:30** Run ID: **MANUAL_140206A**
Client ID: **LCSD-75838** Batch ID: **75838** Units: **mg/L CaCO3** Analysis Date: **02/06/14 9:30** SeqNo: **2045004**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 99.00 | 20 | 20 | 100.0 | 0 | 99.0 | 80 | 120 | 97.00 | 2.04 | 20 | |

**Qualifiers:** ND - Not Detected at the MDL; S - Recovery outside accepted recovery limits; MDL - Method Detection Limit; B - Analyte detected in the associated Method Blank
J - Analyte detected below quanititation limits; R - RPD outside accepted recovery limits; RL - Reporting Limit

**CLIENT:** Innovative Engineering Solutions, Inc.
**Work Order:** N0134
**Project:** Raytheon - Wayland

# ANALYTICAL QC SUMMARY REPORT

## SM4500_OP_W

## SM 4500P-E OP -- Orthophosphate

Sample ID: **MB-75815** SampType: **MBLK** TestCode: **SM4500_OP_W** Prep Date: **01/31/14 15:47** Run ID: **SPEC2_140131A**
Client ID: **MB-75815** Batch ID: **75815** Units: **mg/L** Analysis Date: **01/31/14 15:47** SeqNo: **2044639**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Orthophosphate (As PO4) | ND | 0.050 | 0.050 | | | | | | | | | |

Sample ID: **LCS-75815** SampType: **LCS** TestCode: **SM4500_OP_W** Prep Date: **01/31/14 15:47** Run ID: **SPEC2_140131A**
Client ID: **LCS-75815** Batch ID: **75815** Units: **mg/L** Analysis Date: **01/31/14 15:47** SeqNo: **2044637**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Orthophosphate (As PO4) | 0.3620 | 0.050 | 0.050 | 0.4128 | 0 | 87.7 | 80 | 120 | 0 | | | |

Sample ID: **LCSD-75815** SampType: **LCSD** TestCode: **SM4500_OP_W** Prep Date: **01/31/14 15:47** Run ID: **SPEC2_140131A**
Client ID: **LCSD-75815** Batch ID: **75815** Units: **mg/L** Analysis Date: **01/31/14 15:47** SeqNo: **2044638**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Orthophosphate (As PO4) | 0.3650 | 0.050 | 0.050 | 0.4128 | 0 | 88.4 | 80 | 120 | 0.3620 | 0.825 | 20 | |

**Qualifiers:** ND - Not Detected at the MDL; S - Recovery outside accepted recovery limits; MDL - Method Detection Limit; B - Analyte detected in the associated Method Blank
J - Analyte detected below quanititation limits; R - RPD outside accepted recovery limits; RL - Reporting Limit

**CLIENT:** Innovative Engineering Solutions, Inc.
**Work Order:** N0134
**Project:** Raytheon - Wayland

# ANALYTICAL QC SUMMARY REPORT

## SM5310B_TOC_W

## SM 5310B TOC -- Total Organic Carbon by combustion

Sample ID: **MB-75885** SampType: **MBLK** TestCode: **SM5310B_TOC_W** Prep Date: **02/11/14 8:47** Run ID: **TOC1_140211A**
Client ID: **MB-75885** Batch ID: **75885** Units: **mg/L** Analysis Date: **02/11/14 10:22** SeqNo: **2046228**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Organic Carbon, Total | ND | 2.0 | 10 | | | | | | | | | |

Sample ID: **LCS-75885** SampType: **LCS** TestCode: **SM5310B_TOC_W** Prep Date: **02/11/14 8:47** Run ID: **TOC1_140211A**
Client ID: **LCS-75885** Batch ID: **75885** Units: **mg/L** Analysis Date: **02/11/14 10:43** SeqNo: **2046229**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Organic Carbon, Total | 50.91 | 2.0 | 10 | 60.00 | 0 | 84.8 | 80 | 120 | 0 | | | |

Sample ID: **LCSD-75885** SampType: **LCSD** TestCode: **SM5310B_TOC_W** Prep Date: **02/11/14 8:47** Run ID: **TOC1_140211A**
Client ID: **LCSD-75885** Batch ID: **75885** Units: **mg/L** Analysis Date: **02/11/14 11:05** SeqNo: **2046230**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Organic Carbon, Total | 62.25 | 2.0 | 10 | 60.00 | 0 | 104 | 80 | 120 | 50.91 | 20.1 | 20 | R |

**Qualifiers:** ND - Not Detected at the MDL; S - Recovery outside accepted recovery limits; MDL - Method Detection Limit; B - Analyte detected in the associated Method Blank
J - Analyte detected below quanititation limits; R - RPD outside accepted recovery limits; RL - Reporting Limit

Report Date:
07-Feb-14 11:06

☑ Final Report
☐ Re-Issued Report
☐ Revised Report

**SPECTRUM ANALYTICAL, INC.**
***Featuring***
**HANIBAL TECHNOLOGY**

# *Laboratory Report*

Spectrum Analytical, Inc.
646 Camp Ave.
North Kingstown, RI 02852
Attn: Agnes Huntley

Project: Raytheon-Wayland
Project #: N0134

| Laboratory ID | Client Sample ID | Matrix | Date Sampled | Date Received |
|---|---|---|---|---|
| SB84120-01 | MW-267S-20140130-01 | Aqueous | 30-Jan-14 12:50 | 31-Jan-14 16:45 |
| SB84120-02 | MW-267M-20140130-01 | Aqueous | 30-Jan-14 12:10 | 31-Jan-14 16:45 |
| SB84120-03 | MW-268M-20140130-01 | Aqueous | 30-Jan-14 11:25 | 31-Jan-14 16:45 |
| SB84120-04 | MW-561-20140130-01 | Aqueous | 30-Jan-14 09:10 | 31-Jan-14 16:45 |
| SB84120-05 | MW-553-20140130-01 | Aqueous | 30-Jan-14 10:30 | 31-Jan-14 16:45 |
| SB84120-06 | REW-6-20140130-01 | Aqueous | 30-Jan-14 09:55 | 31-Jan-14 16:45 |
| SB84120-07 | REW-7-20140130-01 | Aqueous | 30-Jan-14 10:50 | 31-Jan-14 16:45 |
| SB84120-08 | REW-8-20140130-01 | Aqueous | 30-Jan-14 12:55 | 31-Jan-14 16:45 |
| SB84120-09 | REW-9-20140130-01 | Aqueous | 30-Jan-14 12:15 | 31-Jan-14 16:45 |
| SB84120-10 | REW-12-20140130-01 | Aqueous | 30-Jan-14 09:10 | 31-Jan-14 16:45 |

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.
All applicable NELAC requirements have been met.

Massachusetts # M-MA138/MA1110
Connecticut # PH-0777
Florida # E87600/E87936
Maine # MA138
New Hampshire # 2538
New Jersey # MA011/MA012
New York # 11393/11840
Pennsylvania # 68-04426/68-02924
Rhode Island # 98
USDA # S-51435

Authorized by:

Nicole Leja
Laboratory Director

Spectrum Analytical holds certification in the State of New York for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of New York does not offer certification for all analytes. Please refer to our website for specific certification holdings in each state.
Please note that this report contains 7 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Spectrum Analytical, Inc.

*Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Spectrum is currently accredited for the specific method or analyte indicated. Please refer to our "Quality" web page at www.spectrum-analytical.com for a full listing of our current certifications and fields of accreditation. States in which Spectrum Analytical, Inc. holds NELAC certification are New York, New Hampshire, New Jersey, Pennsylvania and Florida. All analytical work for Volatile Organic and Air analysis are transferred to and conducted at our 830 Silver Street location (NY-11840, NJ-MA012, PA-68-04426 and FL-E87936).*

*Please contact the Laboratory or Technical Director at 800-789-9115 with any questions regarding the data contained in this laboratory report.*

**CASE NARRATIVE:**

Data has been reported to the RDL. This report includes estimated concentrations detected below the RDL and above the MDL (J-Flag).

The samples were received -0.4 degrees Celsius, please refer to the Chain of Custody for details specific to temperature upon receipt. An infrared thermometer with a tolerance of +/- 1.0 degrees Celsius was used immediately upon receipt of the samples.

If a Matrix Spike (MS), Matrix Spike Duplicate (MSD) or Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group.

**There is no relevant protocol-specific QC and/or performance standards non-conformances to report.**

# Sample Acceptance Check Form

| | |
|---|---|
| Client: | Spectrum Analytical, Inc. - North Kingstown, RI |
| Project: | Raytheon-Wayland / N0134 |
| Work Order: | SB84120 |
| Sample(s) received on: | 1/31/2014 |
| Received by: | Allison Edens |

***The following outlines the condition of samples for the attached Chain of Custody upon receipt.***

| | Yes | No | N/A |
|---|---|---|---|
| 1. Were custody seals present? | ☐ | ☑ | ☐ |
| 2. Were custody seals intact? | ☐ | ☐ | ☑ |
| 3. Were samples received at a temperature of ≤ 6°C? | ☑ | ☐ | ☐ |
| 4. Were samples cooled on ice upon transfer to laboratory representative? | ☐ | ☑ | ☐ |
| 5. Were samples refrigerated upon transfer to laboratory representative? | ☑ | ☐ | ☐ |
| 6. Were sample containers received intact? | ☑ | ☐ | ☐ |
| 7. Were samples properly labeled (labels affixed to sample containers and include sample ID, site location, and/or project number and the collection date)? | ☑ | ☐ | ☐ |
| 8. Were samples accompanied by a Chain of Custody document? | ☑ | ☐ | ☐ |
| 9. Does Chain of Custody document include proper, full, and complete documentation, which shall include sample ID, site location, and/or project number, date and time of collection, collector's name, preservation type, sample matrix and any special remarks concerning the sample? | ☐ | ☑ | ☐ |
| 10. Did sample container labels agree with Chain of Custody document? | ☑ | ☐ | ☐ |
| 11. Were samples received within method-specific holding times? | ☑ | ☐ | ☐ |

Sample Identification
**MW-267S-20140130-01**
SB84120-01

| Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|
| N0134 | Aqueous | 30-Jan-14 12:50 | 31-Jan-14 |

| CAS No. | Analyte(s) | Result | Flag | Units | *RDL | MDL | Dilution | Method Ref. | Prepared | Analyzed | Analyst | Batch | Cert. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **General Chemistry Parameters** | | | | | | | | | | | | | |
| | Ammonia as N | 0.350 | | mg/l | 0.200 | 0.118 | 1 | SM4500-NH3 C. | 04-Feb-14 | 04-Feb-14 | EEM | 1402688 | X |

Sample Identification
**MW-267M-20140130-01**
SB84120-02

| Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|
| N0134 | Aqueous | 30-Jan-14 12:10 | 31-Jan-14 |

| CAS No. | Analyte(s) | Result | Flag | Units | *RDL | MDL | Dilution | Method Ref. | Prepared | Analyzed | Analyst | Batch | Cert. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **General Chemistry Parameters** | | | | | | | | | | | | | |
| | Ammonia as N | 0.210 | | mg/l | 0.200 | 0.118 | 1 | SM4500-NH3 C. | 04-Feb-14 | 04-Feb-14 | EEM | 1402688 | X |

Sample Identification
**MW-268M-20140130-01**
SB84120-03

| Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|
| N0134 | Aqueous | 30-Jan-14 11:25 | 31-Jan-14 |

| CAS No. | Analyte(s) | Result | Flag | Units | *RDL | MDL | Dilution | Method Ref. | Prepared | Analyzed | Analyst | Batch | Cert. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **General Chemistry Parameters** | | | | | | | | | | | | | |
| | Ammonia as N | 0.140 | J | mg/l | 0.200 | 0.118 | 1 | SM4500-NH3 C. | 04-Feb-14 | 04-Feb-14 | EEM | 1402688 | X |

Sample Identification
**MW-561-20140130-01**
SB84120-04

| Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|
| N0134 | Aqueous | 30-Jan-14 09:10 | 31-Jan-14 |

| CAS No. | Analyte(s) | Result | Flag | Units | *RDL | MDL | Dilution | Method Ref. | Prepared | Analyzed | Analyst | Batch | Cert. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **General Chemistry Parameters** | | | | | | | | | | | | | |
| | Ammonia as N | 0.630 | | mg/l | 0.200 | 0.118 | 1 | SM4500-NH3 C. | 04-Feb-14 | 04-Feb-14 | EEM | 1402688 | X |

Sample Identification
**MW-553-20140130-01**
SB84120-05

| Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|
| N0134 | Aqueous | 30-Jan-14 10:30 | 31-Jan-14 |

| CAS No. | Analyte(s) | Result | Flag | Units | *RDL | MDL | Dilution | Method Ref. | Prepared | Analyzed | Analyst | Batch | Cert. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **General Chemistry Parameters** | | | | | | | | | | | | | |
| | Ammonia as N | < 0.200 | U | mg/l | 0.200 | 0.118 | 1 | SM4500-NH3 C. | 04-Feb-14 | 04-Feb-14 | EEM | 1402688 | X |

Sample Identification
**REW-6-20140130-01**
SB84120-06

| Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|
| N0134 | Aqueous | 30-Jan-14 09:55 | 31-Jan-14 |

| CAS No. | Analyte(s) | Result | Flag | Units | *RDL | MDL | Dilution | Method Ref. | Prepared | Analyzed | Analyst | Batch | Cert. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **General Chemistry Parameters** | | | | | | | | | | | | | |
| | Ammonia as N | 0.210 | | mg/l | 0.200 | 0.118 | 1 | SM4500-NH3 C. | 04-Feb-14 | 04-Feb-14 | EEM | 1402688 | X |

| Sample Identification | Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|---|
| **REW-7-20140130-01**<br>SB84120-07 | N0134 | Aqueous | 30-Jan-14 10:50 | 31-Jan-14 |

| CAS No. | Analyte(s) | Result | Flag | Units | *RDL | MDL | Dilution | Method Ref. | Prepared | Analyzed | Analyst | Batch | Cert. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **General Chemistry Parameters** | | | | | | | | | | | | | |
| | Ammonia as N | < 0.200 | U | mg/l | 0.200 | 0.118 | 1 | SM4500-NH3 C. | 04-Feb-14 | 04-Feb-14 | EEM | 1402688 | X |

| Sample Identification | Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|---|
| **REW-8-20140130-01**<br>SB84120-08 | N0134 | Aqueous | 30-Jan-14 12:55 | 31-Jan-14 |

| CAS No. | Analyte(s) | Result | Flag | Units | *RDL | MDL | Dilution | Method Ref. | Prepared | Analyzed | Analyst | Batch | Cert. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **General Chemistry Parameters** | | | | | | | | | | | | | |
| | Ammonia as N | **0.140** | J | mg/l | 0.200 | 0.118 | 1 | SM4500-NH3 C. | 04-Feb-14 | 04-Feb-14 | EEM | 1402688 | X |

| Sample Identification | Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|---|
| **REW-9-20140130-01**<br>SB84120-09 | N0134 | Aqueous | 30-Jan-14 12:15 | 31-Jan-14 |

| CAS No. | Analyte(s) | Result | Flag | Units | *RDL | MDL | Dilution | Method Ref. | Prepared | Analyzed | Analyst | Batch | Cert. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **General Chemistry Parameters** | | | | | | | | | | | | | |
| | Ammonia as N | < 0.200 | U | mg/l | 0.200 | 0.118 | 1 | SM4500-NH3 C. | 04-Feb-14 | 04-Feb-14 | EEM | 1402688 | X |

| Sample Identification | Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|---|
| **REW-12-20140130-01**<br>SB84120-10 | N0134 | Aqueous | 30-Jan-14 09:10 | 31-Jan-14 |

| CAS No. | Analyte(s) | Result | Flag | Units | *RDL | MDL | Dilution | Method Ref. | Prepared | Analyzed | Analyst | Batch | Cert. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **General Chemistry Parameters** | | | | | | | | | | | | | |
| | Ammonia as N | < 0.200 | U | mg/l | 0.200 | 0.118 | 1 | SM4500-NH3 C. | 04-Feb-14 | 04-Feb-14 | EEM | 1402688 | X |

## General Chemistry Parameters - Quality Control

| Analyte(s) | Result | Flag | Units | *RDL | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch 1402688 - General Preparation** | | | | | | | | | | |
| **Blank (1402688-BLK1)** | | | | | | Prepared & Analyzed: 04-Feb-14 | | | | |
| Ammonia as N | < 0.200 | U | mg/l | 0.200 | | | | | | |
| **LCS (1402688-BS1)** | | | | | | Prepared & Analyzed: 04-Feb-14 | | | | |
| Ammonia as N | **4.83** | | mg/l | 0.200 | 5.00 | | 97 | 90-110 | | |
| **Reference (1402688-SRM1)** | | | | | | Prepared & Analyzed: 04-Feb-14 | | | | |
| Ammonia as N | **0.980** | | mg/l | 0.200 | 1.04 | | 95 | 84-116 | | |

## Notes and Definitions

| | |
|---|---|
| J | Detected above the Method Detection Limit but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag). |
| U | Analyte included in the analysis, but not detected at or above the MDL. |
| dry | Sample results reported on a dry weight basis |
| NR | Not Reported |
| RPD | Relative Percent Difference |

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Continuing Calibration Verification: The calibration relationship established during the initial calibration must be verified at periodic intervals. Concentrations, intervals, and criteria are method specific.

Validated by:
Kimberly Wisk

SB 84120-01-04

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

# CHAIN-OF-CUSTODY RECORD

WorkOrder : N0134
Project: Raytheon - Wayland
Report Type : LEVEL 2
Due Date : 2/12/2014
FAX Due Date :
Report To : Agnes R Huntley
Purchase Order : N0134
EDD Types : **Please generate a Little PEL EDD**

**Subcontractor:**
Spectrum Analytical, Inc. - Agawam, MA
11 Almgren Drive
Agawam, Massachusetts 01001

Phone: (413) 789-9018

EQuISFacilityCode: N/A

# = number of containers

**Requested Test**

| Client Sample ID | Collection Date | # | Matrix | DUP/MS/MSD | Mitkem Sample ID | SM4500_NH3_W | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-267S-20140130-01 SB 84120-01 | 01/30/2014 12:50 | 1 | Aqueous | | N0134-01F | X | | | | | | | | | | |
| MW-267M-20140130-01 02 | 01/30/2014 12:10 | 1 | Aqueous | | N0134-02F | X | | | | | | | | | | |
| MW-268M-20140130-01 03 | 01/30/2014 11:25 | 1 | Aqueous | | N0134-03F | X | | | | | | | | | | |
| MW-561-20140130-01 04 | 01/30/2014 09:10 | 1 | Aqueous | | N0134-04F | X | | | | | | | | | | |
| MW-553-20140130-01 05 | 01/30/2014 10:30 | 1 | Aqueous | | N0134-05F | X | | | | | | | | | | |
| REW-6-20140130-01 06 | 01/30/2014 09:55 | 1 | Aqueous | | N0134-06F | X | | | | | | | | | | |

1) SM4500_NH3_W, NITROGEN (AMMONIA)

Use 'Client Sample IDs' when reporting data. If needed, truncate 'Client Sample IDs' to fit on reports. Use full 'Client Sample ID' when generating EDD.

**Comments:**

0.6/-1/-0.4 IR 01
AME 01-31-14

| | | Date/Time | | | Date/Time |
|---|---|---|---|---|---|
| **Relinquished by:** | Agnes R Huntley | 01/31/14 11:12 | **Received by:** | | 1-31-14 1120 |
| **Relinquished by:** | | | **Received by:** | AME | 01-31-14 16:45 |

01/31/2014


646 Camp Ave * North Kingstown * RI * 028524008 * 401-732-3400 * 401-732-3499
www.spectrum-analytical.com

SB 841201 JH

# CHAIN-OF-CUSTODY RECORD

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

WorkOrder : N0134
Project: Raytheon - Wayland
Report Type : LEVEL 2
Due Date : 2/12/2014
FAX Due Date :
Report To : Agnes R Huntley
Purchase Order : N0134
EDD Types : **Please generate a Little PEL EDD**

**Subcontractor:**
Spectrum Analytical, Inc. - Agawam, MA
11 Almgren Drive
Agawam, Massachusetts 01001

Phone: (413) 789-9018

EQuISFacilityCode: N/A

# = number of containers

**Requested Test**

| Client Sample ID | Collection Date | # | Matrix | DUP/MS/MSD | Mitkem Sample ID | SM4500_NH3_W | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| REW-7-20140130-01 SB 841201 07 | 01/30/2014 10:50 | 1 | Aqueous | | N0134-07F | X | | | | | | | | | | |
| REW-8-20140130-01 08 | 01/30/2014 12:55 | 1 | Aqueous | | N0134-08F | X | | | | | | | | | | |
| REW-9-20140130-01 09 | 01/30/2014 12:15 | 1 | Aqueous | | N0134-09F | X | | | | | | | | | | |
| REW-12-20140130-01 10 | 01/30/2014 09:10 | 1 | Aqueous | | N0134-10F | X | | | | | | | | | | |

1) SM4500_NH3_W, NITROGEN (AMMONIA)

0.61-11-04 IR 01
AME 01-31-14

Use 'Client Sample IDs' when reporting data. If needed, truncate 'Client Sample IDs' to fit on reports. Use full 'Client Sample ID' when generating EDD.

**Comments:**

| | | Date/Time | | | Date/Time |
|---|---|---|---|---|---|
| **Relinquished by:** | Agnes R Huntley | 01/31/14 11:12 | **Received by:** | | 1-31-14 1120 |
| **Relinquished by:** | | | **Received by:** | AME | 01-31-14 16:45 |

01/31/2014
Page 2 of 2

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

**WorkOrder: N0134**

**Client ID:** IESI
**Project:** Raytheon - Wayland
**WO Name:** Raytheon - Wayland
**Location:** IESI_WAYLAND,
**Comments:** N/A

**Case:**
**SDG:**
**PO:** RA-006

**HC Due:** 02/12/14
**Fax Due:**
**Fax Report:** ☐

**Report Level:** LEVEL 2
**Special Program:**
**EDD:** CLF

| Lab Samp ID | Client Sample ID | Collection Date | Date Recv'd | Matrix | Test Code | Samp / Lab Test Comments | HF | HT | MS | SEL | Storage |
|---|---|---|---|---|---|---|---|---|---|---|---|
| N0134-01A | MW-267S-20140130-01 | 01/30/2014 12:50 | 01/31/2014 | Aqueous | E300_VOA_W | / | | | | Y | N3 |
| N0134-01B | MW-267S-20140130-01 | 01/30/2014 12:50 | 01/31/2014 | Aqueous | RSK175 | / | | | | | VOA |
| N0134-01C | MW-267S-20140130-01 | 01/30/2014 12:50 | 01/31/2014 | Aqueous | SM5310B_TOC_W | / | | | | | R22 |
| N0134-01D | MW-267S-20140130-01 | 01/30/2014 12:50 | 01/31/2014 | Aqueous | E300IC_W | / NO3,Cl,SO4 | | | | Y | N3 |
| N0134-01D | MW-267S-20140130-01 | 01/30/2014 12:50 | 01/31/2014 | Aqueous | SM2320_W | / | | | | | N3 |
| N0134-01D | MW-267S-20140130-01 | 01/30/2014 12:50 | 01/31/2014 | Aqueous | SM4500_H+ | / | | | | | N3 |
| N0134-01D | MW-267S-20140130-01 | 01/30/2014 12:50 | 01/31/2014 | Aqueous | SM4500_OP_W | / | | | | | N3 |
| N0134-01E | MW-267S-20140130-01 | 01/30/2014 12:50 | 01/31/2014 | Aqueous | SW6010_W | / Fe only | | | | Y | M3 |
| N0134-01F | MW-267S-20140130-01 | 01/30/2014 12:50 | 01/31/2014 | Aqueous | SM4500_NH3_W | / SPECTRUM--sub to Agawam | | | | | SUB |
| N0134-02A | MW-267M-20140130-01 | 01/30/2014 12:10 | 01/31/2014 | Aqueous | E300_VOA_W | / | | | | Y | N3 |
| N0134-02B | MW-267M-20140130-01 | 01/30/2014 12:10 | 01/31/2014 | Aqueous | RSK175 | / | | | | | VOA |
| N0134-02C | MW-267M-20140130-01 | 01/30/2014 12:10 | 01/31/2014 | Aqueous | SM5310B_TOC_W | / | | | | | R22 |
| N0134-02D | MW-267M-20140130-01 | 01/30/2014 12:10 | 01/31/2014 | Aqueous | E300IC_W | / NO3,Cl,SO4 | | | | Y | N3 |
| N0134-02D | MW-267M-20140130-01 | 01/30/2014 12:10 | 01/31/2014 | Aqueous | SM2320_W | / | | | | | N3 |
| N0134-02D | MW-267M-20140130-01 | 01/30/2014 12:10 | 01/31/2014 | Aqueous | SM4500_H+ | / | | | | | N3 |
| N0134-02D | MW-267M-20140130-01 | 01/30/2014 12:10 | 01/31/2014 | Aqueous | SM4500_OP_W | / | | | | | N3 |
| N0134-02E | MW-267M-20140130-01 | 01/30/2014 12:10 | 01/31/2014 | Aqueous | SW6010_W | / Fe only | | | | Y | M3 |
| N0134-02F | MW-267M-20140130-01 | 01/30/2014 12:10 | 01/31/2014 | Aqueous | SM4500_NH3_W | / SPECTRUM--sub to Agawam | | | | | SUB |
| N0134-03A | MW-268M-20140130-01 | 01/30/2014 11:25 | 01/31/2014 | Aqueous | E300_VOA_W | / | | | | Y | N3 |
| N0134-03B | MW-268M-20140130-01 | 01/30/2014 11:25 | 01/31/2014 | Aqueous | RSK175 | / | | | | | VOA |

HF = Fraction logged in but all tests have been placed on hold

HT = Test logged in but has been placed on hold

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

**WorkOrder: N0134**

**Client ID:** IESI
**Project:** Raytheon - Wayland
**WO Name:** Raytheon - Wayland
**Location:** IESI_WAYLAND,
**Comments:** N/A

**Case:**
**SDG:**
**PO:** RA-006

**HC Due:** 02/12/14
**Fax Due:**
**Fax Report:** ☐

**Report Level:** LEVEL 2
**Special Program:**
**EDD:** CLF

| Lab Samp ID | Client Sample ID | Collection Date | Date Recv'd | Matrix | Test Code | Samp / Lab Test Comments | HF | HT | MS | SEL | Storage |
|---|---|---|---|---|---|---|---|---|---|---|---|
| N0134-03C | MW-268M-20140130-01 | 01/30/2014 11:25 | 01/31/2014 | Aqueous | SM5310B_TOC_W | / | | | | | R22 |
| N0134-03D | MW-268M-20140130-01 | 01/30/2014 11:25 | 01/31/2014 | Aqueous | E300IC_W | / NO3,Cl,SO4 | | | | Y | N3 |
| N0134-03D | MW-268M-20140130-01 | 01/30/2014 11:25 | 01/31/2014 | Aqueous | SM2320_W | / | | | | | N3 |
| N0134-03D | MW-268M-20140130-01 | 01/30/2014 11:25 | 01/31/2014 | Aqueous | SM4500_H+ | / | | | | | N3 |
| N0134-03D | MW-268M-20140130-01 | 01/30/2014 11:25 | 01/31/2014 | Aqueous | SM4500_OP_W | / | | | | | N3 |
| N0134-03E | MW-268M-20140130-01 | 01/30/2014 11:25 | 01/31/2014 | Aqueous | SW6010_W | / Fe only | | | | Y | M3 |
| N0134-03F | MW-268M-20140130-01 | 01/30/2014 11:25 | 01/31/2014 | Aqueous | SM4500_NH3_W | / SPECTRUM--sub to Agawam | | | | | SUB |
| N0134-04A | MW-561-20140130-01 | 01/30/2014 09:10 | 01/31/2014 | Aqueous | E300_VOA_W | / | | | | Y | N3 |
| N0134-04B | MW-561-20140130-01 | 01/30/2014 09:10 | 01/31/2014 | Aqueous | RSK175 | / | | | | | VOA |
| N0134-04C | MW-561-20140130-01 | 01/30/2014 09:10 | 01/31/2014 | Aqueous | SM5310B_TOC_W | / | | | | | R22 |
| N0134-04D | MW-561-20140130-01 | 01/30/2014 09:10 | 01/31/2014 | Aqueous | E300IC_W | / NO3,Cl,SO4 | | | | Y | N3 |
| N0134-04D | MW-561-20140130-01 | 01/30/2014 09:10 | 01/31/2014 | Aqueous | SM2320_W | / | | | | | N3 |
| N0134-04D | MW-561-20140130-01 | 01/30/2014 09:10 | 01/31/2014 | Aqueous | SM4500_H+ | / | | | | | N3 |
| N0134-04D | MW-561-20140130-01 | 01/30/2014 09:10 | 01/31/2014 | Aqueous | SM4500_OP_W | / | | | | | N3 |
| N0134-04E | MW-561-20140130-01 | 01/30/2014 09:10 | 01/31/2014 | Aqueous | SW6010_W | / Fe only | | | | Y | M3 |
| N0134-04F | MW-561-20140130-01 | 01/30/2014 09:10 | 01/31/2014 | Aqueous | SM4500_NH3_W | / SPECTRUM--sub to Agawam | | | | | SUB |
| N0134-05A | MW-553-20140130-01 | 01/30/2014 10:30 | 01/31/2014 | Aqueous | E300_VOA_W | / | | | | Y | N3 |
| N0134-05B | MW-553-20140130-01 | 01/30/2014 10:30 | 01/31/2014 | Aqueous | RSK175 | / | | | | | VOA |
| N0134-05C | MW-553-20140130-01 | 01/30/2014 10:30 | 01/31/2014 | Aqueous | SM5310B_TOC_W | / | | | | | R22 |

HF = Fraction logged in but all tests have been placed on hold

HT = Test logged in but has been placed on hold

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

**WorkOrder: N0134**

**Client ID:** IESI
**Project:** Raytheon - Wayland
**WO Name:** Raytheon - Wayland
**Location:** IESI_WAYLAND,
**Comments:** N/A

**Case:**
**SDG:**
**PO:** RA-006

**HC Due:** 02/12/14
**Fax Due:**
**Fax Report:** ☐

**Report Level:** LEVEL 2
**Special Program:**
**EDD:** CLF

| Lab Samp ID | Client Sample ID | Collection Date | Date Recv'd | Matrix | Test Code | Samp / Lab Test Comments | HF | HT | MS | SEL | Storage |
|---|---|---|---|---|---|---|---|---|---|---|---|
| N0134-05D | MW-553-20140130-01 | 01/30/2014 10:30 | 01/31/2014 | Aqueous | E300IC_W | / NO3,Cl,SO4 | | | | Y | N3 |
| N0134-05D | MW-553-20140130-01 | 01/30/2014 10:30 | 01/31/2014 | Aqueous | SM2320_W | / | | | | | N3 |
| N0134-05D | MW-553-20140130-01 | 01/30/2014 10:30 | 01/31/2014 | Aqueous | SM4500_H+ | / | | | | | N3 |
| N0134-05D | MW-553-20140130-01 | 01/30/2014 10:30 | 01/31/2014 | Aqueous | SM4500_OP_W | / | | | | | N3 |
| N0134-05E | MW-553-20140130-01 | 01/30/2014 10:30 | 01/31/2014 | Aqueous | SW6010_W | / Fe only | | | | Y | M3 |
| N0134-05F | MW-553-20140130-01 | 01/30/2014 10:30 | 01/31/2014 | Aqueous | SM4500_NH3_W | / SPECTRUM--sub to Agawam | | | | | SUB |
| N0134-06A | REW-6-20140130-01 | 01/30/2014 09:55 | 01/31/2014 | Aqueous | E300_VOA_W | / | | | | Y | N3 |
| N0134-06B | REW-6-20140130-01 | 01/30/2014 09:55 | 01/31/2014 | Aqueous | RSK175 | / | | | | | VOA |
| N0134-06C | REW-6-20140130-01 | 01/30/2014 09:55 | 01/31/2014 | Aqueous | SM5310B_TOC_W | / | | | | | R22 |
| N0134-06D | REW-6-20140130-01 | 01/30/2014 09:55 | 01/31/2014 | Aqueous | E300IC_W | / NO3,Cl,SO4 | | | | Y | N3 |
| N0134-06D | REW-6-20140130-01 | 01/30/2014 09:55 | 01/31/2014 | Aqueous | SM2320_W | / | | | | | N3 |
| N0134-06D | REW-6-20140130-01 | 01/30/2014 09:55 | 01/31/2014 | Aqueous | SM4500_H+ | / | | | | | N3 |
| N0134-06D | REW-6-20140130-01 | 01/30/2014 09:55 | 01/31/2014 | Aqueous | SM4500_OP_W | / | | | | | N3 |
| N0134-06E | REW-6-20140130-01 | 01/30/2014 09:55 | 01/31/2014 | Aqueous | SW6010_W | / Fe only | | | | Y | M3 |
| N0134-06F | REW-6-20140130-01 | 01/30/2014 09:55 | 01/31/2014 | Aqueous | SM4500_NH3_W | / SPECTRUM--sub to Agawam | | | | | SUB |
| N0134-07A | REW-7-20140130-01 | 01/30/2014 10:50 | 01/31/2014 | Aqueous | E300_VOA_W | / | | | | Y | N3 |
| N0134-07B | REW-7-20140130-01 | 01/30/2014 10:50 | 01/31/2014 | Aqueous | RSK175 | / | | | | | VOA |
| N0134-07C | REW-7-20140130-01 | 01/30/2014 10:50 | 01/31/2014 | Aqueous | SM5310B_TOC_W | / | | | | | R22 |
| N0134-07D | REW-7-20140130-01 | 01/30/2014 10:50 | 01/31/2014 | Aqueous | E300IC_W | / NO3,Cl,SO4 | | | | Y | N3 |
| N0134-07D | REW-7-20140130-01 | 01/30/2014 10:50 | 01/31/2014 | Aqueous | SM2320_W | / | | | | | N3 |

HF = Fraction logged in but all tests have been placed on hold

HT = Test logged in but has been placed on hold

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

**WorkOrder: N0134**

**Client ID:** IESI
**Project:** Raytheon - Wayland
**WO Name:** Raytheon - Wayland
**Location:** IESI_WAYLAND,
**Comments:** N/A

**Case:**
**SDG:**
**PO:** RA-006

**HC Due:** 02/12/14
**Fax Due:**
**Fax Report:** ☐

**Report Level:** LEVEL 2
**Special Program:**
**EDD:** CLF

| Lab Samp ID | Client Sample ID | Collection Date | Date Recv'd | Matrix | Test Code | Samp / Lab Test Comments | HF | HT | MS | SEL | Storage |
|---|---|---|---|---|---|---|---|---|---|---|---|
| N0134-07D | REW-7-20140130-01 | 01/30/2014 10:50 | 01/31/2014 | Aqueous | SM4500_H+ | / | | | | | N3 |
| N0134-07D | REW-7-20140130-01 | 01/30/2014 10:50 | 01/31/2014 | Aqueous | SM4500_OP_W | / | | | | | N3 |
| N0134-07E | REW-7-20140130-01 | 01/30/2014 10:50 | 01/31/2014 | Aqueous | SW6010_W | / Fe only | | | | Y | M3 |
| N0134-07F | REW-7-20140130-01 | 01/30/2014 10:50 | 01/31/2014 | Aqueous | SM4500_NH3_W | / SPECTRUM--sub to Agawam | | | | | SUB |
| N0134-08A | REW-8-20140130-01 | 01/30/2014 12:55 | 01/31/2014 | Aqueous | E300_VOA_W | / | | | | Y | N3 |
| N0134-08B | REW-8-20140130-01 | 01/30/2014 12:55 | 01/31/2014 | Aqueous | RSK175 | / | | | | | VOA |
| N0134-08C | REW-8-20140130-01 | 01/30/2014 12:55 | 01/31/2014 | Aqueous | SM5310B_TOC_W | / | | | | | R22 |
| N0134-08D | REW-8-20140130-01 | 01/30/2014 12:55 | 01/31/2014 | Aqueous | E300IC_W | / NO3,Cl,SO4 | | | | Y | N3 |
| N0134-08D | REW-8-20140130-01 | 01/30/2014 12:55 | 01/31/2014 | Aqueous | SM2320_W | / | | | | | N3 |
| N0134-08D | REW-8-20140130-01 | 01/30/2014 12:55 | 01/31/2014 | Aqueous | SM4500_H+ | / | | | | | N3 |
| N0134-08D | REW-8-20140130-01 | 01/30/2014 12:55 | 01/31/2014 | Aqueous | SM4500_OP_W | / | | | | | N3 |
| N0134-08E | REW-8-20140130-01 | 01/30/2014 12:55 | 01/31/2014 | Aqueous | SW6010_W | / Fe only | | | | Y | M3 |
| N0134-08F | REW-8-20140130-01 | 01/30/2014 12:55 | 01/31/2014 | Aqueous | SM4500_NH3_W | / SPECTRUM--sub to Agawam | | | | | SUB |
| N0134-09A | REW-9-20140130-01 | 01/30/2014 12:15 | 01/31/2014 | Aqueous | E300_VOA_W | / | | | | Y | N3 |
| N0134-09B | REW-9-20140130-01 | 01/30/2014 12:15 | 01/31/2014 | Aqueous | RSK175 | / | | | | | VOA |
| N0134-09C | REW-9-20140130-01 | 01/30/2014 12:15 | 01/31/2014 | Aqueous | SM5310B_TOC_W | / | | | | | R22 |
| N0134-09D | REW-9-20140130-01 | 01/30/2014 12:15 | 01/31/2014 | Aqueous | E300IC_W | / NO3,Cl,SO4 | | | | Y | N3 |
| N0134-09D | REW-9-20140130-01 | 01/30/2014 12:15 | 01/31/2014 | Aqueous | SM2320_W | / | | | | | N3 |
| N0134-09D | REW-9-20140130-01 | 01/30/2014 12:15 | 01/31/2014 | Aqueous | SM4500_H+ | / | | | | | N3 |
| N0134-09D | REW-9-20140130-01 | 01/30/2014 12:15 | 01/31/2014 | Aqueous | SM4500_OP_W | / | | | | | N3 |

HF = Fraction logged in but all tests have been placed on hold

HT = Test logged in but has been placed on hold

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

**WorkOrder: N0134**

**Client ID:** IESI
**Project:** Raytheon - Wayland
**WO Name:** Raytheon - Wayland
**Location:** IESI_WAYLAND,
**Comments:** N/A

**Case:**
**SDG:**
**PO:** RA-006

**HC Due:** 02/12/14
**Fax Due:**
**Fax Report:** ☐

**Report Level:** LEVEL 2
**Special Program:**
**EDD:** CLF

| Lab Samp ID | Client Sample ID | Collection Date | Date Recv'd | Matrix | Test Code | Samp / Lab Test Comments | HF | HT | MS | SEL | Storage |
|---|---|---|---|---|---|---|---|---|---|---|---|
| N0134-09E | REW-9-20140130-01 | 01/30/2014 12:15 | 01/31/2014 | Aqueous | SW6010_W | / Fe only | | | | Y | M3 |
| N0134-09F | REW-9-20140130-01 | 01/30/2014 12:15 | 01/31/2014 | Aqueous | SM4500_NH3_W | / SPECTRUM--sub to Agawam | | | | | SUB |
| N0134-10A | REW-12-20140130-01 | 01/30/2014 09:10 | 01/31/2014 | Aqueous | E300_VOA_W | / | | | | Y | N3 |
| N0134-10B | REW-12-20140130-01 | 01/30/2014 09:10 | 01/31/2014 | Aqueous | RSK175 | / | | | | | VOA |
| N0134-10C | REW-12-20140130-01 | 01/30/2014 09:10 | 01/31/2014 | Aqueous | SM5310B_TOC_W | / | | | | | R22 |
| N0134-10D | REW-12-20140130-01 | 01/30/2014 09:10 | 01/31/2014 | Aqueous | E300IC_W | / NO3,Cl,SO4 | | | | Y | N3 |
| N0134-10D | REW-12-20140130-01 | 01/30/2014 09:10 | 01/31/2014 | Aqueous | SM2320_W | / | | | | | N3 |
| N0134-10D | REW-12-20140130-01 | 01/30/2014 09:10 | 01/31/2014 | Aqueous | SM4500_H+ | / | | | | | N3 |
| N0134-10D | REW-12-20140130-01 | 01/30/2014 09:10 | 01/31/2014 | Aqueous | SM4500_OP_W | / | | | | | N3 |
| N0134-10E | REW-12-20140130-01 | 01/30/2014 09:10 | 01/31/2014 | Aqueous | SW6010_W | / Fe only | | | | Y | M3 |
| N0134-10F | REW-12-20140130-01 | 01/30/2014 09:10 | 01/31/2014 | Aqueous | SM4500_NH3_W | / SPECTRUM--sub to Agawam | | | | | SUB |
| N0134-11A | TRIPBLANK | 01/30/2014 00:00 | 01/31/2014 | Aqueous | RSK175 | / | | | | | VOA |

HF = Fraction logged in but all tests have been placed on hold

HT = Test logged in but has been placed on hold

SPECTRUM ANALYTICAL, INC.
*Featuring*
HANIBAL TECHNOLOGY

Page 1 of 2

# CHAIN OF CUSTODY RECORD

☐ 11 Almgren Drive, Agawam, MA 01001, (413) 789-9018
☐ 8405 Benjamin Road, Ste A, Tampa, FL 33634, (813) 888-9507
☐ 646 Camp Avenue, N Kingstown, RI 02852, (401) 732-3400

**Special Handling:**

TAT- Indicate Date Needed: _____
- All TATs subject to laboratory approval. Min. 24-hour notification needed for rushes.
- Samples disposed of after 60 days unless otherwise instructed.

Report To: Innovative Engineering Solutions Inc, 25 Spring St, Walpole MA 02081
Telephone #: 508-668-0033
Project Mgr. Vicki Pearlman

Invoice To: Innovative Engineering Solutions Inc, 25 Spring St, Walpole, MA 02081
P.O. No.: RA-008 RQN: _____

Project No.: RA-008
Site Name: Raytheon - Wayland
Location: Wayland State: MA
Sampler(s): Dave Jones, Darren Rolls

1=$Na_2S_2O_3$ 2=HCl 3=$H_2SO_4$ 4=$HNO_3$ 5=NaOH 6=Ascorbic Acid 7=$CH_3OH$
8= $NaHSO_4$ 9= Deionized Water 10=$H_3PO_4$ 11= _____ 12= _____

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW= Surface Water SO=Soil SL=Sludge A=Air
X1= _____ X2= _____ X3= _____

G=Grab C=Composite

List preservative code below: 2 | 10 | 4 | 3

QA/QC Reporting Notes:

QA/QC Reporting Level
☐ Level I ☐ Level II
☐ Level III ☐ Level IV
☐ Other _____
State-specific reporting standards: _____

| N0134 Lab Id: | Sample Id: | Date: | Time: | Type | Matrix | # of VOA Vials | # of Amber Glass | # of Clear Glass | # of Plastic | | Dissolved Gases | TOC | Organic Acids | Total Sulfide | $NH_3$ | Total Phosphorus, pH Alkalinity | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | MW-267S-20140130-01 | 1/30/14 | 1250 | G | GW | 6 | | | 3 | | X | X | X | X | X | X | | | |
| 02 | MW-267M-20140130-01 | 1/30/14 | 1210 | G | GW | 6 | | | 3 | | X | X | X | X | X | X | | | |
| 03 | MW-268M-20140130-01 | 1/30/14 | 1125 | G | GW | 6 | | | 3 | | X | X | X | X | X | X | | | |
| 04 | MW-561-20140130-01 | 1/30/14 | 0910 | G | GW | 6 | | | 3 | | X | X | X | X | X | X | | | |
| 05 | MW-543-20140130-01 | 1/30/14 | 1030 | G | GW | 6 | | | 3 | | X | X | X | X | X | X | | | |
| 06 | REW-6-20140130-01 | 1/30/14 | 0955 | G | GW | 6 | | | 3 | | X | X | X | X | X | X | | | |
| 07 | REW-7-20140130-01 | 1/30/14 | 1050 | G | GW | 6 | | | 3 | | X | X | X | X | X | X | | | |
| 08 | REW-8-20140130-01 | 1/30/14 | 1255 | G | GW | 6 | | | 3 | | X | X | X | X | X | X | | | |
| 09 | REW-9-20140130-01 | 1/30/14 | 1215 | G | GW | 6 | | | 3 | | X | X | X | X | X | X | | | |
| 10 | REW-10-20140130-01 | 1/30/14 | 0910 | G | GW | 6 | | | 3 | | X | X | X | X | X | X | | | |

0.6/-1/0.01 IRC1
JCH 1/30

| Relinquished by: | Received by: | Date: | Time: | Temp°C |
|---|---|---|---|---|
| | | 1/30/14 | 1510 | |
| | | 1/30/14 | 1710 | |
| | | 1-31-14 | 0800 | |
| | | 1/31/14 | 11:08 | |

☐ EDD Format _____
☐ E-mail to vpearlman@IESsolutions.com

Condition upon receipt: Custody Seals: ☐ Present ☐ Intact ☐ Broken
☐ Ambient ☐ Iced ☒ Refrigerated ☐ DI VOA Frozen ☐ Soil Jar Frozen

www.spectrum-analytical.com

Revised Feb 2013

SPECTRUM ANALYTICAL, INC.
*Featuring*
HANIBAL TECHNOLOGY

Page 2 of 2

# CHAIN OF CUSTODY RECORD

☐ 11 Almgren Drive, Agawam, MA 01001, (413) 789-9018
☐ 8405 Benjamin Road, Ste A, Tampa, FL 33634, (813) 888-9507
☐ 646 Camp Avenue, N Kingstown, RI 02852, (401) 732-3400

**Special Handling:**

TAT- Indicate Date Needed: _____
- All TATs subject to laboratory approval. Min. 24-hour notification needed for rushes.
- Samples disposed of after 60 days unless otherwise instructed.

Report To: Innovative Engineering Solutions Inc, 25 Spring St, Walpole MA 02081
Telephone #: 508-668-0033
Project Mgr. Vicki Preisner

Invoice To: Innovative Engineering Solutions Inc, 25 Spring St, Walpole MA 02081
P.O. No.: RA-008 RQN: _____

Project No.: RA-008
Site Name: Raytheon – Wayland
Location: Wayland State: MA
Sampler(s): Danny Jones Darren Rollo

1=$Na_2S_2O_3$ 2=HCl 3=$H_2SO_4$ 4=$HNO_3$ 5=NaOH 6=Ascorbic Acid 7=$CH_3OH$
8= $NaHSO_4$ 9= Deionized Water 10=$H_3PO_4$ 11= _____ 12= _____

List preservative code below: 2

QA/QC Reporting Notes:

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW= Surface Water SO=Soil SL=Sludge A=Air
X1= _____ X2= _____ X3= _____

G=Grab C=Composite

| Lab Id: (No 134) | Sample Id: | Date: | Time: | Type | Matrix | # of VOA Vials | # of Amber Glass | # of Clear Glass | # of Plastic | Analyses: |
|---|---|---|---|---|---|---|---|---|---|---|
| 11 | Trip Blank | – | – | – | – | 2 | | | | |

QA/QC Reporting Level
☐ Level I ☐ Level II
☐ Level III ☐ Level IV
☐ Other _____

State-specific reporting standards: _____

06/1 6.4 IR1
JLH 1/30

| Relinquished by: | Received by: | Date: | Time: | Temp°C |
|---|---|---|---|---|
| [signature] | [signature] | 1/30/14 | 1510 | |
| [signature] | [signature] | 1/30/14 | 1810 | |
| [signature] | [signature] | 1-31-14 | 8:00 | |
| [signature] | [signature] | 1/31/14 | 11:08 | |

☐ EDD Format _____
☒ E-mail to vipreisner@IESinc14.com

Condition upon receipt: Custody Seals: ☐ Present ☐ Intact ☐ Broken
☐ Ambient ☒ Iced ☐ Refrigerated ☐ DI VOA Frozen ☐ Soil Jar Frozen

Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

| | |
|---|---|
| Received By: | Page 01 of 00 |
| Reviewed By: KP | Log-in Date 01/31/2014 |
| Work Order: N0134 | Client Name: Innovative Engineering Solutions, Inc. |
| Project Name/Event: Raytheon - Wayland | |

Remarks: (1/2) Please see associated sample/extract transfer logbook pages submitted with this data package.

1. Custody Seal(s) — Present / Absent
   Intact / Broken
2. Custody Seal Nos. — N/A
3. Traffic Reports/ Chain of Custody Records (TR/COCs) or Packing Lists — Present / Absent
4. Airbill — AirBill / Sticker
   Present / Absent
5. Airbill No. — Courier N/A
6. Sample Tags — Present / Absent
   Sample Tag Numbers — Listed / Not Listed on Chain-of-Custody
7. Sample Condition — Intact / Broken/ Leaking
8. Cooler Temperature Indicator Bottle — Present / Absent

| | |
|---|---|
| 9. Cooler Temperature | 2.3 °C |
| 10. Does information on TR/COCs and sample tags agree? | Yes / No |
| 11. Date Received at Laboratory | 01/31/2014 |
| 12. Time Received | 11:08 |

Sample Transfer

| Fraction (1) TVOA/VOA | Fraction (2) SVOA/PEST/ARO |
|---|---|
| Area # | Area # |
| By | By |
| On | On |

| Lab Sample ID | Preservation (pH) HNO3 | H2SO4 | HCl | NaOH | H3PO4 | VOA Matrix | Soil HeadSpace or Air Bubble > or equal to 1/4" |
|---|---|---|---|---|---|---|---|
| N0134-01 | <2 | <2 | | | <2 | H | |
| N0134-02 | <2 | <2 | | | <2 | H | |
| N0134-03 | <2 | <2 | | | <2 | H | |
| N0134-04 | <2 | <2 | | | <2 | H | |
| N0134-05 | <2 | <2 | | | <2 | H | |
| N0134-06 | <2 | <2 | | | <2 | H | |
| N0134-07 | <2 | <2 | | | <2 | H | |
| N0134-08 | <2 | <2 | | | <2 | H | |
| N0134-09 | <2 | <2 | | | <2 | H | |
| N0134-10 | <2 | <2 | | | <2 | H | |
| N0134-11 | | | | | | H | |

IR Temp Gun ID:MT-74

CoolantCondition: ICE

Preservative Name/Lot No:

VOA Matrix Key:

| | |
|---|---|
| US = Unpreserved Soil | A= Air |
| UA = Unpreserved Aqueous | H = HCl |
| M = MeOH | E = Encore |
| N = NaHSO4 | F = Freeze |

See Sample Condition Notification/Corrective Action Form Yes / No

Rad OK Yes / No

**Last Page of Data Report**

Report Date:
22-Apr-14 15:46

- [x] Final Report
- [ ] Re-Issued Report
- [ ] Revised Report

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

# *Laboratory Report*

Innovative Engineering Solutions, Inc.
25 Spring Street
Walpole, MA 02081

Work Order: N0514
Project : Raytheon - Wayland
Project #:

Attn: Sami Fam

| Laboratory ID | Client Sample ID | Matrix | Date Sampled | Date Received |
|---|---|---|---|---|
| N0514-01 | MW-261S-20140408-01 | Aqueous | 08-Apr-14 07:20 | 09-Apr-14 13:00 |
| N0514-02 | MW-265M-20140408-01 | Aqueous | 08-Apr-14 08:45 | 09-Apr-14 13:00 |
| N0514-03 | MW-268S-20140407-01 | Aqueous | 07-Apr-14 08:45 | 09-Apr-14 13:00 |
| N0514-04 | MW-268M-20140407-01 | Aqueous | 07-Apr-14 09:25 | 09-Apr-14 13:00 |
| N0514-05 | MW-552-20140407-01 | Aqueous | 07-Apr-14 15:25 | 09-Apr-14 13:00 |
| N0514-06 | MW-553-20140407-01 | Aqueous | 07-Apr-14 14:30 | 09-Apr-14 13:00 |
| N0514-07 | MW-560-20140407-01 | Aqueous | 07-Apr-14 11:10 | 09-Apr-14 13:00 |
| N0514-08 | MW-561-20140407-01 | Aqueous | 07-Apr-14 12:00 | 09-Apr-14 13:00 |
| N0514-09 | MW-562-20140407-01 | Aqueous | 07-Apr-14 13:30 | 09-Apr-14 13:00 |
| N0514-10 | MW-563-20140407-01 | Aqueous | 07-Apr-14 10:20 | 09-Apr-14 13:00 |
| N0514-11 | REW-1-20140406-01 | Aqueous | 06-Apr-14 13:45 | 09-Apr-14 13:00 |
| N0514-12 | REW-4-20140406-01 | Aqueous | 06-Apr-14 15:20 | 09-Apr-14 13:00 |
| N0514-13 | REW-5-20140406-01 | Aqueous | 06-Apr-14 14:30 | 09-Apr-14 13:00 |
| N0514-14 | REW-6-20140406-01 | Aqueous | 06-Apr-14 09:05 | 09-Apr-14 13:00 |
| N0514-15 | REW-7-20140406-01 | Aqueous | 06-Apr-14 09:35 | 09-Apr-14 13:00 |
| N0514-16 | REW-8-20140406-01 | Aqueous | 06-Apr-14 10:45 | 09-Apr-14 13:00 |
| N0514-17 | REW-9-20140406-01 | Aqueous | 06-Apr-14 11:40 | 09-Apr-14 13:00 |
| N0514-18 | REW-10-20140406-01 | Aqueous | 06-Apr-14 12:25 | 09-Apr-14 13:00 |
| N0514-19 | REW-11-20140406-01 | Aqueous | 06-Apr-14 08:15 | 09-Apr-14 13:00 |
| N0514-20 | REW-12-20140406-01 | Aqueous | 06-Apr-14 13:10 | 09-Apr-14 13:00 |
| N0514-21 | TRIP BLANK | Aqueous | 08-Apr-14 00:00 | 09-Apr-14 13:00 |

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. The results relate only to the samples(s) as received. This report may not be reproduced, except in full, without written approval from Spectrum Analytical.

All applicable NELAC or USEPA CLP requirments have been meet.

Spectrum Analytical (Rhode Island) is accredited under the National Environmental Laboratory Approval Program (NELAP) and DoD Environmental Laboratory Accreditation Program (ELAP), holds Organic and Inorganic contracts under the USEPA CLP Program and is certified under several states. The current list of our laboratory approvals and certifications is available on the Certifications page on our web site at www.spectrum-analytical.com.

Please contact the Laboratory or Technical Director at 401-732-3400 with any questions regarding the data contained in the laboratory report.

| | |
|---|---|
| Department of Defense | N/A |
| Connecticut | PH-0153 |
| Delaware | N/A |
| Florida | E87664 |
| Maine | 2007037 |
| Massachusetts | M-RI907 |
| New Hampshire | 2631 |
| New Jersey | RI001 |
| New York | 11522 |
| Rhode Island | LAI00301 |
| USDA | P330-08-00023 |
| USEPA - ISM | EP-W-09-039 |
| USEPA - SOM | EP-W-11-033 |

NELAP ACCREDITED TNI LABORATORY

LABORATORY ACCREDITATION BUREAU ACCREDITED
Certificate # L2247 Testing

Authorized by:

Yihai Ding
Laboratory Director

# REPORT NARRATIVE

Spectrum Analytical, Inc. Featuring Hanibal Technology, RI Division.

Client : Innovative Engineering Solutions, Inc.

Project: Raytheon - Wayland

Laboratory Workorder / SDG #: N0514

RSK175, Dissolved Gases by GC-FID

## I. SAMPLE RECEIPT

No exceptions or unusual conditions were encountered unless a Sample Condition Notification Form, or other record of communication is included with the Sample Receipt Documentation.

## II. HOLDING TIMES

### A. Sample Preparation:

All samples were prepared within the method-specified holding times.

### B. Sample Analysis:

All samples were analyzed within the method-specified holding times.

## III. METHODS

Samples were analyzed following procedures in laboratory test code: RSK175

## IV. PREPARATION

Aqueous Samples were prepared following procedures in laboratory test code: SW5030B

## V. INSTRUMENTATION

The following instrumentation was used to perform

Instrument Code: V7
Instrument Type: GC-FID

Description: HP5890 II
Manufacturer: Hewlett-Packard
Model: 5890
GC Column used: 30 m X 0.53 mm ID [ um thickness] CARBOXEM 1006 capillary column.

## VI. ANALYSIS

### A. Calibration:

Calibrations met the method/SOP acceptance criteria.

### B. Blanks:

All method blanks were within the acceptance criteria.

### C. Surrogates:

N/A.

### D. Spikes:

#### 1. Laboratory Control Spikes (LCS):

Percent recoveries for lab control samples were within the QC limits.

#### 2. Matrix Spike / Matrix Spike Duplicate (MS/MSD):

No client-requested MS/MSD analyses were included in this SDG.

### E. Internal Standards:

NA.

### F. Dilutions:

The following samples were analyzed at dilution:

MW-261S-20140408-01 (N0514-01ADL) : Dilution Factor: 10
MW-265M-20140408-01 (N0514-02ADL) : Dilution Factor: 10
MW-552-20140407-01 (N0514-05ADL) : Dilution Factor: 20
MW-553-20140407-01 (N0514-06ADL) : Dilution Factor: 20
MW-560-20140407-01 (N0514-07ADL) : Dilution Factor: 20
MW-561-20140407-01 (N0514-08ADL) : Dilution Factor: 20
MW-562-20140407-01 (N0514-09ADL) : Dilution Factor: 100
MW-563-20140407-01 (N0514-10ADL) : Dilution Factor: 100

REW-1-20140406-01 (N0514-11ADL) : Dilution Factor: 20
REW-4-20140406-01 (N0514-12ADL) : Dilution Factor: 20
REW-5-20140406-01 (N0514-13ADL) : Dilution Factor: 10
REW-6-20140406-01 (N0514-14ADL) : Dilution Factor: 10
REW-8-20140406-01 (N0514-16ADL) : Dilution Factor: 20
REW-9-20140406-01 (N0514-17ADL) : Dilution Factor: 20
REW-10-20140406-01 (N0514-18ADL) : Dilution Factor: 10
REW-12-20140406-01 (N0514-20ADL) : Dilution Factor: 5

## G. Samples:

No other unusual occurrences were noted during sample analysis.

## H. Manual Integration

Where needed, manual integrations were performed to improve data quality. The corrections were reviewed and associated hardcopies generated and reported as required. Manual integrations are coded to provide the data reviewer justification for such action. The codes are labeled on the ion chromatogram signal (GC/MS signal) and chromatogram for GC based analysis as follows:

· M1 peak tailing or fronting
· M2 peak co-elution
· M3 rising or falling baseline
· M4 retention time shift
· M5 miscellaneous - under this category, the justification is explained
· M6 software did not integrate peak
· M7 partial peak integration

The following samples were manually integrated:

LCSD-76692 Ethene due to M1

REW-9-20140406-01 (N0514-17A) Methane due to M6

REW-10-20140406-01 (N0514-18A) Methane due to M6

REW-12-20140406-01 (N0514-20A) Methane due to M6

VSTD005H7 Methane due to M3

VSTD005I7 Methane due to M7

VSTD100007H Ethane due to M6

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Signed:_____ _____

Date:_____4/22/2014_____

# REPORT NARRATIVE

Spectrum Analytical, Inc. Featuring Hanibal Technology, RI Division.

Client : Innovative Engineering Solutions, Inc.

Project: Raytheon - Wayland

Laboratory Workorder / SDG #: N0514

SW846 6010C

## I. SAMPLE RECEIPT

No exceptions or unusual conditions were encountered unless a Sample Condition Notification Form, or other record of communication is included with the Sample Receipt Documentation.

## II. HOLDING TIMES

### A. Sample Preparation:

All samples were prepared within the method-specified holding times.

### B. Sample Analysis:

All samples were analyzed within the method-specified holding times.

## III. METHODS

Samples were analyzed following procedures in laboratory test code: SW846 6010C

## IV. PREPARATION

Aqueous Samples were prepared following procedures in laboratory test code: SW3005A

## V. INSTRUMENTATION

The following instrumentation was used:

Instrument Code: OPTIMA2
Instrument Type: ICP

Description: Optima 3100 XL
Manufacturer: Perkin-Elmer
Model: 3100 XL

## VI. ANALYSIS

### A. Calibration:

Calibrations met the method/SOP acceptance criteria.

### B. Blanks:

All method blanks were within the acceptance criteria.

### C. Spikes:

#### 1. Laboratory Control Spikes (LCS):

Percent recoveries for laboratory control samples were within the QC limits.

#### 2. Matrix spike (MS):

A matrix spike was not performed on any sample in this SDG.

### D. Post Digestion Spike (PDS):

A post-digestion spike was not performed on any sample in this SDG.

### E. Duplicate sample:

A duplicate analysis was not performed on any sample in this SDG.

### F. Serial Dilution (SD):

Serial Dilution analysis was performed on sample: REW-12-20140406-01 (N0514-20DSD).

Percent difference was within the QC limits.

### G. Samples:

No other unusual occurrences were noted during sample analysis.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Signed: _____

Date: 04/21/14

# REPORT NARRATIVE

**Spectrum Analytical, Inc. Featuring Hanibal Technology, RI Division.**

**Client : Innovative Engineering Solutions, Inc.**

**Project: Raytheon - Wayland**

**Laboratory Workorder / SDG #: N0514**

**EPA 300.0, EPA 300.0 Modified, SM 2320B, SM 4500 H+ B, SM 4500P-E OP, SM 5310B TOC**

## I. SAMPLE RECEIPT

No exceptions or unusual conditions were encountered unless a Sample Condition Notification Form or other record of communication is included with the Sample Receipt Documentation.

## II. HOLDING TIMES

### A. Sample Preparation:

All samples were prepared within the method-specified holding times.

### B. Sample Analysis:

All samples were analyzed within the method-specified holding times.

## III. METHODS

Samples were analyzed following procedures in laboratory test codes: EPA 300.0, EPA 300.0 Modified, SM 2320B, SM 4500 H+ B, SM 4500P-E OP, SM 5310B TOC

## IV. PREPARATION

Samples were prepared following procedures in laboratory test codes: EPA 300.0, EPA 300.0 Modified, SM 2320B, SM 4500 H+ B, SM 4500P-E OP, SM 5310B TOC

## V. INSTRUMENTATION

The following instrumentation was used:

Instrument Code: IC1
Instrument Type: IC
Description: DX-500
Manufacturer: Dionex
Model: DX-500

GC Column used: 0.25 m X 4 mm ID [ um thickness] AS14A-7 capillary column.

Instrument Code: SPEC2
Instrument Type: SP
Description: Spectronic 20 Genesys
Manufacturer: Spectronic Instruments
Model: 4004-000

Instrument Code: TOC1
Instrument Type: TOC
Description: TOC
Manufacturer: Tekmar Dohrman
Model: Apollo 9000

Instrument Code: WC03
Instrument Type: Probe
Description: pH Meter
Manufacturer: Oakton Instruments
Model: Bench 2700 Series

## VI. ANALYSIS

### A. Calibration:

Calibrations met the method/SOP acceptance criteria.

### B. Blanks:

All method blanks were within the acceptance criteria.

### C. Spikes:

#### 1. Laboratory Control Spikes (LCS):

Percent recoveries for lab control samples were within the QC limits.

#### 2. Matrix Spike / Matrix Spike Duplicate (MS/MSD):

Matrix spikes were performed on samples: MW-261S-20140408-01 (N0514-01BMS), MW-261S-20140408-01 (N0514-01BMSD), REW-12-20140406-01 (N0514-20EMS) and REW-12-20140406-01 (N0514-20EMSD).

Percent recoveries were within the QC limits.

Replicate RPDs were within the advisory QC limits.

### D. Duplicate sample:

No client-requested laboratory duplicate analyses were included in this SDG.

## E. Dilutions:

The following samples were analyzed at dilution:

MW-261S-20140408-01 (N0514-01B), dilution factor: 5 for Acetic Acid
MW-261S-20140408-01 (N0514-01BMS), dilution factor: 5 for Acetic Acid
MW-261S-20140408-01 (N0514-01BMSD), dilution factor: 5 for Acetic Acid
MW-265M-20140408-01 (N0514-02B), dilution factor: 20 for Acetic Acid
MW-560-20140407-01 (N0514-07B), dilution factor: 10 for Acetic Acid
MW-561-20140407-01 (N0514-08B), dilution factor: 10 for Acetic Acid
MW-562-20140407-01 (N0514-09B), dilution factor: 10 for Acetic Acid
MW-562-20140407-01 (N0514-09F), dilution factor: 2 for Orthophosphate (As PO4)
MW-563-20140407-01 (N0514-10B), dilution factor: 10 for Acetic Acid
REW-6-20140406-01 (N0514-14B), dilution factor: 10 for Acetic Acid
REW-7-20140406-01 (N0514-15B), dilution factor: 2 for Acetic Acid
REW-8-20140406-01 (N0514-16B), dilution factor: 10 for Acetic Acid
REW-9-20140406-01 (N0514-17B), dilution factor: 10 for Acetic Acid

## F. Samples:

No other unusual occurrences were noted during sample analysis.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Signed: Shanyn B Lawler

Date: 04/22/2014

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/22/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** MW-261S-20140408-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-01 **Collection Date:** 04/08/14 7:20

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **RSK175 -- Dissolved Gases by GC-FID** | | | | | | | **RSK175** |
| Methane | 6600 | E | 0.61 | µg/L | 1 | 04/14/2014 11:05 | 76598 |
| Ethane | 7.4 | | 1.3 | µg/L | 1 | 04/14/2014 11:05 | 76598 |
| Ethene | 28 | | 1.6 | µg/L | 1 | 04/14/2014 11:05 | 76598 |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/22/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** MW-261S-20140408-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-01 **Collection Date:** 04/08/14 7:20

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **RSK175 -- Dissolved Gases by GC-FID** | | | | | | | **RSK175** |
| Methane | 8500 | | 6.1 | µg/L | 10 | 04/18/2014 11:45 | 76692 |
| Ethane | ND | | 13 | µg/L | 10 | 04/18/2014 11:45 | 76692 |
| Ethene | ND | | 16 | µg/L | 10 | 04/18/2014 11:45 | 76692 |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/22/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** MW-265M-20140408-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-02 **Collection Date:** 04/08/14 8:45

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **RSK175 -- Dissolved Gases by GC-FID** | | | | | | | **RSK175** |
| Methane | 8300 | E | 0.61 | µg/L | 1 | 04/14/2014 11:12 | 76598 |
| Ethane | 3.6 | | 1.3 | µg/L | 1 | 04/14/2014 11:12 | 76598 |
| Ethene | 16 | | 1.6 | µg/L | 1 | 04/14/2014 11:12 | 76598 |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/22/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** MW-265M-20140408-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-02 **Collection Date:** 04/08/14 8:45

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **RSK175 -- Dissolved Gases by GC-FID** | | | | | | | **RSK175** |
| Methane | 5000 | | 6.1 | µg/L | 10 | 04/18/2014 12:38 | 76692 |
| Ethane | ND | | 13 | µg/L | 10 | 04/18/2014 12:38 | 76692 |
| Ethene | ND | | 16 | µg/L | 10 | 04/18/2014 12:38 | 76692 |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/22/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** MW-268S-20140407-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-03 **Collection Date:** 04/07/14 8:45

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **RSK175 -- Dissolved Gases by GC-FID** | | | | | | | **RSK175** |
| Methane | 1000 | | 0.60 | µg/L | 1 | 04/14/2014 11:25 | 76598 |
| Ethane | ND | | 1.2 | µg/L | 1 | 04/14/2014 11:25 | 76598 |
| Ethene | ND | | 1.5 | µg/L | 1 | 04/14/2014 11:25 | 76598 |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/22/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** MW-268M-20140407-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-04 **Collection Date:** 04/07/14 9:25

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **RSK175 -- Dissolved Gases by GC-FID** | | | | | | | **RSK175** |
| Methane | 230 | | 0.61 | µg/L | 1 | 04/14/2014 11:33 | 76598 |
| Ethane | ND | | 1.3 | µg/L | 1 | 04/14/2014 11:33 | 76598 |
| Ethene | 5.0 | | 1.6 | µg/L | 1 | 04/14/2014 11:33 | 76598 |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/22/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** MW-552-20140407-01
**Project:** Raytheon - Wayland
**Lab ID:** N0514-05
**Collection Date:** 04/07/14 15:25

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **RSK175 -- Dissolved Gases by GC-FID** | | | | | | | **RSK175** |
| Methane | 8700 | E | 0.60 | µg/L | 1 | 04/14/2014 11:54 | 76598 |
| Ethane | 3.0 | | 1.2 | µg/L | 1 | 04/14/2014 11:54 | 76598 |
| Ethene | 38 | | 1.5 | µg/L | 1 | 04/14/2014 11:54 | 76598 |

**Qualifiers:**

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/22/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** MW-552-20140407-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-05 **Collection Date:** 04/07/14 15:25

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **RSK175 -- Dissolved Gases by GC-FID** | | | | | | | **RSK175** |
| Methane | 5800 | | 12 | µg/L | 20 | 04/18/2014 13:27 | 76692 |
| Ethane | ND | | 25 | µg/L | 20 | 04/18/2014 13:27 | 76692 |
| Ethene | ND | | 31 | µg/L | 20 | 04/18/2014 13:27 | 76692 |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/22/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** MW-553-20140407-01
**Lab ID:** N0514-06
**Project:** Raytheon - Wayland
**Collection Date:** 04/07/14 14:30

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **RSK175 -- Dissolved Gases by GC-FID** | | | | | | | **RSK175** |
| Methane | 8000 | E | 0.61 | µg/L | 1 | 04/14/2014 12:55 | 76598 |
| Ethane | 2.4 | | 1.3 | µg/L | 1 | 04/14/2014 12:55 | 76598 |
| Ethene | 6.0 | | 1.6 | µg/L | 1 | 04/14/2014 12:55 | 76598 |

**Qualifiers:**

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/22/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** MW-553-20140407-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-06 **Collection Date:** 04/07/14 14:30

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **RSK175 -- Dissolved Gases by GC-FID** | | | | | | | **RSK175** |
| Methane | 7700 | | 12 | µg/L | 20 | 04/18/2014 13:34 | 76692 |
| Ethane | ND | | 25 | µg/L | 20 | 04/18/2014 13:34 | 76692 |
| Ethene | ND | | 32 | µg/L | 20 | 04/18/2014 13:34 | 76692 |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/22/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** MW-560-20140407-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-07 **Collection Date:** 04/07/14 11:10

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **RSK175 -- Dissolved Gases by GC-FID** | | | | | | | **RSK175** |
| Methane | 12000 | E | 0.60 | µg/L | 1 | 04/14/2014 13:15 | 76598 |
| Ethane | ND | | 1.2 | µg/L | 1 | 04/14/2014 13:15 | 76598 |
| Ethene | 1.7 | | 1.5 | µg/L | 1 | 04/14/2014 13:15 | 76598 |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/22/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** MW-560-20140407-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-07 **Collection Date:** 04/07/14 11:10

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **RSK175 -- Dissolved Gases by GC-FID** | | | | | | | **RSK175** |
| Methane | 15000 | | 12 | µg/L | 20 | 04/18/2014 13:41 | 76692 |
| Ethane | ND | | 25 | µg/L | 20 | 04/18/2014 13:41 | 76692 |
| Ethene | ND | | 31 | µg/L | 20 | 04/18/2014 13:41 | 76692 |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/22/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** MW-561-20140407-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-08 **Collection Date:** 04/07/14 12:00

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **RSK175 -- Dissolved Gases by GC-FID** | | | | | | | **RSK175** |
| Methane | 17000 | E | 0.61 | µg/L | 1 | 04/14/2014 13:28 | 76598 |
| Ethane | ND | | 1.3 | µg/L | 1 | 04/14/2014 13:28 | 76598 |
| Ethene | 19 | | 1.6 | µg/L | 1 | 04/14/2014 13:28 | 76598 |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/22/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** MW-561-20140407-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-08 **Collection Date:** 04/07/14 12:00

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **RSK175 -- Dissolved Gases by GC-FID** | | | | | | | **RSK175** |
| Methane | 6500 | | 12 | µg/L | 20 | 04/18/2014 13:48 | 76692 |
| Ethane | ND | | 25 | µg/L | 20 | 04/18/2014 13:48 | 76692 |
| Ethene | ND | | 32 | µg/L | 20 | 04/18/2014 13:48 | 76692 |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/22/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** MW-562-20140407-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-09 **Collection Date:** 04/07/14 13:30

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **RSK175 -- Dissolved Gases by GC-FID** | | | | | | | **RSK175** |
| Methane | 18000 | E | 0.61 | µg/L | 1 | 04/18/2014 13:55 | 76692 |
| Ethane | 7.6 | | 1.3 | µg/L | 1 | 04/18/2014 13:55 | 76692 |
| Ethene | ND | | 1.6 | µg/L | 1 | 04/18/2014 13:55 | 76692 |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/22/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** MW-562-20140407-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-09 **Collection Date:** 04/07/14 13:30

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **RSK175 -- Dissolved Gases by GC-FID** | | | | | | | **RSK175** |
| Methane | 20000 | | 61 | µg/L | 100 | 04/18/2014 14:16 | 76692 |
| Ethane | ND | | 130 | µg/L | 100 | 04/18/2014 14:16 | 76692 |
| Ethene | ND | | 160 | µg/L | 100 | 04/18/2014 14:16 | 76692 |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/22/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** MW-563-20140407-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-10 **Collection Date:** 04/07/14 10:20

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **RSK175 -- Dissolved Gases by GC-FID** | | | | | | | **RSK175** |
| Methane | 31000 | E | 0.61 | µg/L | 1 | 04/18/2014 14:09 | 76692 |
| Ethane | 2.0 | | 1.3 | µg/L | 1 | 04/18/2014 14:09 | 76692 |
| Ethene | 10 | | 1.6 | µg/L | 1 | 04/18/2014 14:09 | 76692 |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/22/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** MW-563-20140407-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-10 **Collection Date:** 04/07/14 10:20

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **RSK175 -- Dissolved Gases by GC-FID** | | | | | | | **RSK175** |
| Methane | 40000 | | 61 | µg/L | 100 | 04/18/2014 14:23 | 76692 |
| Ethane | ND | | 130 | µg/L | 100 | 04/18/2014 14:23 | 76692 |
| Ethene | ND | | 160 | µg/L | 100 | 04/18/2014 14:23 | 76692 |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/22/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** REW-1-20140406-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-11 **Collection Date:** 04/06/14 13:45

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **RSK175 -- Dissolved Gases by GC-FID** | | | | | | | **RSK175** |
| Methane | 8900 | E | 0.61 | µg/L | 1 | 04/17/2014 11:09 | 76664 |
| Ethane | 3.2 | | 1.3 | µg/L | 1 | 04/17/2014 11:09 | 76664 |
| Ethene | ND | | 1.6 | µg/L | 1 | 04/17/2014 11:09 | 76664 |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/22/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** REW-1-20140406-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-11 **Collection Date:** 04/06/14 13:45

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **RSK175 -- Dissolved Gases by GC-FID** | | | | | | | **RSK175** |
| Methane | 9500 | | 12 | µg/L | 20 | 04/18/2014 9:33 | 76692 |
| Ethane | ND | | 25 | µg/L | 20 | 04/18/2014 9:33 | 76692 |
| Ethene | ND | | 32 | µg/L | 20 | 04/18/2014 9:33 | 76692 |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/22/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** REW-4-20140406-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-12 **Collection Date:** 04/06/14 15:20

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **RSK175 -- Dissolved Gases by GC-FID** | | | | | | | **RSK175** |
| Methane | 7700 | E | 0.61 | µg/L | 1 | 04/17/2014 11:16 | 76664 |
| Ethane | ND | | 1.3 | µg/L | 1 | 04/17/2014 11:16 | 76664 |
| Ethene | 5.5 | | 1.6 | µg/L | 1 | 04/17/2014 11:16 | 76664 |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/22/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** REW-4-20140406-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-12 **Collection Date:** 04/06/14 15:20

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **RSK175 -- Dissolved Gases by GC-FID** | | | | | | | **RSK175** |
| Methane | 6000 | | 12 | µg/L | 20 | 04/18/2014 9:51 | 76692 |
| Ethane | ND | | 25 | µg/L | 20 | 04/18/2014 9:51 | 76692 |
| Ethene | ND | | 32 | µg/L | 20 | 04/18/2014 9:51 | 76692 |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/22/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** REW-5-20140406-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-13 **Collection Date:** 04/06/14 14:30

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **RSK175 -- Dissolved Gases by GC-FID** | | | | | | | **RSK175** |
| Methane | 8800 | E | 0.60 | µg/L | 1 | 04/17/2014 11:24 | 76664 |
| Ethane | 2.3 | | 1.2 | µg/L | 1 | 04/17/2014 11:24 | 76664 |
| Ethene | 3.1 | | 1.5 | µg/L | 1 | 04/17/2014 11:24 | 76664 |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/22/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** REW-5-20140406-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-13 **Collection Date:** 04/06/14 14:30

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **RSK175 -- Dissolved Gases by GC-FID** | | | | | | | **RSK175** |
| Methane | 8300 | | 6.0 | µg/L | 10 | 04/18/2014 10:03 | 76692 |
| Ethane | ND | | 12 | µg/L | 10 | 04/18/2014 10:03 | 76692 |
| Ethene | ND | | 15 | µg/L | 10 | 04/18/2014 10:03 | 76692 |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/22/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** REW-6-20140406-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-14 **Collection Date:** 04/06/14 9:05

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **RSK175 -- Dissolved Gases by GC-FID** | | | | | | | **RSK175** |
| Methane | 8700 | E | 0.60 | µg/L | 1 | 04/17/2014 11:32 | 76664 |
| Ethane | ND | | 1.2 | µg/L | 1 | 04/17/2014 11:32 | 76664 |
| Ethene | ND | | 1.5 | µg/L | 1 | 04/17/2014 11:32 | 76664 |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/22/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** REW-6-20140406-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-14 **Collection Date:** 04/06/14 9:05

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **RSK175 -- Dissolved Gases by GC-FID** | | | | | | | **RSK175** |
| Methane | 8000 | | 6.0 | µg/L | 10 | 04/18/2014 10:28 | 76692 |
| Ethane | ND | | 12 | µg/L | 10 | 04/18/2014 10:28 | 76692 |
| Ethene | ND | | 15 | µg/L | 10 | 04/18/2014 10:28 | 76692 |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/22/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** REW-7-20140406-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-15 **Collection Date:** 04/06/14 9:35

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **RSK175 -- Dissolved Gases by GC-FID** | | | | | | | **RSK175** |
| Methane | 200 | | 0.61 | µg/L | 1 | 04/17/2014 11:39 | 76664 |
| Ethane | ND | | 1.3 | µg/L | 1 | 04/17/2014 11:39 | 76664 |
| Ethene | 1.9 | | 1.6 | µg/L | 1 | 04/17/2014 11:39 | 76664 |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/22/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** REW-8-20140406-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-16 **Collection Date:** 04/06/14 10:45

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **RSK175 -- Dissolved Gases by GC-FID** | | | | | | | **RSK175** |
| Methane | 16000 | E | 0.60 | µg/L | 1 | 04/17/2014 11:47 | 76664 |
| Ethane | 1.6 | | 1.2 | µg/L | 1 | 04/17/2014 11:47 | 76664 |
| Ethene | 12 | | 1.5 | µg/L | 1 | 04/17/2014 11:47 | 76664 |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/22/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** REW-8-20140406-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-16 **Collection Date:** 04/06/14 10:45

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **RSK175 -- Dissolved Gases by GC-FID** | | | | | | | **RSK175** |
| Methane | 15000 | | 12 | µg/L | 20 | 04/18/2014 11:05 | 76692 |
| Ethane | ND | | 25 | µg/L | 20 | 04/18/2014 11:05 | 76692 |
| Ethene | ND | | 31 | µg/L | 20 | 04/18/2014 11:05 | 76692 |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/22/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** REW-9-20140406-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-17 **Collection Date:** 04/06/14 11:40

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **RSK175 -- Dissolved Gases by GC-FID** | | | | | | | **RSK175** |
| Methane | 7200 | E | 0.60 | µg/L | 1 | 04/17/2014 11:54 | 76664 |
| Ethane | ND | | 1.2 | µg/L | 1 | 04/17/2014 11:54 | 76664 |
| Ethene | 2.1 | | 1.5 | µg/L | 1 | 04/17/2014 11:54 | 76664 |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/22/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** REW-9-20140406-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-17 **Collection Date:** 04/06/14 11:40

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **RSK175 -- Dissolved Gases by GC-FID** | | | | | | | **RSK175** |
| Methane | 9400 | | 12 | µg/L | 20 | 04/18/2014 11:14 | 76692 |
| Ethane | ND | | 25 | µg/L | 20 | 04/18/2014 11:14 | 76692 |
| Ethene | ND | | 31 | µg/L | 20 | 04/18/2014 11:14 | 76692 |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/22/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** REW-10-20140406-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-18 **Collection Date:** 04/06/14 12:25

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **RSK175 -- Dissolved Gases by GC-FID** | | | | | | | **RSK175** |
| Methane | 3900 | E | 0.61 | µg/L | 1 | 04/17/2014 12:03 | 76664 |
| Ethane | ND | | 1.3 | µg/L | 1 | 04/17/2014 12:03 | 76664 |
| Ethene | ND | | 1.6 | µg/L | 1 | 04/17/2014 12:03 | 76664 |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/22/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** REW-10-20140406-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-18 **Collection Date:** 04/06/14 12:25

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **RSK175 -- Dissolved Gases by GC-FID** | | | | | | | **RSK175** |
| Methane | 3400 | | 6.1 | µg/L | 10 | 04/18/2014 11:25 | 76692 |
| Ethane | ND | | 13 | µg/L | 10 | 04/18/2014 11:25 | 76692 |
| Ethene | ND | | 16 | µg/L | 10 | 04/18/2014 11:25 | 76692 |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/22/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** REW-11-20140406-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-19 **Collection Date:** 04/06/14 8:15

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **RSK175 -- Dissolved Gases by GC-FID** | | | | | | | **RSK175** |
| Methane | 240 | | 0.60 | µg/L | 1 | 04/17/2014 12:11 | 76664 |
| Ethane | ND | | 1.2 | µg/L | 1 | 04/17/2014 12:11 | 76664 |
| Ethene | 2.7 | | 1.5 | µg/L | 1 | 04/17/2014 12:11 | 76664 |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/22/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** REW-12-20140406-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-20 **Collection Date:** 04/06/14 13:10

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **RSK175 -- Dissolved Gases by GC-FID** | | | | | | | **RSK175** |
| Methane | 2200 | E | 0.61 | µg/L | 1 | 04/17/2014 12:19 | 76664 |
| Ethane | ND | | 1.3 | µg/L | 1 | 04/17/2014 12:19 | 76664 |
| Ethene | 5.8 | | 1.6 | µg/L | 1 | 04/17/2014 12:19 | 76664 |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/22/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** REW-12-20140406-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-20 **Collection Date:** 04/06/14 13:10

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **RSK175 -- Dissolved Gases by GC-FID** | | | | | | | **RSK175** |
| Methane | 1200 | | 3.1 | µg/L | 5 | 04/18/2014 11:33 | 76692 |
| Ethane | ND | | 6.3 | µg/L | 5 | 04/18/2014 11:33 | 76692 |
| Ethene | ND | | 7.9 | µg/L | 5 | 04/18/2014 11:33 | 76692 |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/22/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** TRIP BLANK
**Lab ID:** N0514-21
**Project:** Raytheon - Wayland
**Collection Date:** 04/08/14 0:00

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **RSK175 -- Dissolved Gases by GC-FID** | | | | | | | **RSK175** |
| Methane | ND | | 0.60 | µg/L | 1 | 04/21/2014 14:52 | 76722 |
| Ethane | ND | | 1.2 | µg/L | 1 | 04/21/2014 14:52 | 76722 |
| Ethene | ND | | 1.5 | µg/L | 1 | 04/21/2014 14:52 | 76722 |

**Qualifiers:**

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

**CLIENT:** Innovative Engineering Solutions, Inc.
**Work Order:** N0514
**Project:** Raytheon - Wayland

# ANALYTICAL QC SUMMARY REPORT

**RSK175**

**RSK175 -- Dissolved Gases by GC-FID**

Sample ID: **MB-76598** SampType: **MBLK** TestCode: **RSK175** Prep Date: **04/14/14 7:09** Run ID: **V7_140414A**
Client ID: **MB-76598** Batch ID: **76598** Units: **µg/L** Analysis Date **04/14/14 10:17** SeqNo: **2070421**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Methane | ND | 0.36 | 0.60 | | | | | | | | | |
| Ethane | ND | 0.51 | 1.2 | | | | | | | | | |
| Ethene | ND | 0.71 | 1.5 | | | | | | | | | |

Sample ID: **MB-76664** SampType: **MBLK** TestCode: **RSK175** Prep Date: **04/17/14 8:10** Run ID: **V7_140417A**
Client ID: **MB-76664** Batch ID: **76664** Units: **µg/L** Analysis Date **04/17/14 10:51** SeqNo: **2072688**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Methane | ND | 0.36 | 0.60 | | | | | | | | | |
| Ethane | ND | 0.51 | 1.2 | | | | | | | | | |
| Ethene | ND | 0.71 | 1.5 | | | | | | | | | |

Sample ID: **MB-76692** SampType: **MBLK** TestCode: **RSK175** Prep Date: **04/18/14 6:43** Run ID: **V7_140418A**
Client ID: **MB-76692** Batch ID: **76692** Units: **µg/L** Analysis Date **04/18/14 8:46** SeqNo: **2072779**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Methane | ND | 0.36 | 0.60 | | | | | | | | | |
| Ethane | ND | 0.51 | 1.2 | | | | | | | | | |
| Ethene | ND | 0.71 | 1.5 | | | | | | | | | |

Sample ID: **MB-76722** SampType: **MBLK** TestCode: **RSK175** Prep Date: **04/21/14 8:05** Run ID: **V7_140421A**
Client ID: **MB-76722** Batch ID: **76722** Units: **µg/L** Analysis Date **04/21/14 14:39** SeqNo: **2073110**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Methane | ND | 0.36 | 0.60 | | | | | | | | | |
| Ethane | ND | 0.51 | 1.2 | | | | | | | | | |
| Ethene | ND | 0.71 | 1.5 | | | | | | | | | |

Sample ID: **LCS-76598** SampType: **LCS** TestCode: **RSK175** Prep Date: **04/14/14 7:09** Run ID: **V7_140414A**
Client ID: **LCS-76598** Batch ID: **76598** Units: **µg/L** Analysis Date **04/14/14 10:08** SeqNo: **2070420**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Methane | 41.85 | 0.36 | 0.60 | 46.29 | 0 | 90.4 | 75 | 125 | 0 | | | |
| Ethane | 75.98 | 0.51 | 1.2 | 87.43 | 0 | 86.9 | 75 | 125 | 0 | | | |
| Ethene | 84.67 | 0.71 | 1.5 | 81.26 | 0 | 104 | 75 | 125 | 0 | | | |

**Qualifiers:** ND - Not Detected at the MDL; S - Recovery outside accepted recovery limits; MDL - Method Detection Limit; B - Analyte detected in the associated Method Blank; J - Analyte detected below quanititation limits; R - RPD outside accepted recovery limits; RL - Reporting Limit

**CLIENT:** Innovative Engineering Solutions, Inc.
**Work Order:** N0514
**Project:** Raytheon - Wayland

# ANALYTICAL QC SUMMARY REPORT

**RSK175**

**RSK175 -- Dissolved Gases by GC-FID**

Sample ID: **LCS-76664** SampType: **LCS** TestCode: **RSK175** Prep Date: **04/17/14 8:10** Run ID: **V7_140417A**
Client ID: **LCS-76664** Batch ID: **76664** Units: **µg/L** Analysis Date **04/17/14 9:46** SeqNo: **2072687**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Methane | 35.33 | 0.36 | 0.60 | 46.29 | 0 | 76.3 | 75 | 125 | 0 | | | |
| Ethane | 72.69 | 0.51 | 1.2 | 87.43 | 0 | 83.1 | 75 | 125 | 0 | | | |
| Ethene | 82.60 | 0.71 | 1.5 | 81.26 | 0 | 102 | 75 | 125 | 0 | | | |

Sample ID: **LCS-76692** SampType: **LCS** TestCode: **RSK175** Prep Date: **04/18/14 6:43** Run ID: **V7_140418A**
Client ID: **LCS-76692** Batch ID: **76692** Units: **µg/L** Analysis Date **04/18/14 8:12** SeqNo: **2072777**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Methane | 35.54 | 0.36 | 0.60 | 46.29 | 0 | 76.8 | 75 | 125 | 0 | | | |
| Ethane | 76.72 | 0.51 | 1.2 | 87.43 | 0 | 87.8 | 75 | 125 | 0 | | | |
| Ethene | 89.05 | 0.71 | 1.5 | 81.26 | 0 | 110 | 75 | 125 | 0 | | | |

Sample ID: **LCS-76722** SampType: **LCS** TestCode: **RSK175** Prep Date: **04/21/14 8:05** Run ID: **V7_140421A**
Client ID: **LCS-76722** Batch ID: **76722** Units: **µg/L** Analysis Date **04/21/14 13:48** SeqNo: **2073109**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Methane | 49.60 | 0.36 | 0.60 | 46.29 | 0 | 107 | 75 | 125 | 0 | | | |
| Ethane | 69.84 | 0.51 | 1.2 | 87.43 | 0 | 79.9 | 75 | 125 | 0 | | | |
| Ethene | 81.39 | 0.71 | 1.5 | 81.26 | 0 | 100 | 75 | 125 | 0 | | | |

Sample ID: **LCSD-76664** SampType: **LCSD** TestCode: **RSK175** Prep Date: **04/17/14 8:10** Run ID: **V7_140417A**
Client ID: **LCSD-76664** Batch ID: **76664** Units: **µg/L** Analysis Date **04/17/14 13:18** SeqNo: **2072699**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Methane | 56.11 | 0.35 | 0.58 | 45.00 | 0 | 125 | 75 | 125 | 35.33 | 45.5 | 30 | R |
| Ethane | 65.63 | 0.50 | 1.2 | 85.00 | 0 | 77.2 | 75 | 125 | 72.69 | 10.2 | 30 | |
| Ethene | 66.54 | 0.69 | 1.5 | 79.00 | 0 | 84.2 | 75 | 125 | 82.60 | 21.5 | 30 | |

Sample ID: **LCSD-76692** SampType: **LCSD** TestCode: **RSK175** Prep Date: **04/18/14 6:43** Run ID: **V7_140418A**
Client ID: **LCSD-76692** Batch ID: **76692** Units: **µg/L** Analysis Date **04/18/14 8:29** SeqNo: **2072778**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Methane | 42.97 | 0.36 | 0.60 | 46.29 | 0 | 92.8 | 75 | 125 | 35.54 | 18.9 | 30 | |
| Ethane | 92.11 | 0.51 | 1.2 | 87.43 | 0 | 105 | 75 | 125 | 76.72 | 18.2 | 30 | |
| Ethene | 97.00 | 0.71 | 1.5 | 81.26 | 0 | 119 | 75 | 125 | 89.05 | 8.55 | 30 | |

**Qualifiers:** ND - Not Detected at the MDL; S - Recovery outside accepted recovery limits; MDL - Method Detection Limit; B - Analyte detected in the associated Method Blank; J - Analyte detected below quanititation limits; R - RPD outside accepted recovery limits; RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/21/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** MW-261S-20140408-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-01 **Collection Date:** 04/08/14 7:20

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **SW846 6010C -- Metals by ICP** | | | | | | | **SW6010_W** |
| Iron | 100000 | B | 200 | ug/L | 1 | 04/16/2014 9:12 | 76622 |

**Qualifiers:**

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/21/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** MW-265M-20140408-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-02 **Collection Date:** 04/08/14 8:45

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **SW846 6010C -- Metals by ICP** | | | | | | | **SW6010_W** |
| Iron | 120000 | B | 200 | ug/L | 1 | 04/16/2014 9:16 | 76622 |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/21/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** MW-268S-20140407-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-03 **Collection Date:** 04/07/14 8:45

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **SW846 6010C -- Metals by ICP** | | | | | | | **SW6010_W** |
| Iron | 190 | BJ | 200 | ug/L | 1 | 04/16/2014 9:20 | 76622 |

**Qualifiers:**

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/21/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** MW-268M-20140407-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-04 **Collection Date:** 04/07/14 9:25

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **SW846 6010C -- Metals by ICP** | | | | | | | **SW6010_W** |
| Iron | 21000 | B | 200 | ug/L | 1 | 04/16/2014 9:23 | 76622 |

**Qualifiers:**

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/21/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** MW-552-20140407-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-05 **Collection Date:** 04/07/14 15:25

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **SW846 6010C -- Metals by ICP** | | | | | | | **SW6010_W** |
| Iron | 41000 | B | 200 | ug/L | 1 | 04/16/2014 9:27 | 76622 |

**Qualifiers:**

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/21/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** MW-553-20140407-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-06 **Collection Date:** 04/07/14 14:30

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **SW846 6010C -- Metals by ICP** | | | | | | | **SW6010_W** |
| Iron | 21000 | B | 200 | ug/L | 1 | 04/16/2014 9:36 | 76622 |

**Qualifiers:**

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/21/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** MW-560-20140407-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-07 **Collection Date:** 04/07/14 11:10

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **SW846 6010C -- Metals by ICP** | | | | | | | **SW6010_W** |
| Iron | 94000 | B | 200 | ug/L | 1 | 04/16/2014 9:39 | 76622 |

**Qualifiers:**

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/21/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** MW-561-20140407-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-08 **Collection Date:** 04/07/14 12:00

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **SW846 6010C -- Metals by ICP** | | | | | | | **SW6010_W** |
| Iron | 26000 | B | 200 | ug/L | 1 | 04/16/2014 9:43 | 76622 |

**Qualifiers:**

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/21/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** MW-562-20140407-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-09 **Collection Date:** 04/07/14 13:30

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **SW846 6010C -- Metals by ICP** | | | | | | | **SW6010_W** |
| Iron | 290000 | B | 200 | ug/L | 1 | 04/16/2014 9:46 | 76622 |

**Qualifiers:**

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/21/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** MW-563-20140407-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-10 **Collection Date:** 04/07/14 10:20

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **SW846 6010C -- Metals by ICP** | | | | | | | **SW6010_W** |
| Iron | 120000 | B | 200 | ug/L | 1 | 04/16/2014 9:49 | 76622 |

**Qualifiers:**

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/21/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** REW-1-20140406-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-11 **Collection Date:** 04/06/14 13:45

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **SW846 6010C -- Metals by ICP** | | | | | | | **SW6010_W** |
| Iron | 13000 | B | 200 | ug/L | 1 | 04/16/2014 9:53 | 76622 |

**Qualifiers:**

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/21/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** REW-4-20140406-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-12 **Collection Date:** 04/06/14 15:20

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **SW846 6010C -- Metals by ICP** | | | | | | | **SW6010_W** |
| Iron | 13000 | B | 200 | ug/L | 1 | 04/16/2014 9:56 | 76622 |

**Qualifiers:**

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/21/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** REW-5-20140406-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-13 **Collection Date:** 04/06/14 14:30

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **SW846 6010C -- Metals by ICP** | | | | | | | **SW6010_W** |
| Iron | 15000 | B | 200 | ug/L | 1 | 04/16/2014 10:00 | 76622 |

**Qualifiers:**

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/21/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** REW-6-20140406-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-14 **Collection Date:** 04/06/14 9:05

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **SW846 6010C -- Metals by ICP** | | | | | | | **SW6010_W** |
| Iron | 71000 | B | 200 | ug/L | 1 | 04/16/2014 10:03 | 76622 |

**Qualifiers:**

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/21/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** REW-7-20140406-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-15 **Collection Date:** 04/06/14 9:35

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **SW846 6010C -- Metals by ICP** | | | | | | | **SW6010_W** |
| Iron | 42000 | B | 200 | ug/L | 1 | 04/16/2014 10:13 | 76622 |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/21/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** REW-8-20140406-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-16 **Collection Date:** 04/06/14 10:45

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **SW846 6010C -- Metals by ICP** | | | | | | | **SW6010_W** |
| Iron | 89000 | B | 200 | ug/L | 1 | 04/16/2014 10:16 | 76622 |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/21/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** REW-9-20140406-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-17 **Collection Date:** 04/06/14 11:40

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **SW846 6010C -- Metals by ICP** | | | | | | | **SW6010_W** |
| Iron | 64000 | B | 200 | ug/L | 1 | 04/16/2014 10:19 | 76622 |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/21/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** REW-10-20140406-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-18 **Collection Date:** 04/06/14 12:25

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **SW846 6010C -- Metals by ICP** | | | | | | | **SW6010_W** |
| Iron | 130 | BJ | 200 | ug/L | 1 | 04/16/2014 10:22 | 76622 |

**Qualifiers:**

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/21/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** REW-11-20140406-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-19 **Collection Date:** 04/06/14 8:15

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **SW846 6010C -- Metals by ICP** | | | | | | | **SW6010_W** |
| Iron | 23000 | B | 200 | ug/L | 1 | 04/16/2014 10:26 | 76622 |

**Qualifiers:**

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/21/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** REW-12-20140406-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-20 **Collection Date:** 04/06/14 13:10

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **SW846 6010C -- Metals by ICP** | | | | | | | **SW6010_W** |
| Iron | 32000 | B | 200 | ug/L | 1 | 04/16/2014 10:29 | 76622 |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

**CLIENT:** Innovative Engineering Solutions, Inc.
**Work Order:** N0514
**Project:** Raytheon - Wayland

# ANALYTICAL QC SUMMARY REPORT

## SW6010_W

## SW846 6010C -- Metals by ICP

Sample ID: **MB-76622** SampType: **MBLK** TestCode: **SW6010_W** Prep Date: **04/15/14 13:30** Run ID: **OPTIMA2_140416A**
Client ID: **MB-76622** Batch ID: **76622** Units: **ug/L** Analysis Date: **04/16/14 9:04** SeqNo: **2071046**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Iron | 34.19 | 31 | 200 | | | | | | | | | J |

Sample ID: **LCS-76622** SampType: **LCS** TestCode: **SW6010_W** Prep Date: **04/15/14 13:30** Run ID: **OPTIMA2_140416A**
Client ID: **LCS-76622** Batch ID: **76622** Units: **ug/L** Analysis Date: **04/16/14 9:07** SeqNo: **2071047**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Iron | 4567 | 31 | 200 | 4550 | 0 | 100 | 80 | 120 | 0 | | | B |

Sample ID: **LCSD-76622** SampType: **LCSD** TestCode: **SW6010_W** Prep Date: **04/15/14 13:30** Run ID: **OPTIMA2_140416A**
Client ID: **LCSD-76622** Batch ID: **76622** Units: **ug/L** Analysis Date: **04/16/14 9:10** SeqNo: **2071048**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Iron | 4982 | 31 | 200 | 4550 | 0 | 109 | 80 | 120 | 4567 | 8.67 | 20 | B |

Sample ID: **N0514-20DSD** SampType: **SD** TestCode: **SW6010_W** Prep Date: **04/15/14 13:30** Run ID: **OPTIMA2_140416A**
Client ID: **REW-12-20140406-0** Batch ID: **76622** Units: **ug/L** Analysis Date: **04/16/14 10:33** SeqNo: **2071073**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Iron | 32490 | 160 | 1000 | 0 | 0 | 0 | 0 | 0 | 32330 | 0.484 | 10 | B |

**Qualifiers:** ND - Not Detected at the MDL; S - Recovery outside accepted recovery limits; MDL - Method Detection Limit; B - Analyte detected in the associated Method Blank
J - Analyte detected below quanititation limits; R - RPD outside accepted recovery limits; RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/22/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** MW-261S-20140408-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-01 **Collection Date:** 04/08/14 7:20

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **EPA 300.0 Modified -- Volatile Organic Acids** | | | | | | | **E300_VOA_W** |
| Lactic Acid | ND | | 5.0 | mg/L | 1 | 04/17/2014 15:41 | 76638 |
| Acetic Acid | 260 | | 25 | mg/L | 5 | 04/18/2014 0:59 | 76638 |
| Propionic Acid | 5.4 | | 5.0 | mg/L | 1 | 04/17/2014 15:41 | 76638 |
| Butyric Acid | 8.5 | | 5.0 | mg/L | 1 | 04/17/2014 15:41 | 76638 |
| **EPA 300.0 -- Anions by Ion Chromotography (LOW)** | | | | | | | **E300IC_W** |
| Chloride | 33 | | 2.0 | mg/L | 1 | 04/09/2014 16:00 | 76537 |
| Nitrogen, Nitrate (As N) | 0.33 | | 0.13 | mg/L | 1 | 04/09/2014 16:00 | 76537 |
| Sulfate | 0.40 | J | 5.0 | mg/L | 1 | 04/09/2014 16:00 | 76537 |
| **SM 2320B -- Alkalinity (Total)** | | | | | | | **SM2320_W** |
| Alkalinity, Total (As CaCO3) | 160 | | 20 | mg/L CaCO3 | 1 | 04/11/2014 13:15 | 76576 |
| **SM 4500 H+ B -- pH VALUE** | | | | | | | **SM4500_H+** |
| pH | 6.6 | | 1.0 | S.U. | 1 | 04/15/2014 11:36 | R80881 |
| **SM 4500P-E OP -- Orthophosphate** | | | | | | | **SM4500_OP_W** |
| Orthophosphate (As PO4) | 0.47 | | 0.050 | mg/L | 1 | 04/09/2014 15:37 | 76535 |
| **SM 5310B TOC -- Total Organic Carbon by combustion** | | | | | | | **SM5310B_TOC_W** |
| Organic Carbon, Total | 120 | | 10 | mg/L | 1 | 04/14/2014 21:00 | 76597 |

**Qualifiers:**

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/22/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** MW-265M-20140408-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-02 **Collection Date:** 04/08/14 8:45

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **EPA 300.0 Modified -- Volatile Organic Acids** | | | | | | | **E300_VOA_W** |
| Lactic Acid | ND | | 5.0 | mg/L | 1 | 04/17/2014 16:46 | 76638 |
| Acetic Acid | 1100 | | 100 | mg/L | 20 | 04/18/2014 2:04 | 76638 |
| Propionic Acid | 6.7 | | 5.0 | mg/L | 1 | 04/17/2014 16:46 | 76638 |
| Butyric Acid | 26 | | 5.0 | mg/L | 1 | 04/17/2014 16:46 | 76638 |
| **EPA 300.0 -- Anions by Ion Chromotography (LOW)** | | | | | | | **E300IC_W** |
| Chloride | 26 | | 2.0 | mg/L | 1 | 04/09/2014 16:12 | 76537 |
| Nitrogen, Nitrate (As N) | 0.089 | J | 0.13 | mg/L | 1 | 04/09/2014 16:12 | 76537 |
| Sulfate | 0.57 | J | 5.0 | mg/L | 1 | 04/09/2014 16:12 | 76537 |
| **SM 2320B -- Alkalinity (Total)** | | | | | | | **SM2320_W** |
| Alkalinity, Total (As CaCO3) | 150 | | 20 | mg/L CaCO3 | 1 | 04/11/2014 13:15 | 76576 |
| **SM 4500 H+ B -- pH VALUE** | | | | | | | **SM4500_H+** |
| pH | 6.5 | | 1.0 | S.U. | 1 | 04/15/2014 11:38 | R80881 |
| **SM 4500P-E OP -- Orthophosphate** | | | | | | | **SM4500_OP_W** |
| Orthophosphate (As PO4) | 0.098 | | 0.050 | mg/L | 1 | 04/09/2014 15:40 | 76535 |
| **SM 5310B TOC -- Total Organic Carbon by combustion** | | | | | | | **SM5310B_TOC_W** |
| Organic Carbon, Total | 380 | | 10 | mg/L | 1 | 04/14/2014 21:20 | 76597 |

**Qualifiers:**

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/22/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** MW-268S-20140407-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-03 **Collection Date:** 04/07/14 8:45

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **EPA 300.0 Modified -- Volatile Organic Acids** | | | | | | | **E300_VOA_W** |
| Lactic Acid | ND | | 5.0 | mg/L | 1 | 04/17/2014 17:07 | 76638 |
| Acetic Acid | ND | | 5.0 | mg/L | 1 | 04/17/2014 17:07 | 76638 |
| Propionic Acid | ND | | 5.0 | mg/L | 1 | 04/17/2014 17:07 | 76638 |
| Butyric Acid | ND | | 5.0 | mg/L | 1 | 04/17/2014 17:07 | 76638 |
| **EPA 300.0 -- Anions by Ion Chromotography (LOW)** | | | | | | | **E300IC_W** |
| Chloride | 9.9 | | 2.0 | mg/L | 1 | 04/09/2014 16:24 | 76537 |
| Nitrogen, Nitrate (As N) | ND | | 0.13 | mg/L | 1 | 04/09/2014 16:24 | 76537 |
| Sulfate | 25 | | 5.0 | mg/L | 1 | 04/09/2014 16:24 | 76537 |
| **SM 2320B -- Alkalinity (Total)** | | | | | | | **SM2320_W** |
| Alkalinity, Total (As CaCO3) | ND | | 20 | mg/L CaCO3 | 1 | 04/11/2014 13:15 | 76576 |
| **SM 4500 H+ B -- pH VALUE** | | | | | | | **SM4500_H+** |
| pH | 7.3 | | 1.0 | S.U. | 1 | 04/15/2014 11:39 | R80881 |
| **SM 4500P-E OP -- Orthophosphate** | | | | | | | **SM4500_OP_W** |
| Orthophosphate (As PO4) | ND | | 0.050 | mg/L | 1 | 04/09/2014 15:43 | 76535 |
| **SM 5310B TOC -- Total Organic Carbon by combustion** | | | | | | | **SM5310B_TOC_W** |
| Organic Carbon, Total | ND | | 10 | mg/L | 1 | 04/14/2014 21:40 | 76597 |

**Qualifiers:**

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/22/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** MW-268M-20140407-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-04 **Collection Date:** 04/07/14 9:25

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **EPA 300.0 Modified -- Volatile Organic Acids** | | | | | | | **E300_VOA_W** |
| Lactic Acid | ND | | 5.0 | mg/L | 1 | 04/17/2014 17:29 | 76638 |
| Acetic Acid | 0.43 | J | 5.0 | mg/L | 1 | 04/17/2014 17:29 | 76638 |
| Propionic Acid | ND | | 5.0 | mg/L | 1 | 04/17/2014 17:29 | 76638 |
| Butyric Acid | ND | | 5.0 | mg/L | 1 | 04/17/2014 17:29 | 76638 |
| **EPA 300.0 -- Anions by Ion Chromotography (LOW)** | | | | | | | **E300IC_W** |
| Chloride | 23 | | 2.0 | mg/L | 1 | 04/09/2014 16:36 | 76537 |
| Nitrogen, Nitrate (As N) | ND | | 0.13 | mg/L | 1 | 04/09/2014 16:36 | 76537 |
| Sulfate | 41 | | 5.0 | mg/L | 1 | 04/09/2014 16:36 | 76537 |
| **SM 2320B -- Alkalinity (Total)** | | | | | | | **SM2320_W** |
| Alkalinity, Total (As CaCO3) | 24 | | 20 | mg/L CaCO3 | 1 | 04/11/2014 13:15 | 76576 |
| **SM 4500 H+ B -- pH VALUE** | | | | | | | **SM4500_H+** |
| pH | 6.9 | | 1.0 | S.U. | 1 | 04/15/2014 11:40 | R80881 |
| **SM 4500P-E OP -- Orthophosphate** | | | | | | | **SM4500_OP_W** |
| Orthophosphate (As PO4) | 0.082 | | 0.050 | mg/L | 1 | 04/09/2014 15:45 | 76535 |
| **SM 5310B TOC -- Total Organic Carbon by combustion** | | | | | | | **SM5310B_TOC_W** |
| Organic Carbon, Total | ND | | 10 | mg/L | 1 | 04/14/2014 21:59 | 76597 |

**Qualifiers:**

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/22/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** MW-552-20140407-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-05 **Collection Date:** 04/07/14 15:25

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **EPA 300.0 Modified -- Volatile Organic Acids** | | | | | | | **E300_VOA_W** |
| Lactic Acid | ND | | 5.0 | mg/L | 1 | 04/17/2014 17:50 | 76638 |
| Acetic Acid | 17 | | 5.0 | mg/L | 1 | 04/17/2014 17:50 | 76638 |
| Propionic Acid | 0.86 | J | 5.0 | mg/L | 1 | 04/17/2014 17:50 | 76638 |
| Butyric Acid | ND | | 5.0 | mg/L | 1 | 04/17/2014 17:50 | 76638 |
| **EPA 300.0 -- Anions by Ion Chromotography (LOW)** | | | | | | | **E300IC_W** |
| Chloride | 23 | | 2.0 | mg/L | 1 | 04/09/2014 16:47 | 76537 |
| Nitrogen, Nitrate (As N) | ND | | 0.13 | mg/L | 1 | 04/09/2014 16:47 | 76537 |
| Sulfate | 1.7 | J | 5.0 | mg/L | 1 | 04/09/2014 16:47 | 76537 |
| **SM 2320B -- Alkalinity (Total)** | | | | | | | **SM2320_W** |
| Alkalinity, Total (As CaCO3) | 61 | | 20 | mg/L CaCO3 | 1 | 04/11/2014 13:15 | 76576 |
| **SM 4500 H+ B -- pH VALUE** | | | | | | | **SM4500_H+** |
| pH | 7.0 | | 1.0 | S.U. | 1 | 04/15/2014 11:41 | R80881 |
| **SM 4500P-E OP -- Orthophosphate** | | | | | | | **SM4500_OP_W** |
| Orthophosphate (As PO4) | 0.61 | | 0.050 | mg/L | 1 | 04/09/2014 15:48 | 76535 |
| **SM 5310B TOC -- Total Organic Carbon by combustion** | | | | | | | **SM5310B_TOC_W** |
| Organic Carbon, Total | 16 | | 10 | mg/L | 1 | 04/14/2014 22:18 | 76597 |

**Qualifiers:**

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/22/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** MW-553-20140407-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-06 **Collection Date:** 04/07/14 14:30

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **EPA 300.0 Modified -- Volatile Organic Acids** | | | | | | | **E300_VOA_W** |
| Lactic Acid | ND | | 5.0 | mg/L | 1 | 04/17/2014 18:54 | 76638 |
| Acetic Acid | 14 | | 5.0 | mg/L | 1 | 04/17/2014 18:54 | 76638 |
| Propionic Acid | ND | | 5.0 | mg/L | 1 | 04/17/2014 18:54 | 76638 |
| Butyric Acid | ND | | 5.0 | mg/L | 1 | 04/17/2014 18:54 | 76638 |
| **EPA 300.0 -- Anions by Ion Chromotography (LOW)** | | | | | | | **E300IC_W** |
| Chloride | 19 | | 2.0 | mg/L | 1 | 04/09/2014 16:59 | 76537 |
| Nitrogen, Nitrate (As N) | ND | | 0.13 | mg/L | 1 | 04/09/2014 16:59 | 76537 |
| Sulfate | 0.61 | J | 5.0 | mg/L | 1 | 04/09/2014 16:59 | 76537 |
| **SM 2320B -- Alkalinity (Total)** | | | | | | | **SM2320_W** |
| Alkalinity, Total (As CaCO3) | 40 | | 20 | mg/L CaCO3 | 1 | 04/11/2014 13:15 | 76576 |
| **SM 4500 H+ B -- pH VALUE** | | | | | | | **SM4500_H+** |
| pH | 7.2 | | 1.0 | S.U. | 1 | 04/15/2014 11:42 | R80881 |
| **SM 4500P-E OP -- Orthophosphate** | | | | | | | **SM4500_OP_W** |
| Orthophosphate (As PO4) | 0.11 | | 0.050 | mg/L | 1 | 04/09/2014 15:50 | 76535 |
| **SM 5310B TOC -- Total Organic Carbon by combustion** | | | | | | | **SM5310B_TOC_W** |
| Organic Carbon, Total | 17 | | 10 | mg/L | 1 | 04/14/2014 22:37 | 76597 |

**Qualifiers:**

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/22/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** MW-560-20140407-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-07 **Collection Date:** 04/07/14 11:10

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **EPA 300.0 Modified -- Volatile Organic Acids** | | | | | | | **E300_VOA_W** |
| Lactic Acid | ND | | 5.0 | mg/L | 1 | 04/17/2014 19:16 | 76638 |
| Acetic Acid | 780 | | 50 | mg/L | 10 | 04/18/2014 9:14 | 76638 |
| Propionic Acid | 6.0 | | 5.0 | mg/L | 1 | 04/17/2014 19:16 | 76638 |
| Butyric Acid | 16 | | 5.0 | mg/L | 1 | 04/17/2014 19:16 | 76638 |
| **EPA 300.0 -- Anions by Ion Chromotography (LOW)** | | | | | | | **E300IC_W** |
| Chloride | 22 | | 2.0 | mg/L | 1 | 04/09/2014 17:11 | 76537 |
| Nitrogen, Nitrate (As N) | 0.095 | J | 0.13 | mg/L | 1 | 04/09/2014 17:11 | 76537 |
| Sulfate | 0.61 | J | 5.0 | mg/L | 1 | 04/09/2014 17:11 | 76537 |
| **SM 2320B -- Alkalinity (Total)** | | | | | | | **SM2320_W** |
| Alkalinity, Total (As CaCO3) | 65 | | 20 | mg/L CaCO3 | 1 | 04/11/2014 13:15 | 76576 |
| **SM 4500 H+ B -- pH VALUE** | | | | | | | **SM4500_H+** |
| pH | 6.3 | | 1.0 | S.U. | 1 | 04/15/2014 11:43 | R80881 |
| **SM 4500P-E OP -- Orthophosphate** | | | | | | | **SM4500_OP_W** |
| Orthophosphate (As PO4) | 0.31 | | 0.050 | mg/L | 1 | 04/09/2014 15:53 | 76535 |
| **SM 5310B TOC -- Total Organic Carbon by combustion** | | | | | | | **SM5310B_TOC_W** |
| Organic Carbon, Total | 330 | | 10 | mg/L | 1 | 04/14/2014 22:56 | 76597 |

**Qualifiers:**

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/22/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** MW-561-20140407-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-08 **Collection Date:** 04/07/14 12:00

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **EPA 300.0 Modified -- Volatile Organic Acids** | | | | | | | **E300_VOA_W** |
| Lactic Acid | ND | | 5.0 | mg/L | 1 | 04/17/2014 19:37 | 76638 |
| Acetic Acid | 330 | | 50 | mg/L | 10 | 04/18/2014 9:35 | 76638 |
| Propionic Acid | 0.83 | J | 5.0 | mg/L | 1 | 04/17/2014 19:37 | 76638 |
| Butyric Acid | 2.9 | J | 5.0 | mg/L | 1 | 04/17/2014 19:37 | 76638 |
| **EPA 300.0 -- Anions by Ion Chromotography (LOW)** | | | | | | | **E300IC_W** |
| Chloride | 25 | | 2.0 | mg/L | 1 | 04/09/2014 17:22 | 76537 |
| Nitrogen, Nitrate (As N) | ND | | 0.13 | mg/L | 1 | 04/09/2014 17:22 | 76537 |
| Sulfate | ND | | 5.0 | mg/L | 1 | 04/09/2014 17:22 | 76537 |
| **SM 2320B -- Alkalinity (Total)** | | | | | | | **SM2320_W** |
| Alkalinity, Total (As CaCO3) | 31 | | 20 | mg/L CaCO3 | 1 | 04/11/2014 13:15 | 76576 |
| **SM 4500 H+ B -- pH VALUE** | | | | | | | **SM4500_H+** |
| pH | 6.6 | | 1.0 | S.U. | 1 | 04/15/2014 11:44 | R80881 |
| **SM 4500P-E OP -- Orthophosphate** | | | | | | | **SM4500_OP_W** |
| Orthophosphate (As PO4) | 0.053 | | 0.050 | mg/L | 1 | 04/09/2014 15:56 | 76535 |
| **SM 5310B TOC -- Total Organic Carbon by combustion** | | | | | | | **SM5310B_TOC_W** |
| Organic Carbon, Total | 220 | | 10 | mg/L | 1 | 04/15/2014 8:33 | 76597 |

**Qualifiers:**

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/22/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** MW-562-20140407-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-09 **Collection Date:** 04/07/14 13:30

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **EPA 300.0 Modified -- Volatile Organic Acids** | | | | | | | **E300_VOA_W** |
| Lactic Acid | ND | | 5.0 | mg/L | 1 | 04/17/2014 19:59 | 76638 |
| Acetic Acid | 530 | | 50 | mg/L | 10 | 04/18/2014 9:57 | 76638 |
| Propionic Acid | 8.5 | | 5.0 | mg/L | 1 | 04/17/2014 19:59 | 76638 |
| Butyric Acid | 39 | | 5.0 | mg/L | 1 | 04/17/2014 19:59 | 76638 |
| **EPA 300.0 -- Anions by Ion Chromotography (LOW)** | | | | | | | **E300IC_W** |
| Chloride | 36 | | 2.0 | mg/L | 1 | 04/09/2014 17:58 | 76537 |
| Nitrogen, Nitrate (As N) | 0.11 | J | 0.13 | mg/L | 1 | 04/09/2014 17:58 | 76537 |
| Sulfate | 0.64 | J | 5.0 | mg/L | 1 | 04/09/2014 17:58 | 76537 |
| **SM 2320B -- Alkalinity (Total)** | | | | | | | **SM2320_W** |
| Alkalinity, Total (As CaCO3) | 140 | | 20 | mg/L CaCO3 | 1 | 04/11/2014 13:15 | 76576 |
| **SM 4500 H+ B -- pH VALUE** | | | | | | | **SM4500_H+** |
| pH | 6.5 | | 1.0 | S.U. | 1 | 04/15/2014 11:46 | R80881 |
| **SM 4500P-E OP -- Orthophosphate** | | | | | | | **SM4500_OP_W** |
| Orthophosphate (As PO4) | 0.89 | | 0.10 | mg/L | 2 | 04/09/2014 15:58 | 76535 |
| **SM 5310B TOC -- Total Organic Carbon by combustion** | | | | | | | **SM5310B_TOC_W** |
| Organic Carbon, Total | 270 | | 10 | mg/L | 1 | 04/15/2014 8:53 | 76597 |

**Qualifiers:**

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/22/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** MW-563-20140407-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-10 **Collection Date:** 04/07/14 10:20

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **EPA 300.0 Modified -- Volatile Organic Acids** | | | | | | | **E300_VOA_W** |
| Lactic Acid | ND | | 5.0 | mg/L | 1 | 04/17/2014 20:20 | 76638 |
| Acetic Acid | 620 | | 50 | mg/L | 10 | 04/18/2014 10:18 | 76638 |
| Propionic Acid | 5.5 | | 5.0 | mg/L | 1 | 04/17/2014 20:20 | 76638 |
| Butyric Acid | 32 | | 5.0 | mg/L | 1 | 04/17/2014 20:20 | 76638 |
| **EPA 300.0 -- Anions by Ion Chromotography (LOW)** | | | | | | | **E300IC_W** |
| Chloride | 29 | | 2.0 | mg/L | 1 | 04/09/2014 18:09 | 76537 |
| Nitrogen, Nitrate (As N) | ND | | 0.13 | mg/L | 1 | 04/09/2014 18:09 | 76537 |
| Sulfate | 0.44 | J | 5.0 | mg/L | 1 | 04/09/2014 18:09 | 76537 |
| **SM 2320B -- Alkalinity (Total)** | | | | | | | **SM2320_W** |
| Alkalinity, Total (As CaCO3) | 59 | | 20 | mg/L CaCO3 | 1 | 04/11/2014 13:15 | 76576 |
| **SM 4500 H+ B -- pH VALUE** | | | | | | | **SM4500_H+** |
| pH | 6.0 | | 1.0 | S.U. | 1 | 04/15/2014 11:47 | R80881 |
| **SM 4500P-E OP -- Orthophosphate** | | | | | | | **SM4500_OP_W** |
| Orthophosphate (As PO4) | ND | | 0.050 | mg/L | 1 | 04/09/2014 16:01 | 76535 |
| **SM 5310B TOC -- Total Organic Carbon by combustion** | | | | | | | **SM5310B_TOC_W** |
| Organic Carbon, Total | 270 | | 10 | mg/L | 1 | 04/15/2014 9:13 | 76597 |

**Qualifiers:**

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/22/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** REW-1-20140406-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-11 **Collection Date:** 04/06/14 13:45

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **EPA 300.0 Modified -- Volatile Organic Acids** | | | | | | | **E300_VOA_W** |
| Lactic Acid | ND | | 5.0 | mg/L | 1 | 04/17/2014 20:42 | 76638 |
| Acetic Acid | 12 | | 5.0 | mg/L | 1 | 04/17/2014 20:42 | 76638 |
| Propionic Acid | ND | | 5.0 | mg/L | 1 | 04/17/2014 20:42 | 76638 |
| Butyric Acid | ND | | 5.0 | mg/L | 1 | 04/17/2014 20:42 | 76638 |
| **EPA 300.0 -- Anions by Ion Chromotography (LOW)** | | | | | | | **E300IC_W** |
| Chloride | 8.0 | | 2.0 | mg/L | 1 | 04/09/2014 18:21 | 76537 |
| Nitrogen, Nitrate (As N) | ND | | 0.13 | mg/L | 1 | 04/09/2014 18:21 | 76537 |
| Sulfate | 4.3 | J | 5.0 | mg/L | 1 | 04/09/2014 18:21 | 76537 |
| **SM 2320B -- Alkalinity (Total)** | | | | | | | **SM2320_W** |
| Alkalinity, Total (As CaCO3) | 26 | | 20 | mg/L CaCO3 | 1 | 04/11/2014 13:15 | 76576 |
| **SM 4500 H+ B -- pH VALUE** | | | | | | | **SM4500_H+** |
| pH | 7.0 | | 1.0 | S.U. | 1 | 04/15/2014 11:48 | R80881 |
| **SM 4500P-E OP -- Orthophosphate** | | | | | | | **SM4500_OP_W** |
| Orthophosphate (As PO4) | 0.36 | | 0.050 | mg/L | 1 | 04/09/2014 16:04 | 76535 |
| **SM 5310B TOC -- Total Organic Carbon by combustion** | | | | | | | **SM5310B_TOC_W** |
| Organic Carbon, Total | 52 | | 10 | mg/L | 1 | 04/15/2014 9:33 | 76597 |

**Qualifiers:**

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/22/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** REW-4-20140406-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-12 **Collection Date:** 04/06/14 15:20

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **EPA 300.0 Modified -- Volatile Organic Acids** | | | | | | | **E300_VOA_W** |
| Lactic Acid | ND | | 5.0 | mg/L | 1 | 04/17/2014 21:03 | 76638 |
| Acetic Acid | ND | | 5.0 | mg/L | 1 | 04/17/2014 21:03 | 76638 |
| Propionic Acid | ND | | 5.0 | mg/L | 1 | 04/17/2014 21:03 | 76638 |
| Butyric Acid | ND | | 5.0 | mg/L | 1 | 04/17/2014 21:03 | 76638 |
| **EPA 300.0 -- Anions by Ion Chromotography (LOW)** | | | | | | | **E300IC_W** |
| Chloride | 5.1 | | 2.0 | mg/L | 1 | 04/09/2014 18:33 | 76537 |
| Nitrogen, Nitrate (As N) | ND | | 0.13 | mg/L | 1 | 04/09/2014 18:33 | 76537 |
| Sulfate | 21 | | 5.0 | mg/L | 1 | 04/09/2014 18:33 | 76537 |
| **SM 2320B -- Alkalinity (Total)** | | | | | | | **SM2320_W** |
| Alkalinity, Total (As CaCO3) | ND | | 20 | mg/L CaCO3 | 1 | 04/11/2014 13:15 | 76576 |
| **SM 4500 H+ B -- pH VALUE** | | | | | | | **SM4500_H+** |
| pH | 6.8 | | 1.0 | S.U. | 1 | 04/15/2014 11:49 | R80881 |
| **SM 4500P-E OP -- Orthophosphate** | | | | | | | **SM4500_OP_W** |
| Orthophosphate (As PO4) | 0.085 | | 0.050 | mg/L | 1 | 04/09/2014 16:06 | 76535 |
| **SM 5310B TOC -- Total Organic Carbon by combustion** | | | | | | | **SM5310B_TOC_W** |
| Organic Carbon, Total | 22 | B | 10 | mg/L | 1 | 04/15/2014 12:36 | 76601 |

**Qualifiers:**

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/22/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** REW-5-20140406-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-13 **Collection Date:** 04/06/14 14:30

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **EPA 300.0 Modified -- Volatile Organic Acids** | | | | | | | **E300_VOA_W** |
| Lactic Acid | ND | | 5.0 | mg/L | 1 | 04/17/2014 21:25 | 76638 |
| Acetic Acid | 15 | | 5.0 | mg/L | 1 | 04/17/2014 21:25 | 76638 |
| Propionic Acid | ND | | 5.0 | mg/L | 1 | 04/17/2014 21:25 | 76638 |
| Butyric Acid | ND | | 5.0 | mg/L | 1 | 04/17/2014 21:25 | 76638 |
| **EPA 300.0 -- Anions by Ion Chromotography (LOW)** | | | | | | | **E300IC_W** |
| Chloride | 6.4 | | 2.0 | mg/L | 1 | 04/09/2014 18:45 | 76537 |
| Nitrogen, Nitrate (As N) | ND | | 0.13 | mg/L | 1 | 04/09/2014 18:45 | 76537 |
| Sulfate | 6.3 | | 5.0 | mg/L | 1 | 04/09/2014 18:45 | 76537 |
| **SM 2320B -- Alkalinity (Total)** | | | | | | | **SM2320_W** |
| Alkalinity, Total (As CaCO3) | ND | | 20 | mg/L CaCO3 | 1 | 04/11/2014 13:15 | 76576 |
| **SM 4500 H+ B -- pH VALUE** | | | | | | | **SM4500_H+** |
| pH | 6.7 | | 1.0 | S.U. | 1 | 04/15/2014 11:50 | R80881 |
| **SM 4500P-E OP -- Orthophosphate** | | | | | | | **SM4500_OP_W** |
| Orthophosphate (As PO4) | 0.50 | | 0.050 | mg/L | 1 | 04/09/2014 16:09 | 76535 |
| **SM 5310B TOC -- Total Organic Carbon by combustion** | | | | | | | **SM5310B_TOC_W** |
| Organic Carbon, Total | 29 | B | 10 | mg/L | 1 | 04/15/2014 12:55 | 76601 |

**Qualifiers:**

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/22/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** REW-6-20140406-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-14 **Collection Date:** 04/06/14 9:05

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **EPA 300.0 Modified -- Volatile Organic Acids** | | | | | | | **E300_VOA_W** |
| Lactic Acid | ND | | 5.0 | mg/L | 1 | 04/17/2014 21:46 | 76638 |
| Acetic Acid | 340 | | 50 | mg/L | 10 | 04/18/2014 10:40 | 76638 |
| Propionic Acid | 2.0 | J | 5.0 | mg/L | 1 | 04/17/2014 21:46 | 76638 |
| Butyric Acid | 8.5 | | 5.0 | mg/L | 1 | 04/17/2014 21:46 | 76638 |
| **EPA 300.0 -- Anions by Ion Chromotography (LOW)** | | | | | | | **E300IC_W** |
| Chloride | 37 | | 2.0 | mg/L | 1 | 04/09/2014 18:56 | 76537 |
| Nitrogen, Nitrate (As N) | ND | | 0.13 | mg/L | 1 | 04/09/2014 18:56 | 76537 |
| Sulfate | 14 | | 5.0 | mg/L | 1 | 04/09/2014 18:56 | 76537 |
| **SM 2320B -- Alkalinity (Total)** | | | | | | | **SM2320_W** |
| Alkalinity, Total (As CaCO3) | 34 | | 20 | mg/L CaCO3 | 1 | 04/11/2014 13:15 | 76576 |
| **SM 4500 H+ B -- pH VALUE** | | | | | | | **SM4500_H+** |
| pH | 6.3 | | 1.0 | S.U. | 1 | 04/15/2014 11:51 | R80881 |
| **SM 4500P-E OP -- Orthophosphate** | | | | | | | **SM4500_OP_W** |
| Orthophosphate (As PO4) | 0.45 | | 0.050 | mg/L | 1 | 04/09/2014 16:11 | 76535 |
| **SM 5310B TOC -- Total Organic Carbon by combustion** | | | | | | | **SM5310B_TOC_W** |
| Organic Carbon, Total | 220 | B | 10 | mg/L | 1 | 04/15/2014 13:15 | 76601 |

**Qualifiers:**

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/22/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** REW-7-20140406-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-15 **Collection Date:** 04/06/14 9:35

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **EPA 300.0 Modified -- Volatile Organic Acids** | | | | | | | **E300_VOA_W** |
| Lactic Acid | ND | | 5.0 | mg/L | 1 | 04/17/2014 22:50 | 76638 |
| Acetic Acid | 110 | | 10 | mg/L | 2 | 04/18/2014 11:01 | 76638 |
| Propionic Acid | 1.5 | J | 5.0 | mg/L | 1 | 04/17/2014 22:50 | 76638 |
| Butyric Acid | 0.60 | J | 5.0 | mg/L | 1 | 04/17/2014 22:50 | 76638 |
| **EPA 300.0 -- Anions by Ion Chromotography (LOW)** | | | | | | | **E300IC_W** |
| Chloride | 25 | | 2.0 | mg/L | 1 | 04/09/2014 19:08 | 76537 |
| Nitrogen, Nitrate (As N) | ND | | 0.13 | mg/L | 1 | 04/09/2014 19:08 | 76537 |
| Sulfate | 10 | | 5.0 | mg/L | 1 | 04/09/2014 19:08 | 76537 |
| **SM 2320B -- Alkalinity (Total)** | | | | | | | **SM2320_W** |
| Alkalinity, Total (As CaCO3) | ND | | 20 | mg/L CaCO3 | 1 | 04/11/2014 13:15 | 76576 |
| **SM 4500 H+ B -- pH VALUE** | | | | | | | **SM4500_H+** |
| pH | 6.5 | | 1.0 | S.U. | 1 | 04/15/2014 11:53 | R80881 |
| **SM 4500P-E OP -- Orthophosphate** | | | | | | | **SM4500_OP_W** |
| Orthophosphate (As PO4) | 0.10 | | 0.050 | mg/L | 1 | 04/09/2014 16:14 | 76535 |
| **SM 5310B TOC -- Total Organic Carbon by combustion** | | | | | | | **SM5310B_TOC_W** |
| Organic Carbon, Total | 63 | B | 10 | mg/L | 1 | 04/15/2014 13:35 | 76601 |

**Qualifiers:**

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/22/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** REW-8-20140406-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-16 **Collection Date:** 04/06/14 10:45

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **EPA 300.0 Modified -- Volatile Organic Acids** | | | | | | | **E300_VOA_W** |
| Lactic Acid | ND | | 5.0 | mg/L | 1 | 04/17/2014 23:12 | 76638 |
| Acetic Acid | 310 | | 50 | mg/L | 10 | 04/18/2014 11:23 | 76638 |
| Propionic Acid | 4.5 | J | 5.0 | mg/L | 1 | 04/17/2014 23:12 | 76638 |
| Butyric Acid | 5.5 | | 5.0 | mg/L | 1 | 04/17/2014 23:12 | 76638 |
| **EPA 300.0 -- Anions by Ion Chromotography (LOW)** | | | | | | | **E300IC_W** |
| Chloride | 24 | | 2.0 | mg/L | 1 | 04/09/2014 19:20 | 76537 |
| Nitrogen, Nitrate (As N) | ND | | 0.13 | mg/L | 1 | 04/09/2014 19:20 | 76537 |
| Sulfate | 1.7 | J | 5.0 | mg/L | 1 | 04/09/2014 19:20 | 76537 |
| **SM 2320B -- Alkalinity (Total)** | | | | | | | **SM2320_W** |
| Alkalinity, Total (As CaCO3) | 49 | | 20 | mg/L CaCO3 | 1 | 04/11/2014 13:15 | 76576 |
| **SM 4500 H+ B -- pH VALUE** | | | | | | | **SM4500_H+** |
| pH | 6.5 | | 1.0 | S.U. | 1 | 04/15/2014 11:54 | R80881 |
| **SM 4500P-E OP -- Orthophosphate** | | | | | | | **SM4500_OP_W** |
| Orthophosphate (As PO4) | 0.18 | | 0.050 | mg/L | 1 | 04/09/2014 16:17 | 76535 |
| **SM 5310B TOC -- Total Organic Carbon by combustion** | | | | | | | **SM5310B_TOC_W** |
| Organic Carbon, Total | 150 | B | 10 | mg/L | 1 | 04/15/2014 13:54 | 76601 |

**Qualifiers:**

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/22/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** REW-9-20140406-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-17 **Collection Date:** 04/06/14 11:40

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **EPA 300.0 Modified -- Volatile Organic Acids** | | | | | | | **E300_VOA_W** |
| Lactic Acid | ND | | 5.0 | mg/L | 1 | 04/17/2014 23:33 | 76638 |
| Acetic Acid | 340 | | 50 | mg/L | 10 | 04/18/2014 11:44 | 76638 |
| Propionic Acid | 3.1 | J | 5.0 | mg/L | 1 | 04/17/2014 23:33 | 76638 |
| Butyric Acid | 8.2 | | 5.0 | mg/L | 1 | 04/17/2014 23:33 | 76638 |
| **EPA 300.0 -- Anions by Ion Chromotography (LOW)** | | | | | | | **E300IC_W** |
| Chloride | 27 | | 2.0 | mg/L | 1 | 04/09/2014 19:32 | 76537 |
| Nitrogen, Nitrate (As N) | ND | | 0.13 | mg/L | 1 | 04/09/2014 19:32 | 76537 |
| Sulfate | 13 | | 5.0 | mg/L | 1 | 04/09/2014 19:32 | 76537 |
| **SM 2320B -- Alkalinity (Total)** | | | | | | | **SM2320_W** |
| Alkalinity, Total (As CaCO3) | 33 | | 20 | mg/L CaCO3 | 1 | 04/11/2014 13:15 | 76576 |
| **SM 4500 H+ B -- pH VALUE** | | | | | | | **SM4500_H+** |
| pH | 6.4 | | 1.0 | S.U. | 1 | 04/15/2014 11:55 | R80881 |
| **SM 4500P-E OP -- Orthophosphate** | | | | | | | **SM4500_OP_W** |
| Orthophosphate (As PO4) | 0.16 | | 0.050 | mg/L | 1 | 04/09/2014 16:19 | 76535 |
| **SM 5310B TOC -- Total Organic Carbon by combustion** | | | | | | | **SM5310B_TOC_W** |
| Organic Carbon, Total | 180 | B | 10 | mg/L | 1 | 04/15/2014 14:14 | 76601 |

**Qualifiers:**

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/22/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** REW-10-20140406-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-18 **Collection Date:** 04/06/14 12:25

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **EPA 300.0 Modified -- Volatile Organic Acids** | | | | | | | **E300_VOA_W** |
| Lactic Acid | ND | | 5.0 | mg/L | 1 | 04/17/2014 23:55 | 76638 |
| Acetic Acid | 1.3 | J | 5.0 | mg/L | 1 | 04/17/2014 23:55 | 76638 |
| Propionic Acid | ND | | 5.0 | mg/L | 1 | 04/17/2014 23:55 | 76638 |
| Butyric Acid | ND | | 5.0 | mg/L | 1 | 04/17/2014 23:55 | 76638 |
| **EPA 300.0 -- Anions by Ion Chromotography (LOW)** | | | | | | | **E300IC_W** |
| Chloride | 2.0 | J | 2.0 | mg/L | 1 | 04/09/2014 19:43 | 76537 |
| Nitrogen, Nitrate (As N) | 1.5 | | 0.13 | mg/L | 1 | 04/09/2014 19:43 | 76537 |
| Sulfate | 13 | | 5.0 | mg/L | 1 | 04/09/2014 19:43 | 76537 |
| **SM 2320B -- Alkalinity (Total)** | | | | | | | **SM2320_W** |
| Alkalinity, Total (As CaCO3) | ND | | 20 | mg/L CaCO3 | 1 | 04/11/2014 13:15 | 76576 |
| **SM 4500 H+ B -- pH VALUE** | | | | | | | **SM4500_H+** |
| pH | 6.3 | | 1.0 | S.U. | 1 | 04/15/2014 11:56 | R80881 |
| **SM 4500P-E OP -- Orthophosphate** | | | | | | | **SM4500_OP_W** |
| Orthophosphate (As PO4) | ND | | 0.050 | mg/L | 1 | 04/09/2014 16:22 | 76535 |
| **SM 5310B TOC -- Total Organic Carbon by combustion** | | | | | | | **SM5310B_TOC_W** |
| Organic Carbon, Total | 6.6 | BJ | 10 | mg/L | 1 | 04/15/2014 14:34 | 76601 |

**Qualifiers:**

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/22/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** REW-11-20140406-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-19 **Collection Date:** 04/06/14 8:15

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **EPA 300.0 Modified -- Volatile Organic Acids** | | | | | | | **E300_VOA_W** |
| Lactic Acid | ND | | 5.0 | mg/L | 1 | 04/18/2014 0:16 | 76638 |
| Acetic Acid | 48 | | 5.0 | mg/L | 1 | 04/18/2014 0:16 | 76638 |
| Propionic Acid | ND | | 5.0 | mg/L | 1 | 04/18/2014 0:16 | 76638 |
| Butyric Acid | ND | | 5.0 | mg/L | 1 | 04/18/2014 0:16 | 76638 |
| **EPA 300.0 -- Anions by Ion Chromotography (LOW)** | | | | | | | **E300IC_W** |
| Chloride | 22 | | 2.0 | mg/L | 1 | 04/10/2014 8:16 | 76537 |
| Nitrogen, Nitrate (As N) | ND | | 0.13 | mg/L | 1 | 04/10/2014 8:16 | 76537 |
| Sulfate | 34 | | 5.0 | mg/L | 1 | 04/10/2014 8:16 | 76537 |
| **SM 2320B -- Alkalinity (Total)** | | | | | | | **SM2320_W** |
| Alkalinity, Total (As CaCO3) | ND | | 20 | mg/L CaCO3 | 1 | 04/11/2014 13:15 | 76576 |
| **SM 4500 H+ B -- pH VALUE** | | | | | | | **SM4500_H+** |
| pH | 6.5 | | 1.0 | S.U. | 1 | 04/15/2014 11:57 | R80881 |
| **SM 4500P-E OP -- Orthophosphate** | | | | | | | **SM4500_OP_W** |
| Orthophosphate (As PO4) | 0.055 | | 0.050 | mg/L | 1 | 04/09/2014 16:24 | 76535 |
| **SM 5310B TOC -- Total Organic Carbon by combustion** | | | | | | | **SM5310B_TOC_W** |
| Organic Carbon, Total | 35 | B | 10 | mg/L | 1 | 04/15/2014 14:53 | 76601 |

**Qualifiers:**

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

*04/22/2014*

**Client:** Innovative Engineering Solutions, Inc.
**Client Sample ID:** REW-12-20140406-01 **Project:** Raytheon - Wayland
**Lab ID:** N0514-20 **Collection Date:** 04/06/14 13:10

| Analyses | Result | Qual | RL | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|
| **EPA 300.0 Modified -- Volatile Organic Acids** | | | | | | | **E300_VOA_W** |
| Lactic Acid | ND | | 5.0 | mg/L | 1 | 04/18/2014 0:38 | 76638 |
| Acetic Acid | 93 | | 5.0 | mg/L | 1 | 04/18/2014 0:38 | 76638 |
| Propionic Acid | 1.1 | J | 5.0 | mg/L | 1 | 04/18/2014 0:38 | 76638 |
| Butyric Acid | 1.1 | J | 5.0 | mg/L | 1 | 04/18/2014 0:38 | 76638 |
| **EPA 300.0 -- Anions by Ion Chromotography (LOW)** | | | | | | | **E300IC_W** |
| Chloride | 34 | | 2.0 | mg/L | 1 | 04/10/2014 8:44 | 76537 |
| Nitrogen, Nitrate (As N) | ND | | 0.13 | mg/L | 1 | 04/10/2014 8:44 | 76537 |
| Sulfate | 30 | | 5.0 | mg/L | 1 | 04/10/2014 8:44 | 76537 |
| **SM 2320B -- Alkalinity (Total)** | | | | | | | **SM2320_W** |
| Alkalinity, Total (As CaCO3) | ND | | 20 | mg/L CaCO3 | 1 | 04/11/2014 14:00 | 76576 |
| **SM 4500 H+ B -- pH VALUE** | | | | | | | **SM4500_H+** |
| pH | 6.6 | | 1.0 | S.U. | 1 | 04/15/2014 11:58 | R80881 |
| **SM 4500P-E OP -- Orthophosphate** | | | | | | | **SM4500_OP_W** |
| Orthophosphate (As PO4) | ND | | 0.050 | mg/L | 1 | 04/09/2014 16:27 | 76535 |
| **SM 5310B TOC -- Total Organic Carbon by combustion** | | | | | | | **SM5310B_TOC_W** |
| Organic Carbon, Total | 55 | B | 10 | mg/L | 1 | 04/15/2014 15:13 | 76601 |

**Qualifiers:**

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

**CLIENT:** Innovative Engineering Solutions, Inc.
**Work Order:** N0514
**Project:** Raytheon - Wayland

# ANALYTICAL QC SUMMARY REPORT

## E300_VOA_W

## EPA 300.0 Modified -- Volatile Organic Acids

Sample ID: **MB-76638** SampType: **MBLK** TestCode: **E300_VOA_W** Prep Date: **04/17/14 8:00** Run ID: **IC1_140417A**
Client ID: **MB-76638** Batch ID: **76638** Units: **mg/L** Analysis Date: **04/17/14 14:58** SeqNo: **2072078**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lactic Acid | ND | 2.2 | 5.0 | | | | | | | | | |
| Acetic Acid | ND | 0.35 | 5.0 | | | | | | | | | |
| Propionic Acid | ND | 0.50 | 5.0 | | | | | | | | | |
| Butyric Acid | ND | 0.45 | 5.0 | | | | | | | | | |

Sample ID: **LCS-76638** SampType: **LCS** TestCode: **E300_VOA_W** Prep Date: **04/17/14 8:00** Run ID: **IC1_140417A**
Client ID: **LCS-76638** Batch ID: **76638** Units: **mg/L** Analysis Date: **04/17/14 15:20** SeqNo: **2072079**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lactic Acid | 44.95 | 2.2 | 5.0 | 50.00 | 0 | 89.9 | 75 | 125 | 0 | | | |
| Acetic Acid | 48.35 | 0.35 | 5.0 | 50.00 | 0 | 96.7 | 75 | 125 | 0 | | | |
| Propionic Acid | 47.19 | 0.50 | 5.0 | 50.00 | 0 | 94.4 | 75 | 125 | 0 | | | |
| Butyric Acid | 46.65 | 0.45 | 5.0 | 50.00 | 0 | 93.3 | 75 | 125 | 0 | | | |

Sample ID: **N0514-01BMS** SampType: **MS** TestCode: **E300_VOA_W** Prep Date: **04/17/14 8:00** Run ID: **IC1_140417A**
Client ID: **MW-261S-20140408-** Batch ID: **76638** Units: **mg/L** Analysis Date: **04/17/14 16:03** SeqNo: **2072081**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lactic Acid | 48.45 | 2.2 | 5.0 | 50.00 | 0 | 96.9 | 75 | 125 | 0 | | | |
| Propionic Acid | 52.93 | 0.50 | 5.0 | 50.00 | 5.437 | 95.0 | 75 | 125 | 0 | | | |
| Butyric Acid | 55.86 | 0.45 | 5.0 | 50.00 | 8.475 | 94.8 | 75 | 125 | 0 | | | |

Sample ID: **N0514-01BMS** SampType: **MS** TestCode: **E300_VOA_W** Prep Date: **04/17/14 8:00** Run ID: **IC1_140417A**
Client ID: **MW-261S-20140408-** Batch ID: **76638** Units: **mg/L** Analysis Date: **04/18/14 1:21** SeqNo: **2072098**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Acetic Acid | 299.0 | 1.8 | 25 | 50.00 | 255.7 | 86.6 | 75 | 125 | 0 | | | |

Sample ID: **N0514-01BMSD** SampType: **MSD** TestCode: **E300_VOA_W** Prep Date: **04/17/14 8:00** Run ID: **IC1_140417A**
Client ID: **MW-261S-20140408-** Batch ID: **76638** Units: **mg/L** Analysis Date: **04/17/14 16:24** SeqNo: **2072082**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lactic Acid | 47.86 | 2.2 | 5.0 | 50.00 | 0 | 95.7 | 75 | 125 | 48.45 | 1.22 | 25 | |
| Propionic Acid | 52.60 | 0.50 | 5.0 | 50.00 | 5.437 | 94.3 | 75 | 125 | 52.93 | 0.629 | 25 | |
| Butyric Acid | 56.20 | 0.45 | 5.0 | 50.00 | 8.475 | 95.4 | 75 | 125 | 55.86 | 0.598 | 25 | |

**Qualifiers:** ND - Not Detected at the MDL; S - Recovery outside accepted recovery limits; MDL - Method Detection Limit; B - Analyte detected in the associated Method Blank
J - Analyte detected below quanititation limits; R - RPD outside accepted recovery limits; RL - Reporting Limit

**CLIENT:** Innovative Engineering Solutions, Inc.
**Work Order:** N0514
**Project:** Raytheon - Wayland

# ANALYTICAL QC SUMMARY REPORT

## E300_VOA_W

## EPA 300.0 Modified -- Volatile Organic Acids

Sample ID: **N0514-01BMSD** SampType: **MSD** TestCode: **E300_VOA_W** Prep Date: **04/17/14 8:00** Run ID: **IC1_140417A**
Client ID: **MW-261S-20140408-** Batch ID: **76638** Units: **mg/L** Analysis Date: **04/18/14 1:42** SeqNo: **2072099**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Acetic Acid | 298.2 | 1.8 | 25 | 50.00 | 255.7 | 84.9 | 75 | 125 | 299.0 | 0.284 | 25 | |

**Qualifiers:**
ND - Not Detected at the MDL
J - Analyte detected below quanititation limits
S - Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
MDL - Method Detection Limit
RL - Reporting Limit
B - Analyte detected in the associated Method Blank

**CLIENT:** Innovative Engineering Solutions, Inc.
**Work Order:** N0514
**Project:** Raytheon - Wayland

# ANALYTICAL QC SUMMARY REPORT

## E300IC_W

## EPA 300.0 -- Anions by Ion Chromotography (LOW)

Sample ID: **MB-76537** SampType: **MBLK** TestCode: **E300IC_W** Prep Date: **04/09/14 13:55** Run ID: **IC1_140409A**
Client ID: **MB-76537** Batch ID: **76537** Units: **mg/L** Analysis Date: **04/09/14 15:49** SeqNo: **2069423**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | ND | 0.28 | 2.0 | | | | | | | | | |
| Nitrogen, Nitrate (As N) | ND | 0.083 | 0.13 | | | | | | | | | |
| Sulfate | ND | 0.15 | 5.0 | | | | | | | | | |

Sample ID: **LCS-76537** SampType: **LCS** TestCode: **E300IC_W** Prep Date: **04/09/14 13:55** Run ID: **IC1_140409A**
Client ID: **LCS-76537** Batch ID: **76537** Units: **mg/L** Analysis Date: **04/09/14 14:15** SeqNo: **2069415**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 15.97 | 0.28 | 2.0 | 16.00 | 0 | 99.8 | 90 | 110 | 0 | | | |
| Nitrogen, Nitrate (As N) | 0.9981 | 0.083 | 0.13 | 1.000 | 0 | 99.8 | 90 | 110 | 0 | | | |
| Sulfate | 40.26 | 0.15 | 5.0 | 40.00 | 0 | 101 | 90 | 110 | 0 | | | |

Sample ID: **N0514-20EMS** SampType: **MS** TestCode: **E300IC_W** Prep Date: **04/09/14 13:55** Run ID: **IC1_140410A**
Client ID: **REW-12-20140406-0** Batch ID: **76537** Units: **mg/L** Analysis Date: **04/10/14 8:56** SeqNo: **2069622**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 49.24 | 0.28 | 2.0 | 16.00 | 34.09 | 94.7 | 80 | 120 | 0 | | | |
| Nitrogen, Nitrate (As N) | 0.9741 | 0.083 | 0.13 | 1.000 | 0 | 97.4 | 80 | 120 | 0 | | | |
| Sulfate | 70.44 | 0.15 | 5.0 | 40.00 | 30.42 | 100 | 80 | 120 | 0 | | | |

Sample ID: **N0514-20EMSD** SampType: **MSD** TestCode: **E300IC_W** Prep Date: **04/09/14 13:55** Run ID: **IC1_140410A**
Client ID: **REW-12-20140406-0** Batch ID: **76537** Units: **mg/L** Analysis Date: **04/10/14 9:08** SeqNo: **2069623**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 49.52 | 0.28 | 2.0 | 16.00 | 34.09 | 96.5 | 80 | 120 | 49.24 | 0.571 | 20 | |
| Nitrogen, Nitrate (As N) | 0.9770 | 0.083 | 0.13 | 1.000 | 0 | 97.7 | 80 | 120 | 0.9741 | 0.293 | 20 | |
| Sulfate | 71.36 | 0.15 | 5.0 | 40.00 | 30.42 | 102 | 80 | 120 | 70.44 | 1.31 | 20 | |

**Qualifiers:** ND - Not Detected at the MDL; S - Recovery outside accepted recovery limits; MDL - Method Detection Limit; B - Analyte detected in the associated Method Blank
J - Analyte detected below quanititation limits; R - RPD outside accepted recovery limits; RL - Reporting Limit

**CLIENT:** Innovative Engineering Solutions, Inc.
**Work Order:** N0514
**Project:** Raytheon - Wayland

# ANALYTICAL QC SUMMARY REPORT

## SM2320_W

## SM 2320B -- Alkalinity (Total)

Sample ID: **MB-76576** SampType: **MBLK** TestCode: **SM2320_W** Prep Date: **04/11/14 13:15** Run ID: **MANUAL_140411A**
Client ID: **MB-76576** Batch ID: **76576** Units: **mg/L CaCO3** Analysis Date: **04/11/14 13:15** SeqNo: **2071169**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | ND | 20 | 20 | | | | | | | | | |

Sample ID: **LCS-76576** SampType: **LCS** TestCode: **SM2320_W** Prep Date: **04/11/14 13:15** Run ID: **MANUAL_140411A**
Client ID: **LCS-76576** Batch ID: **76576** Units: **mg/L CaCO3** Analysis Date: **04/11/14 13:15** SeqNo: **2071170**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 95.00 | 20 | 20 | 100.0 | 0 | 95.0 | 80 | 120 | 0 | | | |

Sample ID: **LCSD-76576** SampType: **LCSD** TestCode: **SM2320_W** Prep Date: **04/11/14 13:15** Run ID: **MANUAL_140411A**
Client ID: **LCSD-76576** Batch ID: **76576** Units: **mg/L CaCO3** Analysis Date: **04/11/14 13:15** SeqNo: **2071171**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 96.00 | 20 | 20 | 100.0 | 0 | 96.0 | 80 | 120 | 95.00 | 1.05 | 20 | |

**Qualifiers:** ND - Not Detected at the MDL; S - Recovery outside accepted recovery limits; MDL - Method Detection Limit; B - Analyte detected in the associated Method Blank
J - Analyte detected below quanititation limits; R - RPD outside accepted recovery limits; RL - Reporting Limit

**CLIENT:** Innovative Engineering Solutions, Inc.
**Work Order:** N0514
**Project:** Raytheon - Wayland

# ANALYTICAL QC SUMMARY REPORT

## SM4500_OP_W

## SM 4500P-E OP -- Orthophosphate

Sample ID: **MB-76535** SampType: **MBLK** TestCode: **SM4500_OP_W** Prep Date: **04/09/14 15:30** Run ID: **SPEC2_140409A**
Client ID: **MB-76535** Batch ID: **76535** Units: **mg/L** Analysis Date: **04/09/14 15:30** SeqNo: **2069517**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Orthophosphate (As PO4) | ND | 0.050 | 0.050 | | | | | | | | | |

Sample ID: **LCS-76535** SampType: **LCS** TestCode: **SM4500_OP_W** Prep Date: **04/09/14 15:30** Run ID: **SPEC2_140409A**
Client ID: **LCS-76535** Batch ID: **76535** Units: **mg/L** Analysis Date: **04/09/14 15:32** SeqNo: **2069518**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Orthophosphate (As PO4) | 0.4380 | 0.050 | 0.050 | 0.4128 | 0 | 106 | 80 | 120 | 0 | | | |

Sample ID: **LCSD-76535** SampType: **LCSD** TestCode: **SM4500_OP_W** Prep Date: **04/09/14 15:30** Run ID: **SPEC2_140409A**
Client ID: **LCSD-76535** Batch ID: **76535** Units: **mg/L** Analysis Date: **04/09/14 15:35** SeqNo: **2069519**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Orthophosphate (As PO4) | 0.4350 | 0.050 | 0.050 | 0.4128 | 0 | 105 | 80 | 120 | 0.4380 | 0.687 | 20 | |

**Qualifiers:** ND - Not Detected at the MDL; S - Recovery outside accepted recovery limits; MDL - Method Detection Limit; B - Analyte detected in the associated Method Blank
J - Analyte detected below quanititation limits; R - RPD outside accepted recovery limits; RL - Reporting Limit

**CLIENT:** Innovative Engineering Solutions, Inc.
**Work Order:** N0514
**Project:** Raytheon - Wayland

# ANALYTICAL QC SUMMARY REPORT

## SM5310B_TOC_W

## SM 5310B TOC -- Total Organic Carbon by combustion

Sample ID: **MB-76597** SampType: **MBLK** TestCode: **SM5310B_TOC_W** Prep Date: **04/14/14 11:01** Run ID: **TOC1_140414A**
Client ID: **MB-76597** Batch ID: **76597** Units: **mg/L** Analysis Date: **04/14/14 16:07** SeqNo: **2070839**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Organic Carbon, Total | ND | 2.0 | 10 | | | | | | | | | |

Sample ID: **MB-76601** SampType: **MBLK** TestCode: **SM5310B_TOC_W** Prep Date: **04/14/14 13:59** Run ID: **TOC1_140414A**
Client ID: **MB-76601** Batch ID: **76601** Units: **mg/L** Analysis Date: **04/15/14 9:53** SeqNo: **2070880**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Organic Carbon, Total | 2.698 | 2.0 | 10 | | | | | | | | | J |

Sample ID: **LCS-76597** SampType: **LCS** TestCode: **SM5310B_TOC_W** Prep Date: **04/14/14 11:01** Run ID: **TOC1_140414A**
Client ID: **LCS-76597** Batch ID: **76597** Units: **mg/L** Analysis Date: **04/14/14 16:29** SeqNo: **2070840**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Organic Carbon, Total | 63.59 | 2.0 | 10 | 60.00 | 0 | 106 | 80 | 120 | 0 | | | |

Sample ID: **LCS-76601** SampType: **LCS** TestCode: **SM5310B_TOC_W** Prep Date: **04/14/14 13:59** Run ID: **TOC1_140414A**
Client ID: **LCS-76601** Batch ID: **76601** Units: **mg/L** Analysis Date: **04/15/14 10:12** SeqNo: **2070861**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Organic Carbon, Total | 48.83 | 2.0 | 10 | 60.00 | 0 | 81.4 | 80 | 120 | 0 | | | B |

Sample ID: **LCSD-76601** SampType: **LCSD** TestCode: **SM5310B_TOC_W** Prep Date: **04/14/14 13:59** Run ID: **TOC1_140414A**
Client ID: **LCSD-76601** Batch ID: **76601** Units: **mg/L** Analysis Date: **04/15/14 10:31** SeqNo: **2070862**

| Analyte | Result | MDL | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Organic Carbon, Total | 51.88 | 2.0 | 10 | 60.00 | 0 | 86.5 | 80 | 120 | 48.83 | 6.04 | 20 | B |

**Qualifiers:** ND - Not Detected at the MDL; S - Recovery outside accepted recovery limits; MDL - Method Detection Limit; B - Analyte detected in the associated Method Blank
J - Analyte detected below quanititation limits; R - RPD outside accepted recovery limits; RL - Reporting Limit

Report Date:
21-Apr-14 14:54

☑ Final Report
☐ Re-Issued Report
☐ Revised Report

**SPECTRUM ANALYTICAL, INC.**
***Featuring***
**HANIBAL TECHNOLOGY**

# *Laboratory Report*

Spectrum Analytical, Inc.
646 Camp Ave.
North Kingstown, RI 02852
Attn: Agnes Huntley

Project: Raytheon-Wayland
Project #: N0514

| Laboratory ID | Client Sample ID | Matrix | Date Sampled | Date Received |
|---|---|---|---|---|
| SB87849-01 | MW-261S-20140408-01 | Aqueous | 08-Apr-14 07:20 | 17-Apr-14 18:25 |
| SB87849-02 | MW-265M-20140408-01 | Aqueous | 08-Apr-14 08:45 | 17-Apr-14 18:25 |
| SB87849-03 | MW-268S-20140407-01 | Aqueous | 07-Apr-14 08:45 | 17-Apr-14 18:25 |
| SB87849-04 | MW-268M-20140407-01 | Aqueous | 07-Apr-14 09:25 | 17-Apr-14 18:25 |
| SB87849-05 | MW-552-20140407-01 | Aqueous | 07-Apr-14 15:25 | 17-Apr-14 18:25 |
| SB87849-06 | MW-553-20140407-01 | Aqueous | 07-Apr-14 14:30 | 17-Apr-14 18:25 |
| SB87849-07 | MW-560-20140407-01 | Aqueous | 07-Apr-14 11:10 | 17-Apr-14 18:25 |
| SB87849-08 | MW-561-20140407-01 | Aqueous | 07-Apr-14 12:00 | 17-Apr-14 18:25 |
| SB87849-09 | MW-562-20140407-01 | Aqueous | 07-Apr-14 13:30 | 17-Apr-14 18:25 |
| SB87849-10 | MW-563-20140407-01 | Aqueous | 07-Apr-14 10:20 | 17-Apr-14 18:25 |
| SB87849-11 | REW-1-20140406-01 | Aqueous | 06-Apr-14 13:45 | 17-Apr-14 18:25 |
| SB87849-12 | REW-4-20140406-01 | Aqueous | 06-Apr-14 15:20 | 17-Apr-14 18:25 |
| SB87849-13 | REW-5-20140406-01 | Aqueous | 06-Apr-14 14:30 | 17-Apr-14 18:25 |
| SB87849-14 | REW-6-20140406-01 | Aqueous | 06-Apr-14 09:05 | 17-Apr-14 18:25 |
| SB87849-15 | REW-7-20140406-01 | Aqueous | 06-Apr-14 09:35 | 17-Apr-14 18:25 |
| SB87849-16 | REW-8-20140406-01 | Aqueous | 06-Apr-14 10:45 | 17-Apr-14 18:25 |
| SB87849-17 | REW-9-20140406-01 | Aqueous | 06-Apr-14 11:40 | 17-Apr-14 18:25 |
| SB87849-18 | REW-10-20140406-01 | Aqueous | 06-Apr-14 12:25 | 17-Apr-14 18:25 |
| SB87849-19 | REW-11-20140406-01 | Aqueous | 06-Apr-14 08:15 | 17-Apr-14 18:25 |
| SB87849-20 | REW-12-20140406-01 | Aqueous | 06-Apr-14 13:10 | 17-Apr-14 18:25 |

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.
All applicable NELAC requirements have been met.

Massachusetts # M-MA138/MA1110
Connecticut # PH-0777
Florida # E87600/E87936
Maine # MA138
New Hampshire # 2538
New Jersey # MA011/MA012
New York # 11393/11840
Pennsylvania # 68-04426/68-02924
Rhode Island # 98
USDA # S-51435

Authorized by:

Nicole Leja
Laboratory Director

Spectrum Analytical holds certification in the State of Massachusetts for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of Massachusetts does not offer certification for all analytes. Please refer to our website for specific certification holdings in each state.
Please note that this report contains 10 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Spectrum Analytical, Inc.

*Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Spectrum is currently accredited for the specific method or analyte indicated. Please refer to our "Quality" web page at www.spectrum-analytical.com for a full listing of our current certifications and fields of accreditation. States in which Spectrum Analytical, Inc. holds NELAC certification are New York, New Hampshire, New Jersey, Pennsylvania and Florida. All analytical work for Volatile Organic and Air analysis are transferred to and conducted at our 830 Silver Street location (NY-11840, NJ-MA012, PA-68-04426 and FL-E87936).*

*Please contact the Laboratory or Technical Director at 800-789-9115 with any questions regarding the data contained in this laboratory report.*

**CASE NARRATIVE:**

Data has been reported to the RDL. This report excludes estimated concentrations detected below the RDL and above the MDL (J-Flag).

The samples were received -0.2 degrees Celsius, please refer to the Chain of Custody for details specific to temperature upon receipt. An infrared thermometer with a tolerance of +/- 1.0 degrees Celsius was used immediately upon receipt of the samples.

If a Matrix Spike (MS), Matrix Spike Duplicate (MSD) or Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group.

**There is no relevant protocol-specific QC and/or performance standards non-conformances to report.**

# Sample Acceptance Check Form

| | |
|---|---|
| Client: | Spectrum Analytical, Inc. - North Kingstown, RI |
| Project: | Raytheon-Wayland / N0514 |
| Work Order: | SB87849 |
| Sample(s) received on: | 4/17/2014 |
| Received by: | Mary Wilson |

***The following outlines the condition of samples for the attached Chain of Custody upon receipt.***

| | Yes | No | N/A |
|---|---|---|---|
| 1. Were custody seals present? | ☐ | ☑ | ☐ |
| 2. Were custody seals intact? | ☐ | ☐ | ☑ |
| 3. Were samples received at a temperature of ≤ 6°C? | ☑ | ☐ | ☐ |
| 4. Were samples cooled on ice upon transfer to laboratory representative? | ☐ | ☑ | ☐ |
| 5. Were samples refrigerated upon transfer to laboratory representative? | ☑ | ☐ | ☐ |
| 6. Were sample containers received intact? | ☑ | ☐ | ☐ |
| 7. Were samples properly labeled (labels affixed to sample containers and include sample ID, site location, and/or project number and the collection date)? | ☑ | ☐ | ☐ |
| 8. Were samples accompanied by a Chain of Custody document? | ☑ | ☐ | ☐ |
| 9. Does Chain of Custody document include proper, full, and complete documentation, which shall include sample ID, site location, and/or project number, date and time of collection, collector's name, preservation type, sample matrix and any special remarks concerning the sample? | ☐ | ☑ | ☐ |
| 10. Did sample container labels agree with Chain of Custody document? | ☑ | ☐ | ☐ |
| 11. Were samples received within method-specific holding times? | ☑ | ☐ | ☐ |

Sample Identification
**MW-261S-20140408-01**
SB87849-01

| Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|
| N0514 | Aqueous | 08-Apr-14 07:20 | 17-Apr-14 |

| CAS No. | Analyte(s) | Result | Flag | Units | *RDL | MDL | Dilution | Method Ref. | Prepared | Analyzed | Analyst | Batch | Cert. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **General Chemistry Parameters** | | | | | | | | | | | | | |
| | Ammonia as N | < 0.200 | | mg/l | 0.200 | 0.118 | 1 | SM4500-NH3 C. | 21-Apr-14 | 21-Apr-14 | EEM | 1408590 | X |

Sample Identification
**MW-265M-20140408-01**
SB87849-02

| Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|
| N0514 | Aqueous | 08-Apr-14 08:45 | 17-Apr-14 |

| CAS No. | Analyte(s) | Result | Flag | Units | *RDL | MDL | Dilution | Method Ref. | Prepared | Analyzed | Analyst | Batch | Cert. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **General Chemistry Parameters** | | | | | | | | | | | | | |
| | Ammonia as N | **0.490** | | mg/l | 0.200 | 0.118 | 1 | SM4500-NH3 C. | 21-Apr-14 | 21-Apr-14 | EEM | 1408590 | X |

Sample Identification
**MW-268S-20140407-01**
SB87849-03

| Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|
| N0514 | Aqueous | 07-Apr-14 08:45 | 17-Apr-14 |

| CAS No. | Analyte(s) | Result | Flag | Units | *RDL | MDL | Dilution | Method Ref. | Prepared | Analyzed | Analyst | Batch | Cert. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **General Chemistry Parameters** | | | | | | | | | | | | | |
| | Ammonia as N | < 0.200 | | mg/l | 0.200 | 0.118 | 1 | SM4500-NH3 C. | 21-Apr-14 | 21-Apr-14 | EEM | 1408590 | X |

Sample Identification
**MW-268M-20140407-01**
SB87849-04

| Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|
| N0514 | Aqueous | 07-Apr-14 09:25 | 17-Apr-14 |

| CAS No. | Analyte(s) | Result | Flag | Units | *RDL | MDL | Dilution | Method Ref. | Prepared | Analyzed | Analyst | Batch | Cert. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **General Chemistry Parameters** | | | | | | | | | | | | | |
| | Ammonia as N | < 0.200 | | mg/l | 0.200 | 0.118 | 1 | SM4500-NH3 C. | 21-Apr-14 | 21-Apr-14 | EEM | 1408590 | X |

Sample Identification
**MW-552-20140407-01**
SB87849-05

| Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|
| N0514 | Aqueous | 07-Apr-14 15:25 | 17-Apr-14 |

| CAS No. | Analyte(s) | Result | Flag | Units | *RDL | MDL | Dilution | Method Ref. | Prepared | Analyzed | Analyst | Batch | Cert. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **General Chemistry Parameters** | | | | | | | | | | | | | |
| | Ammonia as N | **0.210** | | mg/l | 0.200 | 0.118 | 1 | SM4500-NH3 C. | 21-Apr-14 | 21-Apr-14 | EEM | 1408590 | X |

Sample Identification
**MW-553-20140407-01**
SB87849-06

| Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|
| N0514 | Aqueous | 07-Apr-14 14:30 | 17-Apr-14 |

| CAS No. | Analyte(s) | Result | Flag | Units | *RDL | MDL | Dilution | Method Ref. | Prepared | Analyzed | Analyst | Batch | Cert. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **General Chemistry Parameters** | | | | | | | | | | | | | |
| | Ammonia as N | < 0.200 | | mg/l | 0.200 | 0.118 | 1 | SM4500-NH3 C. | 21-Apr-14 | 21-Apr-14 | EEM | 1408590 | X |

Sample Identification
**MW-560-20140407-01**
SB87849-07

| Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|
| N0514 | Aqueous | 07-Apr-14 11:10 | 17-Apr-14 |

| CAS No. | Analyte(s) | Result | Flag | Units | *RDL | MDL | Dilution | Method Ref. | Prepared | Analyzed | Analyst | Batch | Cert. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **General Chemistry Parameters** | | | | | | | | | | | | | |
| | Ammonia as N | 0.280 | | mg/l | 0.200 | 0.118 | 1 | SM4500-NH3 C. | 21-Apr-14 | 21-Apr-14 | EEM | 1408590 | X |

Sample Identification
**MW-561-20140407-01**
SB87849-08

| Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|
| N0514 | Aqueous | 07-Apr-14 12:00 | 17-Apr-14 |

| CAS No. | Analyte(s) | Result | Flag | Units | *RDL | MDL | Dilution | Method Ref. | Prepared | Analyzed | Analyst | Batch | Cert. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **General Chemistry Parameters** | | | | | | | | | | | | | |
| | Ammonia as N | 0.560 | | mg/l | 0.200 | 0.118 | 1 | SM4500-NH3 C. | 21-Apr-14 | 21-Apr-14 | EEM | 1408590 | X |

Sample Identification
**MW-562-20140407-01**
SB87849-09

| Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|
| N0514 | Aqueous | 07-Apr-14 13:30 | 17-Apr-14 |

| CAS No. | Analyte(s) | Result | Flag | Units | *RDL | MDL | Dilution | Method Ref. | Prepared | Analyzed | Analyst | Batch | Cert. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **General Chemistry Parameters** | | | | | | | | | | | | | |
| | Ammonia as N | 2.17 | | mg/l | 0.200 | 0.118 | 1 | SM4500-NH3 C. | 21-Apr-14 | 21-Apr-14 | EEM | 1408590 | X |

Sample Identification
**MW-563-20140407-01**
SB87849-10

| Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|
| N0514 | Aqueous | 07-Apr-14 10:20 | 17-Apr-14 |

| CAS No. | Analyte(s) | Result | Flag | Units | *RDL | MDL | Dilution | Method Ref. | Prepared | Analyzed | Analyst | Batch | Cert. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **General Chemistry Parameters** | | | | | | | | | | | | | |
| | Ammonia as N | < 0.200 | | mg/l | 0.200 | 0.118 | 1 | SM4500-NH3 C. | 21-Apr-14 | 21-Apr-14 | EEM | 1408590 | X |

Sample Identification
**REW-1-20140406-01**
SB87849-11

| Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|
| N0514 | Aqueous | 06-Apr-14 13:45 | 17-Apr-14 |

| CAS No. | Analyte(s) | Result | Flag | Units | *RDL | MDL | Dilution | Method Ref. | Prepared | Analyzed | Analyst | Batch | Cert. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **General Chemistry Parameters** | | | | | | | | | | | | | |
| | Ammonia as N | 0.490 | | mg/l | 0.200 | 0.118 | 1 | SM4500-NH3 C. | 21-Apr-14 | 21-Apr-14 | EEM | 1408590 | X |

Sample Identification
**REW-4-20140406-01**
SB87849-12

| Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|
| N0514 | Aqueous | 06-Apr-14 15:20 | 17-Apr-14 |

| CAS No. | Analyte(s) | Result | Flag | Units | *RDL | MDL | Dilution | Method Ref. | Prepared | Analyzed | Analyst | Batch | Cert. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **General Chemistry Parameters** | | | | | | | | | | | | | |
| | Ammonia as N | 0.630 | | mg/l | 0.200 | 0.118 | 1 | SM4500-NH3 C. | 21-Apr-14 | 21-Apr-14 | EEM | 1408590 | X |

| Sample Identification | Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|---|
| **REW-5-20140406-01** SB87849-13 | N0514 | Aqueous | 06-Apr-14 14:30 | 17-Apr-14 |

| CAS No. | Analyte(s) | Result | Flag | Units | *RDL | MDL | Dilution | Method Ref. | Prepared | Analyzed | Analyst | Batch | Cert. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **General Chemistry Parameters** | | | | | | | | | | | | | |
| | Ammonia as N | < 0.200 | | mg/l | 0.200 | 0.118 | 1 | SM4500-NH3 C. | 21-Apr-14 | 21-Apr-14 | EEM | 1408590 | X |

| Sample Identification | Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|---|
| **REW-6-20140406-01** SB87849-14 | N0514 | Aqueous | 06-Apr-14 09:05 | 17-Apr-14 |

| CAS No. | Analyte(s) | Result | Flag | Units | *RDL | MDL | Dilution | Method Ref. | Prepared | Analyzed | Analyst | Batch | Cert. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **General Chemistry Parameters** | | | | | | | | | | | | | |
| | Ammonia as N | < 0.200 | | mg/l | 0.200 | 0.118 | 1 | SM4500-NH3 C. | 21-Apr-14 | 21-Apr-14 | EEM | 1408590 | X |

| Sample Identification | Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|---|
| **REW-7-20140406-01** SB87849-15 | N0514 | Aqueous | 06-Apr-14 09:35 | 17-Apr-14 |

| CAS No. | Analyte(s) | Result | Flag | Units | *RDL | MDL | Dilution | Method Ref. | Prepared | Analyzed | Analyst | Batch | Cert. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **General Chemistry Parameters** | | | | | | | | | | | | | |
| | Ammonia as N | < 0.200 | | mg/l | 0.200 | 0.118 | 1 | SM4500-NH3 C. | 21-Apr-14 | 21-Apr-14 | EEM | 1408590 | X |

| Sample Identification | Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|---|
| **REW-8-20140406-01** SB87849-16 | N0514 | Aqueous | 06-Apr-14 10:45 | 17-Apr-14 |

| CAS No. | Analyte(s) | Result | Flag | Units | *RDL | MDL | Dilution | Method Ref. | Prepared | Analyzed | Analyst | Batch | Cert. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **General Chemistry Parameters** | | | | | | | | | | | | | |
| | Ammonia as N | **0.420** | | mg/l | 0.200 | 0.118 | 1 | SM4500-NH3 C. | 21-Apr-14 | 21-Apr-14 | EEM | 1408590 | X |

| Sample Identification | Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|---|
| **REW-9-20140406-01** SB87849-17 | N0514 | Aqueous | 06-Apr-14 11:40 | 17-Apr-14 |

| CAS No. | Analyte(s) | Result | Flag | Units | *RDL | MDL | Dilution | Method Ref. | Prepared | Analyzed | Analyst | Batch | Cert. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **General Chemistry Parameters** | | | | | | | | | | | | | |
| | Ammonia as N | **0.210** | | mg/l | 0.200 | 0.118 | 1 | SM4500-NH3 C. | 21-Apr-14 | 21-Apr-14 | EEM | 1408590 | X |

| Sample Identification | Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|---|
| **REW-10-20140406-01** SB87849-18 | N0514 | Aqueous | 06-Apr-14 12:25 | 17-Apr-14 |

| CAS No. | Analyte(s) | Result | Flag | Units | *RDL | MDL | Dilution | Method Ref. | Prepared | Analyzed | Analyst | Batch | Cert. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **General Chemistry Parameters** | | | | | | | | | | | | | |
| | Ammonia as N | < 0.200 | | mg/l | 0.200 | 0.118 | 1 | SM4500-NH3 C. | 21-Apr-14 | 21-Apr-14 | EEM | 1408590 | X |

| Sample Identification | Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|---|
| **REW-11-20140406-01**<br>SB87849-19 | N0514 | Aqueous | 06-Apr-14 08:15 | 17-Apr-14 |

| *CAS No.* | *Analyte(s)* | *Result* | *Flag* | *Units* | **RDL* | *MDL* | *Dilution* | *Method Ref.* | *Prepared* | *Analyzed* | *Analyst* | *Batch* | *Cert.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **General Chemistry Parameters** | | | | | | | | | | | | | |
| | Ammonia as N | < 0.200 | | mg/l | 0.200 | 0.118 | 1 | SM4500-NH3 C. | 21-Apr-14 | 21-Apr-14 | EEM | 1408590 | X |

| Sample Identification | Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|---|
| **REW-12-20140406-01**<br>SB87849-20 | N0514 | Aqueous | 06-Apr-14 13:10 | 17-Apr-14 |

| *CAS No.* | *Analyte(s)* | *Result* | *Flag* | *Units* | **RDL* | *MDL* | *Dilution* | *Method Ref.* | *Prepared* | *Analyzed* | *Analyst* | *Batch* | *Cert.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **General Chemistry Parameters** | | | | | | | | | | | | | |
| | Ammonia as N | < 0.200 | | mg/l | 0.200 | 0.118 | 1 | SM4500-NH3 C. | 21-Apr-14 | 21-Apr-14 | EEM | 1408590 | X |

## General Chemistry Parameters - Quality Control

| Analyte(s) | Result | Flag | Units | *RDL | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch 1408590 - General Preparation** | | | | | | | | | | |
| **Blank (1408590-BLK1)** | | | | | | Prepared & Analyzed: 21-Apr-14 | | | | |
| Ammonia as N | < 0.200 | | mg/l | 0.200 | | | | | | |
| **LCS (1408590-BS1)** | | | | | | Prepared & Analyzed: 21-Apr-14 | | | | |
| Ammonia as N | **5.32** | | mg/l | 0.200 | 5.00 | | 106 | 90-110 | | |
| **Reference (1408590-SRM1)** | | | | | | Prepared & Analyzed: 21-Apr-14 | | | | |
| Ammonia as N | **1.82** | | mg/l | 0.200 | 1.92 | | 95 | 84-116 | | |

## Notes and Definitions

| | |
|---|---|
| dry | Sample results reported on a dry weight basis |
| NR | Not Reported |
| RPD | Relative Percent Difference |

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Continuing Calibration Verification: The calibration relationship established during the initial calibration must be verified at periodic intervals. Concentrations, intervals, and criteria are method specific.

Validated by:

OB 87849 UK

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

# CHAIN-OF-CUSTODY RECORD

WorkOrder : N0514
Project: Raytheon - Wayland
Report Type : LEVEL 2
Due Date : 4/21/2014
FAX Due Date :
Report To : Agnes R Huntley
Purchase Order : N0514
EDD Types : **Please generate a Little PEL EDD**

**Subcontractor:**
Spectrum Analytical, Inc. - Agawam, MA
11 Almgren Drive
Agawam, Massachusetts 01001

Phone: (413) 789-9018

EQuISFacilityCode: N/A

# = number of containers

**Requested Test**

| Client Sample ID | Collection Date | # | Matrix | DUP/MS/MSD | Mitkem Sample ID | SM4500_NH3_W | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-261S-20140408-01 | 04/08/2014 07:20 | 1 | Aqueous | | N0514-01G | X | | | | | | | | | | 87849-01 |
| MW-265M-20140408-01 | 04/08/2014 08:45 | 1 | Aqueous | | N0514-02G | X | | | | | | | | | | 02 |
| MW-268S-20140407-01 | 04/07/2014 08:45 | 1 | Aqueous | | N0514-03G | X | | | | | | | | | | 03 |
| MW-268M-20140407-01 | 04/07/2014 09:25 | 1 | Aqueous | | N0514-04G | X | | | | | | | | | | 04 |
| MW-552-20140407-01 | 04/07/2014 15:25 | 1 | Aqueous | | N0514-05G | X | | | | | | | | | | 05 |
| MW-553-20140407-01 | 04/07/2014 14:30 | 1 | Aqueous | | N0514-06G | X | | | | | | | | | | 06 |

1) SM4500_NH3_W, NITROGEN (AMMONIA)

Use 'Client Sample IDs' when reporting data. If needed, truncate 'Client Sample IDs' to fit on reports. Use full 'Client Sample ID' when generating EDD.

**Comments:** MA Site, MCP/CAM reporting.

02/-1/-02 IR 02
4-17-14

| | | Date/Time | | | Date/Time |
|---|---|---|---|---|---|
| **Relinquished by:** | Agnes R Huntley | 04/11/14 8:46 | **Received by:** | | 4/17/14 1225 |
| **Relinquished by:** | | | **Received by:** | | 4-17-14 1825 |

Rev



646 Camp Ave * North Kingstown * RI * 028524008 * 401-732-3400 * 401-732-3499
www.spectrum-analytical.com

SB87849-OK

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

# CHAIN-OF-CUSTODY RECORD

WorkOrder : N0514
Project: Raytheon - Wayland
Report Type : LEVEL 2
Due Date : 4/21/2014
FAX Due Date :
Report To : Agnes R Huntley
Purchase Order : N0514
EDD Types : **Please generate a Little PEL EDD**

**Subcontractor:**
Spectrum Analytical, Inc. - Agawam, MA
11 Almgren Drive
Agawam, Massachusetts 01001

Phone: (413) 789-9018

EQuISFacilityCode: N/A

# = number of containers

**Requested Test**

| Client Sample ID | Collection Date | # | Matrix | DUP/MS/MSD | Mitkem Sample ID | SM4500_NH3_W | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-560-20140407-01 | 04/07/2014 11:10 | 1 | Aqueous | | N0514-07G | X | | | | | | | | | | 87849-07 |
| MW-561-20140407-01 | 04/07/2014 12:00 | 1 | Aqueous | | N0514-08G | X | | | | | | | | | | 08 |
| MW-562-20140407-01 | 04/07/2014 13:30 | 1 | Aqueous | | N0514-09G | X | | | | | | | | | | 09 |
| MW-563-20140407-01 | 04/07/2014 10:20 | 1 | Aqueous | | N0514-10G | X | | | | | | | | | | 10 |
| REW-1-20140406-01 | 04/06/2014 13:45 | 1 | Aqueous | | N0514-11G | X | | | | | | | | | | 11 |
| REW-4-20140406-01 | 04/06/2014 15:20 | 1 | Aqueous | | N0514-12G | X | | | | | | | | | | 12 |

1) SM4500_NH3_W, NITROGEN (AMMONIA)

Use 'Client Sample IDs' when reporting data. If needed, truncate 'Client Sample IDs' to fit on reports. Use full 'Client Sample ID' when generating EDD.

**Comments:** MA Site, MCP/CAM reporting.

02/-1/-02 IR 02
4-17-14

| | | Date/Time | | | Date/Time |
|---|---|---|---|---|---|
| **Relinquished by:** | Agnes R Huntley | 04/11/14 8:46 | **Received by:** | Bob Hosing | 4/17/14 1225 |
| **Relinquished by:** | Bob Hosing | | **Received by:** | MDW | 4-17-14 1830 |

Rev=



646 Camp Ave * North Kingstown * RI * 028524008 * 401-732-3400 * 401-732-3499
www.spectrum-analytical.com

SB87849 OK

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

# CHAIN-OF-CUSTODY RECORD

WorkOrder : N0514
Project: Raytheon - Wayland
Report Type : LEVEL 2
Due Date : 4/21/2014
FAX Due Date :
Report To : Agnes R Huntley
Purchase Order : N0514
EDD Types : **Please generate a Little PEL EDD**

**Subcontractor:**
Spectrum Analytical, Inc. - Agawam, MA
11 Almgren Drive
Agawam, Massachusetts 01001

Phone: (413) 789-9018

EQuISFacilityCode: N/A

# = number of containers

**Requested Test**

| Client Sample ID | Collection Date | # | Matrix | DUP/MS/MSD | Mitkem Sample ID | SM4500_NH3_W | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| REW-5-20140406-01 | 04/06/2014 14:30 | 1 | Aqueous | | N0514-13G | X | | | | | | | | | | 87849-13 |
| REW-6-20140406-01 | 04/06/2014 09:05 | 1 | Aqueous | | N0514-14G | X | | | | | | | | | | 14 |
| REW-7-20140406-01 | 04/06/2014 09:35 | 1 | Aqueous | | N0514-15G | X | | | | | | | | | | 15 |
| REW-8-20140406-01 | 04/06/2014 10:45 | 1 | Aqueous | | N0514-16G | X | | | | | | | | | | 16 |
| REW-9-20140406-01 | 04/06/2014 11:40 | 1 | Aqueous | | N0514-17G | X | | | | | | | | | | 17 |
| REW-10-20140406-01 | 04/06/2014 12:25 | 1 | Aqueous | | N0514-18G | X | | | | | | | | | | 18 |

1) SM4500_NH3_W, NITROGEN (AMMONIA)

Use 'Client Sample IDs' when reporting data. If needed, truncate 'Client Sample IDs' to fit on reports. Use full 'Client Sample ID' when generating EDD.

**Comments:** MA Site, MCP/CAM reporting.

02/1/02 IR02
4-17-14

| | | Date/Time | | | Date/Time |
|---|---|---|---|---|---|
| **Relinquished by:** | Agnes R Huntley | 04/11/14 8:46 | **Received by:** | | 4/17/14 1225 |
| **Relinquished by:** | | | **Received by:** | | 4-17-14 1825 |

Rev=



646 Camp Ave * North Kingstown * RI * 028524008 * 401-732-3400 * 401-732-3499
www.spectrum-analytical.com

SB87849-UK

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

# CHAIN-OF-CUSTODY RECORD

WorkOrder : N0514
Project: Raytheon - Wayland
Report Type : LEVEL 2
Due Date : 4/21/2014
FAX Due Date :
Report To : Agnes R Huntley
Purchase Order : N0514
EDD Types : **Please generate a Little PEL EDD**

**Subcontractor:**
Spectrum Analytical, Inc. - Agawam, MA
11 Almgren Drive
Agawam, Massachusetts 01001

Phone: (413) 789-9018

EQuISFacilityCode: N/A

# = number of containers

**Requested Test**

| Client Sample ID | Collection Date | # | Matrix | DUP/MS/MSD | Mitkem Sample ID | SM4500_NH3_W | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| REW-11-20140406-01 | 04/06/2014 08:15 | 1 | Aqueous | | N0514-19G | X | | | | | | | | | | 87849-19 |
| REW-12-20140406-01 | 04/06/2014 13:10 | 1 | Aqueous | | N0514-20G | X | | | | | | | | | | 20 |

1) SM4500_NH3_W, NITROGEN (AMMONIA)

Use 'Client Sample IDs' when reporting data. If needed, truncate 'Client Sample IDs' to fit on reports. Use full 'Client Sample ID' when generating EDD.

**Comments:** MA Site, MCP/CAM reporting.

02/1 62 IR 02
4-17-14

| | | Date/Time | | | Date/Time |
|---|---|---|---|---|---|
| **Relinquished by:** | Agnes R Huntley | 04/11/14 8:46 | **Received by:** | Bill Hering | 4/17/14 1225 |
| **Relinquished by:** | Bill Hering | | **Received by:** | MDW | 4-17-14 1825 |



646 Camp Ave * North Kingstown * RI * 028524008 * 401-732-3400 * 401-732-3499
www.spectrum-analytical.com

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

**WorkOrder: N0514**

**Client ID:** IESI
**Project:** Raytheon - Wayland
**WO Name:** Raytheon - Wayland
**Location:** IESI_WAYLAND,
**Comments:** N/A

**Case:**
**SDG:**
**PO:** RA-008

**HC Due:** 04/21/14
**Fax Due:**
**Fax Report:** ☐

**Report Level:** LEVEL 2
**Special Program:**
**EDD:** CLF

| Lab Samp ID | Client Sample ID | Collection Date | Date Recv'd | Matrix | Test Code | Samp / Lab Test Comments | HF | HT | MS | SEL | Storage |
|---|---|---|---|---|---|---|---|---|---|---|---|
| N0514-01A | MW-261S-20140408-01 | 04/08/2014 07:20 | 04/09/2014 | Aqueous | RSK175 | / | | | | | VOA |
| N0514-01B | MW-261S-20140408-01 | 04/08/2014 07:20 | 04/09/2014 | Aqueous | E300_VOA_W | / | | | | Y | E2 |
| N0514-01C | MW-261S-20140408-01 | 04/08/2014 07:20 | 04/09/2014 | Aqueous | SM5310B_TOC_W | / | | | | | R22 |
| N0514-01D | MW-261S-20140408-01 | 04/08/2014 07:20 | 04/09/2014 | Aqueous | SW6010_W | / Fe only | | | | Y | M6 |
| N0514-01E | MW-261S-20140408-01 | 04/08/2014 07:20 | 04/09/2014 | Aqueous | E300IC_W | / NO3,Cl,SO4 | | | | Y | E2 |
| N0514-01E | MW-261S-20140408-01 | 04/08/2014 07:20 | 04/09/2014 | Aqueous | SM2320_W | / | | | | | E2 |
| N0514-01E | MW-261S-20140408-01 | 04/08/2014 07:20 | 04/09/2014 | Aqueous | SM4500_H+ | / | | | | | E2 |
| N0514-01F | MW-261S-20140408-01 | 04/08/2014 07:20 | 04/09/2014 | Aqueous | SM4500_OP_W | / | | | | | E2 |
| N0514-01G | MW-261S-20140408-01 | 04/08/2014 07:20 | 04/09/2014 | Aqueous | SM4500_NH3_W | / SPECTRUM--sub to Agawam | | | | | SUB |
| N0514-02A | MW-265M-20140408-01 | 04/08/2014 08:45 | 04/09/2014 | Aqueous | RSK175 | / | | | | | VOA |
| N0514-02B | MW-265M-20140408-01 | 04/08/2014 08:45 | 04/09/2014 | Aqueous | E300_VOA_W | / | | | | Y | E2 |
| N0514-02C | MW-265M-20140408-01 | 04/08/2014 08:45 | 04/09/2014 | Aqueous | SM5310B_TOC_W | / | | | | | R22 |
| N0514-02D | MW-265M-20140408-01 | 04/08/2014 08:45 | 04/09/2014 | Aqueous | SW6010_W | / Fe only | | | | Y | M6 |
| N0514-02E | MW-265M-20140408-01 | 04/08/2014 08:45 | 04/09/2014 | Aqueous | E300IC_W | / NO3,Cl,SO4 | | | | Y | E2 |
| N0514-02E | MW-265M-20140408-01 | 04/08/2014 08:45 | 04/09/2014 | Aqueous | SM2320_W | / | | | | | E2 |
| N0514-02E | MW-265M-20140408-01 | 04/08/2014 08:45 | 04/09/2014 | Aqueous | SM4500_H+ | / | | | | | E2 |
| N0514-02F | MW-265M-20140408-01 | 04/08/2014 08:45 | 04/09/2014 | Aqueous | SM4500_OP_W | / | | | | | E2 |
| N0514-02G | MW-265M-20140408-01 | 04/08/2014 08:45 | 04/09/2014 | Aqueous | SM4500_NH3_W | / SPECTRUM--sub to Agawam | | | | | SUB |
| N0514-03A | MW-268S-20140407-01 | 04/07/2014 08:45 | 04/09/2014 | Aqueous | RSK175 | / | | | | | VOA |

HF = Fraction logged in but all tests have been placed on hold

HT = Test logged in but has been placed on hold

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

**WorkOrder: N0514**

**Client ID:** IESI
**Project:** Raytheon - Wayland
**WO Name:** Raytheon - Wayland
**Location:** IESI_WAYLAND,
**Comments:** N/A

**Case:**
**SDG:**
**PO:** RA-008

**HC Due:** 04/21/14
**Fax Due:**
**Fax Report:** ☐

**Report Level:** LEVEL 2
**Special Program:**
**EDD:** CLF

| Lab Samp ID | Client Sample ID | Collection Date | Date Recv'd | Matrix | Test Code | Samp / Lab Test Comments | HF | HT | MS | SEL | Storage |
|---|---|---|---|---|---|---|---|---|---|---|---|
| N0514-03B | MW-268S-20140407-01 | 04/07/2014 08:45 | 04/09/2014 | Aqueous | E300_VOA_W | / | | | | Y | E2 |
| N0514-03C | MW-268S-20140407-01 | 04/07/2014 08:45 | 04/09/2014 | Aqueous | SM5310B_TOC_W | / | | | | | R22 |
| N0514-03D | MW-268S-20140407-01 | 04/07/2014 08:45 | 04/09/2014 | Aqueous | SW6010_W | / Fe only | | | | Y | M6 |
| N0514-03E | MW-268S-20140407-01 | 04/07/2014 08:45 | 04/09/2014 | Aqueous | E300IC_W | / NO3,Cl,SO4 | | | | Y | E2 |
| N0514-03E | MW-268S-20140407-01 | 04/07/2014 08:45 | 04/09/2014 | Aqueous | SM2320_W | / | | | | | E2 |
| N0514-03E | MW-268S-20140407-01 | 04/07/2014 08:45 | 04/09/2014 | Aqueous | SM4500_H+ | / | | | | | E2 |
| N0514-03F | MW-268S-20140407-01 | 04/07/2014 08:45 | 04/09/2014 | Aqueous | SM4500_OP_W | / | | | | | E2 |
| N0514-03G | MW-268S-20140407-01 | 04/07/2014 08:45 | 04/09/2014 | Aqueous | SM4500_NH3_W | / SPECTRUM--sub to Agawam | | | | | SUB |
| N0514-04A | MW-268M-20140407-01 | 04/07/2014 09:25 | 04/09/2014 | Aqueous | RSK175 | / | | | | | VOA |
| N0514-04B | MW-268M-20140407-01 | 04/07/2014 09:25 | 04/09/2014 | Aqueous | E300_VOA_W | / | | | | Y | E2 |
| N0514-04C | MW-268M-20140407-01 | 04/07/2014 09:25 | 04/09/2014 | Aqueous | SM5310B_TOC_W | / | | | | | R22 |
| N0514-04D | MW-268M-20140407-01 | 04/07/2014 09:25 | 04/09/2014 | Aqueous | SW6010_W | / Fe only | | | | Y | M6 |
| N0514-04E | MW-268M-20140407-01 | 04/07/2014 09:25 | 04/09/2014 | Aqueous | E300IC_W | / NO3,Cl,SO4 | | | | Y | E2 |
| N0514-04E | MW-268M-20140407-01 | 04/07/2014 09:25 | 04/09/2014 | Aqueous | SM2320_W | / | | | | | E2 |
| N0514-04E | MW-268M-20140407-01 | 04/07/2014 09:25 | 04/09/2014 | Aqueous | SM4500_H+ | / | | | | | E2 |
| N0514-04F | MW-268M-20140407-01 | 04/07/2014 09:25 | 04/09/2014 | Aqueous | SM4500_OP_W | / | | | | | E2 |
| N0514-04G | MW-268M-20140407-01 | 04/07/2014 09:25 | 04/09/2014 | Aqueous | SM4500_NH3_W | / SPECTRUM--sub to Agawam | | | | | SUB |
| N0514-05A | MW-552-20140407-01 | 04/07/2014 15:25 | 04/09/2014 | Aqueous | RSK175 | / | | | | | VOA |
| N0514-05B | MW-552-20140407-01 | 04/07/2014 15:25 | 04/09/2014 | Aqueous | E300_VOA_W | / | | | | Y | E2 |

HF = Fraction logged in but all tests have been placed on hold

HT = Test logged in but has been placed on hold

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

**WorkOrder: N0514**

**Client ID:** IESI
**Project:** Raytheon - Wayland
**WO Name:** Raytheon - Wayland
**Location:** IESI_WAYLAND,
**Comments:** N/A

**Case:**
**SDG:**
**PO:** RA-008

**HC Due:** 04/21/14
**Fax Due:**
**Fax Report:** ☐

**Report Level:** LEVEL 2
**Special Program:**
**EDD:** CLF

| Lab Samp ID | Client Sample ID | Collection Date | Date Recv'd | Matrix | Test Code | Samp / Lab Test Comments | HF | HT | MS | SEL | Storage |
|---|---|---|---|---|---|---|---|---|---|---|---|
| N0514-05C | MW-552-20140407-01 | 04/07/2014 15:25 | 04/09/2014 | Aqueous | SM5310B_TOC_W | / | | | | | R22 |
| N0514-05D | MW-552-20140407-01 | 04/07/2014 15:25 | 04/09/2014 | Aqueous | SW6010_W | / Fe only | | | | Y | M6 |
| N0514-05E | MW-552-20140407-01 | 04/07/2014 15:25 | 04/09/2014 | Aqueous | E300IC_W | / NO3,Cl,SO4 | | | | Y | E2 |
| N0514-05E | MW-552-20140407-01 | 04/07/2014 15:25 | 04/09/2014 | Aqueous | SM2320_W | / | | | | | E2 |
| N0514-05E | MW-552-20140407-01 | 04/07/2014 15:25 | 04/09/2014 | Aqueous | SM4500_H+ | / | | | | | E2 |
| N0514-05F | MW-552-20140407-01 | 04/07/2014 15:25 | 04/09/2014 | Aqueous | SM4500_OP_W | / | | | | | E2 |
| N0514-05G | MW-552-20140407-01 | 04/07/2014 15:25 | 04/09/2014 | Aqueous | SM4500_NH3_W | / SPECTRUM--sub to Agawam | | | | | SUB |
| N0514-06A | MW-553-20140407-01 | 04/07/2014 14:30 | 04/09/2014 | Aqueous | RSK175 | / | | | | | VOA |
| N0514-06B | MW-553-20140407-01 | 04/07/2014 14:30 | 04/09/2014 | Aqueous | E300_VOA_W | / | | | | Y | E2 |
| N0514-06C | MW-553-20140407-01 | 04/07/2014 14:30 | 04/09/2014 | Aqueous | SM5310B_TOC_W | / | | | | | R22 |
| N0514-06D | MW-553-20140407-01 | 04/07/2014 14:30 | 04/09/2014 | Aqueous | SW6010_W | / Fe only | | | | Y | M6 |
| N0514-06E | MW-553-20140407-01 | 04/07/2014 14:30 | 04/09/2014 | Aqueous | E300IC_W | / NO3,Cl,SO4 | | | | Y | E2 |
| N0514-06E | MW-553-20140407-01 | 04/07/2014 14:30 | 04/09/2014 | Aqueous | SM2320_W | / | | | | | E2 |
| N0514-06E | MW-553-20140407-01 | 04/07/2014 14:30 | 04/09/2014 | Aqueous | SM4500_H+ | / | | | | | E2 |
| N0514-06F | MW-553-20140407-01 | 04/07/2014 14:30 | 04/09/2014 | Aqueous | SM4500_OP_W | / | | | | | E2 |
| N0514-06G | MW-553-20140407-01 | 04/07/2014 14:30 | 04/09/2014 | Aqueous | SM4500_NH3_W | / SPECTRUM--sub to Agawam | | | | | SUB |
| N0514-07A | MW-560-20140407-01 | 04/07/2014 11:10 | 04/09/2014 | Aqueous | RSK175 | / | | | | | VOA |
| N0514-07B | MW-560-20140407-01 | 04/07/2014 11:10 | 04/09/2014 | Aqueous | E300_VOA_W | / | | | | Y | E2 |
| N0514-07C | MW-560-20140407-01 | 04/07/2014 11:10 | 04/09/2014 | Aqueous | SM5310B_TOC_W | / | | | | | R22 |

HF = Fraction logged in but all tests have been placed on hold

HT = Test logged in but has been placed on hold

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

**WorkOrder: N0514**

**Client ID:** IESI
**Project:** Raytheon - Wayland
**WO Name:** Raytheon - Wayland
**Location:** IESI_WAYLAND,
**Comments:** N/A

**Case:**
**SDG:**
**PO:** RA-008

**HC Due:** 04/21/14
**Fax Due:**
**Fax Report:** ☐

**Report Level:** LEVEL 2
**Special Program:**
**EDD:** CLF

| Lab Samp ID | Client Sample ID | Collection Date | Date Recv'd | Matrix | Test Code | Samp / Lab Test Comments | HF | HT | MS | SEL | Storage |
|---|---|---|---|---|---|---|---|---|---|---|---|
| N0514-07D | MW-560-20140407-01 | 04/07/2014 11:10 | 04/09/2014 | Aqueous | SW6010_W | / Fe only | | | | Y | M6 |
| N0514-07E | MW-560-20140407-01 | 04/07/2014 11:10 | 04/09/2014 | Aqueous | E300IC_W | / NO3,Cl,SO4 | | | | Y | E2 |
| N0514-07E | MW-560-20140407-01 | 04/07/2014 11:10 | 04/09/2014 | Aqueous | SM2320_W | / | | | | | E2 |
| N0514-07E | MW-560-20140407-01 | 04/07/2014 11:10 | 04/09/2014 | Aqueous | SM4500_H+ | / | | | | | E2 |
| N0514-07F | MW-560-20140407-01 | 04/07/2014 11:10 | 04/09/2014 | Aqueous | SM4500_OP_W | / | | | | | E2 |
| N0514-07G | MW-560-20140407-01 | 04/07/2014 11:10 | 04/09/2014 | Aqueous | SM4500_NH3_W | / SPECTRUM--sub to Agawam | | | | | SUB |
| N0514-08A | MW-561-20140407-01 | 04/07/2014 12:00 | 04/09/2014 | Aqueous | RSK175 | / | | | | | VOA |
| N0514-08B | MW-561-20140407-01 | 04/07/2014 12:00 | 04/09/2014 | Aqueous | E300_VOA_W | / | | | | Y | E2 |
| N0514-08C | MW-561-20140407-01 | 04/07/2014 12:00 | 04/09/2014 | Aqueous | SM5310B_TOC_W | / | | | | | R22 |
| N0514-08D | MW-561-20140407-01 | 04/07/2014 12:00 | 04/09/2014 | Aqueous | SW6010_W | / Fe only | | | | Y | M6 |
| N0514-08E | MW-561-20140407-01 | 04/07/2014 12:00 | 04/09/2014 | Aqueous | E300IC_W | / NO3,Cl,SO4 | | | | Y | E2 |
| N0514-08E | MW-561-20140407-01 | 04/07/2014 12:00 | 04/09/2014 | Aqueous | SM2320_W | / | | | | | E2 |
| N0514-08E | MW-561-20140407-01 | 04/07/2014 12:00 | 04/09/2014 | Aqueous | SM4500_H+ | / | | | | | E2 |
| N0514-08F | MW-561-20140407-01 | 04/07/2014 12:00 | 04/09/2014 | Aqueous | SM4500_OP_W | / | | | | | E2 |
| N0514-08G | MW-561-20140407-01 | 04/07/2014 12:00 | 04/09/2014 | Aqueous | SM4500_NH3_W | / SPECTRUM--sub to Agawam | | | | | SUB |
| N0514-09A | MW-562-20140407-01 | 04/07/2014 13:30 | 04/09/2014 | Aqueous | RSK175 | / | | | | | VOA |
| N0514-09B | MW-562-20140407-01 | 04/07/2014 13:30 | 04/09/2014 | Aqueous | E300_VOA_W | / | | | | Y | E2 |
| N0514-09C | MW-562-20140407-01 | 04/07/2014 13:30 | 04/09/2014 | Aqueous | SM5310B_TOC_W | / | | | | | R22 |
| N0514-09D | MW-562-20140407-01 | 04/07/2014 13:30 | 04/09/2014 | Aqueous | SW6010_W | / Fe only | | | | Y | M6 |

HF = Fraction logged in but all tests have been placed on hold

HT = Test logged in but has been placed on hold

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

**WorkOrder: N0514**

**Client ID:** IESI
**Project:** Raytheon - Wayland
**WO Name:** Raytheon - Wayland
**Location:** IESI_WAYLAND,
**Comments:** N/A

**Case:**
**SDG:**
**PO:** RA-008

**HC Due:** 04/21/14
**Fax Due:**
**Fax Report:** ☐

**Report Level:** LEVEL 2
**Special Program:**
**EDD:** CLF

| Lab Samp ID | Client Sample ID | Collection Date | Date Recv'd | Matrix | Test Code | Samp / Lab Test Comments | HF | HT | MS | SEL | Storage |
|---|---|---|---|---|---|---|---|---|---|---|---|
| N0514-09E | MW-562-20140407-01 | 04/07/2014 13:30 | 04/09/2014 | Aqueous | E300IC_W | / NO3,Cl,SO4 | | | | Y | E2 |
| N0514-09E | MW-562-20140407-01 | 04/07/2014 13:30 | 04/09/2014 | Aqueous | SM2320_W | / | | | | | E2 |
| N0514-09E | MW-562-20140407-01 | 04/07/2014 13:30 | 04/09/2014 | Aqueous | SM4500_H+ | / | | | | | E2 |
| N0514-09F | MW-562-20140407-01 | 04/07/2014 13:30 | 04/09/2014 | Aqueous | SM4500_OP_W | / | | | | | E2 |
| N0514-09G | MW-562-20140407-01 | 04/07/2014 13:30 | 04/09/2014 | Aqueous | SM4500_NH3_W | / SPECTRUM--sub to Agawam | | | | | SUB |
| N0514-10A | MW-563-20140407-01 | 04/07/2014 10:20 | 04/09/2014 | Aqueous | RSK175 | / | | | | | VOA |
| N0514-10B | MW-563-20140407-01 | 04/07/2014 10:20 | 04/09/2014 | Aqueous | E300_VOA_W | / | | | | Y | E2 |
| N0514-10C | MW-563-20140407-01 | 04/07/2014 10:20 | 04/09/2014 | Aqueous | SM5310B_TOC_W | / | | | | | R22 |
| N0514-10D | MW-563-20140407-01 | 04/07/2014 10:20 | 04/09/2014 | Aqueous | SW6010_W | / Fe only | | | | Y | M6 |
| N0514-10E | MW-563-20140407-01 | 04/07/2014 10:20 | 04/09/2014 | Aqueous | E300IC_W | / NO3,Cl,SO4 | | | | Y | E2 |
| N0514-10E | MW-563-20140407-01 | 04/07/2014 10:20 | 04/09/2014 | Aqueous | SM2320_W | / | | | | | E2 |
| N0514-10E | MW-563-20140407-01 | 04/07/2014 10:20 | 04/09/2014 | Aqueous | SM4500_H+ | / | | | | | E2 |
| N0514-10F | MW-563-20140407-01 | 04/07/2014 10:20 | 04/09/2014 | Aqueous | SM4500_OP_W | / | | | | | E2 |
| N0514-10G | MW-563-20140407-01 | 04/07/2014 10:20 | 04/09/2014 | Aqueous | SM4500_NH3_W | / SPECTRUM--sub to Agawam | | | | | SUB |
| N0514-11A | REW-1-20140406-01 | 04/06/2014 13:45 | 04/09/2014 | Aqueous | RSK175 | / | | | | | VOA |
| N0514-11B | REW-1-20140406-01 | 04/06/2014 13:45 | 04/09/2014 | Aqueous | E300_VOA_W | / | | | | Y | E2 |
| N0514-11C | REW-1-20140406-01 | 04/06/2014 13:45 | 04/09/2014 | Aqueous | SM5310B_TOC_W | / | | | | | R22 |
| N0514-11D | REW-1-20140406-01 | 04/06/2014 13:45 | 04/09/2014 | Aqueous | SW6010_W | / Fe only | | | | Y | M6 |
| N0514-11E | REW-1-20140406-01 | 04/06/2014 13:45 | 04/09/2014 | Aqueous | E300IC_W | / NO3,Cl,SO4 | | | | Y | E2 |

HF = Fraction logged in but all tests have been placed on hold

HT = Test logged in but has been placed on hold

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

**WorkOrder: N0514**

**Client ID:** IESI
**Project:** Raytheon - Wayland
**WO Name:** Raytheon - Wayland
**Location:** IESI_WAYLAND,
**Comments:** N/A

**Case:**
**SDG:**
**PO:** RA-008

**HC Due:** 04/21/14
**Fax Due:**
**Fax Report:** ☐

**Report Level:** LEVEL 2
**Special Program:**
**EDD:** CLF

| Lab Samp ID | Client Sample ID | Collection Date | Date Recv'd | Matrix | Test Code | Samp / Lab Test Comments | HF | HT | MS | SEL | Storage |
|---|---|---|---|---|---|---|---|---|---|---|---|
| N0514-11E | REW-1-20140406-01 | 04/06/2014 13:45 | 04/09/2014 | Aqueous | SM2320_W | / | | | | | E2 |
| N0514-11E | REW-1-20140406-01 | 04/06/2014 13:45 | 04/09/2014 | Aqueous | SM4500_H+ | / | | | | | E2 |
| N0514-11F | REW-1-20140406-01 | 04/06/2014 13:45 | 04/09/2014 | Aqueous | SM4500_OP_W | / | | | | | E2 |
| N0514-11G | REW-1-20140406-01 | 04/06/2014 13:45 | 04/09/2014 | Aqueous | SM4500_NH3_W | / SPECTRUM--sub to Agawam | | | | | SUB |
| N0514-12A | REW-4-20140406-01 | 04/06/2014 15:20 | 04/09/2014 | Aqueous | RSK175 | / | | | | | VOA |
| N0514-12B | REW-4-20140406-01 | 04/06/2014 15:20 | 04/09/2014 | Aqueous | E300_VOA_W | / | | | | Y | E2 |
| N0514-12C | REW-4-20140406-01 | 04/06/2014 15:20 | 04/09/2014 | Aqueous | SM5310B_TOC_W | / | | | | | R22 |
| N0514-12D | REW-4-20140406-01 | 04/06/2014 15:20 | 04/09/2014 | Aqueous | SW6010_W | / Fe only | | | | Y | M6 |
| N0514-12E | REW-4-20140406-01 | 04/06/2014 15:20 | 04/09/2014 | Aqueous | E300IC_W | / NO3,Cl,SO4 | | | | Y | E2 |
| N0514-12E | REW-4-20140406-01 | 04/06/2014 15:20 | 04/09/2014 | Aqueous | SM2320_W | / | | | | | E2 |
| N0514-12E | REW-4-20140406-01 | 04/06/2014 15:20 | 04/09/2014 | Aqueous | SM4500_H+ | / | | | | | E2 |
| N0514-12F | REW-4-20140406-01 | 04/06/2014 15:20 | 04/09/2014 | Aqueous | SM4500_OP_W | / | | | | | E2 |
| N0514-12G | REW-4-20140406-01 | 04/06/2014 15:20 | 04/09/2014 | Aqueous | SM4500_NH3_W | / SPECTRUM--sub to Agawam | | | | | SUB |
| N0514-13A | REW-5-20140406-01 | 04/06/2014 14:30 | 04/09/2014 | Aqueous | RSK175 | / | | | | | VOA |
| N0514-13B | REW-5-20140406-01 | 04/06/2014 14:30 | 04/09/2014 | Aqueous | E300_VOA_W | / | | | | Y | E2 |
| N0514-13C | REW-5-20140406-01 | 04/06/2014 14:30 | 04/09/2014 | Aqueous | SM5310B_TOC_W | / | | | | | R22 |
| N0514-13D | REW-5-20140406-01 | 04/06/2014 14:30 | 04/09/2014 | Aqueous | SW6010_W | / Fe only | | | | Y | M6 |
| N0514-13E | REW-5-20140406-01 | 04/06/2014 14:30 | 04/09/2014 | Aqueous | E300IC_W | / NO3,Cl,SO4 | | | | Y | E2 |
| N0514-13E | REW-5-20140406-01 | 04/06/2014 14:30 | 04/09/2014 | Aqueous | SM2320_W | / | | | | | E2 |

HF = Fraction logged in but all tests have been placed on hold

HT = Test logged in but has been placed on hold

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

**WorkOrder: N0514**

**Client ID:** IESI
**Project:** Raytheon - Wayland
**WO Name:** Raytheon - Wayland
**Location:** IESI_WAYLAND,
**Comments:** N/A

**Case:**
**SDG:**
**PO:** RA-008

**HC Due:** 04/21/14
**Fax Due:**
**Fax Report:** ☐

**Report Level:** LEVEL 2
**Special Program:**
**EDD:** CLF

| Lab Samp ID | Client Sample ID | Collection Date | Date Recv'd | Matrix | Test Code | Samp / Lab Test Comments | HF | HT | MS | SEL | Storage |
|---|---|---|---|---|---|---|---|---|---|---|---|
| N0514-13E | REW-5-20140406-01 | 04/06/2014 14:30 | 04/09/2014 | Aqueous | SM4500_H+ | / | | | | | E2 |
| N0514-13F | REW-5-20140406-01 | 04/06/2014 14:30 | 04/09/2014 | Aqueous | SM4500_OP_W | / | | | | | E2 |
| N0514-13G | REW-5-20140406-01 | 04/06/2014 14:30 | 04/09/2014 | Aqueous | SM4500_NH3_W | / SPECTRUM--sub to Agawam | | | | | SUB |
| N0514-14A | REW-6-20140406-01 | 04/06/2014 09:05 | 04/09/2014 | Aqueous | RSK175 | / | | | | | VOA |
| N0514-14B | REW-6-20140406-01 | 04/06/2014 09:05 | 04/09/2014 | Aqueous | E300_VOA_W | / | | | | Y | E2 |
| N0514-14C | REW-6-20140406-01 | 04/06/2014 09:05 | 04/09/2014 | Aqueous | SM5310B_TOC_W | / | | | | | R22 |
| N0514-14D | REW-6-20140406-01 | 04/06/2014 09:05 | 04/09/2014 | Aqueous | SW6010_W | / Fe only | | | | Y | M6 |
| N0514-14E | REW-6-20140406-01 | 04/06/2014 09:05 | 04/09/2014 | Aqueous | E300IC_W | / NO3,Cl,SO4 | | | | Y | E2 |
| N0514-14E | REW-6-20140406-01 | 04/06/2014 09:05 | 04/09/2014 | Aqueous | SM2320_W | / | | | | | E2 |
| N0514-14E | REW-6-20140406-01 | 04/06/2014 09:05 | 04/09/2014 | Aqueous | SM4500_H+ | / | | | | | E2 |
| N0514-14F | REW-6-20140406-01 | 04/06/2014 09:05 | 04/09/2014 | Aqueous | SM4500_OP_W | / | | | | | E2 |
| N0514-14G | REW-6-20140406-01 | 04/06/2014 09:05 | 04/09/2014 | Aqueous | SM4500_NH3_W | / SPECTRUM--sub to Agawam | | | | | SUB |
| N0514-15A | REW-7-20140406-01 | 04/06/2014 09:35 | 04/09/2014 | Aqueous | RSK175 | / | | | | | VOA |
| N0514-15B | REW-7-20140406-01 | 04/06/2014 09:35 | 04/09/2014 | Aqueous | E300_VOA_W | / | | | | Y | E2 |
| N0514-15C | REW-7-20140406-01 | 04/06/2014 09:35 | 04/09/2014 | Aqueous | SM5310B_TOC_W | / | | | | | R22 |
| N0514-15D | REW-7-20140406-01 | 04/06/2014 09:35 | 04/09/2014 | Aqueous | SW6010_W | / Fe only | | | | Y | M6 |
| N0514-15E | REW-7-20140406-01 | 04/06/2014 09:35 | 04/09/2014 | Aqueous | E300IC_W | / NO3,Cl,SO4 | | | | Y | E2 |
| N0514-15E | REW-7-20140406-01 | 04/06/2014 09:35 | 04/09/2014 | Aqueous | SM2320_W | / | | | | | E2 |
| N0514-15E | REW-7-20140406-01 | 04/06/2014 09:35 | 04/09/2014 | Aqueous | SM4500_H+ | / | | | | | E2 |

HF = Fraction logged in but all tests have been placed on hold

HT = Test logged in but has been placed on hold

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

**WorkOrder: N0514**

**Client ID:** IESI
**Project:** Raytheon - Wayland
**WO Name:** Raytheon - Wayland
**Location:** IESI_WAYLAND,
**Comments:** N/A

**Case:**
**SDG:**
**PO:** RA-008

**HC Due:** 04/21/14
**Fax Due:**
**Fax Report:** ☐

**Report Level:** LEVEL 2
**Special Program:**
**EDD:** CLF

| Lab Samp ID | Client Sample ID | Collection Date | Date Recv'd | Matrix | Test Code | Samp / Lab Test Comments | HF | HT | MS | SEL | Storage |
|---|---|---|---|---|---|---|---|---|---|---|---|
| N0514-15F | REW-7-20140406-01 | 04/06/2014 09:35 | 04/09/2014 | Aqueous | SM4500_OP_W | / | | | | | E2 |
| N0514-15G | REW-7-20140406-01 | 04/06/2014 09:35 | 04/09/2014 | Aqueous | SM4500_NH3_W | / SPECTRUM--sub to Agawam | | | | | SUB |
| N0514-16A | REW-8-20140406-01 | 04/06/2014 10:45 | 04/09/2014 | Aqueous | RSK175 | / | | | | | VOA |
| N0514-16B | REW-8-20140406-01 | 04/06/2014 10:45 | 04/09/2014 | Aqueous | E300_VOA_W | / | | | | Y | E2 |
| N0514-16C | REW-8-20140406-01 | 04/06/2014 10:45 | 04/09/2014 | Aqueous | SM5310B_TOC_W | / | | | | | R22 |
| N0514-16D | REW-8-20140406-01 | 04/06/2014 10:45 | 04/09/2014 | Aqueous | SW6010_W | / Fe only | | | | Y | M6 |
| N0514-16E | REW-8-20140406-01 | 04/06/2014 10:45 | 04/09/2014 | Aqueous | E300IC_W | / NO3,Cl,SO4 | | | | Y | E2 |
| N0514-16E | REW-8-20140406-01 | 04/06/2014 10:45 | 04/09/2014 | Aqueous | SM2320_W | / | | | | | E2 |
| N0514-16E | REW-8-20140406-01 | 04/06/2014 10:45 | 04/09/2014 | Aqueous | SM4500_H+ | / | | | | | E2 |
| N0514-16F | REW-8-20140406-01 | 04/06/2014 10:45 | 04/09/2014 | Aqueous | SM4500_OP_W | / | | | | | E2 |
| N0514-16G | REW-8-20140406-01 | 04/06/2014 10:45 | 04/09/2014 | Aqueous | SM4500_NH3_W | / SPECTRUM--sub to Agawam | | | | | SUB |
| N0514-17A | REW-9-20140406-01 | 04/06/2014 11:40 | 04/09/2014 | Aqueous | RSK175 | / | | | | | VOA |
| N0514-17B | REW-9-20140406-01 | 04/06/2014 11:40 | 04/09/2014 | Aqueous | E300_VOA_W | / | | | | Y | E2 |
| N0514-17C | REW-9-20140406-01 | 04/06/2014 11:40 | 04/09/2014 | Aqueous | SM5310B_TOC_W | / | | | | | R22 |
| N0514-17D | REW-9-20140406-01 | 04/06/2014 11:40 | 04/09/2014 | Aqueous | SW6010_W | / Fe only | | | | Y | M6 |
| N0514-17E | REW-9-20140406-01 | 04/06/2014 11:40 | 04/09/2014 | Aqueous | E300IC_W | / NO3,Cl,SO4 | | | | Y | E2 |
| N0514-17E | REW-9-20140406-01 | 04/06/2014 11:40 | 04/09/2014 | Aqueous | SM2320_W | / | | | | | E2 |
| N0514-17E | REW-9-20140406-01 | 04/06/2014 11:40 | 04/09/2014 | Aqueous | SM4500_H+ | / | | | | | E2 |
| N0514-17F | REW-9-20140406-01 | 04/06/2014 11:40 | 04/09/2014 | Aqueous | SM4500_OP_W | / | | | | | E2 |

HF = Fraction logged in but all tests have been placed on hold

HT = Test logged in but has been placed on hold

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

**WorkOrder: N0514**

**Client ID:** IESI
**Project:** Raytheon - Wayland
**WO Name:** Raytheon - Wayland
**Location:** IESI_WAYLAND,
**Comments:** N/A

**Case:**
**SDG:**
**PO:** RA-008

**HC Due:** 04/21/14
**Fax Due:**
**Fax Report:** ☐

**Report Level:** LEVEL 2
**Special Program:**
**EDD:** CLF

| Lab Samp ID | Client Sample ID | Collection Date | Date Recv'd | Matrix | Test Code | Samp / Lab Test Comments | HF | HT | MS | SEL | Storage |
|---|---|---|---|---|---|---|---|---|---|---|---|
| N0514-17G | REW-9-20140406-01 | 04/06/2014 11:40 | 04/09/2014 | Aqueous | SM4500_NH3_W | / SPECTRUM--sub to Agawam | | | | | SUB |
| N0514-18A | REW-10-20140406-01 | 04/06/2014 12:25 | 04/09/2014 | Aqueous | RSK175 | ONLY 1 VIAL USE CAUTION / | | | | | VOA |
| N0514-18B | REW-10-20140406-01 | 04/06/2014 12:25 | 04/09/2014 | Aqueous | E300_VOA_W | / | | | | Y | E2 |
| N0514-18C | REW-10-20140406-01 | 04/06/2014 12:25 | 04/09/2014 | Aqueous | SM5310B_TOC_W | / | | | | | R22 |
| N0514-18D | REW-10-20140406-01 | 04/06/2014 12:25 | 04/09/2014 | Aqueous | SW6010_W | / Fe only | | | | Y | M6 |
| N0514-18E | REW-10-20140406-01 | 04/06/2014 12:25 | 04/09/2014 | Aqueous | E300IC_W | / NO3,Cl,SO4 | | | | Y | E2 |
| N0514-18E | REW-10-20140406-01 | 04/06/2014 12:25 | 04/09/2014 | Aqueous | SM2320_W | / | | | | | E2 |
| N0514-18E | REW-10-20140406-01 | 04/06/2014 12:25 | 04/09/2014 | Aqueous | SM4500_H+ | / | | | | | E2 |
| N0514-18F | REW-10-20140406-01 | 04/06/2014 12:25 | 04/09/2014 | Aqueous | SM4500_OP_W | / | | | | | E2 |
| N0514-18G | REW-10-20140406-01 | 04/06/2014 12:25 | 04/09/2014 | Aqueous | SM4500_NH3_W | / SPECTRUM--sub to Agawam | | | | | SUB |
| N0514-19A | REW-11-20140406-01 | 04/06/2014 08:15 | 04/09/2014 | Aqueous | RSK175 | / | | | | | VOA |
| N0514-19B | REW-11-20140406-01 | 04/06/2014 08:15 | 04/09/2014 | Aqueous | E300_VOA_W | / | | | | Y | E2 |
| N0514-19C | REW-11-20140406-01 | 04/06/2014 08:15 | 04/09/2014 | Aqueous | SM5310B_TOC_W | / | | | | | R22 |
| N0514-19D | REW-11-20140406-01 | 04/06/2014 08:15 | 04/09/2014 | Aqueous | SW6010_W | / Fe only | | | | Y | M6 |
| N0514-19E | REW-11-20140406-01 | 04/06/2014 08:15 | 04/09/2014 | Aqueous | E300IC_W | / NO3,Cl,SO4 | | | | Y | E2 |
| N0514-19E | REW-11-20140406-01 | 04/06/2014 08:15 | 04/09/2014 | Aqueous | SM2320_W | / | | | | | E2 |
| N0514-19E | REW-11-20140406-01 | 04/06/2014 08:15 | 04/09/2014 | Aqueous | SM4500_H+ | / | | | | | E2 |
| N0514-19F | REW-11-20140406-01 | 04/06/2014 08:15 | 04/09/2014 | Aqueous | SM4500_OP_W | / | | | | | E2 |
| N0514-19G | REW-11-20140406-01 | 04/06/2014 08:15 | 04/09/2014 | Aqueous | SM4500_NH3_W | / SPECTRUM--sub to Agawam | | | | | SUB |

HF = Fraction logged in but all tests have been placed on hold

HT = Test logged in but has been placed on hold

# Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

**WorkOrder: N0514**

**Client ID:** IESI
**Project:** Raytheon - Wayland
**WO Name:** Raytheon - Wayland
**Location:** IESI_WAYLAND,
**Comments:** N/A

**Case:**
**SDG:**
**PO:** RA-008

**HC Due:** 04/21/14
**Fax Due:**
**Fax Report:** ☐

**Report Level:** LEVEL 2
**Special Program:**
**EDD:** CLF

| Lab Samp ID | Client Sample ID | Collection Date | Date Recv'd | Matrix | Test Code | Samp / Lab Test Comments | HF | HT | MS | SEL | Storage |
|---|---|---|---|---|---|---|---|---|---|---|---|
| N0514-20A | REW-12-20140406-01 | 04/06/2014 13:10 | 04/09/2014 | Aqueous | RSK175 | / | | | | | VOA |
| N0514-20B | REW-12-20140406-01 | 04/06/2014 13:10 | 04/09/2014 | Aqueous | E300_VOA_W | / | | | | Y | E2 |
| N0514-20C | REW-12-20140406-01 | 04/06/2014 13:10 | 04/09/2014 | Aqueous | SM5310B_TOC_W | / | | | | | R22 |
| N0514-20D | REW-12-20140406-01 | 04/06/2014 13:10 | 04/09/2014 | Aqueous | SW6010_W | / Fe only | | | | Y | M6 |
| N0514-20E | REW-12-20140406-01 | 04/06/2014 13:10 | 04/09/2014 | Aqueous | E300IC_W | / NO3,Cl,SO4 | | | | Y | E2 |
| N0514-20E | REW-12-20140406-01 | 04/06/2014 13:10 | 04/09/2014 | Aqueous | SM2320_W | / | | | | | E2 |
| N0514-20E | REW-12-20140406-01 | 04/06/2014 13:10 | 04/09/2014 | Aqueous | SM4500_H+ | / | | | | | E2 |
| N0514-20F | REW-12-20140406-01 | 04/06/2014 13:10 | 04/09/2014 | Aqueous | SM4500_OP_W | / | | | | | E2 |
| N0514-20G | REW-12-20140406-01 | 04/06/2014 13:10 | 04/09/2014 | Aqueous | SM4500_NH3_W | / SPECTRUM--sub to Agawam | | | | | SUB |
| N0514-21A | TRIP BLANK | 04/08/2014 00:00 | 04/09/2014 | Aqueous | RSK175 | / | | | | | VOA |

HF = Fraction logged in but all tests have been placed on hold

HT = Test logged in but has been placed on hold

SPECTRUM ANALYTICAL, INC.
*Featuring*
HANIBAL TECHNOLOGY

Page 1 of 3

# CHAIN OF CUSTODY RECORD

☐ 11 Almgren Drive, Agawam, MA 01001, (413) 789-9018
☐ 8405 Benjamin Road, Ste A, Tampa, FL 33634, (813) 888-9507
☐ 646 Camp Avenue, N Kingstown, RI 02852, (401) 732-3400

**Special Handling:**

TAT- Indicate Date Needed: _____
- All TATs subject to laboratory approval. Min. 24-hour notification needed for rushes.
- Samples disposed of after 60 days unless otherwise instructed.

Report To: Innovative Engineering Solutions Inc, 25 Spring St, Walpole MA 02081
Telephone #: 508-668-0033
Project Mgr. Vicki Parinan

Invoice To: same

P.O. No.: RA-008 RQN: _____

Project No.: RA-008
Site Name: Raytheon Wayland
Location: Wayland State: MA
Sampler(s): Daniel Jones

1=$Na_2S_2O_3$ 2=HCl 3=$H_2SO_4$ 4=$HNO_3$ 5=NaOH 6=Ascorbic Acid 7=$CH_3OH$
8= $NaHSO_4$ 9= Deionized Water 10=$H_3PO_4$ 11= None 12= _____

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW= Surface Water SO=Soil SL=Sludge A=Air
X1= _____ X2= _____ X3= _____

G=Grab C=Composite

| Lab Id: | Sample Id: | Date: | Time: | Type | Matrix | # of VOA Vials | # of Amber Glass | # of Clear Glass | # of Plastic | $NH_3$ | Total $PO_4$ | metals | TOC | Dissolved Cations | Acids | pH, Alkalinity | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Containers: | | | | Analyses: | | | | | | | |
| | | | | | | | | | | List preservative code below: | | | | | | | |
| | | | | | | | | | | 3 | 3 | 4 | 10 | 2 | 11 | 11 | |
| N0514-01 | mw-361s-20140408-01 | 4/8/14 | 0720 | G | GW | 6 | | | 4 | X | X | X | X | X | X | X | |
| -02 | mw-361m-20140408-01 | 4/8/14 | 0845 | G | GW | 6 | | | 4 | X | X | X | X | X | X | X | |
| -03 | mw-368s-20140407-01 | 4/7/14 | 0825 | G | GW | 6 | | | 4 | X | X | X | X | X | X | X | |
| -04 | mw-368m-20140407-01 | 4/7/14 | 0925 | G | GW | 6 | | | 4 | X | X | X | X | X | X | X | |
| -05 | mw-552-20140407-01 | 4/7/14 | 1525 | G | GW | 6 | | | 4 | X | X | X | X | X | X | X | |
| -06 | mw-553-20140407-01 | 4/7/14 | 1430 | G | GW | 6 | | | 4 | X | X | X | X | X | X | X | |
| -07 | mw-560-20140407-01 | 4/7/14 | 1110 | G | GW | 6 | | | 4 | X | X | X | X | X | X | X | |
| -08 | mw-561-20140407-01 | 4/7/14 | 1200 | G | GW | 6 | | | 4 | X | X | X | X | X | X | X | |
| -09 | mw-562-20140407-01 | 4/7/14 | 1330 | G | GW | 6 | | | 4 | X | X | X | X | X | X | X | |
| -10 | mw-563-20140407-01 | 4/7/14 | 1020 | G | GW | 6 | | | 4 | X | X | X | X | X | X | X | |

QA/QC Reporting Notes:

QA/QC Reporting Level
☐ Level I ☐ Level II
☐ Level III ☐ Level IV
☒ Other GW-1

State-specific reporting standards: _____

1.6/0/1.6 IR 01
AME 04-08-14

| Relinquished by: | Received by: | Date: | Time: | Temp°C |
|---|---|---|---|---|
| | | 4/8/14 | 1113 | |
| | SUBOUT FRIDGE | 04-08-14 | 16:20 | |
| | | 04/09/14 | 13:00 | 2.5°C |

☐ EDD Format _____
☒ E-mail to v.parinan@innovativeis.com

Condition upon receipt: Custody Seals: ☐ Present ☐ Intact ☐ Broken
☐ Ambient ☒ Iced ☐ Refrigerated ☐ DI VOA Frozen ☐ Soil Jar Frozen

SPECTRUM ANALYTICAL, INC.
*Featuring*
HANIBAL TECHNOLOGY

Page 2 of 3

# CHAIN OF CUSTODY RECORD

☐ 11 Almgren Drive, Agawam, MA 01001, (413) 789-9018
☐ 8405 Benjamin Road, Ste A, Tampa, FL 33634, (813) 888-9507
☐ 646 Camp Avenue, N Kingstown, RI 02852, (401) 732-3400

**Special Handling:**

TAT- Indicate Date Needed: _____
- All TATs subject to laboratory approval. Min. 24-hour notification needed for rushes.
- Samples disposed of after 60 days unless otherwise instructed.

Report To: Innovative Engineering Solutions Inc, 25 Spring St, Walpole MA 02081
Telephone #: 508-668-0033
Project Mgr. Vicki Pinzigan

Invoice To: Same

P.O. No.: RA-008 RQN: _____

Project No.: RA-008
Site Name: Raytheon Wayland
Location: Wayland State: MA
Sampler(s): Dany Jones

1=$Na_2S_2O_3$ 2=HCl 3=$H_2SO_4$ 4=$HNO_3$ 5=NaOH 6=Ascorbic Acid 7=$CH_3OH$
8= $NaHSO_4$ 9= Deionized Water 10=$H_3PO_4$ 11= None 12= _____

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW= Surface Water SO=Soil SL=Sludge A=Air
X1= _____ X2= _____ X3= _____

G=Grab C=Composite

| Lab Id: | Sample Id: | Date: | Time: | Type | Matrix | # of VOA Vials | # of Amber Glass | # of Clear Glass | # of Plastic | NH3 | Total PO4 | Metals | TOC | Dissolved Gases | Acids | pH, Anions, Alkalinity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| List preservative code below: | | | | | | | | | | 3 | 3 | 4 | 10 | 2 | 11 | 11 |
| N05 14-11 | REW-1-20140406-01 | 4/6/14 | 1345 | G | GW | 6 | | | 4 | X | X | X | X | X | X | X |
| -12 | REW-4-20140406-01 | 4/6/14 | 1520 | G | GW | 6 | | | 4 | X | X | X | X | X | X | X |
| -13 | REW-5-20140406-01 | 4/6/14 | 1430 | G | GW | 6 | | | 4 | X | X | X | X | X | X | X |
| -14 | REW-6-20140406-01 | 4/6/14 | 0905 | G | GW | 6 | | | 4 | X | X | X | X | X | X | X |
| -15 | REW-7-20140406-01 | 4/6/14 | 0935 | G | GW | 6 | | | 4 | X | X | X | X | X | X | X |
| -16 | REW-8-20140406-01 | 4/6/14 | 1045 | G | GW | 6 | | | 4 | X | X | X | X | X | X | X |
| -17 | REW-9-20140406-01 | 4/6/14 | 1140 | G | GW | 6 | | | 4 | X | X | X | X | X | X | X |
| -18 | REW-10-20140406-01 | 4/6/14 | 1225 | G | GW | 6 | | | 4 | X | X | X | X | X | X | X |
| -19 | REW-11-20140406-01 | 4/6/14 | 0815 | G | GW | 6 | | | 4 | X | X | X | X | X | X | X |
| -20 | REW-12-20140406-01 | 4/6/14 | 1310 | G | GW | 6 | | | 4 | X | X | X | X | X | X | X |

QA/QC Reporting Notes:

QA/QC Reporting Level
☐ Level I ☐ Level II
☐ Level III ☐ Level IV
☒ Other GW-1

State-specific reporting standards: _____

16/0/16 IR01
AME 04-08-14

| Relinquished by: | Received by: | Date: | Time: | Temp°C |
|---|---|---|---|---|
| | | 4/8/14 | 1113 | |
| | SUBMIT FRIDGE | 04-08-14 | 16:20 | |
| | | 04/09/14 | 13:00 | 2.5C |

☐ EDD Format _____
☒ E-mail to vipinzigan@EJIonline.com

Condition upon receipt: Custody Seals: ☐ Present ☐ Intact ☐ Broken
☐ Ambient ☒ Iced ☐ Refrigerated ☐ DI VOA Frozen ☐ Soil Jar Frozen

SPECTRUM ANALYTICAL, INC.
*Featuring*
HANIBAL TECHNOLOGY



# CHAIN OF CUSTODY RECORD

☐ 11 Almgren Drive, Agawam, MA 01001, (413) 789-9018
☐ 8405 Benjamin Road, Ste A, Tampa, FL 33634, (813) 888-9507
☐ 646 Camp Avenue, N Kingstown, RI 02852, (401) 732-3400

**Special Handling:**

TAT- Indicate Date Needed: _____
- All TATs subject to laboratory approval. Min. 24-hour notification needed for rushes.
- Samples disposed of after 60 days unless otherwise instructed.

Report To: Innovative Engineering Solutions Inc
25 Spring St
Walpole, MA 02081
Telephone #: 508-668-0033
Project Mgr. Vicki Pearlman

Invoice To: same

P.O. No.: RA-008 RQN: _____

Project No.: RA-008
Site Name: Raytheon - Wayland
Location: Wayland State: MA
Sampler(s): Dave Jones

1=$Na_2S_2O_3$ 2=HCl 3=$H_2SO_4$ 4=$HNO_3$ 5=NaOH 6=Ascorbic Acid 7=$CH_3OH$
8= $NaHSO_4$ 9= Deionized Water 10=$H_3PO_4$ 11= _____ 12= _____

List preservative code below: 2

QA/QC Reporting Notes:

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW= Surface Water SO=Soil SL=Sludge A=Air
X1= _____ X2= _____ X3= _____

G=Grab C=Composite

QA/QC Reporting Level
☐ Level I ☐ Level II
☐ Level III ☐ Level IV
☒ Other GW-1

State-specific reporting standards: _____

| Lab Id: | Sample Id: | Date: | Time: | Type | Matrix | # of VOA Vials | # of Amber Glass | # of Clear Glass | # of Plastic | Analyses: | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N0514-21 | Trip Blank | — | — | | | 2 | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |

1.6/0/1.6 IR 01
AME 04-08-14

| Relinquished by: | Received by: | Date: | Time: | Temp°C |
|---|---|---|---|---|
| | | 4/8/14 | 1715 | |
| | AME | 04-08-14 | 16:20 | |
| AME | SUB-OUT FRIDGE | 04-08-14 | 16:21 | |
| | | 04/08/14 | 13:00 | 25C |

☐ EDD Format _____
☐ E-mail to _____

Condition upon receipt: Custody Seals: ☐ Present ☐ Intact ☐ Broken
☐ Ambient ☒ Iced ☐ Refrigerated ☐ DI VOA Frozen ☐ Soil Jar Frozen

Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

| | |
|---|---|
| Received By: VEB | Page 01 of 01 |
| Reviewed By: KP | Log-in Date 04/09/2014 |
| Work Order: N0514 | Client Name: Innovative Engineering Solutions, Inc. |
| Project Name/Event: Raytheon - Wayland | |

Remarks: (1/2) Please see associated sample/extract transfer logbook pages submitted with this data package.

1. Custody Seal(s) — Present / Absent
   Intact / Broken
2. Custody Seal Nos. — N/A
3. Traffic Reports/ Chain of Custody Records (TR/COCs) or Packing Lists — Present / Absent
4. Airbill — AirBill / Sticker
   Present / Absent
5. Airbill No. — Courier N/A
6. Sample Tags — Present / Absent
   Sample Tag Numbers — Listed / Not Listed on Chain-of-Custody
7. Sample Condition — Intact / Broken / Leaking
8. Cooler Temperature Indicator Bottle — Present / Absent

| | |
|---|---|
| 9. Cooler Temperature | 2.5 °C |
| 10. Does information on TR/COCs and sample tags agree? | Yes / No |
| 11. Date Received at Laboratory | 04/09/2014 |
| 12. Time Received | 13:00 |

Sample Transfer

| Fraction (1) TVOA/VOA | Fraction (2) SVOA/PEST/ARO |
|---|---|
| Area # | Area # |
| By | By |
| On | On |

| Lab Sample ID | Preservation (pH) HNO3 | H2SO4 | HCl | NaOH | H3PO4 | VOA Matrix | Soil HeadSpace or Air Bubble > or equal to 1/4" |
|---|---|---|---|---|---|---|---|
| N0514-01 | <2 | <2 | | | | H | |
| N0514-02 | <2 | <2 | | | | H | |
| N0514-03 | <2 | <2 | | | | H | |
| N0514-04 | <2 | <2 | | | | H | |
| N0514-05 | <2 | <2 | | | | H | |
| N0514-06 | <2 | <2 | | | | H | |
| N0514-07 | <2 | <2 | | | | H | |
| N0514-08 | <2 | <2 | | | | H | |
| N0514-09 | <2 | <2 | | | | H | |
| N0514-10 | <2 | <2 | | | | H | |
| N0514-11 | <2 | <2 | | | | H | |
| N0514-12 | <2 | <2 | | | | H | |
| N0514-13 | <2 | <2 | | | | H | |
| N0514-14 | <2 | <2 | | | | H | |
| N0514-15 | <2 | <2 | | | | H | |
| N0514-16 | <2 | <2 | | | | H | |
| N0514-17 | <2 | <2 | | | | H | |
| N0514-18 | <2 | <2 | | | | H | |
| N0514-19 | <2 | <2 | | | | H | |
| N0514-20 | <2 | <2 | | | | H | |
| N0514-21 | | | | | | H | |

IR Temp Gun ID:MT-74

CoolantCondition: ICE

Preservative Name/Lot No:

VOA Matrix Key:

| | |
|---|---|
| US = Unpreserved Soil | A= Air |
| UA = Unpreserved Aqueous | H = HCl |
| M = MeOH | E = Encore |
| N = NaHSO4 | F = Freeze |

See Sample Condition Notification/Corrective Action Form Yes / No

Rad OK Yes / No

**Last Page of Data Report**

## FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

| | | | |
|---|---|---|---|
| PROJECT | **RA-006** | JOB NUMBER | N/A |
| WELL ID | **MW-276S-20140130-01** | DATE | 30-Jan-14 |
| TIME | START 1225 END 1305 | | |


***Innovative Engineering Solutions, Inc.***
25 Spring Street
Walpole Massachusetts 02081


### WATER LEVEL/PUMP SETTINGS

MEASUREMENT POINT
- [x] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER

PROTECTIVE CASING STICKUP (FROM GROUND): FT

PROTECTIVE CASING/WELL DIFFERENCE: FT

INITIAL DEPTH TO WATER: 11.91 FT

WELL DEPTH: 75.10 FT

WELL DIAMETER: 2 IN

FINAL DEPTH TO WATER: 15.66 FT

SCREEN LENGTH: FT

PID AMBIENT AIR: NA PPM

DRAWDOWN VOLUME: 0.61 GAL
(initial - final x 0.163 {2-inch} or x 0.654 {4-inch})

PID WELL MOUTH: NA PPM

| WELL INTEGRITY | YES | NO | N/A |
|---|---|---|---|
| CAP | [x] | [ ] | [ ] |
| CASING | [x] | [ ] | [ ] |
| LOCKED | [ ] | [x] | [ ] |
| COLLAR | [ ] | [ ] | [x] |

TOTAL VOLUME PURGED: 3.12 GAL
(purge rate (milliliters per minute) x time duration (minutes) x 0.00026 gal/millilter)

### PURGE DATA

| TIME | DEPTH TO WATER (ft) | PURGE RATE (ml/min) | TEMP (deg C) | SPECIFIC CONDUCTANCE (mg/cm) | pH (units) | DISS. $O_2$ (mg/L) | TURBIDITY (ntu) | REDOX (mv) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|
| 1225 | 12.46 | 300 | 8.83 | 426 | 5.68 | 49.28 | N/A | 15.8 | |
| 1235 | 14.32 | 300 | 9.76 | 468 | 5.63 | 5.90 | N/A | -22.8 | |
| 1240 | 15.10 | 300 | 9.80 | 470 | 5.63 | 6.14 | N/A | -23.6 | |
| 1245 | 15.41 | 300 | 9.78 | 472 | 5.62 | 6.09 | N/A | -20.7 | |
| 1250 | 15.66 | 300 | 9.91 | 473 | 5.62 | 6.07 | N/A | -26.2 | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | sampled @ 1250 |

### EQUIPMENT DOCUMENTATION

| TYPE OF PUMP | TYPE OF TUBING | TYPE OF PUMP MATERIAL |
|---|---|---|
| GEO 2 | SILICON/ POLY | Peristaltic |

### ANALYTICAL PARAMETERS

| | METHOD NUMBER | PRESERVATION METHOD | VOLUME REQUIRED | SAMPLE COLLECTED | SAMPLE RESULTS |
|---|---|---|---|---|---|
| [x] TA | 8260 | HCL/4 DEG C | 3 x 40 ml | [x] | |
| [x] Spectrum | Dissolved Gases | HCL/4 DEG C | 2 x 40 ml | [x] | |
| [x] Spectrum | TOC | H3PO4/4 DEG C | 2 x 40 ml | [x] | |
| [x] Spectrum | Acids | 4 DEG C | 2 x 40 ml | [x] | |
| [x] Spectrum | Total Iron | HNO3/4 DEG C | 1 x 250 ml | [x] | |
| [x] Spectrum | NH3 | H2SO4/4 DEG C | 1 x 250 ml | [x] | |
| [x] Spectrum | PO4, Anions, pH, Alkalinity | 4 DEG C | 1 x 500 ml | [x] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |

PURGE WATER DESCRIPTION: clear, odor, no sheen

PURGE WATER CONTAINERIZED: Pour back into well

NUMBER OF BUCKETS GENERATED:

**NOTES**

SIGNATURE: **DHR**

## FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

| | | | |
|---|---|---|---|
| PROJECT | **RA-006** | JOB NUMBER | N/A |
| WELL ID | **MW-276M-20140130-01** | DATE | 30-Jan-14 |
| TIME | START 1145 END 1220 | | |


***Innovative Engineering Solutions, Inc.***
25 Spring Street
Walpole Massachusetts 02081


### WATER LEVEL/PUMP SETTINGS

MEASUREMENT POINT
- [x] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER

PROTECTIVE CASING STICKUP (FROM GROUND): FT

PROTECTIVE CASING/WELL DIFFERENCE: FT

INITIAL DEPTH TO WATER: 10.24 FT

WELL DEPTH: 98.00 FT

WELL DIAMETER: 2 IN

FINAL DEPTH TO WATER: 12.11 FT

SCREEN LENGTH: FT

PID AMBIENT AIR: NA PPM

DRAWDOWN VOLUME: 0.14 GAL
(initial - final x 0.163 {2-inch} or x 0.654 {4-inch})

PID WELL MOUTH: NA PPM

TOTAL VOLUME PURGED: 2.73 GAL
(purge rate (milliliters per minute) x time duration (minutes) x 0.00026 gal/millilter)

| WELL INTEGRITY | YES | NO | N/A |
|---|---|---|---|
| CAP | [x] | [ ] | [ ] |
| CASING | [x] | [ ] | [ ] |
| LOCKED | [ ] | [x] | [ ] |
| COLLAR | [ ] | [ ] | [x] |

### PURGE DATA

| TIME | DEPTH TO WATER (ft) | PURGE RATE (ml/min) | TEMP (deg C) | SPECIFIC CONDUCTANCE (mg/cm) | pH (units) | DISS. $O_2$ (mg/L) | TURBIDITY (ntu) | REDOX (mv) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|
| 1145 | 11.11 | 300 | 8.03 | 489 | 6.34 | 4.58 | N/A | -66.1 | |
| 1155 | 11.95 | 300 | 9.35 | 519 | 6.13 | 1.67 | N/A | -48.1 | |
| 1200 | 12.06 | 300 | 9.29 | 532 | 6.16 | 1.52 | N/A | -52.8 | |
| 1205 | 12.11 | 300 | 9.44 | 549 | 6.22 | 1.94 | N/A | -61.9 | |
| 1210 | 12.11 | 300 | 9.31 | 563 | 6.28 | 1.56 | N/A | -71.2 | |
| | | | | | | | | | sampled @ 1210 |

### EQUIPMENT DOCUMENTATION

| TYPE OF PUMP | TYPE OF TUBING | TYPE OF PUMP MATERIAL |
|---|---|---|
| GEO 2 | SILICON/ POLY | Peristaltic |

### ANALYTICAL PARAMETERS

| | METHOD NUMBER | PRESERVATION METHOD | VOLUME REQUIRED | SAMPLE COLLECTED | SAMPLE RESULTS |
|---|---|---|---|---|---|
| [x] TA | 8260 | HCL/4 DEG C | 3 x 40 ml | [x] | |
| [x] Spectrum | Dissolved Gases | HCL/4 DEG C | 2 x 40 ml | [x] | |
| [x] Spectrum | TOC | H3PO4/4 DEG C | 2 x 40 ml | [x] | |
| [x] Spectrum | Acids | 4 DEG C | 2 x 40 ml | [x] | |
| [x] Spectrum | Total Iron | HNO3/4 DEG C | 1 x 250 ml | [x] | |
| [x] Spectrum | NH3 | H2SO4/4 DEG C | 1 x 250 ml | [x] | |
| [x] Spectrum | PO4, Anions, pH, Alkalinity | 4 DEG C | 1 x 500 ml | [x] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |

PURGE WATER DESCRIPTION: clear, odor, no sheen

PURGE WATER CONTAINERIZED: Pour back into well

NUMBER OF BUCKETS GENERATED:

**NOTES**

SIGNATURE: **DHR**

## FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

| | | | |
|---|---|---|---|
| PROJECT | **RA-006** | JOB NUMBER | N/A |
| WELL ID | **MW-268M-20140130-01** | DATE | 30-Jan-14 |
| TIME | START 1100 END 1140 | | |


***Innovative Engineering Solutions, Inc.***
25 Spring Street
Walpole Massachusetts 02081


### WATER LEVEL/PUMP SETTINGS

MEASUREMENT POINT
- [x] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER _____

PROTECTIVE CASING STICKUP (FROM GROUND): FT

PROTECTIVE CASING/WELL DIFFERENCE: FT

INITIAL DEPTH TO WATER: 9.45 FT

WELL DEPTH: 81.70 FT

WELL DIAMETER: 2 IN

FINAL DEPTH TO WATER: 9.95 FT

SCREEN LENGTH: FT

PID AMBIENT AIR: NA PPM

DRAWDOWN VOLUME: 0.08 GAL
(initial - final x 0.163 {2-inch} or x 0.654 {4-inch})

TOTAL VOLUME PURGED: 3.12 GAL
(purge rate (milliliters per minute) x time duration (minutes) x 0.00026 gal/millilter)

| WELL INTEGRITY | YES | NO | N/A |
|---|---|---|---|
| CAP | [x] | [ ] | [ ] |
| CASING | [x] | [ ] | [ ] |
| LOCKED | [ ] | [x] | [ ] |
| COLLAR | [ ] | [ ] | [x] |

PID WELL MOUTH: NA PPM

### PURGE DATA

| TIME | DEPTH TO WATER (ft) | PURGE RATE (ml/min) | TEMP (deg C) | SPECIFIC CONDUCTANCE (mg/cm) | pH (units) | DISS. $O_2$ (mg/L) | TURBIDITY (ntu) | REDOX (mv) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|
| 1100 | 9.84 | 300 | 6.04 | 195 | 6.43 | 11.00 | N/A | 14.1 | |
| 1110 | 10.05 | 300 | 7.45 | 219 | 7.13 | 0.37 | N/A | -129.4 | |
| 1115 | 9.95 | 300 | 7.08 | 219 | 7.19 | 0.34 | N/A | -143.5 | |
| 1120 | 9.95 | 300 | 6.62 | 217 | 7.19 | 0.52 | N/A | -145.1 | |
| 1125 | 9.95 | 300 | 6.39 | 216 | 7.19 | 0.40 | N/A | -145.5 | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | sampled @ |

### EQUIPMENT DOCUMENTATION

| TYPE OF PUMP | TYPE OF TUBING | TYPE OF PUMP MATERIAL |
|---|---|---|
| GEO 2 | SILICON/ POLY | Peristaltic |

### ANALYTICAL PARAMETERS

| | METHOD NUMBER | PRESERVATION METHOD | VOLUME REQUIRED | SAMPLE COLLECTED | SAMPLE RESULTS |
|---|---|---|---|---|---|
| [x] TA | 8260 | HCL/4 DEG C | 3 x 40 ml | [x] | |
| [x] Spectrum | Dissolved Gases | HCL/4 DEG C | 2 x 40 ml | [x] | |
| [x] Spectrum | TOC | H3PO4/4 DEG C | 2 x 40 ml | [x] | |
| [x] Spectrum | Acids | 4 DEG C | 2 x 40 ml | [x] | |
| [x] Spectrum | Total Iron | HNO3/4 DEG C | 1 x 250 ml | [x] | |
| [x] Spectrum | NH3 | H2SO4/4 DEG C | 1 x 250 ml | [x] | |
| [x] Spectrum | PO4, Anions, pH, Alkalinity | 4 DEG C | 1 x 500 ml | [x] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |

PURGE WATER DESCRIPTION: clear, odor, no sheen

PURGE WATER CONTAINERIZED: Pour back into well

NUMBER OF BUCKETS GENERATED:

**NOTES**

SIGNATURE: **DHR**

## FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

| | | | |
|---|---|---|---|
| PROJECT | **RA-006** | JOB NUMBER | N/A |
| WELL ID | **MW-553-20140130-01** | DATE | 30-Jan-14 |
| TIME | START 1005 END 1045 | | |


***Innovative Engineering Solutions, Inc.***
25 Spring Street
Walpole Massachusetts 02081


### WATER LEVEL/PUMP SETTINGS

MEASUREMENT POINT
- [x] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER _____

PROTECTIVE CASING STICKUP (FROM GROUND): FT

PROTECTIVE CASING/WELL DIFFERENCE: FT

INITIAL DEPTH TO WATER: 7.79 FT

WELL DEPTH: 64.80 FT

WELL DIAMETER: 2 IN

FINAL DEPTH TO WATER: 10.05 FT

SCREEN LENGTH: FT

PID AMBIENT AIR: NA PPM

DRAWDOWN VOLUME: 0.37 GAL
(initial - final x 0.163 {2-inch} or x 0.654 {4-inch})

PID WELL MOUTH: NA PPM

| WELL INTEGRITY | YES | NO | N/A |
|---|---|---|---|
| CAP | ☑ | ☐ | ☐ |
| CASING | ☑ | ☐ | ☐ |
| LOCKED | ☐ | ☑ | ☐ |
| COLLAR | ☐ | ☐ | ☑ |

TOTAL VOLUME PURGED: 3.12 GAL
(purge rate (milliliters per minute) x time duration (minutes) x 0.00026 gal/millilter)

### PURGE DATA

| TIME | DEPTH TO WATER (ft) | PURGE RATE (ml/min) | TEMP (deg C) | SPECIFIC CONDUCTANCE (mg/cm) | pH (units) | DISS. $O_2$ (mg/L) | TURBIDITY (ntu) | REDOX (mv) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|
| 1005 | 8.04 | 300 | 9.98 | 493 | 5.73 | 13.2 | N/A | 31 | |
| 1015 | 9.41 | 300 | 9.25 | 517 | 5.67 | 2.99 | N/A | 20 | |
| 1020 | 9.60 | 300 | 9.47 | 519 | 5.67 | 5.14 | N/A | 16.4 | |
| 1025 | 9.99 | 300 | 9.44 | 518 | 5.66 | 5.84 | N/A | 13.1 | |
| 1030 | 10.05 | 300 | 9.55 | 520 | 5.55 | 7.20 | N/A | 12.3 | |
| | | | | | | | | | sampled @ 1030 |

### EQUIPMENT DOCUMENTATION

| TYPE OF PUMP | TYPE OF TUBING | TYPE OF PUMP MATERIAL |
|---|---|---|
| GEO 2 | SILICON/ POLY | Peristaltic |

### ANALYTICAL PARAMETERS

| | METHOD NUMBER | PRESERVATION METHOD | VOLUME REQUIRED | SAMPLE COLLECTED | SAMPLE RESULTS |
|---|---|---|---|---|---|
| ☑ TA | 8260 | HCL/4 DEG C | 3 x 40 ml | ☑ | |
| ☑ Spectrum | Dissolved Gases | HCL/4 DEG C | 2 x 40 ml | ☑ | |
| ☑ Spectrum | TOC | H3PO4/4 DEG C | 2 x 40 ml | ☑ | |
| ☑ Spectrum | Acids | 4 DEG C | 2 x 40 ml | ☑ | |
| ☑ Spectrum | Total Iron | HNO3/4 DEG C | 1 x 250 ml | ☑ | |
| ☑ Spectrum | NH3 | H2SO4/4 DEG C | 1 x 250 ml | ☑ | |
| ☑ Spectrum | PO4, Anions, pH, Alkalinity | 4 DEG C | 1 x 500 ml | ☑ | |
| ☐ | | | | ☐ | |
| ☐ | | | | ☐ | |
| ☐ | | | | ☐ | |
| ☐ | | | | ☐ | |

PURGE WATER DESCRIPTION: clear, odor, no sheen

PURGE WATER CONTAINERIZED: Pour back into well

NUMBER OF BUCKETS GENERATED:

**NOTES**

SIGNATURE: **DHR**

## FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

| | | | |
|---|---|---|---|
| PROJECT | **RA-006** | JOB NUMBER | N/A |
| WELL ID | **MW-561-20140130-01** | DATE | 30-Jan-14 |
| TIME | START 0845 END 0950 | | |


***Innovative Engineering Solutions, Inc.***
25 Spring Street
Walpole Massachusetts 02081


### WATER LEVEL/PUMP SETTINGS

MEASUREMENT POINT
- [x] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER

PROTECTIVE CASING STICKUP (FROM GROUND): FT

PROTECTIVE CASING/WELL DIFFERENCE: FT

INITIAL DEPTH TO WATER: 10.62 FT

WELL DEPTH: 53.45 FT

WELL DIAMETER: 2 IN

FINAL DEPTH TO WATER: 10.9 FT

SCREEN LENGTH: FT

PID AMBIENT AIR: NA PPM

DRAWDOWN VOLUME: 0.05 GAL
(initial - final x 0.163 {2-inch} or x 0.654 {4-inch})

PID WELL MOUTH: NA PPM

TOTAL VOLUME PURGED: 5.07 GAL
(purge rate (milliliters per minute) x time duration (minutes) x 0.00026 gal/millilter)

| WELL INTEGRITY | YES | NO | N/A |
|---|---|---|---|
| CAP | ☑ | ☐ | ☐ |
| CASING | ☑ | ☐ | ☐ |
| LOCKED | ☐ | ☑ | ☐ |
| COLLAR | ☐ | ☐ | ☑ |

### PURGE DATA

| TIME | DEPTH TO WATER (ft) | PURGE RATE (ml/min) | TEMP (deg C) | SPECIFIC CONDUCTANCE (mg/cm) | pH (units) | DISS. $O_2$ (mg/L) | TURBIDITY (ntu) | REDOX (mv) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|
| 0845 | 11.05 | 300 | 7.48 | 345 | 6.12 | 1.97 | N/A | 70.5 | DupX |
| 0855 | 10.90 | 300 | 7.88 | 345 | 6.72 | 0.14 | N/A | -47.9 | |
| 0900 | 10.90 | 300 | 8.07 | 347 | 6.68 | 0.18 | N/A | -57.6 | |
| 0905 | 10.90 | 300 | 8.17 | 348 | 6.66 | 0.20 | N/A | -52.3 | |
| 0910 | 10.90 | 300 | 8.20 | 348 | 6.63 | 0.47 | N/A | -52.8 | |
| | | | | | | | | | sampled @ 0910 |

### EQUIPMENT DOCUMENTATION

| TYPE OF PUMP | TYPE OF TUBING | TYPE OF PUMP MATERIAL |
|---|---|---|
| GEO 2 | SILICON/ POLY | Peristaltic |

### ANALYTICAL PARAMETERS

| | METHOD NUMBER | PRESERVATION METHOD | VOLUME REQUIRED | SAMPLE COLLECTED | SAMPLE RESULTS |
|---|---|---|---|---|---|
| ☑ TA | 8260 | HCL/4 DEG C | 3 x 40 ml | ☑ | |
| ☑ Spectrum | Dissolved Gases | HCL/4 DEG C | 2 x 40 ml | ☑ | |
| ☑ Spectrum | TOC | H3PO4/4 DEG C | 2 x 40 ml | ☑ | |
| ☑ Spectrum | Acids | 4 DEG C | 2 x 40 ml | ☑ | |
| ☑ Spectrum | Total Iron | HNO3/4 DEG C | 1 x 250 ml | ☑ | |
| ☑ Spectrum | NH3 | H2SO4/4 DEG C | 1 x 250 ml | ☑ | |
| ☑ Spectrum | PO4, Anions, pH, Alkalinity | 4 DEG C | 1 x 500 ml | ☑ | |
| ☐ | | | | ☐ | |
| ☐ | | | | ☐ | |
| ☐ | | | | ☐ | |
| ☐ | | | | ☐ | |

PURGE WATER DESCRIPTION: clear, strong odor, no sheen

PURGE WATER CONTAINERIZED: Pour back into well

NUMBER OF BUCKETS GENERATED:

**NOTES**

DupX

SIGNATURE: **DHR**

## FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

| | | | |
|---|---|---|---|
| PROJECT | **RA-006** | JOB NUMBER | N/A |
| WELL ID | **REW-6-20140130-01** | DATE | 30-Jan-14 |
| TIME | START 0930 END 1005 | | |


***Innovative Engineering Solutions, Inc.***
25 Spring Street
Walpole Massachusetts 02081


### WATER LEVEL/PUMP SETTINGS

MEASUREMENT POINT
- [x] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER _____

PROTECTIVE CASING STICKUP (FROM GROUND): FT

PROTECTIVE CASING/WELL DIFFERENCE: FT

| | | | | | |
|---|---|---|---|---|---|
| INITIAL DEPTH TO WATER | Note 1 FT | WELL DEPTH | Note 1 FT | WELL DIAMETER | 2 IN |
| FINAL DEPTH TO WATER | Note 1 FT | SCREEN LENGTH | FT | PID AMBIENT AIR | NA PPM |
| DRAWDOWN VOLUME | Note 1 GAL | | | PID WELL MOUTH | NA PPM |
| TOTAL VOLUME PURGED | 1.82 GAL | | | | |

(initial - final x 0.163 {2-inch} or x 0.654 {4-inch})

(purge rate (milliliters per minute) x time duration (minutes) x 0.00026 gal/millilter)

| WELL INTEGRITY | YES | NO | N/A |
|---|---|---|---|
| CAP | ☑ | ☐ | ☐ |
| CASING | ☑ | ☐ | ☐ |
| LOCKED | ☐ | ☑ | ☐ |
| COLLAR | ☐ | ☐ | ☑ |

### PURGE DATA

| TIME | DEPTH TO WATER (ft) | PURGE RATE (ml/min) | TEMP (deg C) | SPECIFIC CONDUCTANCE (mg/cm) | pH (units) | DISS. $O_2$ (mg/L) | TURBIDITY (ntu) | REDOX (mv) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|
| 0940 | Note 1 | 200 | 8.55 | 422 | 6.61 | 0.34 | N/A | -128.2 | |
| 0945 | Note 1 | 200 | 8.42 | 421 | 6.63 | 0.28 | N/A | -138.2 | |
| 0950 | Note 1 | 200 | 8.55 | 421 | 6.63 | 0.28 | N/A | -140.7 | |
| 0955 | Note 1 | 200 | 8.46 | 421 | 6.63 | 0.27 | N/A | -143.5 | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | sampled @ 0955 |

### EQUIPMENT DOCUMENTATION

| TYPE OF PUMP | TYPE OF TUBING | TYPE OF PUMP MATERIAL |
|---|---|---|
| GEO 2 | SILICON/ POLY | Peristaltic |

### ANALYTICAL PARAMETERS

| | METHOD NUMBER | PRESERVATION METHOD | VOLUME REQUIRED | SAMPLE COLLECTED | SAMPLE RESULTS |
|---|---|---|---|---|---|
| ☑ TA | 8260 | HCL/4 DEG C | 3 x 40 ml | ☑ | |
| ☑ Spectrum | Dissolved Gases | HCL/4 DEG C | 2 x 40 ml | ☑ | |
| ☑ Spectrum | TOC | H3PO4/4 DEG C | 2 x 40 ml | ☑ | |
| ☑ Spectrum | Acids | 4 DEG C | 2 x 40 ml | ☑ | |
| ☑ Spectrum | Total Iron | HNO3/4 DEG C | 1 x 250 ml | ☑ | |
| ☑ Spectrum | NH3 | H2SO4/4 DEG C | 1 x 250 ml | ☑ | |
| ☑ Spectrum | PO4, Anions, pH, Alkalinity | 4 DEG C | 1 x 500 ml | ☑ | |
| ☐ | | | | ☐ | |
| ☐ | | | | ☐ | |
| ☐ | | | | ☐ | |
| ☐ | | | | ☐ | |

PURGE WATER DESCRIPTION: clear, slight bio odor

PURGE WATER CONTAINERIZED: Pour back into well

NUMBER OF BUCKETS GENERATED:

**NOTES**

Note 1: pump in well and operating

SIGNATURE **DAJ**

## FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

| | | | |
|---|---|---|---|
| PROJECT | **RA-006** | JOB NUMBER | N/A |
| WELL ID | **REW-7-20140130-01** | DATE | 30-Jan-14 |
| TIME | START 1025 END 1100 | | |


***Innovative Engineering Solutions, Inc.***
25 Spring Street
Walpole Massachusetts 02081


### WATER LEVEL/PUMP SETTINGS

MEASUREMENT POINT
- [x] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER _____

PROTECTIVE CASING STICKUP (FROM GROUND): FT

PROTECTIVE CASING/WELL DIFFERENCE: FT

INITIAL DEPTH TO WATER: Note 1 FT

WELL DEPTH: Note 1 FT

WELL DIAMETER: 2 IN

FINAL DEPTH TO WATER: Note 1 FT

SCREEN LENGTH: FT

PID AMBIENT AIR: NA PPM

DRAWDOWN VOLUME: Note 1 GAL
(initial - final x 0.163 {2-inch} or x 0.654 {4-inch})

PID WELL MOUTH: NA PPM

| WELL INTEGRITY | YES | NO | N/A |
|---|---|---|---|
| CAP | ☑ | ☐ | ☐ |
| CASING | ☑ | ☐ | ☐ |
| LOCKED | ☐ | ☑ | ☐ |
| COLLAR | ☐ | ☐ | ☑ |

TOTAL VOLUME PURGED: 1.82 GAL
(purge rate (milliliters per minute) x time duration (minutes) x 0.00026 gal/millilter)

### PURGE DATA

| TIME | DEPTH TO WATER (ft) | PURGE RATE (ml/min) | TEMP (deg C) | SPECIFIC CONDUCTANCE (mg/cm) | pH (units) | DISS. $O_2$ (mg/L) | TURBIDITY (ntu) | REDOX (mv) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|
| 1035 | Note 1 | 200 | 7.98 | 267 | 6.78 | 0.54 | N/A | -126.8 | |
| 1040 | Note 1 | 200 | 7.94 | 266 | 6.79 | 0.46 | N/A | -133.1 | |
| 1045 | Note 1 | 200 | 8.22 | 270 | 6.79 | 0.44 | N/A | -135.1 | |
| 1050 | Note 1 | 200 | 7.91 | 267 | 6.79 | 0.42 | N/A | -139.8 | |
| | | | | | | | | | sampled @ 1050 |

### EQUIPMENT DOCUMENTATION

| TYPE OF PUMP | TYPE OF TUBING | TYPE OF PUMP MATERIAL |
|---|---|---|
| GEO 2 | SILICON/ POLY | Peristaltic |

### ANALYTICAL PARAMETERS

| | METHOD NUMBER | PRESERVATION METHOD | VOLUME REQUIRED | SAMPLE COLLECTED | SAMPLE RESULTS |
|---|---|---|---|---|---|
| ☑ TA | 8260 | HCL/4 DEG C | 3 x 40 ml | ☑ | |
| ☑ Spectrum | Dissolved Gases | HCL/4 DEG C | 2 x 40 ml | ☑ | |
| ☑ Spectrum | TOC | H3PO4/4 DEG C | 2 x 40 ml | ☑ | |
| ☑ Spectrum | Acids | 4 DEG C | 2 x 40 ml | ☑ | |
| ☑ Spectrum | Total Iron | HNO3/4 DEG C | 1 x 250 ml | ☑ | |
| ☑ Spectrum | NH3 | H2SO4/4 DEG C | 1 x 250 ml | ☑ | |
| ☑ Spectrum | PO4, Anions, pH, Alkalinity | 4 DEG C | 1 x 500 ml | ☑ | |
| ☐ | | | | ☐ | |
| ☐ | | | | ☐ | |
| ☐ | | | | ☐ | |
| ☐ | | | | ☐ | |

PURGE WATER DESCRIPTION: clear, slight bio odor

PURGE WATER CONTAINERIZED: Pour back into well

NUMBER OF BUCKETS GENERATED:

**NOTES**
Note 1: pump in well and operating

SIGNATURE: **DAJ**

## FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

| | | | |
|---|---|---|---|
| PROJECT | **RA-006** | JOB NUMBER | N/A |
| WELL ID | **REW-8-20140130-01** | DATE | 30-Jan-14 |
| TIME | START 1230 END 1305 | | |


***Innovative Engineering Solutions, Inc.***
25 Spring Street
Walpole Massachusetts 02081


### WATER LEVEL/PUMP SETTINGS

MEASUREMENT POINT
- [x] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER

PROTECTIVE CASING STICKUP (FROM GROUND): FT

PROTECTIVE CASING/WELL DIFFERENCE: FT

INITIAL DEPTH TO WATER: Note 1 FT

WELL DEPTH: Note 1 FT

WELL DIAMETER: 2 IN

FINAL DEPTH TO WATER: Note 1 FT

SCREEN LENGTH: FT

PID AMBIENT AIR: NA PPM

DRAWDOWN VOLUME: Note 1 GAL
(initial - final x 0.163 {2-inch} or x 0.654 {4-inch})

PID WELL MOUTH: NA PPM

| WELL INTEGRITY | YES | NO | N/A |
|---|---|---|---|
| CAP | [x] | [ ] | [ ] |
| CASING | [x] | [ ] | [ ] |
| LOCKED | [ ] | [x] | [ ] |
| COLLAR | [ ] | [ ] | [x] |

TOTAL VOLUME PURGED: 2.08 GAL
(purge rate (milliliters per minute) x time duration (minutes) x 0.00026 gal/millilter)

### PURGE DATA

| TIME | DEPTH TO WATER (ft) | PURGE RATE (ml/min) | TEMP (deg C) | SPECIFIC CONDUCTANCE (mg/cm) | pH (units) | DISS. $O_2$ (mg/L) | TURBIDITY (ntu) | REDOX (mv) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|
| 1240 | Note 1 | 200 | 7.69 | 41 | 6.23 | 0.65 | N/A | -61.1 | |
| 1245 | Note 1 | 200 | 7.30 | 41 | 6.27 | 0.56 | N/A | -63.9 | |
| 1250 | Note 1 | 200 | 7.47 | 41 | 6.26 | 0.54 | N/A | -66.4 | |
| 1255 | Note 1 | 200 | 7.87 | 41 | 6.26 | 0.52 | N/A | -70.3 | |
| | | | | | | | | | sampled @ 1255 |

### EQUIPMENT DOCUMENTATION

| TYPE OF PUMP | TYPE OF TUBING | TYPE OF PUMP MATERIAL |
|---|---|---|
| GEO 2 | SILICON/ POLY | Peristaltic |

### ANALYTICAL PARAMETERS

| | METHOD NUMBER | PRESERVATION METHOD | VOLUME REQUIRED | SAMPLE COLLECTED | SAMPLE RESULTS |
|---|---|---|---|---|---|
| [x] TA | 8260 | HCL/4 DEG C | 3 x 40 ml | [x] | |
| [x] Spectrum | Dissolved Gases | HCL/4 DEG C | 2 x 40 ml | [x] | |
| [x] Spectrum | TOC | H3PO4/4 DEG C | 2 x 40 ml | [x] | |
| [x] Spectrum | Acids | 4 DEG C | 2 x 40 ml | [x] | |
| [x] Spectrum | Total Iron | HNO3/4 DEG C | 1 x 250 ml | [x] | |
| [x] Spectrum | NH3 | H2SO4/4 DEG C | 1 x 250 ml | [x] | |
| [x] Spectrum | PO4, Anions, pH, Alkalinity | 4 DEG C | 1 x 500 ml | [x] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |

PURGE WATER DESCRIPTION: clear, slight bio odor

PURGE WATER CONTAINERIZED: Pour back into well

NUMBER OF BUCKETS GENERATED:

**NOTES**
Note 1: pump in well and operating

SIGNATURE: **DAJ**

## FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

| | | | |
|---|---|---|---|
| PROJECT | **RA-006** | JOB NUMBER | N/A |
| WELL ID | **REW-9-20140130-01** | DATE | 30-Jan-14 |
| TIME | START 1140 END 1215 | | |


***Innovative Engineering Solutions, Inc.***
25 Spring Street
Walpole Massachusetts 02081


### WATER LEVEL/PUMP SETTINGS

MEASUREMENT POINT
- [x] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER

PROTECTIVE CASING STICKUP (FROM GROUND): FT

PROTECTIVE CASING/WELL DIFFERENCE: FT

INITIAL DEPTH TO WATER: Note 1 FT

WELL DEPTH: Note 1 FT

WELL DIAMETER: 2 IN

FINAL DEPTH TO WATER: Note 1 FT

SCREEN LENGTH: FT

PID AMBIENT AIR: NA PPM

DRAWDOWN VOLUME: Note 1 GAL
(initial - final x 0.163 {2-inch} or x 0.654 {4-inch})

PID WELL MOUTH: NA PPM

| WELL INTEGRITY | YES | NO | N/A |
|---|---|---|---|
| CAP | [x] | [ ] | [ ] |
| CASING | [x] | [ ] | [ ] |
| LOCKED | [ ] | [x] | [ ] |
| COLLAR | [ ] | [ ] | [x] |

TOTAL VOLUME PURGED: 1.82 GAL
(purge rate (milliliters per minute) x time duration (minutes) x 0.00026 gal/millilter)

### PURGE DATA

| TIME | DEPTH TO WATER (ft) | PURGE RATE (ml/min) | TEMP (deg C) | SPECIFIC CONDUCTANCE (mg/cm) | pH (units) | DISS. $O_2$ (mg/L) | TURBIDITY (ntu) | REDOX (mv) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|
| 1150 | Note 1 | 200 | 7.65 | 277 | 5.93 | 2.17 | N/A | -27.4 | |
| 1155 | Note 1 | 200 | 7.68 | 294 | 5.92 | 0.51 | N/A | -85.1 | |
| 1200 | Note 1 | 200 | 7.77 | 296 | 5.94 | 0.50 | N/A | -86.3 | |
| 1205 | Note 1 | 200 | 7.81 | 302 | 5.94 | 0.49 | N/A | -89.9 | |
| | | | | | | | | | sampled @ 1205 |

### EQUIPMENT DOCUMENTATION

| TYPE OF PUMP | TYPE OF TUBING | TYPE OF PUMP MATERIAL |
|---|---|---|
| GEO 2 | SILICON/ POLY | Peristaltic |

### ANALYTICAL PARAMETERS

| | METHOD NUMBER | PRESERVATION METHOD | VOLUME REQUIRED | SAMPLE COLLECTED | SAMPLE RESULTS |
|---|---|---|---|---|---|
| [x] TA | 8260 | HCL/4 DEG C | 3 x 40 ml | [x] | |
| [x] Spectrum | Dissolved Gases | HCL/4 DEG C | 2 x 40 ml | [x] | |
| [x] Spectrum | TOC | H3PO4/4 DEG C | 2 x 40 ml | [x] | |
| [x] Spectrum | Acids | 4 DEG C | 2 x 40 ml | [x] | |
| [x] Spectrum | Total Iron | HNO3/4 DEG C | 1 x 250 ml | [x] | |
| [x] Spectrum | NH3 | H2SO4/4 DEG C | 1 x 250 ml | [x] | |
| [x] Spectrum | PO4, Anions, pH, Alkalinity | 4 DEG C | 1 x 500 ml | [x] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |

PURGE WATER DESCRIPTION: clear, strong bio odor

PURGE WATER CONTAINERIZED: Pour back into well

NUMBER OF BUCKETS GENERATED:

**NOTES**
Note 1: pump in well and operating

SIGNATURE: **DAJ**

## FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

| | | | |
|---|---|---|---|
| PROJECT | **RA-006** | JOB NUMBER | N/A |
| WELL ID | **REW-12-20140130-01** | DATE | 30-Jan-14 |
| TIME | START 0845 END 0920 | | |


***Innovative Engineering Solutions, Inc.***
25 Spring Street
Walpole Massachusetts 02081


### WATER LEVEL/PUMP SETTINGS

MEASUREMENT POINT
- [x] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER

PROTECTIVE CASING STICKUP (FROM GROUND): FT

PROTECTIVE CASING/WELL DIFFERENCE: FT

| | | | | | |
|---|---|---|---|---|---|
| INITIAL DEPTH TO WATER | Note 1 FT | WELL DEPTH | Note 1 FT | WELL DIAMETER | 2 IN |
| FINAL DEPTH TO WATER | Note 1 FT | SCREEN LENGTH | FT | PID AMBIENT AIR | NA PPM |
| DRAWDOWN VOLUME | Note 1 GAL | | | PID WELL MOUTH | NA PPM |
| TOTAL VOLUME PURGED | 1.82 GAL | | | | |

(initial - final x 0.163 {2-inch} or x 0.654 {4-inch})

(purge rate (milliliters per minute) x time duration (minutes) x 0.00026 gal/millilter)

| WELL INTEGRITY | YES | NO | N/A |
|---|---|---|---|
| CAP | ☑ | ☐ | ☐ |
| CASING | ☑ | ☐ | ☐ |
| LOCKED | ☐ | ☑ | ☐ |
| COLLAR | ☐ | ☐ | ☑ |

### PURGE DATA

| TIME | DEPTH TO WATER (ft) | PURGE RATE (ml/min) | TEMP (deg C) | SPECIFIC CONDUCTANCE (mg/cm) | pH (units) | DISS. $O_2$ (mg/L) | TURBIDITY (ntu) | REDOX (mv) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|
| 0855 | Note 1 | 200 | 8.73 | 286 | 6.69 | 0.41 | N/A | -132.1 | |
| 0900 | Note 1 | 200 | 7.88 | 278 | 6.71 | 0.31 | N/A | -141.3 | |
| 0905 | Note 1 | 200 | 7.83 | 277 | 6.70 | 0.30 | N/A | -143.1 | |
| 0910 | Note 1 | 200 | 7.63 | 275 | 6.71 | 0.29 | N/A | -142.9 | |
| | | | | | | | | | sampled @ 0910 |

### EQUIPMENT DOCUMENTATION

| TYPE OF PUMP | TYPE OF TUBING | TYPE OF PUMP MATERIAL |
|---|---|---|
| GEO 2 | SILICON/ POLY | Peristaltic |

### ANALYTICAL PARAMETERS

| | METHOD NUMBER | PRESERVATION METHOD | VOLUME REQUIRED | SAMPLE COLLECTED | SAMPLE RESULTS |
|---|---|---|---|---|---|
| ☑ TA | 8260 | HCL/4 DEG C | 3 x 40 ml | ☑ | |
| ☑ Spectrum | Dissolved Gases | HCL/4 DEG C | 2 x 40 ml | ☑ | |
| ☑ Spectrum | TOC | H3PO4/4 DEG C | 2 x 40 ml | ☑ | |
| ☑ Spectrum | Acids | 4 DEG C | 2 x 40 ml | ☑ | |
| ☑ Spectrum | Total Iron | HNO3/4 DEG C | 1 x 250 ml | ☑ | |
| ☑ Spectrum | NH3 | H2SO4/4 DEG C | 1 x 250 ml | ☑ | |
| ☑ Spectrum | PO4, Anions, pH, Alkalinity | 4 DEG C | 1 x 500 ml | ☑ | |
| ☐ | | | | ☐ | |
| ☐ | | | | ☐ | |
| ☐ | | | | ☐ | |
| ☐ | | | | ☐ | |

PURGE WATER DESCRIPTION: clear, strong bio odor

PURGE WATER CONTAINERIZED: Pour back into well

NUMBER OF BUCKETS GENERATED:

**NOTES**

Note 1: pump in well and operating

SIGNATURE: **DAJ**

## FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

| | | | |
|---|---|---|---|
| PROJECT | **RA-006** | JOB NUMBER | N/A |
| WELL ID | **DEP-19M-20140405-01** | DATE | 5-Apr-14 |
| TIME | START 1005 END 1040 | | |


***Innovative Engineering Solutions, Inc.***
25 Spring Street
Walpole Massachusetts 02081


### WATER LEVEL/PUMP SETTINGS

MEASUREMENT POINT
- [x] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER _____

PROTECTIVE CASING STICKUP (FROM GROUND): FT

PROTECTIVE CASING/WELL DIFFERENCE: FT

| | | | | | |
|---|---|---|---|---|---|
| INITIAL DEPTH TO WATER | 6.35 FT | WELL DEPTH | 39.80 FT | WELL DIAMETER | 3/8 IN |
| FINAL DEPTH TO WATER | Note 1 FT | SCREEN LENGTH | FT | PID AMBIENT AIR | NA PPM |
| DRAWDOWN VOLUME | Note 1 GAL | | | PID WELL MOUTH | NA PPM |
| TOTAL VOLUME PURGED | 1.82 GAL | | | | |

(initial - final x 0.163 {2-inch} or x 0.654 {4-inch})

(purge rate (milliliters per minute) x time duration (minutes) x 0.00026 gal/millilter)

| WELL INTEGRITY | YES | NO | N/A |
|---|---|---|---|
| CAP | [x] | [ ] | [ ] |
| CASING | [x] | [ ] | [ ] |
| LOCKED | [ ] | [x] | [ ] |
| COLLAR | [ ] | [ ] | [x] |

### PURGE DATA

| TIME | DEPTH TO WATER (ft) | PURGE RATE (ml/min) | TEMP (deg C) | SPECIFIC CONDUCTANCE (mg/cm) | pH (units) | DISS. $O_2$ (mg/L) | TURBIDITY (ntu) | REDOX (mv) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|
| 1015 | Note 1 | 200 | 8.29 | 85 | 9.92 | 0.98 | N/A | -490.5 | |
| 1020 | Note 1 | 200 | 8.56 | 81 | 9.87 | 0.56 | N/A | -469.8 | |
| 1025 | Note 1 | 200 | 8.50 | 78 | 9.86 | 0.58 | N/A | -461.3 | |
| 1030 | Note 1 | 200 | 8.51 | 77 | 9.88 | 0.61 | N/A | -458.7 | |
| | | | | | | | | | sampled @ 1030 |

### EQUIPMENT DOCUMENTATION

| TYPE OF PUMP | TYPE OF TUBING | TYPE OF PUMP MATERIAL |
|---|---|---|
| GEO 2 | SILICON/ POLY | Peristaltic |

### ANALYTICAL PARAMETERS

| | METHOD NUMBER | PRESERVATION METHOD | VOLUME REQUIRED | SAMPLE COLLECTED | SAMPLE RESULTS |
|---|---|---|---|---|---|
| [x] TA | 8260B | HCL/4 DEG C | 3 x 40 ml | [x] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |

PURGE WATER DESCRIPTION: clear, no odor

PURGE WATER CONTAINERIZED: Pour back into well

NUMBER OF BUCKETS GENERATED:

**NOTES**

Note 1: could not fit tubing and level probe in well at same time.

SIGNATURE **DAJ**

## FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

| | | | |
|---|---|---|---|
| PROJECT | **RA-006** | JOB NUMBER | N/A |
| WELL ID | **DEP-21-20140405-01** | DATE | 5-Apr-14 |
| TIME | START 1100 END 1130 | | |


***Innovative Engineering Solutions, Inc.***
25 Spring Street
Walpole Massachusetts 02081


### WATER LEVEL/PUMP SETTINGS

MEASUREMENT POINT
- [x] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER _____

PROTECTIVE CASING STICKUP (FROM GROUND): FT

PROTECTIVE CASING/WELL DIFFERENCE: FT

INITIAL DEPTH TO WATER: 8 FT

WELL DEPTH: 49.61 FT

WELL DIAMETER: 1/2 IN

FINAL DEPTH TO WATER: Note 1 FT

SCREEN LENGTH: FT

PID AMBIENT AIR: NA PPM

DRAWDOWN VOLUME: Note 1 GAL
(initial - final x 0.163 {2-inch} or x 0.654 {4-inch})

PID WELL MOUTH: NA PPM

TOTAL VOLUME PURGED: 1.56 GAL
(purge rate (milliliters per minute) x time duration (minutes) x 0.00026 gal/millilter)

| WELL INTEGRITY | YES | NO | N/A |
|---|---|---|---|
| CAP | [x] | [ ] | [ ] |
| CASING | [x] | [ ] | [ ] |
| LOCKED | [ ] | [x] | [ ] |
| COLLAR | [ ] | [ ] | [x] |

### PURGE DATA

| TIME | DEPTH TO WATER (ft) | PURGE RATE (ml/min) | TEMP (deg C) | SPECIFIC CONDUCTANCE (mg/cm) | pH (units) | DISS. $O_2$ (mg/L) | TURBIDITY (ntu) | REDOX (mv) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|
| 1110 | Note 1 | 200 | 9.17 | 73 | 9.92 | 1.65 | N/A | -529.3 | |
| 1115 | Note 1 | 200 | 9.11 | 66 | 9.83 | 0.76 | N/A | -463.8 | |
| 1120 | Note 1 | 200 | 9.33 | 67 | 9.84 | 0.61 | N/A | -465.2 | |
| 1125 | Note 1 | 200 | 9.41 | 67 | 9.82 | 0.58 | N/A | -467.5 | |
| | | | | | | | | | sampled @ 1125 |

### EQUIPMENT DOCUMENTATION

| TYPE OF PUMP | TYPE OF TUBING | TYPE OF PUMP MATERIAL |
|---|---|---|
| GEO 2 | SILICON/ POLY | Peristaltic |

### ANALYTICAL PARAMETERS

| | METHOD NUMBER | PRESERVATION METHOD | VOLUME REQUIRED | SAMPLE COLLECTED | SAMPLE RESULTS |
|---|---|---|---|---|---|
| [x] TA | 8260B | HCL/4 DEG C | 3 x 40 ml | [x] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |

PURGE WATER DESCRIPTION: clear, no odor

PURGE WATER CONTAINERIZED: Pour back into well

NUMBER OF BUCKETS GENERATED:

**NOTES**
Note 1: could not fit tubing and level probe in well at same time.

SIGNATURE: **DAJ**

## FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

| | | | |
|---|---|---|---|
| PROJECT | RA-006 | JOB NUMBER | N/A |
| WELL ID | MW-261S-20140408-01 | DATE | 8-Apr-14 |
| TIME | START 0655 END 0745 | | |


***Innovative Engineering Solutions, Inc.***
25 Spring Street
Walpole Massachusetts 02081


### WATER LEVEL/PUMP SETTINGS

MEASUREMENT POINT
- [x] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER

PROTECTIVE CASING STICKUP (FROM GROUND): FT

PROTECTIVE CASING/WELL DIFFERENCE: FT

| | | | | | |
|---|---|---|---|---|---|
| INITIAL DEPTH TO WATER | 9.51 FT | WELL DEPTH | 24.40 FT | WELL DIAMETER | 2 IN |
| FINAL DEPTH TO WATER | 10.33 FT | SCREEN LENGTH | FT | PID AMBIENT AIR | NA PPM |
| DRAWDOWN VOLUME | 0.13 GAL | | | PID WELL MOUTH | NA PPM |

(initial - final x 0.163 {2-inch} or x 0.654 {4-inch})

| WELL INTEGRITY | YES | NO | N/A |
|---|---|---|---|
| CAP | [x] | [ ] | [ ] |
| CASING | [x] | [ ] | [ ] |
| LOCKED | [ ] | [x] | [ ] |
| COLLAR | [ ] | [ ] | [x] |

TOTAL VOLUME PURGED: 2.6 GAL

(purge rate (milliliters per minute) x time duration (minutes) x 0.00026 gal/millilter)

### PURGE DATA

| TIME | DEPTH TO WATER (ft) | PURGE RATE (ml/min) | TEMP (deg C) | SPECIFIC CONDUCTANCE (mg/cm) | pH (units) | DISS. $O_2$ (mg/L) | TURBIDITY (ntu) | REDOX (mv) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|
| 0705 | 10.33 | 200 | 8.77 | 855 | 6.81 | 0.62 | N/A | -96.5 | DupX3-20140408-01 |
| 0710 | 10.33 | 200 | 8.81 | 856 | 6.80 | 0.45 | N/A | -99.8 | |
| 0715 | 10.33 | 200 | 8.82 | 857 | 6.80 | 0.46 | N/A | -100 | |
| 0720 | 10.33 | 200 | 8.87 | 859 | 6.81 | 0.47 | N/A | -100.9 | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | sampled @ 0720 |

### EQUIPMENT DOCUMENTATION

| TYPE OF PUMP | TYPE OF TUBING | TYPE OF PUMP MATERIAL |
|---|---|---|
| GEO 2 | SILICON/ POLY | Peristaltic |

### ANALYTICAL PARAMETERS

| | METHOD NUMBER | PRESERVATION METHOD | VOLUME REQUIRED | SAMPLE COLLECTED | SAMPLE RESULTS |
|---|---|---|---|---|---|
| [x] TA | 8260B | HCL/4 DEG C | 3 x 40 ml | [x] | |
| [x] TA | 8260SIM | HCL/4 DEG C | 2 x 40 ml | [x] | |
| [x] Spectrum | NH3 | H2SO4/4 DEG C | 1 X 250 ml | [x] | |
| [x] Spectrum | PO4 | H2SO4/4 DEG C | 1 X 250 ml | [x] | |
| [x] Spectrum | Metals | HNO3/4 DEG C | 1 X 250 ml | [x] | |
| [x] Spectrum | TOC | H3PO4/4 DEG C | 2 x 40 ml | [x] | |
| [x] Spectrum | Dissolved Gases | HCL/4 DEG C | 2 x 40 ml | [x] | |
| [x] Spectrum | Acids | 4 DEG C | 2 x 40 ml | [x] | |
| [x] Spectrum | pH, Anions, Alkalinity | 4 DEG C | 1 x 500 ml | [x] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |

PURGE WATER DESCRIPTION: clear, slight bio odor

PURGE WATER CONTAINERIZED: Pour back into well

NUMBER OF BUCKETS GENERATED:

**NOTES**

DupX3-20140408-01

SIGNATURE: **DAJ**

## FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

| | | | |
|---|---|---|---|
| PROJECT | **RA-006** | JOB NUMBER | N/A |
| WELL ID | **MW-263M-20140406-01** | DATE | 8-Apr-14 |
| TIME | START 1110 END 1150 | | |


***Innovative Engineering Solutions, Inc.***
25 Spring Street
Walpole Massachusetts 02081


### WATER LEVEL/PUMP SETTINGS

MEASUREMENT POINT
- [x] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER _____

PROTECTIVE CASING STICKUP (FROM GROUND): FT

PROTECTIVE CASING/WELL DIFFERENCE: FT

INITIAL DEPTH TO WATER: 8.84 FT

WELL DEPTH: 52.68 FT

WELL DIAMETER: 2 IN

FINAL DEPTH TO WATER: 8.86 FT

SCREEN LENGTH: FT

PID AMBIENT AIR: NA PPM

DRAWDOWN VOLUME: 0.003 GAL
(initial - final x 0.163 {2-inch} or x 0.654 {4-inch})

PID WELL MOUTH: NA PPM

TOTAL VOLUME PURGED: 3.1 GAL
(purge rate (milliliters per minute) x time duration (minutes) x 0.00026 gal/millilter)

| WELL INTEGRITY | YES | NO | N/A |
|---|---|---|---|
| CAP | [x] | [ ] | [ ] |
| CASING | [x] | [ ] | [ ] |
| LOCKED | [ ] | [x] | [ ] |
| COLLAR | [ ] | [ ] | [x] |

### PURGE DATA

| TIME | DEPTH TO WATER (ft) | PURGE RATE (ml/min) | TEMP (deg C) | SPECIFIC CONDUCTANCE (mg/cm) | pH (units) | DISS. $O_2$ (mg/L) | TURBIDITY (ntu) | REDOX (mv) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|
| 1115 | 8.86 | 300 | 9.37 | 302 | 6.95 | 2.33 | N/A | -108.1 | |
| 1125 | 8.85 | 300 | 9.59 | 325 | 7.39 | 0.83 | N/A | -153.7 | |
| 1135 | 8.86 | 300 | 9.80 | 332 | 7.48 | 0.81 | N/A | -145.8 | |
| 1140 | 8.86 | 300 | 9.83 | 333 | 7.50 | 0.86 | N/A | -142.7 | |
| 1145 | 8.86 | 300 | 9.82 | 334 | 7.51 | 0.75 | N/A | -142.1 | |
| | | | | | | | | | sampled @ 1145 |

### EQUIPMENT DOCUMENTATION

| TYPE OF PUMP | TYPE OF TUBING | TYPE OF PUMP MATERIAL |
|---|---|---|
| GEO 2 | SILICON/ POLY | Peristaltic |

### ANALYTICAL PARAMETERS

| | METHOD NUMBER | PRESERVATION METHOD | VOLUME REQUIRED | SAMPLE COLLECTED | SAMPLE RESULTS |
|---|---|---|---|---|---|
| [x] TA | 8260B | HCL/4 DEG C | 3 x 40 ml | [x] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |

PURGE WATER DESCRIPTION: clear, slight odor, no sheen

PURGE WATER CONTAINERIZED: Pour back into well

NUMBER OF BUCKETS GENERATED:

**NOTES**

SIGNATURE: **DHR**

## FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

| | | | |
|---|---|---|---|
| PROJECT | RA-006 | JOB NUMBER | N/A |
| WELL ID | MW-264M-20140406-01 | DATE | 8-Apr-14 |
| TIME | START 0945 END 1035 | | |


***Innovative Engineering Solutions, Inc.***
25 Spring Street
Walpole Massachusetts 02081


### WATER LEVEL/PUMP SETTINGS

MEASUREMENT POINT
- [x] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER _____

PROTECTIVE CASING STICKUP (FROM GROUND): FT

PROTECTIVE CASING/WELL DIFFERENCE: FT

| | | | | | |
|---|---|---|---|---|---|
| INITIAL DEPTH TO WATER | 6.31 FT | WELL DEPTH | 47.30 FT | WELL DIAMETER | 2 IN |
| FINAL DEPTH TO WATER | 6.57 FT | SCREEN LENGTH | FT | PID AMBIENT AIR | NA PPM |
| DRAWDOWN VOLUME | 0.006 GAL | | | PID WELL MOUTH | NA PPM |
| TOTAL VOLUME PURGED | 3.9 GAL | | | | |

(initial - final x 0.163 {2-inch} or x 0.654 {4-inch})

(purge rate (milliliters per minute) x time duration (minutes) x 0.00026 gal/millilter)

| WELL INTEGRITY | YES | NO | N/A |
|---|---|---|---|
| CAP | ☑ | ☐ | ☐ |
| CASING | ☑ | ☐ | ☐ |
| LOCKED | ☐ | ☑ | ☐ |
| COLLAR | ☐ | ☐ | ☑ |

### PURGE DATA

| TIME | DEPTH TO WATER (ft) | PURGE RATE (ml/min) | TEMP (deg C) | SPECIFIC CONDUCTANCE (mg/cm) | pH (units) | DISS. $O_2$ (mg/L) | TURBIDITY (ntu) | REDOX (mv) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|
| 095 | 6.55 | 300 | 9.41 | 147 | 6.77 | 13.90 | N/A | 221.4 | |
| 1000 | 6.59 | 300 | 9.50 | 133 | 6.20 | 8.81 | N/A | 247.5 | turn pump down |
| 1010 | 6.57 | 300 | 9.36 | 130 | 6.39 | 7.96 | N/A | 190.7 | |
| 1020 | 6.57 | 300 | 9.45 | 145 | 6.10 | 4.02 | N/A | 80.2 | |
| 1025 | 6.57 | 300 | 9.52 | 149 | 6.06 | 3.28 | N/A | 77.3 | |
| 1030 | 6.57 | 300 | 9.54 | 155 | 6.05 | 3.17 | N/A | 76.8 | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | sampled @ 1030 |

### EQUIPMENT DOCUMENTATION

| TYPE OF PUMP | TYPE OF TUBING | TYPE OF PUMP MATERIAL |
|---|---|---|
| GEO 2 | SILICON/ POLY | Peristaltic |

### ANALYTICAL PARAMETERS

| | METHOD NUMBER | PRESERVATION METHOD | VOLUME REQUIRED | SAMPLE COLLECTED | SAMPLE RESULTS |
|---|---|---|---|---|---|
| ☑ TA | 8260B | HCL/4 DEG C | 3 x 40 ml | ☑ | |
| ☐ | | | | ☐ | |
| ☐ | | | | ☐ | |
| ☐ | | | | ☐ | |
| ☐ | | | | ☐ | |
| ☐ | | | | ☐ | |
| ☐ | | | | ☐ | |
| ☐ | | | | ☐ | |
| ☐ | | | | ☐ | |
| ☐ | | | | ☐ | |
| ☐ | | | | ☐ | |

PURGE WATER DESCRIPTION: clear, no odor, no sheen

PURGE WATER CONTAINERIZED: Pour back into well

NUMBER OF BUCKETS GENERATED:

**NOTES**

SIGNATURE: **DHR**

## FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

| | | | |
|---|---|---|---|
| PROJECT | RA-006 | JOB NUMBER | N/A |
| WELL ID | MW-265S-20140408-01 | DATE | 8-Apr-14 |
| TIME | START 0900 END 0930 | | |


***Innovative Engineering Solutions, Inc.***
25 Spring Street
Walpole Massachusetts 02081


### WATER LEVEL/PUMP SETTINGS

MEASUREMENT POINT
- [x] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER _____

PROTECTIVE CASING STICKUP (FROM GROUND): FT

PROTECTIVE CASING/WELL DIFFERENCE: FT

| | | | | | |
|---|---|---|---|---|---|
| INITIAL DEPTH TO WATER | 6.03 FT | WELL DEPTH | 21.00 FT | WELL DIAMETER | 2 IN |
| FINAL DEPTH TO WATER | 6.12 FT | SCREEN LENGTH | FT | PID AMBIENT AIR | NA PPM |
| DRAWDOWN VOLUME | 0.02 GAL | | | PID WELL MOUTH | NA PPM |

(initial - final x 0.163 {2-inch} or x 0.654 {4-inch})

| WELL INTEGRITY | YES | NO | N/A |
|---|---|---|---|
| CAP | [x] | [ ] | [ ] |
| CASING | [x] | [ ] | [ ] |
| LOCKED | [ ] | [x] | [ ] |
| COLLAR | [ ] | [ ] | [x] |

TOTAL VOLUME PURGED: 1.56 GAL

(purge rate (milliliters per minute) x time duration (minutes) x 0.00026 gal/millilter)

### PURGE DATA

| TIME | DEPTH TO WATER (ft) | PURGE RATE (ml/min) | TEMP (deg C) | SPECIFIC CONDUCTANCE (mg/cm) | pH (units) | DISS. $O_2$ (mg/L) | TURBIDITY (ntu) | REDOX (mv) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|
| 0910 | 6.12 | 200 | 7.77 | 125 | 6.09 | 0.73 | N/A | 62 | |
| 0915 | 6.12 | 200 | 7.71 | 122 | 6.08 | 0.49 | N/A | 73.9 | |
| 0920 | 6.12 | 200 | 7.48 | 122 | 6.05 | 0.48 | N/A | 84.5 | |
| 0925 | 6.12 | 200 | 7.26 | 121 | 6.04 | 0.49 | N/A | 92.4 | |
| | | | | | | | | | sampled @ 0925 |

### EQUIPMENT DOCUMENTATION

| TYPE OF PUMP | TYPE OF TUBING | TYPE OF PUMP MATERIAL |
|---|---|---|
| GEO 2 | SILICON/ POLY | Peristaltic |

### ANALYTICAL PARAMETERS

| | METHOD NUMBER | PRESERVATION METHOD | VOLUME REQUIRED | SAMPLE COLLECTED | SAMPLE RESULTS |
|---|---|---|---|---|---|
| [x] TA | 8260B | HCL/4 DEG C | 3 x 40 ml | [x] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |

PURGE WATER DESCRIPTION: clear, no odor

PURGE WATER CONTAINERIZED: Pour back into well

NUMBER OF BUCKETS GENERATED:

**NOTES**

SIGNATURE: **DAJ**

## FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

| | | | |
|---|---|---|---|
| PROJECT | **RA-006** | JOB NUMBER | N/A |
| WELL ID | **MW-265M-20140408-01** | DATE | 8-Apr-14 |
| TIME | START 0820 END 0855 | | |


***Innovative Engineering Solutions, Inc.***
25 Spring Street
Walpole Massachusetts 02081


### WATER LEVEL/PUMP SETTINGS

MEASUREMENT POINT
- [x] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER _____

PROTECTIVE CASING STICKUP (FROM GROUND): FT

PROTECTIVE CASING/WELL DIFFERENCE: FT

INITIAL DEPTH TO WATER: 9.46 FT

WELL DEPTH: 48.40 FT

WELL DIAMETER: 2 IN

FINAL DEPTH TO WATER: 10.13 FT

SCREEN LENGTH: FT

PID AMBIENT AIR: NA PPM

DRAWDOWN VOLUME: 0.11 GAL
(initial - final x 0.163 {2-inch} or x 0.654 {4-inch})

TOTAL VOLUME PURGED: 1.82 GAL
(purge rate (milliliters per minute) x time duration (minutes) x 0.00026 gal/millilter)

| WELL INTEGRITY | YES | NO | N/A |
|---|---|---|---|
| CAP | ☑ | ☐ | ☐ |
| CASING | ☑ | ☐ | ☐ |
| LOCKED | ☐ | ☑ | ☐ |
| COLLAR | ☐ | ☐ | ☑ |

PID WELL MOUTH: NA PPM

### PURGE DATA

| TIME | DEPTH TO WATER (ft) | PURGE RATE (ml/min) | TEMP (deg C) | SPECIFIC CONDUCTANCE (mg/cm) | pH (units) | DISS. $O_2$ (mg/L) | TURBIDITY (ntu) | REDOX (mv) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|
| 0830 | 10.13 | 200 | 9.42 | 1151 | 6.42 | 0.93 | N/A | -35.2 | |
| 0835 | 10.13 | 200 | 9.48 | 1167 | 6.43 | 0.60 | N/A | -40.1 | |
| 0840 | 10.13 | 200 | 9.56 | 1173 | 6.43 | 0.58 | N/A | -42.3 | |
| 0845 | 10.13 | 200 | 9.60 | 1177 | 6.43 | 0.56 | N/A | -43.4 | |
| | | | | | | | | | sampled @ 0845 |

### EQUIPMENT DOCUMENTATION

| TYPE OF PUMP | TYPE OF TUBING | TYPE OF PUMP MATERIAL |
|---|---|---|
| GEO 2 | SILICON/ POLY | Peristaltic |

### ANALYTICAL PARAMETERS

| | METHOD NUMBER | PRESERVATION METHOD | VOLUME REQUIRED | SAMPLE COLLECTED | SAMPLE RESULTS |
|---|---|---|---|---|---|
| ☑ TA | 8260B | HCL/4 DEG C | 3 x 40 ml | ☑ | |
| ☑ TA | 8260SIM | HCL/4 DEG C | 2 x 40 ml | ☑ | |
| ☑ Spectrum | NH3 | H2SO4/4 DEG C | 1 X 250 ml | ☑ | |
| ☑ Spectrum | PO4 | H2SO4/4 DEG C | 1 X 250 ml | ☑ | |
| ☑ Spectrum | Metals | HNO3/4 DEG C | 1 X 250 ml | ☑ | |
| ☑ Spectrum | TOC | H3PO4/4 DEG C | 2 x 40 ml | ☑ | |
| ☑ Spectrum | Dissolved Gases | HCL/4 DEG C | 2 x 40 ml | ☑ | |
| ☑ Spectrum | Acids | 4 DEG C | 2 x 40 ml | ☑ | |
| ☑ Spectrum | pH, Anions, Alkalinity | 4 DEG C | 1 x 500 ml | ☑ | |
| ☐ | | | | ☐ | |
| ☐ | | | | ☐ | |

PURGE WATER DESCRIPTION: clear, no odor

PURGE WATER CONTAINERIZED: Pour back into well

NUMBER OF BUCKETS GENERATED:

**NOTES**

SIGNATURE: **DAJ**

## FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

| | | | |
|---|---|---|---|
| PROJECT | RA-006 | JOB NUMBER | N/A |
| WELL ID | MW-265D-20140408-01 | DATE | 8-Apr-14 |
| TIME | START 0750 END 0820 | | |


***Innovative Engineering Solutions, Inc.***
25 Spring Street
Walpole Massachusetts 02081


### WATER LEVEL/PUMP SETTINGS

MEASUREMENT POINT
- [x] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER _____

PROTECTIVE CASING STICKUP (FROM GROUND): FT

PROTECTIVE CASING/WELL DIFFERENCE: FT

| | | | | | |
|---|---|---|---|---|---|
| INITIAL DEPTH TO WATER | 11.84 FT | WELL DEPTH | 91.45 FT | WELL DIAMETER | 2 IN |
| FINAL DEPTH TO WATER | 13.82 FT | SCREEN LENGTH | FT | PID AMBIENT AIR | NA PPM |
| DRAWDOWN VOLUME | 0.33 GAL | | | PID WELL MOUTH | NA PPM |

(initial - final x 0.163 {2-inch} or x 0.654 {4-inch})

| WELL INTEGRITY | YES | NO | N/A |
|---|---|---|---|
| CAP | [x] | [ ] | [ ] |
| CASING | [x] | [ ] | [ ] |
| LOCKED | [ ] | [x] | [ ] |
| COLLAR | [ ] | [ ] | [x] |

TOTAL VOLUME PURGED: 1.56 GAL

(purge rate (milliliters per minute) x time duration (minutes) x 0.00026 gal/millilter)

### PURGE DATA

| TIME | DEPTH TO WATER (ft) | PURGE RATE (ml/min) | TEMP (deg C) | SPECIFIC CONDUCTANCE (mg/cm) | pH (units) | DISS. $O_2$ (mg/L) | TURBIDITY (ntu) | REDOX (mv) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|
| 0800 | 13.49 | 200 | 9.97 | 290 | 7.45 | 4.88 | N/A | -36.6 | |
| 0805 | 13.67 | 200 | 10.02 | 286 | 7.41 | 4.72 | N/A | -20.6 | |
| 0810 | 13.76 | 200 | 10.03 | 284 | 7.40 | 4.59 | N/A | -5.4 | |
| 0815 | 13.82 | 200 | 10.03 | 283 | 7.39 | 4.51 | N/A | 3.1 | |
| | | | | | | | | | sampled @ 0815 |

### EQUIPMENT DOCUMENTATION

| TYPE OF PUMP | TYPE OF TUBING | TYPE OF PUMP MATERIAL |
|---|---|---|
| GEO 2 | SILICON/ POLY | Peristaltic |

### ANALYTICAL PARAMETERS

| | METHOD NUMBER | PRESERVATION METHOD | VOLUME REQUIRED | SAMPLE COLLECTED | SAMPLE RESULTS |
|---|---|---|---|---|---|
| [x] TA | 8260B | HCL/4 DEG C | 3 x 40 ml | [x] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |

PURGE WATER DESCRIPTION: clear, no odor

PURGE WATER CONTAINERIZED: Pour back into well

NUMBER OF BUCKETS GENERATED:

**NOTES**

SIGNATURE: **DAJ**

## FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

| | | | |
|---|---|---|---|
| PROJECT | RA-006 | JOB NUMBER | N/A |
| WELL ID | MW-266Ma-20140405-01 | DATE | 5-Apr-14 |
| TIME | START 1420 END 1455 | | |


***Innovative Engineering Solutions, Inc.***
25 Spring Street
Walpole Massachusetts 02081


### WATER LEVEL/PUMP SETTINGS

MEASUREMENT POINT
- [x] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER _____

PROTECTIVE CASING STICKUP (FROM GROUND): FT

PROTECTIVE CASING/WELL DIFFERENCE: FT

| | | | | | |
|---|---|---|---|---|---|
| INITIAL DEPTH TO WATER | 8.93 FT | WELL DEPTH | 55.10 FT | WELL DIAMETER | 2 IN |
| FINAL DEPTH TO WATER | 10.39 FT | SCREEN LENGTH | FT | PID AMBIENT AIR | NA PPM |
| DRAWDOWN VOLUME | 0.24 GAL | | | PID WELL MOUTH | NA PPM |
| TOTAL VOLUME PURGED | 1.82 GAL | | | | |

(initial - final x 0.163 {2-inch} or x 0.654 {4-inch})

(purge rate (milliliters per minute) x time duration (minutes) x 0.00026 gal/millilter)

| WELL INTEGRITY | YES | NO | N/A |
|---|---|---|---|
| CAP | [x] | [ ] | [ ] |
| CASING | [x] | [ ] | [ ] |
| LOCKED | [ ] | [x] | [ ] |
| COLLAR | [ ] | [ ] | [x] |

### PURGE DATA

| TIME | DEPTH TO WATER (ft) | PURGE RATE (ml/min) | TEMP (deg C) | SPECIFIC CONDUCTANCE (mg/cm) | pH (units) | DISS. $O_2$ (mg/L) | TURBIDITY (ntu) | REDOX (mv) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|
| 1430 | 10.48 | 200 | 9.75 | 97 | 6.46 | 8.17 | N/A | 176.1 | |
| 1435 | 10.46 | 200 | 9.72 | 89 | 6.48 | 7.23 | N/A | 147 | |
| 1440 | 10.41 | 200 | 9.63 | 88 | 6.50 | 6.34 | N/A | 112.7 | |
| 1445 | 10.39 | 200 | 9.60 | 89 | 6.51 | 6.26 | N/A | 98.1 | |
| 1450 | 10.39 | 200 | 9.59 | 89 | 6.52 | 5.84 | N/A | 94.3 | |
| | | | | | | | | | sampled @ 1450 |

### EQUIPMENT DOCUMENTATION

| TYPE OF PUMP | TYPE OF TUBING | TYPE OF PUMP MATERIAL |
|---|---|---|
| GEO 2 | SILICON/ POLY | Peristaltic |

### ANALYTICAL PARAMETERS

| | METHOD NUMBER | PRESERVATION METHOD | VOLUME REQUIRED | SAMPLE COLLECTED | SAMPLE RESULTS |
|---|---|---|---|---|---|
| [x] TA | 8260B | HCL/4 DEG C | 3 x 40 ml | [x] | |
| [x] TA | 8260SIM | HCL/4 DEG C | 2 x 40 ml | [x] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |

PURGE WATER DESCRIPTION: clear, no odor

PURGE WATER CONTAINERIZED: Pour back into well

NUMBER OF BUCKETS GENERATED:

**NOTES**

SIGNATURE: **DAJ**

## FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

| | | | |
|---|---|---|---|
| PROJECT | RA-006 | JOB NUMBER | N/A |
| WELL ID | MW-266Mb-20140405-01 | DATE | 5-Apr-14 |
| TIME | START 1455 END 1525 | | |


***Innovative Engineering Solutions, Inc.***
25 Spring Street
Walpole Massachusetts 02081


### WATER LEVEL/PUMP SETTINGS

MEASUREMENT POINT
- [x] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER _____

PROTECTIVE CASING STICKUP (FROM GROUND): FT

PROTECTIVE CASING/WELL DIFFERENCE: FT

| | | | | | |
|---|---|---|---|---|---|
| INITIAL DEPTH TO WATER | 8.19 FT | WELL DEPTH | 70.10 FT | WELL DIAMETER | 2 IN |
| FINAL DEPTH TO WATER | 8.41 FT | SCREEN LENGTH | FT | PID AMBIENT AIR | NA PPM |
| DRAWDOWN VOLUME | 0.04 GAL | | | PID WELL MOUTH | NA PPM |
| TOTAL VOLUME PURGED | 1.56 GAL | | | | |

(initial - final x 0.163 {2-inch} or x 0.654 {4-inch})

(purge rate (milliliters per minute) x time duration (minutes) x 0.00026 gal/millilter)

| WELL INTEGRITY | YES | NO | N/A |
|---|---|---|---|
| CAP | [x] | [ ] | [ ] |
| CASING | [x] | [ ] | [ ] |
| LOCKED | [ ] | [x] | [ ] |
| COLLAR | [ ] | [ ] | [x] |

### PURGE DATA

| TIME | DEPTH TO WATER (ft) | PURGE RATE (ml/min) | TEMP (deg C) | SPECIFIC CONDUCTANCE (mg/cm) | pH (units) | DISS. $O_2$ (mg/L) | TURBIDITY (ntu) | REDOX (mv) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|
| 1505 | 8.41 | 200 | 9.96 | 150 | 6.74 | 1.95 | N/A | 167 | DupX1-20140405-01 |
| 1510 | 8.41 | 200 | 9.81 | 156 | 6.70 | 1.28 | N/A | 71.3 | |
| 1515 | 8.41 | 200 | 9.76 | 159 | 6.70 | 1.25 | N/A | 62.4 | |
| 1520 | 8.41 | 200 | 9.69 | 165 | 6.69 | 1.18 | N/A | 53.9 | |
| | | | | | | | | | sampled @ 1520 |

### EQUIPMENT DOCUMENTATION

| TYPE OF PUMP | TYPE OF TUBING | TYPE OF PUMP MATERIAL |
|---|---|---|
| GEO 2 | SILICON/ POLY | Peristaltic |

### ANALYTICAL PARAMETERS

| | METHOD NUMBER | PRESERVATION METHOD | VOLUME REQUIRED | SAMPLE COLLECTED | SAMPLE RESULTS |
|---|---|---|---|---|---|
| [x] TA | 8260B | HCL/4 DEG C | 3 x 40 ml | [x] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |

PURGE WATER DESCRIPTION: clear, no odor

PURGE WATER CONTAINERIZED: Pour back into well

NUMBER OF BUCKETS GENERATED:

**NOTES**

DupX1-20140405-01

SIGNATURE: **DAJ**

## FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

| | | | |
|---|---|---|---|
| PROJECT | **RA-006** | JOB NUMBER | N/A |
| WELL ID | **MW-267S-20140405-01** | DATE | 5-Apr-14 |
| TIME | START 1255 END 1325 | | |


***Innovative Engineering Solutions, Inc.***
25 Spring Street
Walpole Massachusetts 02081


### WATER LEVEL/PUMP SETTINGS

MEASUREMENT POINT
- [x] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER _____

PROTECTIVE CASING STICKUP (FROM GROUND): FT

PROTECTIVE CASING/WELL DIFFERENCE: FT

INITIAL DEPTH TO WATER: 9.71 FT

WELL DEPTH: 76.40 FT

WELL DIAMETER: 2 IN

FINAL DEPTH TO WATER: 12.98 FT

SCREEN LENGTH: FT

PID AMBIENT AIR: NA PPM

DRAWDOWN VOLUME: 0.53 GAL
(initial - final x 0.163 {2-inch} or x 0.654 {4-inch})

PID WELL MOUTH: NA PPM

TOTAL VOLUME PURGED: 1.56 GAL
(purge rate (milliliters per minute) x time duration (minutes) x 0.00026 gal/millilter)

| WELL INTEGRITY | YES | NO | N/A |
|---|---|---|---|
| CAP | [x] | [ ] | [ ] |
| CASING | [x] | [ ] | [ ] |
| LOCKED | [ ] | [x] | [ ] |
| COLLAR | [ ] | [ ] | [x] |

### PURGE DATA

| TIME | DEPTH TO WATER (ft) | PURGE RATE (ml/min) | TEMP (deg C) | SPECIFIC CONDUCTANCE (mg/cm) | pH (units) | DISS. $O_2$ (mg/L) | TURBIDITY (ntu) | REDOX (mv) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|
| 1305 | 12.68 | 200 | 10.32 | 549 | 6.07 | 0.28 | N/A | -110.4 | |
| 1310 | 12.98 | 200 | 10.35 | 549 | 6.06 | 0.20 | N/A | -115.5 | |
| 1315 | 12.98 | 200 | 10.38 | 551 | 6.06 | 0.19 | N/A | -118.8 | |
| 1320 | 12.98 | 200 | 10.40 | 551 | 6.05 | 0.19 | N/A | -121 | |
| | | | | | | | | | sampled @ 1320 |

### EQUIPMENT DOCUMENTATION

| TYPE OF PUMP | TYPE OF TUBING | TYPE OF PUMP MATERIAL |
|---|---|---|
| GEO 2 | SILICON/ POLY | Peristaltic |

### ANALYTICAL PARAMETERS

| | METHOD NUMBER | PRESERVATION METHOD | VOLUME REQUIRED | SAMPLE COLLECTED | SAMPLE RESULTS |
|---|---|---|---|---|---|
| [x] TA | 8260B | HCL/4 DEG C | 3 x 40 ml | [x] | |
| [x] TA | 8260SIM | HCL/4 DEG C | 2 x 40 ml | [x] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |

PURGE WATER DESCRIPTION: clear, slight bio odor

PURGE WATER CONTAINERIZED: Pour back into well

NUMBER OF BUCKETS GENERATED:

**NOTES**

SIGNATURE: **DAJ**

## FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

| | | | |
|---|---|---|---|
| PROJECT | RA-006 | JOB NUMBER | N/A |
| WELL ID | MW-267M-20140405-01 | DATE | 5-Apr-14 |
| TIME | START 1225 END 1255 | | |


***Innovative Engineering Solutions, Inc.***
25 Spring Street
Walpole Massachusetts 02081


### WATER LEVEL/PUMP SETTINGS

MEASUREMENT POINT
- [x] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER _____

PROTECTIVE CASING STICKUP (FROM GROUND): FT

PROTECTIVE CASING/WELL DIFFERENCE: FT

| | | | | | |
|---|---|---|---|---|---|
| INITIAL DEPTH TO WATER | 8.46 FT | WELL DEPTH | 98.20 FT | WELL DIAMETER | 2 IN |
| FINAL DEPTH TO WATER | 10.46 FT | SCREEN LENGTH | FT | PID AMBIENT AIR | NA PPM |
| DRAWDOWN VOLUME | 0.33 GAL | | | PID WELL MOUTH | NA PPM |
| TOTAL VOLUME PURGED | 1.56 GAL | | | | |

(initial - final x 0.163 {2-inch} or x 0.654 {4-inch})

(purge rate (milliliters per minute) x time duration (minutes) x 0.00026 gal/millilter)

| WELL INTEGRITY | YES | NO | N/A |
|---|---|---|---|
| CAP | [x] | [ ] | [ ] |
| CASING | [x] | [ ] | [ ] |
| LOCKED | [ ] | [x] | [ ] |
| COLLAR | [ ] | [ ] | [x] |

### PURGE DATA

| TIME | DEPTH TO WATER (ft) | PURGE RATE (ml/min) | TEMP (deg C) | SPECIFIC CONDUCTANCE (mg/cm) | pH (units) | DISS. $O_2$ (mg/L) | TURBIDITY (ntu) | REDOX (mv) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|
| 1235 | 10.56 | 200 | 10.25 | 813 | 6.03 | 0.32 | N/A | -113.1 | |
| 1240 | 10.46 | 200 | 9.93 | 827 | 6.03 | 0.30 | N/A | -111.3 | |
| 1245 | 10.46 | 200 | 9.97 | 841 | 6.01 | 0.32 | N/A | -109.3 | |
| 1250 | 10.46 | 200 | 10.26 | 876 | 5.99 | 0.34 | N/A | -105.6 | |
| | | | | | | | | | sampled @ 1250 |

### EQUIPMENT DOCUMENTATION

| TYPE OF PUMP | TYPE OF TUBING | TYPE OF PUMP MATERIAL |
|---|---|---|
| GEO 2 | SILICON/ POLY | Peristaltic |

### ANALYTICAL PARAMETERS

| | METHOD NUMBER | PRESERVATION METHOD | VOLUME REQUIRED | SAMPLE COLLECTED | SAMPLE RESULTS |
|---|---|---|---|---|---|
| [x] TA | 8260B | HCL/4 DEG C | 3 x 40 ml | [x] | |
| [x] TA | 8260SIM | HCL/4 DEG C | 2 x 40 ml | [x] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |

PURGE WATER DESCRIPTION: cloudy, slight bio odor

PURGE WATER CONTAINERIZED: Pour back into well

NUMBER OF BUCKETS GENERATED:

**NOTES**

SIGNATURE: **DAJ**

## FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

| | | | |
|---|---|---|---|
| PROJECT | **RA-006** | JOB NUMBER | N/A |
| WELL ID | **MW-268S-20140407-01** | DATE | 7-Apr-14 |
| TIME | START 0820 END 0900 | | |


***Innovative Engineering Solutions, Inc.***
25 Spring Street
Walpole Massachusetts 02081


### WATER LEVEL/PUMP SETTINGS

MEASUREMENT POINT
- [x] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER _____

PROTECTIVE CASING STICKUP (FROM GROUND): FT

PROTECTIVE CASING/WELL DIFFERENCE: FT

| | | | | | |
|---|---|---|---|---|---|
| INITIAL DEPTH TO WATER | 7.73 FT | WELL DEPTH | 77.00 FT | WELL DIAMETER | 2 IN |
| FINAL DEPTH TO WATER | 12.7 FT | SCREEN LENGTH | FT | PID AMBIENT AIR | NA PPM |
| DRAWDOWN VOLUME | 0.81 GAL | | | PID WELL MOUTH | NA PPM |
| TOTAL VOLUME PURGED | 2.08 GAL | | | | |

(initial - final x 0.163 {2-inch} or x 0.654 {4-inch})

(purge rate (milliliters per minute) x time duration (minutes) x 0.00026 gal/millilter)

| WELL INTEGRITY | YES | NO | N/A |
|---|---|---|---|
| CAP | [x] | [ ] | [ ] |
| CASING | [x] | [ ] | [ ] |
| LOCKED | [ ] | [x] | [ ] |
| COLLAR | [ ] | [ ] | [x] |

### PURGE DATA

| TIME | DEPTH TO WATER (ft) | PURGE RATE (ml/min) | TEMP (deg C) | SPECIFIC CONDUCTANCE (mg/cm) | pH (units) | DISS. $O_2$ (mg/L) | TURBIDITY (ntu) | REDOX (mv) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|
| 0830 | 10.72 | 200 | 8.70 | 134 | 7.06 | 1.95 | N/A | 209.8 | |
| 0835 | 11.32 | 200 | 8.74 | 132 | 7.04 | 1.40 | N/A | 201.8 | |
| 0840 | 12.31 | 200 | 8.84 | 130 | 7.03 | 1.36 | N/A | 199.6 | |
| 0845 | 12.70 | 200 | 8.89 | 129 | 7.02 | 1.36 | N/A | 200.8 | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | sampled @ 0845 |

### EQUIPMENT DOCUMENTATION

| TYPE OF PUMP | TYPE OF TUBING | TYPE OF PUMP MATERIAL |
|---|---|---|
| GEO 2 | SILICON/ POLY | Peristaltic |

### ANALYTICAL PARAMETERS

| | METHOD NUMBER | PRESERVATION METHOD | VOLUME REQUIRED | SAMPLE COLLECTED | SAMPLE RESULTS |
|---|---|---|---|---|---|
| [x] TA | 8260B | HCL/4 DEG C | 3 x 40 ml | [x] | |
| [x] TA | 8260SIM | HCL/4 DEG C | 2 x 40 ml | [x] | |
| [x] Spectrum | NH3 | H2SO4/4 DEG C | 1 X 250 ml | [x] | |
| [x] Spectrum | PO4 | H2SO4/4 DEG C | 1 X 250 ml | [x] | |
| [x] Spectrum | Metals | HNO3/4 DEG C | 1 X 250 ml | [x] | |
| [x] Spectrum | TOC | H3PO4/4 DEG C | 2 x 40 ml | [x] | |
| [x] Spectrum | Dissolved Gases | HCL/4 DEG C | 2 x 40 ml | [x] | |
| [x] Spectrum | Acids | 4 DEG C | 2 x 40 ml | [x] | |
| [x] Spectrum | pH, Anions, Alkalinity | 4 DEG C | 1 x 500 ml | [x] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |

PURGE WATER DESCRIPTION: clear, no odor

PURGE WATER CONTAINERIZED: Pour back into well

NUMBER OF BUCKETS GENERATED:

**NOTES**

SIGNATURE: **DAJ**

## FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

| | | | |
|---|---|---|---|
| PROJECT | RA-006 | JOB NUMBER | N/A |
| WELL ID | MW-268M-20140407-01 | DATE | 7-Apr-14 |
| TIME | START 0910 END 0940 | | |


***Innovative Engineering Solutions, Inc.***
25 Spring Street
Walpole Massachusetts 02081


### WATER LEVEL/PUMP SETTI

- [x] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER _____

PROTECTIVE CASING STICKUP (FROM GROUND): FT

PROTECTIVE CASING/WELL DIFFERENCE: FT

| | | | | | |
|---|---|---|---|---|---|
| INITIAL DEPTH TO WATER | 6.86 FT | WELL DEPTH | 93.80 FT | WELL DIAMETER | 2 IN |
| FINAL DEPTH TO WATER | 7.53 FT | SCREEN LENGTH | FT | PID AMBIENT AIR | NA PPM |
| DRAWDOWN VOLUME | 0.11 GAL | | | PID WELL MOUTH | NA PPM |
| TOTAL VOLUME PURGED | 2.08 GAL | | | | |

(initial - final x 0.163 {2-inch} or x 0.654 {4-inch})

(purge rate (milliliters per minute) x time duration (minutes) x 0.00026 gal/millilter)

| WELL INTEGRITY | YES | NO | N/A |
|---|---|---|---|
| CAP | ☑ | ☐ | ☐ |
| CASING | ☑ | ☐ | ☐ |
| LOCKED | ☐ | ☑ | ☐ |
| COLLAR | ☐ | ☐ | ☑ |

### PURGE DATA

| TIME | DEPTH TO WATER (ft) | PURGE RATE (ml/min) | TEMP (deg C) | SPECIFIC CONDUCTANCE (mg/cm) | pH (units) | DISS. $O_2$ (mg/L) | TURBIDITY (ntu) | REDOX (mv) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|
| 0910 | 7.53 | 200 | 9.20 | 225 | 7.22 | 1.95 | N/A | -18.4 | |
| 0915 | 7.53 | 200 | 9.20 | 225 | 7.23 | 0.80 | N/A | 58.9 | |
| 0920 | 7.53 | 200 | 9.14 | 225 | 7.24 | 0.78 | N/A | -58.4 | |
| 0925 | 7.53 | 200 | 9.21 | 225 | 7.24 | 0.74 | N/A | -60.9 | |
| | | | | | | | | | sampled @ 0925 |

### EQUIPMENT DOCUMENTATION

| TYPE OF PUMP | TYPE OF TUBING | TYPE OF PUMP MATERIAL |
|---|---|---|
| GEO 2 | SILICON/ POLY | Peristaltic |

### ANALYTICAL PARAMETERS

| | METHOD NUMBER | PRESERVATION METHOD | VOLUME REQUIRED | SAMPLE COLLECTED | SAMPLE RESULTS |
|---|---|---|---|---|---|
| ☑ TA | 8260B | HCL/4 DEG C | 3 x 40 ml | ☑ | |
| ☑ TA | 8260SIM | HCL/4 DEG C | 2 x 40 ml | ☑ | |
| ☑ Spectrum | NH3 | H2SO4/4 DEG C | 1 X 250 ml | ☑ | |
| ☑ Spectrum | PO4 | H2SO4/4 DEG C | 1 X 250 ml | ☑ | |
| ☑ Spectrum | Metals | HNO3/4 DEG C | 1 X 250 ml | ☑ | |
| ☑ Spectrum | TOC | H3PO4/4 DEG C | 2 x 40 ml | ☑ | |
| ☑ Spectrum | Dissolved Gases | HCL/4 DEG C | 2 x 40 ml | ☑ | |
| ☑ Spectrum | Acids | 4 DEG C | 2 x 40 ml | ☑ | |
| ☑ Spectrum | pH, Anions, Alkalinity | 4 DEG C | 1 x 500 ml | ☑ | |
| ☐ | | | | ☐ | |
| ☐ | | | | ☐ | |

PURGE WATER DESCRIPTION: clear, no odor

PURGE WATER CONTAINERIZED: Pour back into well

NUMBER OF BUCKETS GENERATED:

**NOTES**

SIGNATURE: **DAJ**

## FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

| | | | |
|---|---|---|---|
| PROJECT | RA-006 | JOB NUMBER | N/A |
| WELL ID | MW-268D-20140405-01 | DATE | 5-Apr-14 |
| TIME | START 1155 END 1225 | | |


***Innovative Engineering Solutions, Inc.***
25 Spring Street
Walpole Massachusetts 02081


### WATER LEVEL/PUMP SETTINGS

MEASUREMENT POINT
- [x] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER _____

PROTECTIVE CASING STICKUP (FROM GROUND): FT

PROTECTIVE CASING/WELL DIFFERENCE: FT

| | | | | | |
|---|---|---|---|---|---|
| INITIAL DEPTH TO WATER | 7.13 FT | WELL DEPTH | 130.15 FT | WELL DIAMETER | 2 IN |
| FINAL DEPTH TO WATER | 7.25 FT | SCREEN LENGTH | FT | PID AMBIENT AIR | NA PPM |
| DRAWDOWN VOLUME | 0.02 GAL | | | PID WELL MOUTH | NA PPM |

(initial - final x 0.163 {2-inch} or x 0.654 {4-inch})

| WELL INTEGRITY | YES | NO | N/A |
|---|---|---|---|
| CAP | [x] | [ ] | [ ] |
| CASING | [x] | [ ] | [ ] |
| LOCKED | [ ] | [x] | [ ] |
| COLLAR | [ ] | [ ] | [x] |

TOTAL VOLUME PURGED: 1.56 GAL

(purge rate (milliliters per minute) x time duration (minutes) x 0.00026 gal/millilter)

### PURGE DATA

| TIME | DEPTH TO WATER (ft) | PURGE RATE (ml/min) | TEMP (deg C) | SPECIFIC CONDUCTANCE (mg/cm) | pH (units) | DISS. $O_2$ (mg/L) | TURBIDITY (ntu) | REDOX (mv) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|
| 1205 | 7.25 | 200 | 9.31 | 235 | 8.39 | 0.64 | N/A | -194.8 | |
| 1215 | 7.25 | 200 | 9.37 | 239 | 8.35 | 0.45 | N/A | -209.3 | |
| 1215 | 7.25 | 200 | 9.28 | 239 | 8.35 | 0.43 | N/A | -219.6 | |
| 1220 | 7.25 | 200 | 9.12 | 238 | 8.35 | 0.44 | N/A | -211.3 | |
| | | | | | | | | | sampled @ 1220 |

### EQUIPMENT DOCUMENTATION

| TYPE OF PUMP | TYPE OF TUBING | TYPE OF PUMP MATERIAL |
|---|---|---|
| GEO 2 | SILICON/ POLY | Peristaltic |

### ANALYTICAL PARAMETERS

| | METHOD NUMBER | PRESERVATION METHOD | VOLUME REQUIRED | SAMPLE COLLECTED | SAMPLE RESULTS |
|---|---|---|---|---|---|
| [x] TA | 8260B | HCL/4 DEG C | 3 x 40 ml | [x] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |

PURGE WATER DESCRIPTION: clear, slight bio odor

PURGE WATER CONTAINERIZED: Pour back into well

NUMBER OF BUCKETS GENERATED:

**NOTES**

SIGNATURE: **DAJ**

## FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

| | | | |
|---|---|---|---|
| PROJECT | RA-006 | JOB NUMBER | N/A |
| WELL ID | MW-269Ma-20140405-01 | DATE | 5-Apr-14 |
| TIME | START 1335 END 1415 | | |


***Innovative Engineering Solutions, Inc.***
25 Spring Street
Walpole Massachusetts 02081


### WATER LEVEL/PUMP SETTINGS

MEASUREMENT POINT
- [x] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER _____

PROTECTIVE CASING STICKUP (FROM GROUND): FT

PROTECTIVE CASING/WELL DIFFERENCE: FT

| | | | | | |
|---|---|---|---|---|---|
| INITIAL DEPTH TO WATER | 5.91 FT | WELL DEPTH | 33.68 FT | WELL DIAMETER | 2 IN |
| FINAL DEPTH TO WATER | 7.87 FT | SCREEN LENGTH | FT | PID AMBIENT AIR | NA PPM |
| DRAWDOWN VOLUME | 0.32 GAL | | | PID WELL MOUTH | NA PPM |

(initial - final x 0.163 {2-inch} or x 0.654 {4-inch})

| WELL INTEGRITY | YES | NO | N/A |
|---|---|---|---|
| CAP | [x] | [ ] | [ ] |
| CASING | [x] | [ ] | [ ] |
| LOCKED | [ ] | [x] | [ ] |
| COLLAR | [ ] | [ ] | [x] |

TOTAL VOLUME PURGED: 2.08 GAL

(purge rate (milliliters per minute) x time duration (minutes) x 0.00026 gal/millilter)

### PURGE DATA

| TIME | DEPTH TO WATER (ft) | PURGE RATE (ml/min) | TEMP (deg C) | SPECIFIC CONDUCTANCE (mg/cm) | pH (units) | DISS. $O_2$ (mg/L) | TURBIDITY (ntu) | REDOX (mv) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|
| 1345 | 8.06 | 200 | 9.76 | 278 | 7.06 | 1.60 | N/A | 20.7 | |
| 1355 | 8.13 | 200 | 9.66 | 279 | 7.14 | 0.37 | N/A | -54.2 | |
| 1400 | 8.02 | 200 | 9.46 | 278 | 7.17 | 0.28 | N/A | -69.6 | |
| 1405 | 7.90 | 200 | 9.51 | 278 | 7.17 | 0.26 | N/A | -77.6 | |
| 1415 | 7.87 | 200 | 9.53 | 278 | 7.17 | 0.25 | N/A | -82 | |
| | | | | | | | | | sampled @ 1410 |

### EQUIPMENT DOCUMENTATION

| TYPE OF PUMP | TYPE OF TUBING | TYPE OF PUMP MATERIAL |
|---|---|---|
| GEO 2 | SILICON/ POLY | Peristaltic |

### ANALYTICAL PARAMETERS

| | METHOD NUMBER | PRESERVATION METHOD | VOLUME REQUIRED | SAMPLE COLLECTED | SAMPLE RESULTS |
|---|---|---|---|---|---|
| [x] TA | 8260B | HCL/4 DEG C | 3 x 40 ml | [x] | |
| [x] TA | 8260SIM | HCL/4 DEG C | 2 x 40 ml | [x] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |

PURGE WATER DESCRIPTION: cloudy, no odor

PURGE WATER CONTAINERIZED: Pour back into well

NUMBER OF BUCKETS GENERATED:

**NOTES**

SIGNATURE: **DAJ**

## FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

| | | | |
|---|---|---|---|
| PROJECT | **RA-006** | JOB NUMBER | N/A |
| WELL ID | **MW-551-20140407-01** | DATE | 7-Apr-14 |
| TIME | START 1140 END 1210 | | |


***Innovative Engineering Solutions, Inc.***
25 Spring Street
Walpole Massachusetts 02081


### WATER LEVEL/PUMP SETTINGS

MEASUREMENT POINT
- [x] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER

PROTECTIVE CASING STICKUP (FROM GROUND): FT

PROTECTIVE CASING/WELL DIFFERENCE: FT

INITIAL DEPTH TO WATER: 6.71 FT

WELL DEPTH: 26.30 FT

WELL DIAMETER: 2 IN

FINAL DEPTH TO WATER: 9.88 FT

SCREEN LENGTH: FT

PID AMBIENT AIR: NA PPM

DRAWDOWN VOLUME: 0.52 GAL
(initial - final x 0.163 {2-inch} or x 0.654 {4-inch})

| WELL INTEGRITY | YES | NO | N/A |
|---|---|---|---|
| CAP | [x] | [ ] | [ ] |
| CASING | [x] | [ ] | [ ] |
| LOCKED | [ ] | [x] | [ ] |
| COLLAR | [ ] | [ ] | [x] |

PID WELL MOUTH: NA PPM

TOTAL VOLUME PURGED: 1.56 GAL
(purge rate (milliliters per minute) x time duration (minutes) x 0.00026 gal/millilter)

### PURGE DATA

| TIME | DEPTH TO WATER (ft) | PURGE RATE (ml/min) | TEMP (deg C) | SPECIFIC CONDUCTANCE (mg/cm) | pH (units) | DISS. $O_2$ (mg/L) | TURBIDITY (ntu) | REDOX (mv) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|
| 1150 | 8.71 | 200 | 9.69 | 345 | 6.73 | 0.70 | N/A | -48.8 | |
| 1155 | 9.43 | 200 | 9.51 | 347 | 6.74 | 0.32 | N/A | -60.8 | |
| 1200 | 9.78 | 200 | 9.53 | 349 | 6.75 | 0.33 | N/A | -66.5 | |
| 1205 | 9.88 | 200 | 9.52 | 350 | 6.76 | 0.33 | N/A | -69.3 | |
| | | | | | | | | | sampled @ 1205 |

### EQUIPMENT DOCUMENTATION

| TYPE OF PUMP | TYPE OF TUBING | TYPE OF PUMP MATERIAL |
|---|---|---|
| GEO 2 | SILICON/ POLY | Peristaltic |

### ANALYTICAL PARAMETERS

| | METHOD NUMBER | PRESERVATION METHOD | VOLUME REQUIRED | SAMPLE COLLECTED | SAMPLE RESULTS |
|---|---|---|---|---|---|
| [x] TA | 8260B | HCL/4 DEG C | 3 x 40 ml | [x] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |

PURGE WATER DESCRIPTION: clear, no odor

PURGE WATER CONTAINERIZED: Pour back into well

NUMBER OF BUCKETS GENERATED:

**NOTES**

SIGNATURE: **DAJ**

## FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

| | | | |
|---|---|---|---|
| PROJECT | **RA-006** | JOB NUMBER | N/A |
| WELL ID | **MW-552-20140407-01** | DATE | 7-Apr-14 |
| TIME | START 1500 END 1535 | | |


***Innovative Engineering Solutions, Inc.***
25 Spring Street
Walpole Massachusetts 02081


### WATER LEVEL/PUMP SETTI

- [x] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER _____

PROTECTIVE CASING STICKUP (FROM GROUND): FT

PROTECTIVE CASING/WELL DIFFERENCE: FT

| | | | | | |
|---|---|---|---|---|---|
| INITIAL DEPTH TO WATER | 8.15 FT | WELL DEPTH | 27.10 FT | WELL DIAMETER | 2 IN |
| FINAL DEPTH TO WATER | 9 FT | SCREEN LENGTH | FT | PID AMBIENT AIR | NA PPM |
| DRAWDOWN VOLUME | 0.14 GAL | | | PID WELL MOUTH | NA PPM |

(initial - final x 0.163 {2-inch} or x 0.654 {4-inch})

| WELL INTEGRITY | YES | NO | N/A |
|---|---|---|---|
| CAP | ☑ | ☐ | ☐ |
| CASING | ☑ | ☐ | ☐ |
| LOCKED | ☐ | ☑ | ☐ |
| COLLAR | ☐ | ☐ | ☑ |

TOTAL VOLUME PURGED: 1.82 GAL

(purge rate (milliliters per minute) x time duration (minutes) x 0.00026 gal/millilter)

### PURGE DATA

| TIME | DEPTH TO WATER (ft) | PURGE RATE (ml/min) | TEMP (deg C) | SPECIFIC CONDUCTANCE (mg/cm) | pH (units) | DISS. $O_2$ (mg/L) | TURBIDITY (ntu) | REDOX (mv) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|
| 1510 | 8.98 | 200 | 9.89 | 672 | 7.24 | 0.37 | N/A | -100.9 | |
| 1515 | 9.00 | 200 | 9.88 | 689 | 7.21 | 0.26 | N/A | -109.7 | |
| 1520 | 9.00 | 200 | 9.95 | 705 | 7.20 | 0.27 | N/A | -117.1 | |
| 1525 | 9.00 | 200 | 10.08 | 724 | 7.19 | 0.26 | N/A | -123 | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | sampled @ 1525 |

### EQUIPMENT DOCUMENTATION

| TYPE OF PUMP | TYPE OF TUBING | TYPE OF PUMP MATERIAL |
|---|---|---|
| GEO 2 | SILICON/ POLY | Peristaltic |

### ANALYTICAL PARAMETERS

| | METHOD NUMBER | PRESERVATION METHOD | VOLUME REQUIRED | SAMPLE COLLECTED | SAMPLE RESULTS |
|---|---|---|---|---|---|
| ☑ TA | 8260B | HCL/4 DEG C | 3 x 40 ml | ☑ | |
| ☑ TA | 8260SIM | HCL/4 DEG C | 2 x 40 ml | ☑ | |
| ☑ Spectrum | NH3 | H2SO4/4 DEG C | 1 X 250 ml | ☑ | |
| ☑ Spectrum | PO4 | H2SO4/4 DEG C | 1 X 250 ml | ☑ | |
| ☑ Spectrum | Metals | HNO3/4 DEG C | 1 X 250 ml | ☑ | |
| ☑ Spectrum | TOC | H3PO4/4 DEG C | 2 x 40 ml | ☑ | |
| ☑ Spectrum | Dissolved Gases | HCL/4 DEG C | 2 x 40 ml | ☑ | |
| ☑ Spectrum | Acids | 4 DEG C | 2 x 40 ml | ☑ | |
| ☑ Spectrum | pH, Anions, Alkalinity | 4 DEG C | 1 x 500 ml | ☑ | |
| ☐ | | | | ☐ | |
| ☐ | | | | ☐ | |

PURGE WATER DESCRIPTION: clear, no odor

PURGE WATER CONTAINERIZED: Pour back into well

NUMBER OF BUCKETS GENERATED:

**NOTES**

SIGNATURE: **DAJ**

## FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

| | | | |
|---|---|---|---|
| PROJECT | RA-006 | JOB NUMBER | N/A |
| WELL ID | MW-553-20140407-01 | DATE | 7-Apr-14 |
| TIME | START 1405 END 1450 | | |


***Innovative Engineering Solutions, Inc.***
25 Spring Street
Walpole Massachusetts 02081


### WATER LEVEL/PUMP SETTI

- [x] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER _____

PROTECTIVE CASING STICKUP (FROM GROUND): FT

PROTECTIVE CASING/WELL DIFFERENCE: FT

| | | | | | |
|---|---|---|---|---|---|
| INITIAL DEPTH TO WATER | 8.57 FT | WELL DEPTH | 21.50 FT | WELL DIAMETER | 2 IN |
| FINAL DEPTH TO WATER | 15.53 FT | SCREEN LENGTH | FT | PID AMBIENT AIR | NA PPM |
| DRAWDOWN VOLUME | 1.13 GAL | | | PID WELL MOUTH | NA PPM |
| TOTAL VOLUME PURGED | 2.34 GAL | | | | |

(initial - final x 0.163 {2-inch} or x 0.654 {4-inch})

(purge rate (milliliters per minute) x time duration (minutes) x 0.00026 gal/millilter)

| WELL INTEGRITY | YES | NO | N/A |
|---|---|---|---|
| CAP | [x] | [ ] | [ ] |
| CASING | [x] | [ ] | [ ] |
| LOCKED | [ ] | [x] | [ ] |
| COLLAR | [ ] | [ ] | [x] |

### PURGE DATA

| TIME | DEPTH TO WATER (ft) | PURGE RATE (ml/min) | TEMP (deg C) | SPECIFIC CONDUCTANCE (mg/cm) | pH (units) | DISS. $O_2$ (mg/L) | TURBIDITY (ntu) | REDOX (mv) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|
| 1415 | 12.01 | 200 | 9.58 | 676 | 7.36 | 0.39 | N/A | -155 | |
| 1420 | 13.66 | 200 | 9.45 | 669 | 7.37 | 0.32 | N/A | -155 | |
| 1425 | 14.16 | 200 | 9.49 | 667 | 7.37 | 0.30 | N/A | -154 | |
| 1430 | 15.53 | 200 | 9.53 | 664 | 7.36 | 0.32 | N/A | -151.8 | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | sampled @ 1430 |

### EQUIPMENT DOCUMENTATION

| TYPE OF PUMP | TYPE OF TUBING | TYPE OF PUMP MATERIAL |
|---|---|---|
| GEO 2 | SILICON/ POLY | Peristaltic |

### ANALYTICAL PARAMETERS

| | METHOD NUMBER | PRESERVATION METHOD | VOLUME REQUIRED | SAMPLE COLLECTED | SAMPLE RESULTS |
|---|---|---|---|---|---|
| [x] TA | 8260B | HCL/4 DEG C | 3 x 40 ml | [x] | |
| [x] Spectrum | NH3 | H2SO4/4 DEG C | 1 X 250 ml | [x] | |
| [x] Spectrum | PO4 | H2SO4/4 DEG C | 1 X 250 ml | [x] | |
| [x] Spectrum | Metals | HNO3/4 DEG C | 1 X 250 ml | [x] | |
| [x] Spectrum | TOC | H3PO4/4 DEG C | 2 x 40 ml | [x] | |
| [x] Spectrum | Dissolved Gases | HCL/4 DEG C | 2 x 40 ml | [x] | |
| [x] Spectrum | Acids | 4 DEG C | 2 x 40 ml | [x] | |
| [x] Spectrum | pH, Anions, Alkalinity | 4 DEG C | 1 x 500 ml | [x] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |

PURGE WATER DESCRIPTION: clear, slight bio odor

PURGE WATER CONTAINERIZED: Pour back into well

NUMBER OF BUCKETS GENERATED:

**NOTES**

SIGNATURE: **DAJ**

## FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

| | | | |
|---|---|---|---|
| PROJECT | **RA-006** | JOB NUMBER | N/A |
| WELL ID | **MW-560-20140407-01** | DATE | 7-Apr-14 |
| TIME | START 1045 END 1120 | | |


***Innovative Engineering Solutions, Inc.***
25 Spring Street
Walpole Massachusetts 02081


### WATER LEVEL/PUMP SETTI

- [x] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER _____

PROTECTIVE CASING STICKUP (FROM GROUND): FT

PROTECTIVE CASING/WELL DIFFERENCE: FT

| | | | | | |
|---|---|---|---|---|---|
| INITIAL DEPTH TO WATER | 8.73 FT | WELL DEPTH | 65.20 FT | WELL DIAMETER | 2 IN |
| FINAL DEPTH TO WATER | 10.44 FT | SCREEN LENGTH | FT | PID AMBIENT AIR | NA PPM |
| DRAWDOWN VOLUME | 0.28 GAL | | | PID WELL MOUTH | NA PPM |
| TOTAL VOLUME PURGED | 2.34 GAL | | | | |

(initial - final x 0.163 {2-inch} or x 0.654 {4-inch})

(purge rate (milliliters per minute) x time duration (minutes) x 0.00026 gal/millilter)

| WELL INTEGRITY | YES | NO | N/A |
|---|---|---|---|
| CAP | ☑ | ☐ | ☐ |
| CASING | ☑ | ☐ | ☐ |
| LOCKED | ☐ | ☑ | ☐ |
| COLLAR | ☐ | ☐ | ☑ |

### PURGE DATA

| TIME | DEPTH TO WATER (ft) | PURGE RATE (ml/min) | TEMP (deg C) | SPECIFIC CONDUCTANCE (mg/cm) | pH (units) | DISS. $O_2$ (mg/L) | TURBIDITY (ntu) | REDOX (mv) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|
| 1055 | 9.98 | 200 | 10.01 | 860 | 7.01 | 0.71 | N/A | -121.8 | |
| 1100 | 10.26 | 200 | 10.28 | 869 | 7.06 | 0.58 | N/A | -129.5 | |
| 1105 | 10.36 | 200 | 10.23 | 871 | 7.06 | 0.55 | N/A | -131.8 | |
| 1110 | 10.44 | 200 | 10.40 | 875 | 7.05 | 0.51 | N/A | -125.8 | |
| | | | | | | | | | sampled @ 1110 |

### EQUIPMENT DOCUMENTATION

| TYPE OF PUMP | TYPE OF TUBING | TYPE OF PUMP MATERIAL |
|---|---|---|
| GEO 2 | SILICON/ POLY | Peristaltic |

### ANALYTICAL PARAMETERS

| | METHOD NUMBER | PRESERVATION METHOD | VOLUME REQUIRED | SAMPLE COLLECTED | SAMPLE RESULTS |
|---|---|---|---|---|---|
| ☑ TA | 8260B | HCL/4 DEG C | 3 x 40 ml | ☑ | |
| ☑ Spectrum | NH3 | H2SO4/4 DEG C | 1 X 250 ml | ☑ | |
| ☑ Spectrum | PO4 | H2SO4/4 DEG C | 1 X 250 ml | ☑ | |
| ☑ Spectrum | Metals | HNO3/4 DEG C | 1 X 250 ml | ☑ | |
| ☑ Spectrum | TOC | H3PO4/4 DEG C | 2 x 40 ml | ☑ | |
| ☑ Spectrum | Dissolved Gases | HCL/4 DEG C | 2 x 40 ml | ☑ | |
| ☑ Spectrum | Acids | 4 DEG C | 2 x 40 ml | ☑ | |
| ☑ Spectrum | pH, Anions, Alkalinity | 4 DEG C | 1 x 500 ml | ☑ | |
| ☐ | | | | ☐ | |
| ☐ | | | | ☐ | |
| ☐ | | | | ☐ | |

PURGE WATER DESCRIPTION: cloudy, slight bio odor

PURGE WATER CONTAINERIZED: Pour back into well

NUMBER OF BUCKETS GENERATED:

**NOTES**

SIGNATURE **DAJ**

## FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

| | | | |
|---|---|---|---|
| PROJECT | **RA-006** | JOB NUMBER | N/A |
| WELL ID | **MW-561-20140407-01** | DATE | 7-Apr-14 |
| TIME | START 1135 END 1215 | | |


***Innovative Engineering Solutions, Inc.***
25 Spring Street
Walpole Massachusetts 02081


### WATER LEVEL/PUMP SETTI

- [x] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER _____

PROTECTIVE CASING STICKUP (FROM GROUND): FT

PROTECTIVE CASING/WELL DIFFERENCE: FT

| | | | | | |
|---|---|---|---|---|---|
| INITIAL DEPTH TO WATER | 8.15 FT | WELL DEPTH | 53.65 FT | WELL DIAMETER | 2 IN |
| FINAL DEPTH TO WATER | 8.48 FT | SCREEN LENGTH | FT | PID AMBIENT AIR | NA PPM |
| DRAWDOWN VOLUME | 0.05 GAL | | | PID WELL MOUTH | NA PPM |
| TOTAL VOLUME PURGED | 2.08 GAL | | | | |

(initial - final x 0.163 {2-inch} or x 0.654 {4-inch})

(purge rate (milliliters per minute) x time duration (minutes) x 0.00026 gal/millilter)

| WELL INTEGRITY | YES | NO | N/A |
|---|---|---|---|
| CAP | ☑ | ☐ | ☐ |
| CASING | ☑ | ☐ | ☐ |
| LOCKED | ☐ | ☑ | ☐ |
| COLLAR | ☐ | ☐ | ☑ |

### PURGE DATA

| TIME | DEPTH TO WATER (ft) | PURGE RATE (ml/min) | TEMP (deg C) | SPECIFIC CONDUCTANCE (mg/cm) | pH (units) | DISS. $O_2$ (mg/L) | TURBIDITY (ntu) | REDOX (mv) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|
| 1145 | 8.48 | 200 | 11.44 | 399 | 6.85 | 0.58 | N/A | -74.8 | |
| 1150 | 8.48 | 200 | 11.42 | 397 | 6.88 | 0.58 | N/A | -86.8 | |
| 1155 | 8.48 | 200 | 11.37 | 396 | 6.89 | 0.54 | N/A | -91 | |
| 1200 | 8.48 | 200 | 11.34 | 396 | 6.87 | 0.52 | N/A | -83.2 | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | sampled @ 1200 |

### EQUIPMENT DOCUMENTATION

| TYPE OF PUMP | TYPE OF TUBING | TYPE OF PUMP MATERIAL |
|---|---|---|
| GEO 2 | SILICON/ POLY | Peristaltic |

### ANALYTICAL PARAMETERS

| | METHOD NUMBER | PRESERVATION METHOD | VOLUME REQUIRED | SAMPLE COLLECTED | SAMPLE RESULTS |
|---|---|---|---|---|---|
| ☑ TA | 8260B | HCL/4 DEG C | 3 x 40 ml | ☑ | |
| ☑ Spectrum | NH3 | H2SO4/4 DEG C | 1 X 250 ml | ☑ | |
| ☑ Spectrum | PO4 | H2SO4/4 DEG C | 1 X 250 ml | ☑ | |
| ☑ Spectrum | Metals | HNO3/4 DEG C | 1 X 250 ml | ☑ | |
| ☑ Spectrum | TOC | H3PO4/4 DEG C | 2 x 40 ml | ☑ | |
| ☑ Spectrum | Dissolved Gases | HCL/4 DEG C | 2 x 40 ml | ☑ | |
| ☑ Spectrum | Acids | 4 DEG C | 2 x 40 ml | ☑ | |
| ☑ Spectrum | pH, Anions, Alkalinity | 4 DEG C | 1 x 500 ml | ☑ | |
| ☐ | | | | ☐ | |
| ☐ | | | | ☐ | |
| ☐ | | | | ☐ | |

PURGE WATER DESCRIPTION: clear, slight bio odor

PURGE WATER CONTAINERIZED: Pour back into well

NUMBER OF BUCKETS GENERATED:

**NOTES**

SIGNATURE **DAJ**

## FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

| | | | |
|---|---|---|---|
| PROJECT | **RA-006** | JOB NUMBER | N/A |
| WELL ID | **MW-562-20140407-01** | DATE | 7-Apr-14 |
| TIME | START 1305 END 1345 | | |


***Innovative Engineering Solutions, Inc.***
25 Spring Street
Walpole Massachusetts 02081


### WATER LEVEL/PUMP SETTI

- [x] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER _____

PROTECTIVE CASING STICKUP (FROM GROUND): FT

PROTECTIVE CASING/WELL DIFFERENCE: FT

| | | | | | |
|---|---|---|---|---|---|
| INITIAL DEPTH TO WATER | 6.63 FT | WELL DEPTH | 41.60 FT | WELL DIAMETER | 2 IN |
| FINAL DEPTH TO WATER | 7.43 FT | SCREEN LENGTH | FT | PID AMBIENT AIR | NA PPM |
| DRAWDOWN VOLUME | 0.1 GAL | | | PID WELL MOUTH | NA PPM |

(initial - final x 0.163 {2-inch} or x 0.654 {4-inch})

| WELL INTEGRITY | YES | NO | N/A |
|---|---|---|---|
| CAP | [x] | [ ] | [ ] |
| CASING | [x] | [ ] | [ ] |
| LOCKED | [ ] | [x] | [ ] |
| COLLAR | [ ] | [ ] | [x] |

TOTAL VOLUME PURGED: 2.08 GAL

(purge rate (milliliters per minute) x time duration (minutes) x 0.00026 gal/millilter)

### PURGE DATA

| TIME | DEPTH TO WATER (ft) | PURGE RATE (ml/min) | TEMP (deg C) | SPECIFIC CONDUCTANCE (mg/cm) | pH (units) | DISS. $O_2$ (mg/L) | TURBIDITY (ntu) | REDOX (mv) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|
| 1315 | 7.48 | 200 | 11.73 | 1345 | 6.69 | 0.82 | N/A | -130.4 | |
| 1320 | 7.45 | 200 | 11.90 | 1388 | 6.64 | 0.78 | N/A | -126.1 | |
| 1325 | 7.43 | 200 | 11.83 | 1404 | 6.62 | 0.74 | N/A | -125 | |
| 1330 | 7.43 | 200 | 11.76 | 1392 | 6.62 | 0.72 | N/A | -125.1 | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | sampled @ 1330 |

### EQUIPMENT DOCUMENTATION

| TYPE OF PUMP | TYPE OF TUBING | TYPE OF PUMP MATERIAL |
|---|---|---|
| GEO 2 | SILICON/ POLY | Peristaltic |

### ANALYTICAL PARAMETERS

| | METHOD NUMBER | PRESERVATION METHOD | VOLUME REQUIRED | SAMPLE COLLECTED | SAMPLE RESULTS |
|---|---|---|---|---|---|
| [x] TA | 8260B | HCL/4 DEG C | 3 x 40 ml | [x] | |
| [x] Spectrum | NH3 | H2SO4/4 DEG C | 1 X 250 ml | [x] | |
| [x] Spectrum | PO4 | H2SO4/4 DEG C | 1 X 250 ml | [x] | |
| [x] Spectrum | Metals | HNO3/4 DEG C | 1 X 250 ml | [x] | |
| [x] Spectrum | TOC | H3PO4/4 DEG C | 2 x 40 ml | [x] | |
| [x] Spectrum | Dissolved Gases | HCL/4 DEG C | 2 x 40 ml | [x] | |
| [x] Spectrum | Acids | 4 DEG C | 2 x 40 ml | [x] | |
| [x] Spectrum | pH, Anions, Alkalinity | 4 DEG C | 1 x 500 ml | [x] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |

PURGE WATER DESCRIPTION: clear, slight bio odor

PURGE WATER CONTAINERIZED: Pour back into well

NUMBER OF BUCKETS GENERATED:

**NOTES**

SIGNATURE: **DAJ**

## FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

| | | | |
|---|---|---|---|
| PROJECT | **RA-006** | JOB NUMBER | N/A |
| WELL ID | **MW-563-20140407-01** | DATE | 7-Apr-14 |
| TIME | START 0955 END 1035 | | |


***Innovative Engineering Solutions, Inc.***
25 Spring Street
Walpole Massachusetts 02081


### WATER LEVEL/PUMP SETTI

- [x] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER _____

PROTECTIVE CASING STICKUP (FROM GROUND): FT

PROTECTIVE CASING/WELL DIFFERENCE: FT

| | | | | | |
|---|---|---|---|---|---|
| INITIAL DEPTH TO WATER | 6.31 FT | WELL DEPTH | 65.20 FT | WELL DIAMETER | 2 IN |
| FINAL DEPTH TO WATER | 8.81 FT | SCREEN LENGTH | FT | PID AMBIENT AIR | NA PPM |
| DRAWDOWN VOLUME | 0.41 GAL | | | PID WELL MOUTH | NA PPM |
| TOTAL VOLUME PURGED | 2.08 GAL | | | | |

(initial - final x 0.163 {2-inch} or x 0.654 {4-inch})

(purge rate (milliliters per minute) x time duration (minutes) x 0.00026 gal/millilter)

| WELL INTEGRITY | YES | NO | N/A |
|---|---|---|---|
| CAP | [x] | [ ] | [ ] |
| CASING | [x] | [ ] | [ ] |
| LOCKED | [ ] | [x] | [ ] |
| COLLAR | [ ] | [ ] | [x] |

### PURGE DATA

| TIME | DEPTH TO WATER (ft) | PURGE RATE (ml/min) | TEMP (deg C) | SPECIFIC CONDUCTANCE (mg/cm) | pH (units) | DISS. $O_2$ (mg/L) | TURBIDITY (ntu) | REDOX (mv) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|
| 1005 | 8.26 | 200 | 10.16 | 613 | 5.74 | 0.88 | N/A | 40.9 | |
| 1010 | 8.46 | 200 | 10.21 | 614 | 5.75 | 0.79 | N/A | 39.5 | |
| 1015 | 8.75 | 200 | 10.38 | 619 | 5.76 | 0.79 | N/A | 39.1 | |
| 1020 | 8.81 | 200 | 10.41 | 622 | 5.76 | 0.79 | N/A | 37.2 | |
| | | | | | | | | | sampled @ 1020 |

### EQUIPMENT DOCUMENTATION

| TYPE OF PUMP | TYPE OF TUBING | TYPE OF PUMP MATERIAL |
|---|---|---|
| GEO 2 | SILICON/ POLY | Peristaltic |

### ANALYTICAL PARAMETERS

| | METHOD NUMBER | PRESERVATION METHOD | VOLUME REQUIRED | SAMPLE COLLECTED | SAMPLE RESULTS |
|---|---|---|---|---|---|
| [x] TA | 8260B | HCL/4 DEG C | 3 x 40 ml | [x] | |
| [x] Spectrum | NH3 | H2SO4/4 DEG C | 1 X 250 ml | [x] | |
| [x] Spectrum | PO4 | H2SO4/4 DEG C | 1 X 250 ml | [x] | |
| [x] Spectrum | Metals | HNO3/4 DEG C | 1 X 250 ml | [x] | |
| [x] Spectrum | TOC | H3PO4/4 DEG C | 2 x 40 ml | [x] | |
| [x] Spectrum | Dissolved Gases | HCL/4 DEG C | 2 x 40 ml | [x] | |
| [x] Spectrum | Acids | 4 DEG C | 2 x 40 ml | [x] | |
| [x] Spectrum | pH, Anions, Alkalinity | 4 DEG C | 1 x 500 ml | [x] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |

PURGE WATER DESCRIPTION: clear, strong bio odor

PURGE WATER CONTAINERIZED: Pour back into well

NUMBER OF BUCKETS GENERATED:

**NOTES**

SIGNATURE: **DAJ**

## FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

| | | | |
|---|---|---|---|
| PROJECT | **RA-006** | JOB NUMBER | N/A |
| WELL ID | **REW-1-20140406-01** | DATE | 6-Apr-14 |
| TIME | START 1320 END 1355 | | |


***Innovative Engineering Solutions, Inc.***
25 Spring Street
Walpole Massachusetts 02081


### WATER LEVEL/PUMP SETTINGS

MEASUREMENT POINT
- [x] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER

PROTECTIVE CASING STICKUP (FROM GROUND): FT

PROTECTIVE CASING/WELL DIFFERENCE: FT

| | | | | | |
|---|---|---|---|---|---|
| INITIAL DEPTH TO WATER | 4.81 FT | WELL DEPTH | 39.13 FT | WELL DIAMETER | 4 IN |
| FINAL DEPTH TO WATER | 5.15 FT | SCREEN LENGTH | FT | PID AMBIENT AIR | NA PPM |
| DRAWDOWN VOLUME | 0.22 GAL | | | PID WELL MOUTH | NA PPM |
| TOTAL VOLUME PURGED | 1.82 GAL | | | | |

(initial - final x 0.163 {2-inch} or x 0.654 {4-inch})

(purge rate (milliliters per minute) x time duration (minutes) x 0.00026 gal/millilter)

| WELL INTEGRITY | YES | NO | N/A |
|---|---|---|---|
| CAP | ☑ | ☐ | ☐ |
| CASING | ☑ | ☐ | ☐ |
| LOCKED | ☐ | ☑ | ☐ |
| COLLAR | ☐ | ☐ | ☑ |

### PURGE DATA

| TIME | DEPTH TO WATER (ft) | PURGE RATE (ml/min) | TEMP (deg C) | SPECIFIC CONDUCTANCE (mg/cm) | pH (units) | DISS. $O_2$ (mg/L) | TURBIDITY (ntu) | REDOX (mv) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|
| 1330 | 5.15 | 200 | 10.32 | 359 | 7.08 | 0.52 | N/A | -100.9 | |
| 1335 | 5.15 | 200 | 10.27 | 359 | 7.09 | 0.45 | N/A | -104.3 | |
| 1340 | 5.15 | 200 | 10.39 | 360 | 7.09 | 0.42 | N/A | -106.7 | |
| 1345 | 5.15 | 200 | 10.42 | 360 | 7.09 | 0.40 | N/A | -106.6 | |
| | | | | | | | | | sampled @ 1345 |

### EQUIPMENT DOCUMENTATION

| TYPE OF PUMP | TYPE OF TUBING | TYPE OF PUMP MATERIAL |
|---|---|---|
| GEO 2 | SILICON/ POLY | Peristaltic |

### ANALYTICAL PARAMETERS

| | METHOD NUMBER | PRESERVATION METHOD | VOLUME REQUIRED | SAMPLE COLLECTED | SAMPLE RESULTS |
|---|---|---|---|---|---|
| ☑ TA | 8260B | HCL/4 DEG C | 3 x 40 ml | ☑ | |
| ☑ Spectrum | NH3 | H2SO4/4 DEG C | 1 X 250 ml | ☑ | |
| ☑ Spectrum | PO4 | H2SO4/4 DEG C | 1 X 250 ml | ☑ | |
| ☑ Spectrum | Metals | HNO3/4 DEG C | 1 X 250 ml | ☑ | |
| ☑ Spectrum | TOC | H3PO4/4 DEG C | 2 x 40 ml | ☑ | |
| ☑ Spectrum | Dissolved Gases | HCL/4 DEG C | 2 x 40 ml | ☑ | |
| ☑ Spectrum | Acids | 4 DEG C | 2 x 40 ml | ☑ | |
| ☑ Spectrum | pH, Anions, Alkalinity | 4 DEG C | 1 x 500 ml | ☑ | |
| ☐ | | | | ☐ | |
| ☐ | | | | ☐ | |
| ☐ | | | | ☐ | |

PURGE WATER DESCRIPTION: clear, slight bio odor

PURGE WATER CONTAINERIZED: Pour back into well

NUMBER OF BUCKETS GENERATED:

**NOTES**

SIGNATURE: **DAJ**

## FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

| | | | |
|---|---|---|---|
| PROJECT | **RA-006** | JOB NUMBER | N/A |
| WELL ID | **REW-4-20140406-01** | DATE | 6-Apr-14 |
| TIME | START 1455 END 1535 | | |


***Innovative Engineering Solutions, Inc.***
25 Spring Street
Walpole Massachusetts 02081


### WATER LEVEL/PUMP SETTINGS

MEASUREMENT POINT
- [x] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER _____

PROTECTIVE CASING STICKUP (FROM GROUND): FT

PROTECTIVE CASING/WELL DIFFERENCE: FT

INITIAL DEPTH TO WATER: 5.42 FT

WELL DEPTH: 46.80 FT

WELL DIAMETER: 4 IN

FINAL DEPTH TO WATER: 6.43 FT

SCREEN LENGTH: FT

PID AMBIENT AIR: NA PPM

DRAWDOWN VOLUME: 0.66 GAL
(initial - final x 0.163 {2-inch} or x 0.654 {4-inch})

| WELL INTEGRITY | YES | NO | N/A |
|---|---|---|---|
| CAP | ☑ | ☐ | ☐ |
| CASING | ☑ | ☐ | ☐ |
| LOCKED | ☐ | ☑ | ☐ |
| COLLAR | ☐ | ☐ | ☑ |

PID WELL MOUTH: NA PPM

TOTAL VOLUME PURGED: 2.08 GAL
(purge rate (milliliters per minute) x time duration (minutes) x 0.00026 gal/millilter)

### PURGE DATA

| TIME | DEPTH TO WATER (ft) | PURGE RATE (ml/min) | TEMP (deg C) | SPECIFIC CONDUCTANCE (mg/cm) | pH (units) | DISS. $O_2$ (mg/L) | TURBIDITY (ntu) | REDOX (mv) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|
| 1505 | 6.23 | 200 | 10.74 | 196 | 6.50 | 1.13 | N/A | -38.3 | |
| 1510 | 6.32 | 200 | 10.63 | 196 | 6.49 | 0.73 | N/A | -43.2 | |
| 1515 | 6.39 | 200 | 10.71 | 196 | 6.49 | 0.69 | N/A | -41.6 | |
| 1520 | 6.43 | 200 | 10.60 | 196 | 6.50 | 0.70 | N/A | -40 | |
| | | | | | | | | | sampled @ 1520 |

### EQUIPMENT DOCUMENTATION

| TYPE OF PUMP | TYPE OF TUBING | TYPE OF PUMP MATERIAL |
|---|---|---|
| GEO 2 | SILICON/ POLY | Peristaltic |

### ANALYTICAL PARAMETERS

| | METHOD NUMBER | PRESERVATION METHOD | VOLUME REQUIRED | SAMPLE COLLECTED | SAMPLE RESULTS |
|---|---|---|---|---|---|
| ☑ TA | 8260B | HCL/4 DEG C | 3 x 40 ml | ☑ | |
| ☑ Spectrum | NH3 | H2SO4/4 DEG C | 1 X 250 ml | ☑ | |
| ☑ Spectrum | PO4 | H2SO4/4 DEG C | 1 X 250 ml | ☑ | |
| ☑ Spectrum | Metals | HNO3/4 DEG C | 1 X 250 ml | ☑ | |
| ☑ Spectrum | TOC | H3PO4/4 DEG C | 2 x 40 ml | ☑ | |
| ☑ Spectrum | Dissolved Gases | HCL/4 DEG C | 2 x 40 ml | ☑ | |
| ☑ Spectrum | Acids | 4 DEG C | 2 x 40 ml | ☑ | |
| ☑ Spectrum | pH, Anions, Alkalinity | 4 DEG C | 1 x 500 ml | ☑ | |
| ☐ | | | | ☐ | |
| ☐ | | | | ☐ | |
| ☐ | | | | ☐ | |

PURGE WATER DESCRIPTION: clear, moderate bio odor

PURGE WATER CONTAINERIZED: Pour back into well

NUMBER OF BUCKETS GENERATED:

**NOTES**

SIGNATURE: **DAJ**

## FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

| | | | |
|---|---|---|---|
| PROJECT | **RA-006** | JOB NUMBER | N/A |
| WELL ID | **REW-5-20140406-01** | DATE | 6-Apr-14 |
| TIME | START 1405 END 1440 | | |


***Innovative Engineering Solutions, Inc.***
25 Spring Street
Walpole Massachusetts 02081


### WATER LEVEL/PUMP SETTINGS

MEASUREMENT POINT
- [x] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER _____

PROTECTIVE CASING STICKUP (FROM GROUND): FT

PROTECTIVE CASING/WELL DIFFERENCE: FT

INITIAL DEPTH TO WATER: 4.13 FT

WELL DEPTH: 39.68 FT

WELL DIAMETER: 4 IN

FINAL DEPTH TO WATER: 5.37 FT

SCREEN LENGTH: FT

PID AMBIENT AIR: NA PPM

DRAWDOWN VOLUME: 0.89 GAL
(initial - final x 0.163 {2-inch} or x 0.654 {4-inch})

| WELL INTEGRITY | YES | NO | N/A |
|---|---|---|---|
| CAP | [x] | [ ] | [ ] |
| CASING | [x] | [ ] | [ ] |
| LOCKED | [ ] | [x] | [ ] |
| COLLAR | [ ] | [ ] | [x] |

PID WELL MOUTH: NA PPM

TOTAL VOLUME PURGED: 1.82 GAL
(purge rate (milliliters per minute) x time duration (minutes) x 0.00026 gal/millilter)

### PURGE DATA

| TIME | DEPTH TO WATER (ft) | PURGE RATE (ml/min) | TEMP (deg C) | SPECIFIC CONDUCTANCE (mg/cm) | pH (units) | DISS. $O_2$ (mg/L) | TURBIDITY (ntu) | REDOX (mv) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|
| 1415 | 5.37 | 200 | 10.69 | 185 | 6.88 | 0.97 | N/A | -80.4 | |
| 1420 | 5.37 | 200 | 10.73 | 185 | 6.88 | 0.62 | N/A | -79.6 | |
| 1425 | 5.37 | 200 | 10.85 | 186 | 6.88 | 0.59 | N/A | -79 | |
| 1430 | 5.37 | 200 | 11.02 | 186 | 6.88 | 0.56 | N/A | -78.5 | |
| | | | | | | | | | sampled @ 1430 |

### EQUIPMENT DOCUMENTATION

| TYPE OF PUMP | TYPE OF TUBING | TYPE OF PUMP MATERIAL |
|---|---|---|
| GEO 2 | SILICON/ POLY | Peristaltic |

### ANALYTICAL PARAMETERS

| | METHOD NUMBER | PRESERVATION METHOD | VOLUME REQUIRED | SAMPLE COLLECTED | SAMPLE RESULTS |
|---|---|---|---|---|---|
| [x] TA | 8260B | HCL/4 DEG C | 3 x 40 ml | [x] | |
| [x] Spectrum | NH3 | H2SO4/4 DEG C | 1 X 250 ml | [x] | |
| [x] Spectrum | PO4 | H2SO4/4 DEG C | 1 X 250 ml | [x] | |
| [x] Spectrum | Metals | HNO3/4 DEG C | 1 X 250 ml | [x] | |
| [x] Spectrum | TOC | H3PO4/4 DEG C | 2 x 40 ml | [x] | |
| [x] Spectrum | Dissolved Gases | HCL/4 DEG C | 2 x 40 ml | [x] | |
| [x] Spectrum | Acids | 4 DEG C | 2 x 40 ml | [x] | |
| [x] Spectrum | pH, Anions, Alkalinity | 4 DEG C | 1 x 500 ml | [x] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |

PURGE WATER DESCRIPTION: clear, slight bio odor

PURGE WATER CONTAINERIZED: Pour back into well

NUMBER OF BUCKETS GENERATED:

**NOTES**

SIGNATURE: **DAJ**

## FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

| | | | |
|---|---|---|---|
| PROJECT | **RA-006** | JOB NUMBER | N/A |
| WELL ID | **REW-6-20140406-01** | DATE | 6-Apr-14 |
| TIME | START 0840 END 0915 | | |


***Innovative Engineering Solutions, Inc.***
25 Spring Street
Walpole Massachusetts 02081


### WATER LEVEL/PUMP SETTINGS

MEASUREMENT POINT
- [x] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER _____

PROTECTIVE CASING STICKUP (FROM GROUND): FT

PROTECTIVE CASING/WELL DIFFERENCE: FT

INITIAL DEPTH TO WATER: Note 1 FT

WELL DEPTH: Note 1 FT

WELL DIAMETER: 4 IN

FINAL DEPTH TO WATER: Note 1 FT

SCREEN LENGTH: FT

PID AMBIENT AIR: NA PPM

DRAWDOWN VOLUME: Note 1 GAL
(initial - final x 0.163 {2-inch} or x 0.654 {4-inch})

PID WELL MOUTH: NA PPM

| WELL INTEGRITY | YES | NO | N/A |
|---|---|---|---|
| CAP | ☑ | ☐ | ☐ |
| CASING | ☑ | ☐ | ☐ |
| LOCKED | ☐ | ☑ | ☐ |
| COLLAR | ☐ | ☐ | ☑ |

TOTAL VOLUME PURGED: 1.82 GAL
(purge rate (milliliters per minute) x time duration (minutes) x 0.00026 gal/millilter)

### PURGE DATA

| TIME | DEPTH TO WATER (ft) | PURGE RATE (ml/min) | TEMP (deg C) | SPECIFIC CONDUCTANCE (mg/cm) | pH (units) | DISS. $O_2$ (mg/L) | TURBIDITY (ntu) | REDOX (mv) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|
| 0850 | Note 1 | 200 | 10.01 | 473 | 6.77 | 0.32 | N/A | -101.3 | |
| 0855 | Note 1 | 200 | 10.01 | 473 | 6.76 | 0.19 | N/A | -123.3 | |
| 0900 | Note 1 | 200 | 9.98 | 473 | 6.76 | 0.20 | N/A | -123.9 | |
| 0905 | Note 1 | 200 | 10.01 | 473 | 6.76 | 0.20 | N/A | -122.9 | |
| | | | | | | | | | sampled @ 0905 |

### EQUIPMENT DOCUMENTATION

| TYPE OF PUMP | TYPE OF TUBING | TYPE OF PUMP MATERIAL |
|---|---|---|
| GEO 2 | SILICON/ POLY | Peristaltic |

### ANALYTICAL PARAMETERS

| | METHOD NUMBER | PRESERVATION METHOD | VOLUME REQUIRED | SAMPLE COLLECTED | SAMPLE RESULTS |
|---|---|---|---|---|---|
| ☑ TA | 8260B | HCL/4 DEG C | 3 x 40 ml | ☑ | |
| ☑ Spectrum | NH3 | H2SO4/4 DEG C | 1 X 250 ml | ☑ | |
| ☑ Spectrum | PO4 | H2SO4/4 DEG C | 1 X 250 ml | ☑ | |
| ☑ Spectrum | Metals | HNO3/4 DEG C | 1 X 250 ml | ☑ | |
| ☑ Spectrum | TOC | H3PO4/4 DEG C | 2 x 40 ml | ☑ | |
| ☑ Spectrum | Dissolved Gases | HCL/4 DEG C | 2 x 40 ml | ☑ | |
| ☑ Spectrum | Acids | 4 DEG C | 2 x 40 ml | ☑ | |
| ☑ Spectrum | pH, Anions, Alkalinity | 4 DEG C | 1 x 500 ml | ☑ | |
| ☐ | | | | ☐ | |
| ☐ | | | | ☐ | |
| ☐ | | | | ☐ | |

PURGE WATER DESCRIPTION: clear, slight bio odor

PURGE WATER CONTAINERIZED: Pour back into well

NUMBER OF BUCKETS GENERATED:

**NOTES**
Note 1: pump in well and operating

SIGNATURE: **DAJ**

## FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

| | | | |
|---|---|---|---|
| PROJECT | **RA-006** | JOB NUMBER | N/A |
| WELL ID | **REW-7-20140406-01** | DATE | 6-Apr-14 |
| TIME | START 0920 END 0945 | | |


***Innovative Engineering Solutions, Inc.***
25 Spring Street
Walpole Massachusetts 02081


### WATER LEVEL/PUMP SETTINGS

MEASUREMENT POINT
- [x] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER _____

PROTECTIVE CASING STICKUP (FROM GROUND): FT

PROTECTIVE CASING/WELL DIFFERENCE: FT

| | | | | | |
|---|---|---|---|---|---|
| INITIAL DEPTH TO WATER | Note 1 FT | WELL DEPTH | Note 1 FT | WELL DIAMETER | 4 IN |
| FINAL DEPTH TO WATER | Note 1 FT | SCREEN LENGTH | FT | PID AMBIENT AIR | NA PPM |
| DRAWDOWN VOLUME | Note 1 GAL | | | PID WELL MOUTH | NA PPM |

(initial - final x 0.163 {2-inch} or x 0.654 {4-inch})

| WELL INTEGRITY | YES | NO | N/A |
|---|---|---|---|
| CAP | [x] | [ ] | [ ] |
| CASING | [x] | [ ] | [ ] |
| LOCKED | [ ] | [x] | [ ] |
| COLLAR | [ ] | [ ] | [x] |

TOTAL VOLUME PURGED: 2.34 GAL

(purge rate (milliliters per minute) x time duration (minutes) x 0.00026 gal/millilter)

### PURGE DATA

| TIME | DEPTH TO WATER (ft) | PURGE RATE (ml/min) | TEMP (deg C) | SPECIFIC CONDUCTANCE (mg/cm) | pH (units) | DISS. $O_2$ (mg/L) | TURBIDITY (ntu) | REDOX (mv) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|
| 0925 | Note 1 | 200 | 10.45 | 324 | 6.94 | 0.63 | N/A | -101.9 | |
| 0930 | Note 1 | 200 | 10.12 | 307 | 6.90 | 0.45 | N/A | -118.3 | |
| 0935 | Note 1 | 200 | 10.34 | 309 | 6.89 | 0.43 | N/A | -104.7 | |
| 0940 | Note 1 | 200 | 10.59 | 296 | 6.91 | 0.40 | N/A | -110 | |
| | | | | | | | | | sampled @ 0935 |

### EQUIPMENT DOCUMENTATION

| TYPE OF PUMP | TYPE OF TUBING | TYPE OF PUMP MATERIAL |
|---|---|---|
| GEO 2 | SILICON/ POLY | Peristaltic |

### ANALYTICAL PARAMETERS

| | METHOD NUMBER | PRESERVATION METHOD | VOLUME REQUIRED | SAMPLE COLLECTED | SAMPLE RESULTS |
|---|---|---|---|---|---|
| [x] TA | 8260B | HCL/4 DEG C | 3 x 40 ml | [x] | |
| [x] Spectrum | NH3 | H2SO4/4 DEG C | 1 X 250 ml | [x] | |
| [x] Spectrum | PO4 | H2SO4/4 DEG C | 1 X 250 ml | [x] | |
| [x] Spectrum | Metals | HNO3/4 DEG C | 1 X 250 ml | [x] | |
| [x] Spectrum | TOC | H3PO4/4 DEG C | 2 x 40 ml | [x] | |
| [x] Spectrum | Dissolved Gases | HCL/4 DEG C | 2 x 40 ml | [x] | |
| [x] Spectrum | Acids | 4 DEG C | 2 x 40 ml | [x] | |
| [x] Spectrum | pH, Anions, Alkalinity | 4 DEG C | 1 x 500 ml | [x] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |

PURGE WATER DESCRIPTION: clear, slight bio odor

PURGE WATER CONTAINERIZED: Pour back into well

NUMBER OF BUCKETS GENERATED:

**NOTES**

Note 1: pump in well and operating

SIGNATURE: **DAJ**

## FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

| | | | |
|---|---|---|---|
| PROJECT | **RA-006** | JOB NUMBER | N/A |
| WELL ID | **REW-8-20140406-01** | DATE | 6-Apr-14 |
| TIME | START 1005 END 1055 | | |


***Innovative Engineering Solutions, Inc.***
25 Spring Street
Walpole Massachusetts 02081


### WATER LEVEL/PUMP SETTINGS

MEASUREMENT POINT
- [x] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER _____

PROTECTIVE CASING STICKUP (FROM GROUND): FT

PROTECTIVE CASING/WELL DIFFERENCE: FT

| | | | | | |
|---|---|---|---|---|---|
| INITIAL DEPTH TO WATER | Note 1 FT | WELL DEPTH | Note 1 FT | WELL DIAMETER | 4 IN |
| FINAL DEPTH TO WATER | Note 1 FT | SCREEN LENGTH | FT | PID AMBIENT AIR | NA PPM |
| DRAWDOWN VOLUME | Note 1 GAL | | | PID WELL MOUTH | NA PPM |
| TOTAL VOLUME PURGED | 2.6 GAL | | | | |

(initial - final x 0.163 {2-inch} or x 0.654 {4-inch})

(purge rate (milliliters per minute) x time duration (minutes) x 0.00026 gal/millilter)

| WELL INTEGRITY | YES | NO | N/A |
|---|---|---|---|
| CAP | ☑ | ☐ | ☐ |
| CASING | ☑ | ☐ | ☐ |
| LOCKED | ☐ | ☑ | ☐ |
| COLLAR | ☐ | ☐ | ☑ |

### PURGE DATA

| TIME | DEPTH TO WATER (ft) | PURGE RATE (ml/min) | TEMP (deg C) | SPECIFIC CONDUCTANCE (mg/cm) | pH (units) | DISS. $O_2$ (mg/L) | TURBIDITY (ntu) | REDOX (mv) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|
| 1030 | Note 1 | 200 | 10.18 | 298 | 6.59 | 0.30 | N/A | -68.1 | |
| 1035 | Note 1 | 200 | 10.23 | 323 | 6.56 | 0.19 | N/A | -67.6 | |
| 1040 | Note 1 | 200 | 10.18 | 344 | 6.55 | 0.20 | N/A | -69.2 | |
| 1045 | Note 1 | 200 | 10.16 | 360 | 6.54 | 0.21 | N/A | -69 | |
| | | | | | | | | | sampled @ 1045 |

### EQUIPMENT DOCUMENTATION

| TYPE OF PUMP | TYPE OF TUBING | TYPE OF PUMP MATERIAL |
|---|---|---|
| GEO 2 | SILICON/ POLY | Peristaltic |

### ANALYTICAL PARAMETERS

| | METHOD NUMBER | PRESERVATION METHOD | VOLUME REQUIRED | SAMPLE COLLECTED | SAMPLE RESULTS |
|---|---|---|---|---|---|
| ☑ TA | 8260B | HCL/4 DEG C | 3 x 40 ml | ☑ | |
| ☑ Spectrum | NH3 | H2SO4/4 DEG C | 1 X 250 ml | ☑ | |
| ☑ Spectrum | PO4 | H2SO4/4 DEG C | 1 X 250 ml | ☑ | |
| ☑ Spectrum | Metals | HNO3/4 DEG C | 1 X 250 ml | ☑ | |
| ☑ Spectrum | TOC | H3PO4/4 DEG C | 2 x 40 ml | ☑ | |
| ☑ Spectrum | Dissolved Gases | HCL/4 DEG C | 2 x 40 ml | ☑ | |
| ☑ Spectrum | Acids | 4 DEG C | 2 x 40 ml | ☑ | |
| ☑ Spectrum | pH, Anions, Alkalinity | 4 DEG C | 1 x 500 ml | ☑ | |
| ☐ | | | | ☐ | |
| ☐ | | | | ☐ | |
| ☐ | | | | ☐ | |

PURGE WATER DESCRIPTION: cloudy, slight bio odor

PURGE WATER CONTAINERIZED: Pour back into well

NUMBER OF BUCKETS GENERATED:

**NOTES**

Note 1: pump in well and operating

SIGNATURE **DAJ**

## FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

| | | | |
|---|---|---|---|
| PROJECT | **RA-006** | JOB NUMBER | N/A |
| WELL ID | **REW-9-20140406-01** | DATE | 6-Apr-14 |
| TIME | START 1115 END 1150 | | |


***Innovative Engineering Solutions, Inc.***
25 Spring Street
Walpole Massachusetts 02081


### WATER LEVEL/PUMP SETTINGS

MEASUREMENT POINT
- [x] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER

PROTECTIVE CASING STICKUP (FROM GROUND): FT

PROTECTIVE CASING/WELL DIFFERENCE: FT

INITIAL DEPTH TO WATER: Note 1 FT

WELL DEPTH: Note 1 FT

WELL DIAMETER: 4 IN

FINAL DEPTH TO WATER: Note 1 FT

SCREEN LENGTH: FT

PID AMBIENT AIR: NA PPM

DRAWDOWN VOLUME: Note 1 GAL
(initial - final x 0.163 {2-inch} or x 0.654 {4-inch})

TOTAL VOLUME PURGED: 1.82 GAL
(purge rate (milliliters per minute) x time duration (minutes) x 0.00026 gal/millilter)

| WELL INTEGRITY | YES | NO | N/A |
|---|---|---|---|
| CAP | [x] | [ ] | [ ] |
| CASING | [x] | [ ] | [ ] |
| LOCKED | [ ] | [x] | [ ] |
| COLLAR | [ ] | [ ] | [x] |

PID WELL MOUTH: NA PPM

### PURGE DATA

| TIME | DEPTH TO WATER (ft) | PURGE RATE (ml/min) | TEMP (deg C) | SPECIFIC CONDUCTANCE (mg/cm) | pH (units) | DISS. $O_2$ (mg/L) | TURBIDITY (ntu) | REDOX (mv) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|
| 1125 | Note 1 | 200 | 10.49 | 478 | 6.88 | 0.48 | N/A | -100.5 | |
| 1130 | Note 1 | 200 | 10.87 | 476 | 6.88 | 0.28 | N/A | -98.9 | |
| 1135 | Note 1 | 200 | 10.95 | 470 | 6.89 | 0.27 | N/A | -102.7 | |
| 1140 | Note 1 | 200 | 11.07 | 481 | 6.88 | 0.24 | N/A | -108.7 | |
| | | | | | | | | | sampled @ 1140 |

### EQUIPMENT DOCUMENTATION

| TYPE OF PUMP | TYPE OF TUBING | TYPE OF PUMP MATERIAL |
|---|---|---|
| GEO 2 | SILICON/ POLY | Peristaltic |

### ANALYTICAL PARAMETERS

| | METHOD NUMBER | PRESERVATION METHOD | VOLUME REQUIRED | SAMPLE COLLECTED | SAMPLE RESULTS |
|---|---|---|---|---|---|
| [x] TA | 8260B | HCL/4 DEG C | 3 x 40 ml | [x] | |
| [x] Spectrum | NH3 | H2SO4/4 DEG C | 1 X 250 ml | [x] | |
| [x] Spectrum | PO4 | H2SO4/4 DEG C | 1 X 250 ml | [x] | |
| [x] Spectrum | Metals | HNO3/4 DEG C | 1 X 250 ml | [x] | |
| [x] Spectrum | TOC | H3PO4/4 DEG C | 2 x 40 ml | [x] | |
| [x] Spectrum | Dissolved Gases | HCL/4 DEG C | 2 x 40 ml | [x] | |
| [x] Spectrum | Acids | 4 DEG C | 2 x 40 ml | [x] | |
| [x] Spectrum | pH, Anions, Alkalinity | 4 DEG C | 1 x 500 ml | [x] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |

PURGE WATER DESCRIPTION: clear, slight bio odor

PURGE WATER CONTAINERIZED: Pour back into well

NUMBER OF BUCKETS GENERATED:

**NOTES**
Note 1: pump in well and operating

SIGNATURE: **DAJ**

## FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

| | | | |
|---|---|---|---|
| PROJECT | **RA-006** | JOB NUMBER | N/A |
| WELL ID | **REW-10-20140406-01** | DATE | 6-Apr-14 |
| TIME | START 1200 END 1235 | | |


***Innovative Engineering Solutions, Inc.***
25 Spring Street
Walpole Massachusetts 02081


### WATER LEVEL/PUMP SETTINGS

MEASUREMENT POINT
- [x] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER _____

PROTECTIVE CASING STICKUP (FROM GROUND): FT

PROTECTIVE CASING/WELL DIFFERENCE: FT

| | | | | | |
|---|---|---|---|---|---|
| INITIAL DEPTH TO WATER | Note 1 FT | WELL DEPTH | Note 1 FT | WELL DIAMETER | 4 IN |
| FINAL DEPTH TO WATER | Note 1 FT | SCREEN LENGTH | FT | PID AMBIENT AIR | NA PPM |
| DRAWDOWN VOLUME | Note 1 GAL | | | PID WELL MOUTH | NA PPM |
| TOTAL VOLUME PURGED | 1.82 GAL | | | | |

(initial - final x 0.163 {2-inch} or x 0.654 {4-inch})

(purge rate (milliliters per minute) x time duration (minutes) x 0.00026 gal/millilter)

| WELL INTEGRITY | YES | NO | N/A |
|---|---|---|---|
| CAP | ☑ | ☐ | ☐ |
| CASING | ☑ | ☐ | ☐ |
| LOCKED | ☐ | ☑ | ☐ |
| COLLAR | ☐ | ☐ | ☑ |

### PURGE DATA

| TIME | DEPTH TO WATER (ft) | PURGE RATE (ml/min) | TEMP (deg C) | SPECIFIC CONDUCTANCE (mg/cm) | pH (units) | DISS. $O_2$ (mg/L) | TURBIDITY (ntu) | REDOX (mv) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|
| 1210 | Note 1 | 200 | 8.11 | 70 | 5.94 | 3.77 | N/A | 142 | |
| 1215 | Note 1 | 200 | 8.26 | 63 | 5.92 | 3.45 | N/A | 155.8 | |
| 1220 | Note 1 | 200 | 8.14 | 62 | 5.92 | 3.41 | N/A | 161.3 | |
| 1225 | Note 1 | 200 | 8.06 | 61 | 5.91 | 3.34 | N/A | 165.9 | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | sampled @ 1225 |

### EQUIPMENT DOCUMENTATION

| TYPE OF PUMP | TYPE OF TUBING | TYPE OF PUMP MATERIAL |
|---|---|---|
| GEO 2 | SILICON/ POLY | Peristaltic |

### ANALYTICAL PARAMETERS

| | METHOD NUMBER | PRESERVATION METHOD | VOLUME REQUIRED | SAMPLE COLLECTED | SAMPLE RESULTS |
|---|---|---|---|---|---|
| ☑ TA | 8260B | HCL/4 DEG C | 3 x 40 ml | ☑ | |
| ☑ Spectrum | NH3 | H2SO4/4 DEG C | 1 X 250 ml | ☑ | |
| ☑ Spectrum | PO4 | H2SO4/4 DEG C | 1 X 250 ml | ☑ | |
| ☑ Spectrum | Metals | HNO3/4 DEG C | 1 X 250 ml | ☑ | |
| ☑ Spectrum | TOC | H3PO4/4 DEG C | 2 x 40 ml | ☑ | |
| ☑ Spectrum | Dissolved Gases | HCL/4 DEG C | 2 x 40 ml | ☑ | |
| ☑ Spectrum | Acids | 4 DEG C | 2 x 40 ml | ☑ | |
| ☑ Spectrum | pH, Anions, Alkalinity | 4 DEG C | 1 x 500 ml | ☑ | |
| ☐ | | | | ☐ | |
| ☐ | | | | ☐ | |
| ☐ | | | | ☐ | |

PURGE WATER DESCRIPTION: clear, no odor

PURGE WATER CONTAINERIZED: Pour back into well

NUMBER OF BUCKETS GENERATED:

**NOTES**

Note 1: pump in well and operating

SIGNATURE: **DAJ**

## FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

| | | | |
|---|---|---|---|
| PROJECT | **RA-006** | JOB NUMBER | N/A |
| WELL ID | **REW-11-20140406-01** | DATE | 6-Apr-14 |
| TIME | START 0750 END 0835 | | |


***Innovative Engineering Solutions, Inc.***
25 Spring Street
Walpole Massachusetts 02081


### WATER LEVEL/PUMP SETTINGS

MEASUREMENT POINT
- [x] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER

PROTECTIVE CASING STICKUP (FROM GROUND): FT

PROTECTIVE CASING/WELL DIFFERENCE: FT

| | | | | | |
|---|---|---|---|---|---|
| INITIAL DEPTH TO WATER | Note 1 FT | WELL DEPTH | Note 1 FT | WELL DIAMETER | 4 IN |
| FINAL DEPTH TO WATER | Note 1 FT | SCREEN LENGTH | FT | PID AMBIENT AIR | NA PPM |
| DRAWDOWN VOLUME | Note 1 GAL | | | PID WELL MOUTH | NA PPM |
| TOTAL VOLUME PURGED | 1.82 GAL | | | | |

(initial - final x 0.163 {2-inch} or x 0.654 {4-inch})

(purge rate (milliliters per minute) x time duration (minutes) x 0.00026 gal/millilter)

| WELL INTEGRITY | YES | NO | N/A |
|---|---|---|---|
| CAP | ☑ | ☐ | ☐ |
| CASING | ☑ | ☐ | ☐ |
| LOCKED | ☐ | ☑ | ☐ |
| COLLAR | ☐ | ☐ | ☑ |

### PURGE DATA

| TIME | DEPTH TO WATER (ft) | PURGE RATE (ml/min) | TEMP (deg C) | SPECIFIC CONDUCTANCE (mg/cm) | pH (units) | DISS. $O_2$ (mg/L) | TURBIDITY (ntu) | REDOX (mv) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|
| 0800 | Note 1 | 200 | 9.49 | 239 | 6.87 | 0.69 | N/A | -54.2 | DupX2-20140406-01 |
| 0805 | Note 1 | 200 | 9.60 | 241 | 6.86 | 0.38 | N/A | -68.9 | |
| 0810 | Note 1 | 200 | 9.62 | 241 | 6.86 | 0.40 | N/A | -77.2 | |
| 0815 | Note 1 | 200 | 9.74 | 241 | 6.85 | 0.42 | N/A | -83.1 | |
| | | | | | | | | | sampled @ 0815 |

### EQUIPMENT DOCUMENTATION

| TYPE OF PUMP | TYPE OF TUBING | TYPE OF PUMP MATERIAL |
|---|---|---|
| GEO 2 | SILICON/ POLY | Peristaltic |

### ANALYTICAL PARAMETERS

| | METHOD NUMBER | PRESERVATION METHOD | VOLUME REQUIRED | SAMPLE COLLECTED | SAMPLE RESULTS |
|---|---|---|---|---|---|
| ☑ TA | 8260B | HCL/4 DEG C | 3 x 40 ml | ☑ | |
| ☑ Spectrum | NH3 | H2SO4/4 DEG C | 1 X 250 ml | ☑ | |
| ☑ Spectrum | PO4 | H2SO4/4 DEG C | 1 X 250 ml | ☑ | |
| ☑ Spectrum | Metals | HNO3/4 DEG C | 1 X 250 ml | ☑ | |
| ☑ Spectrum | TOC | H3PO4/4 DEG C | 2 x 40 ml | ☑ | |
| ☑ Spectrum | Dissolved Gases | HCL/4 DEG C | 2 x 40 ml | ☑ | |
| ☑ Spectrum | Acids | 4 DEG C | 2 x 40 ml | ☑ | |
| ☑ Spectrum | pH, Anions, Alkalinity | 4 DEG C | 1 x 500 ml | ☑ | |
| ☐ | | | | ☐ | |
| ☐ | | | | ☐ | |
| ☐ | | | | ☐ | |

PURGE WATER DESCRIPTION: clear, slight bio odor

PURGE WATER CONTAINERIZED: Pour back into well

NUMBER OF BUCKETS GENERATED:

**NOTES**

Note 1: pump in well and operating

DupX2-20140406-01

SIGNATURE **DAJ**

## FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

| | | | |
|---|---|---|---|
| PROJECT | **RA-006** | JOB NUMBER | N/A |
| WELL ID | **REW-12-20140406-01** | DATE | 6-Apr-14 |
| TIME | START 1245 END 1315 | | |


***Innovative Engineering Solutions, Inc.***
25 Spring Street
Walpole Massachusetts 02081


### WATER LEVEL/PUMP SETTINGS

MEASUREMENT POINT
- [x] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING
- [ ] OTHER

PROTECTIVE CASING STICKUP (FROM GROUND): FT

PROTECTIVE CASING/WELL DIFFERENCE: FT

INITIAL DEPTH TO WATER: Note 1 FT

WELL DEPTH: Note 1 FT

WELL DIAMETER: 4 IN

FINAL DEPTH TO WATER: Note 1 FT

SCREEN LENGTH: FT

PID AMBIENT AIR: NA PPM

DRAWDOWN VOLUME: Note 1 GAL
(initial - final x 0.163 {2-inch} or x 0.654 {4-inch})

TOTAL VOLUME PURGED: 1.56 GAL
(purge rate (milliliters per minute) x time duration (minutes) x 0.00026 gal/millilter)

| WELL INTEGRITY | YES | NO | N/A |
|---|---|---|---|
| CAP | [x] | [ ] | [ ] |
| CASING | [x] | [ ] | [ ] |
| LOCKED | [ ] | [x] | [ ] |
| COLLAR | [ ] | [ ] | [x] |

PID WELL MOUTH: NA PPM

### PURGE DATA

| TIME | DEPTH TO WATER (ft) | PURGE RATE (ml/min) | TEMP (deg C) | SPECIFIC CONDUCTANCE (mg/cm) | pH (units) | DISS. $O_2$ (mg/L) | TURBIDITY (ntu) | REDOX (mv) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|
| 1255 | Note 1 | 200 | 11.04 | 313 | 6.87 | 0.45 | N/A | -85.5 | |
| 1300 | Note 1 | 200 | 11.17 | 314 | 6.89 | 0.24 | N/A | -85.5 | |
| 1305 | Note 1 | 200 | 11.22 | 315 | 6.88 | 0.22 | N/A | -91.1 | |
| 1310 | Note 1 | 200 | 11.24 | 316 | 6.89 | 0.20 | N/A | -94.1 | |
| | | | | | | | | | sampled @ 1310 |

### EQUIPMENT DOCUMENTATION

| TYPE OF PUMP | TYPE OF TUBING | TYPE OF PUMP MATERIAL |
|---|---|---|
| GEO 2 | SILICON/ POLY | Peristaltic |

### ANALYTICAL PARAMETERS

| | METHOD NUMBER | PRESERVATION METHOD | VOLUME REQUIRED | SAMPLE COLLECTED | SAMPLE RESULTS |
|---|---|---|---|---|---|
| [x] TA | 8260B | HCL/4 DEG C | 3 x 40 ml | [x] | |
| [x] Spectrum | NH3 | H2SO4/4 DEG C | 1 X 250 ml | [x] | |
| [x] Spectrum | PO4 | H2SO4/4 DEG C | 1 X 250 ml | [x] | |
| [x] Spectrum | Metals | HNO3/4 DEG C | 1 X 250 ml | [x] | |
| [x] Spectrum | TOC | H3PO4/4 DEG C | 2 x 40 ml | [x] | |
| [x] Spectrum | Dissolved Gases | HCL/4 DEG C | 2 x 40 ml | [x] | |
| [x] Spectrum | Acids | 4 DEG C | 2 x 40 ml | [x] | |
| [x] Spectrum | pH, Anions, Alkalinity | 4 DEG C | 1 x 500 ml | [x] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |
| [ ] | | | | [ ] | |

PURGE WATER DESCRIPTION: clear, slight bio odor

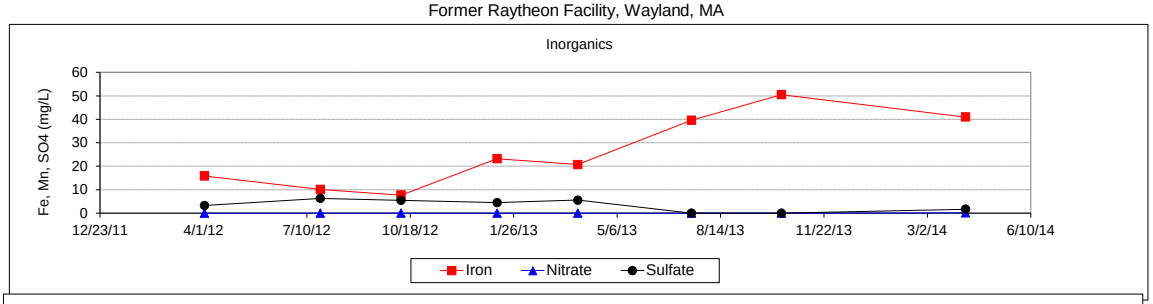
PURGE WATER CONTAINERIZED: Pour back into well

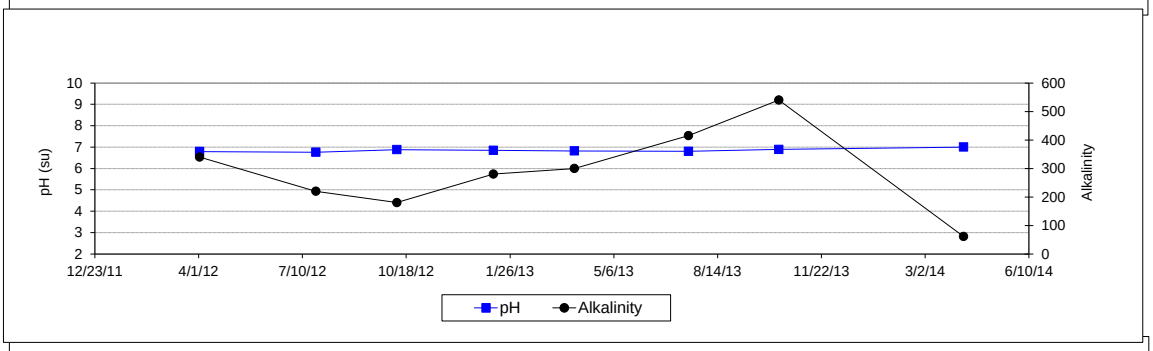
NUMBER OF BUCKETS GENERATED:

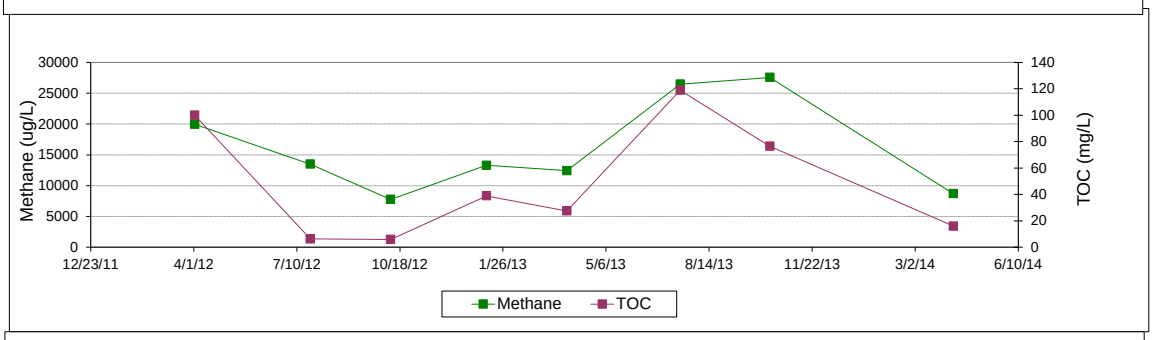
**NOTES**
Note 1: pump in well and operating

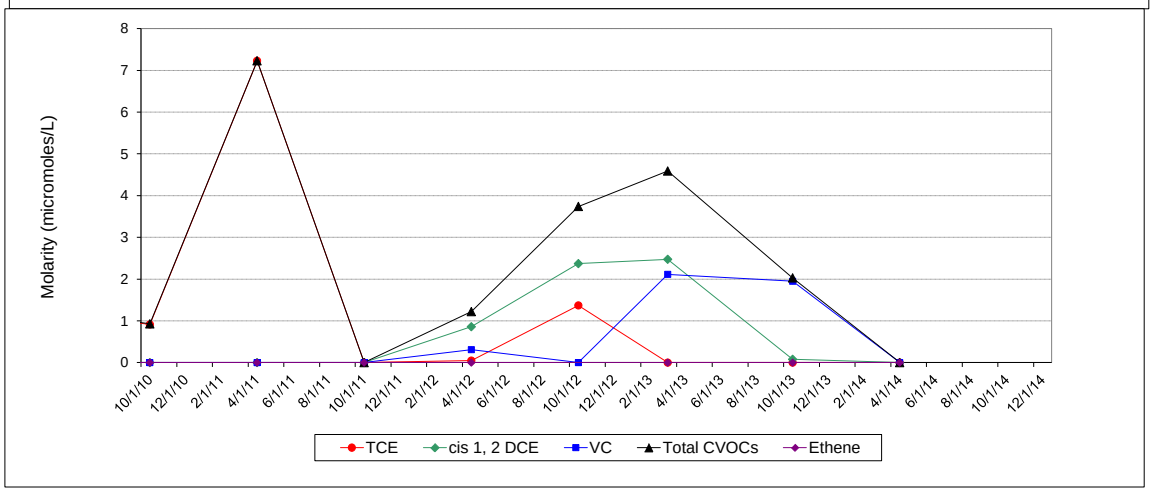
SIGNATURE: **DAJ**

Northern Area Remediation Monitoring Data
MW-551
Former Raytheon Facility, Wayland, MA

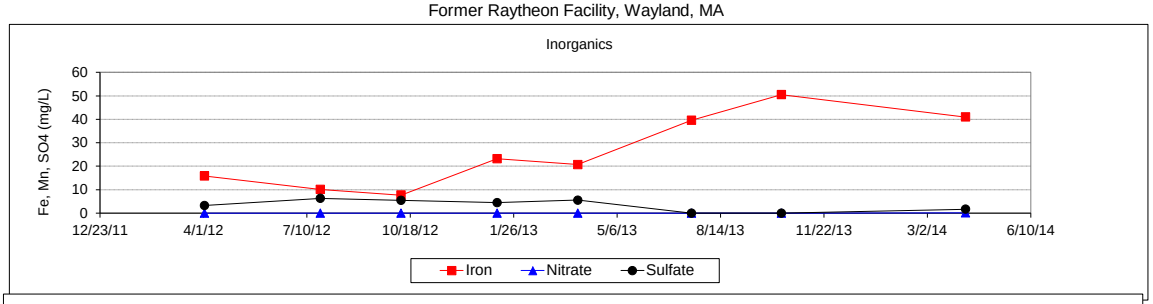


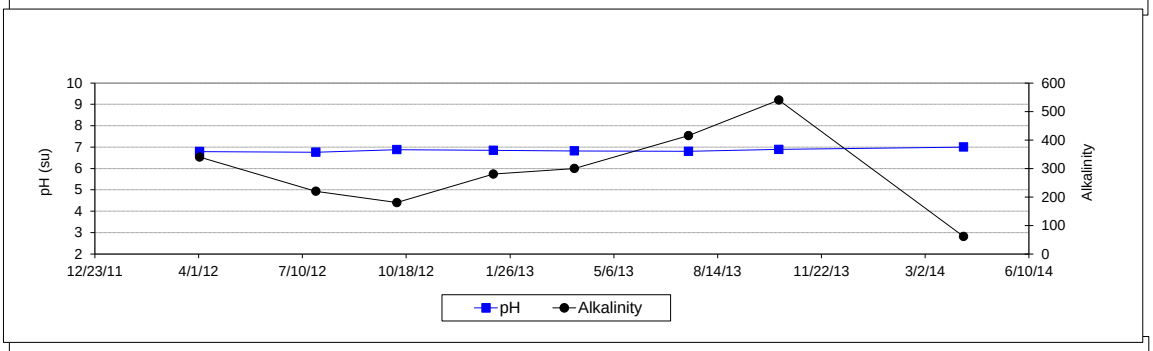



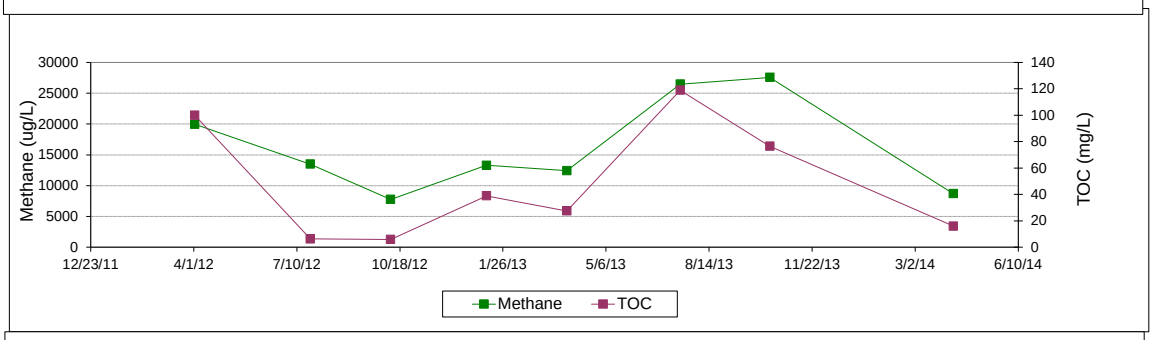



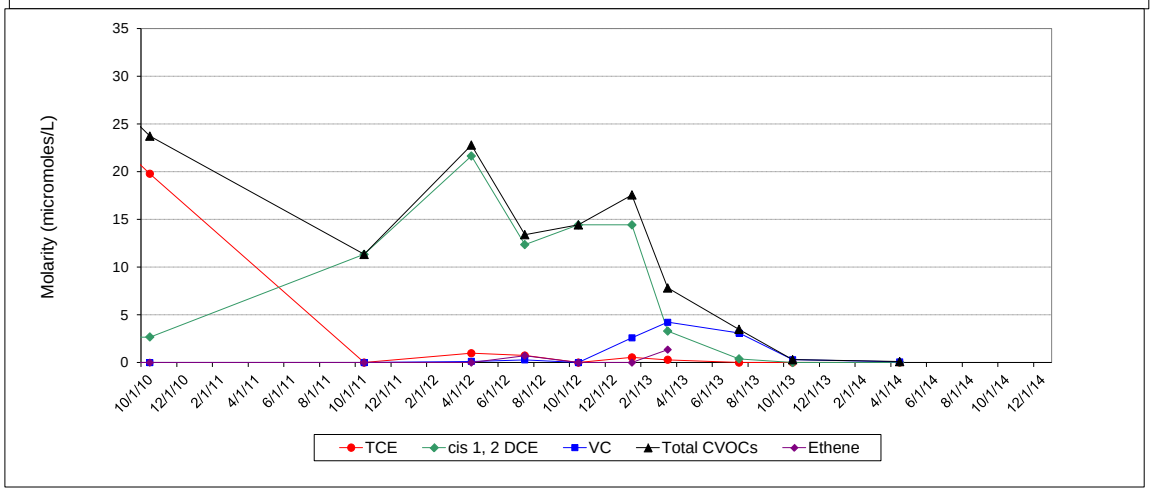



Northern Area Remediation Monitoring Data
MW-552
Former Raytheon Facility, Wayland, MA

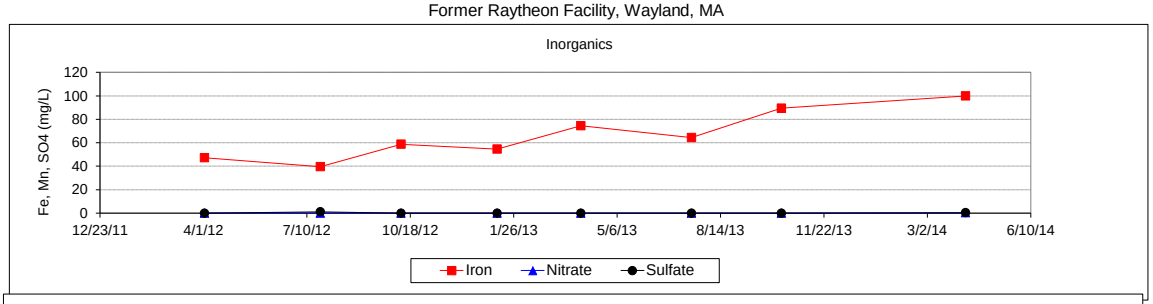


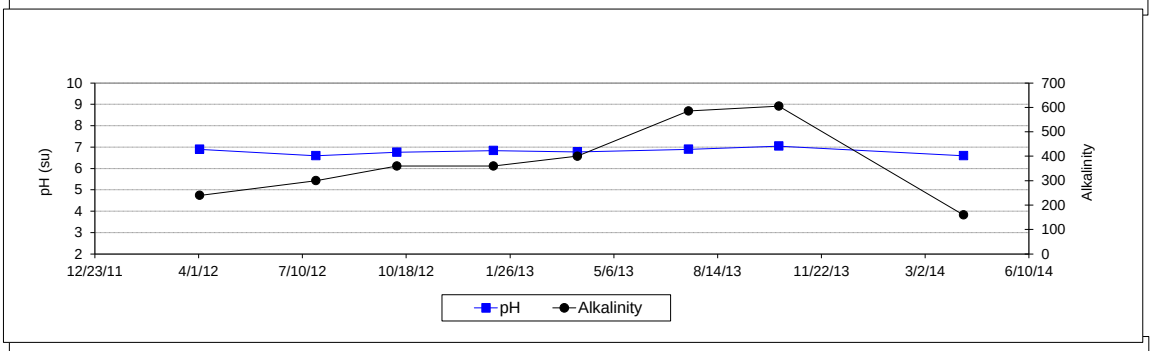



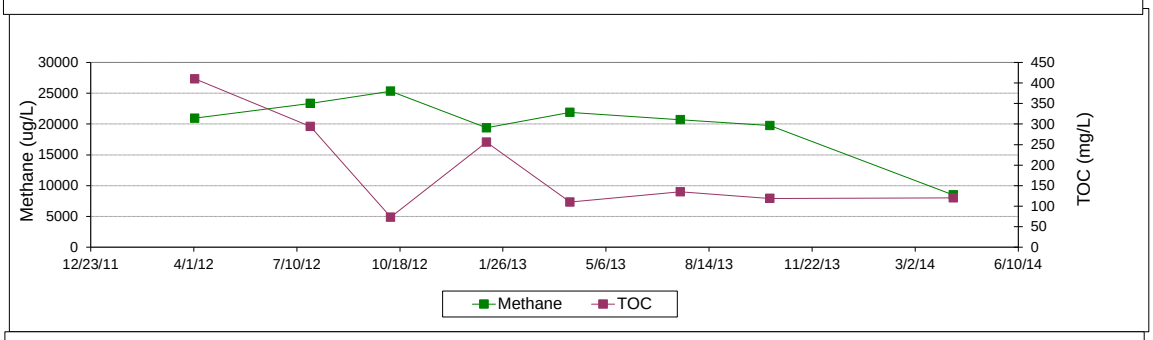



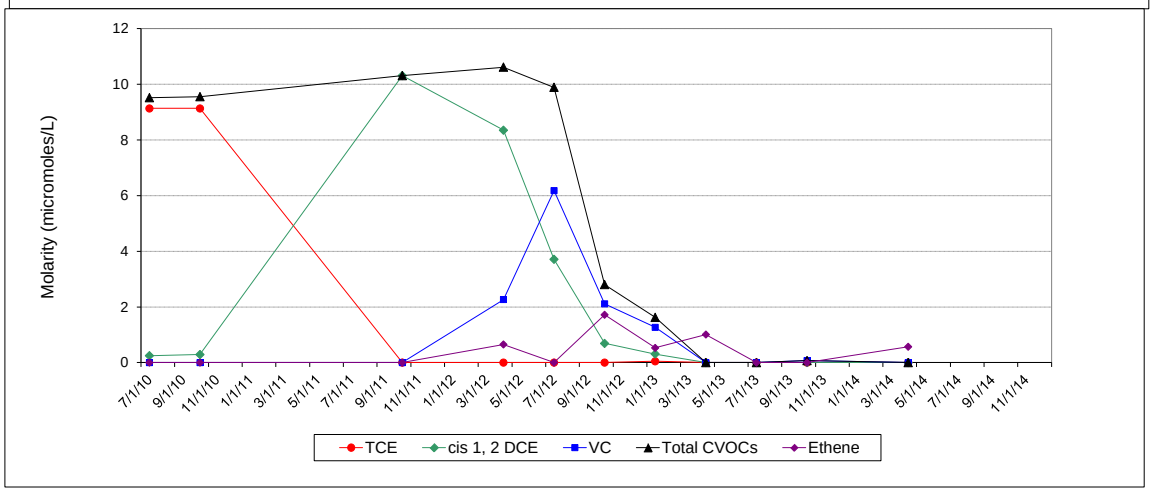



Northern Area Remediation Monitoring Data
MW-261S
Former Raytheon Facility, Wayland, MA

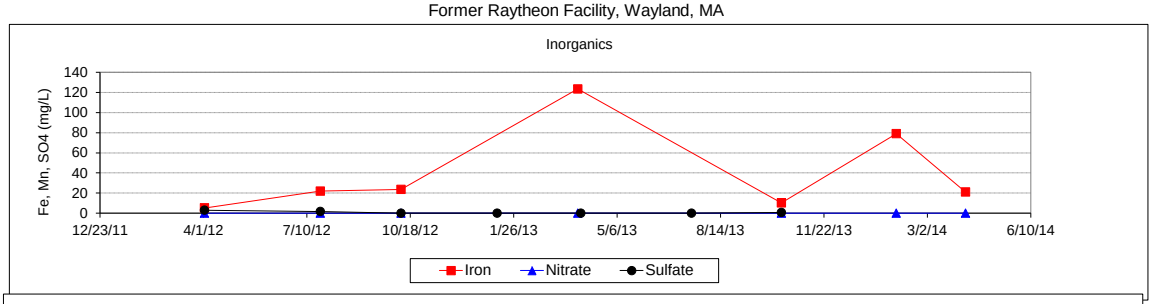


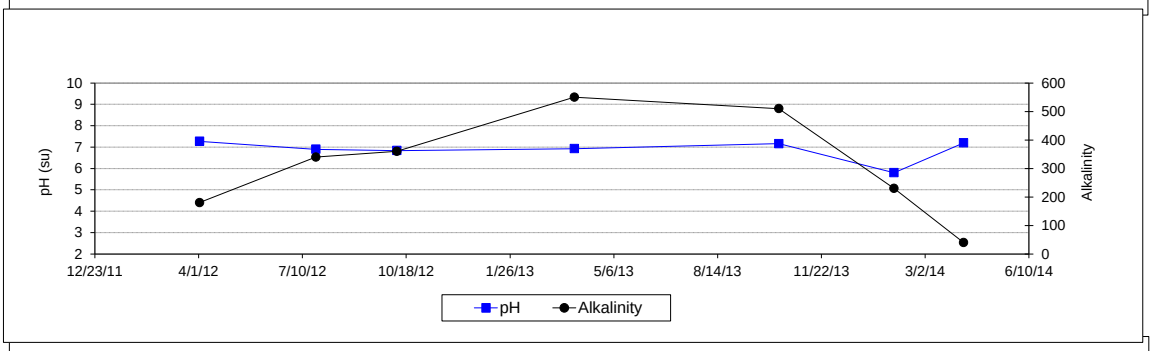



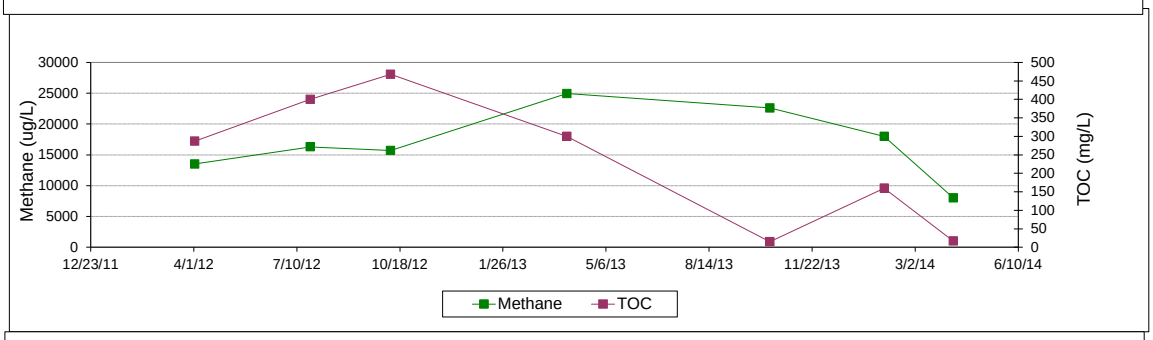



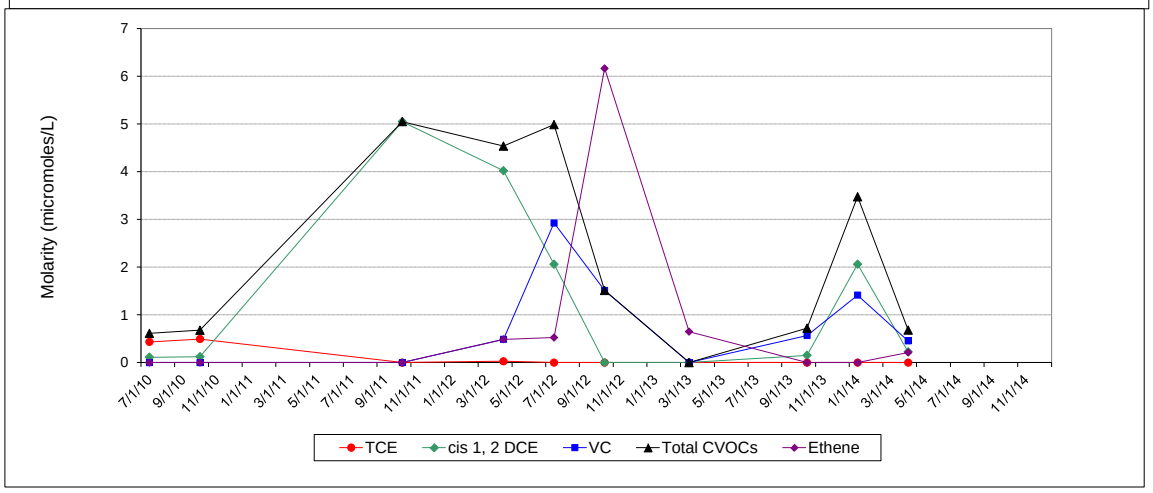



Northern Area Remediation Monitoring Data
MW-553
Former Raytheon Facility, Wayland, MA

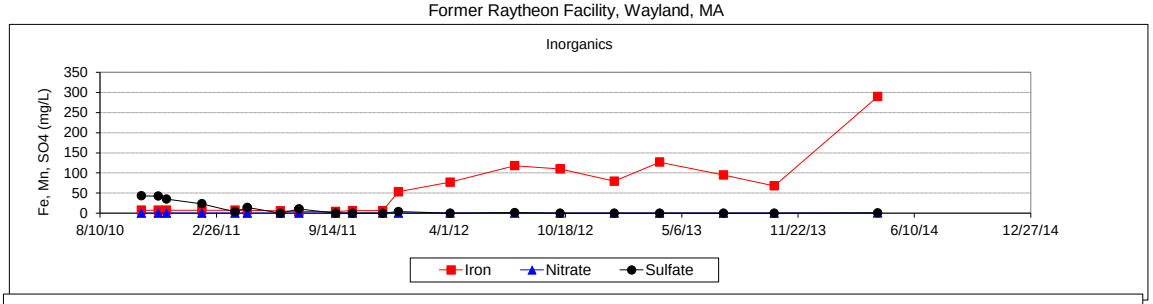


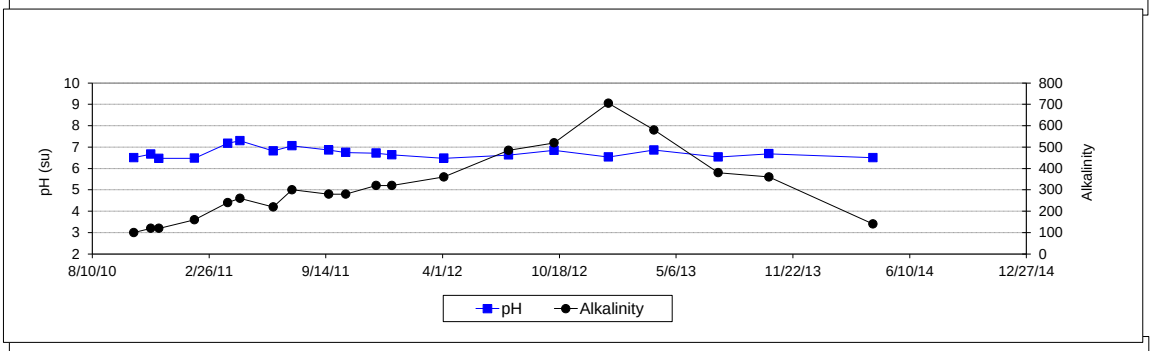



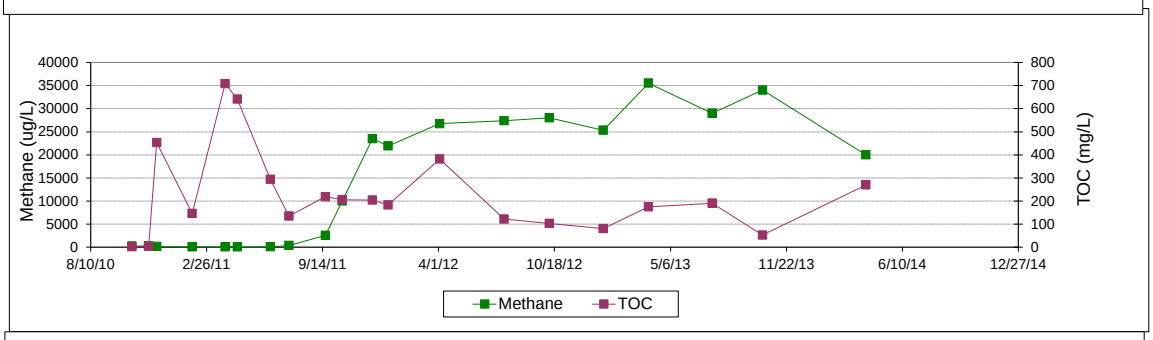



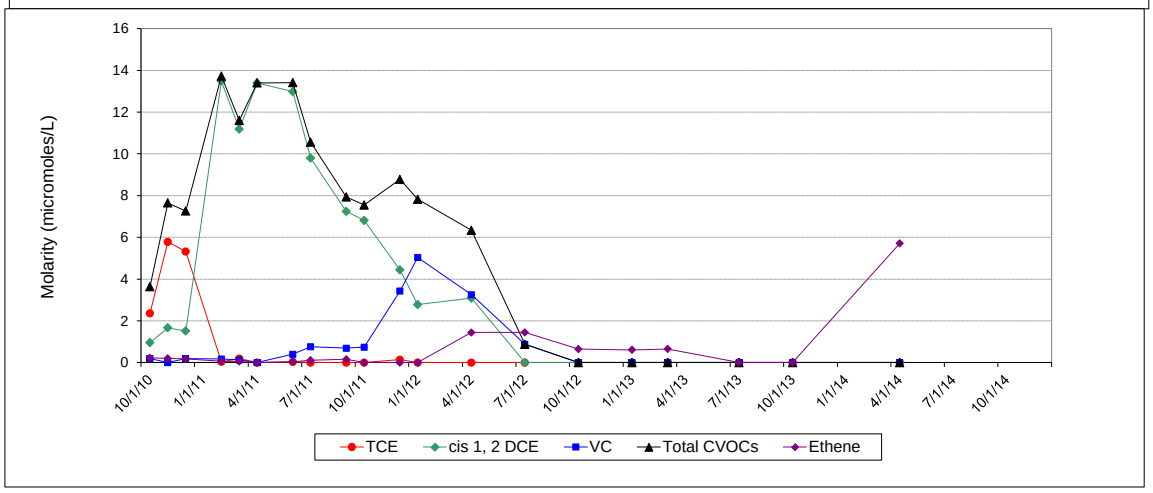



Northern Area Remediation Monitoring Data
MW-562
Former Raytheon Facility, Wayland, MA

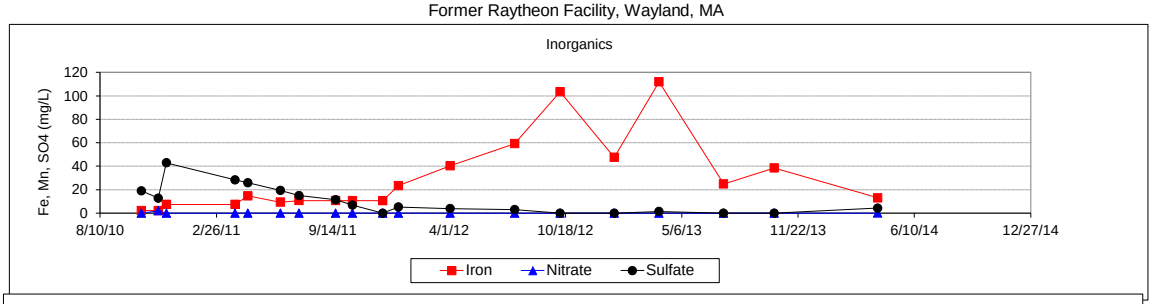


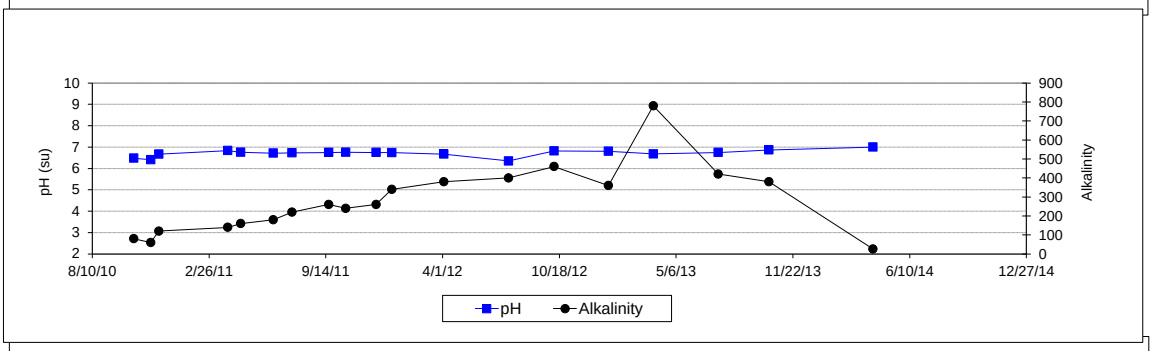



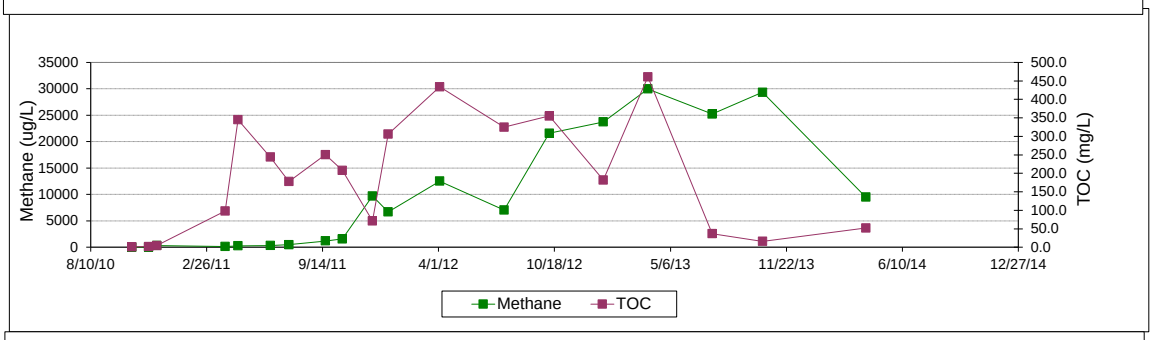



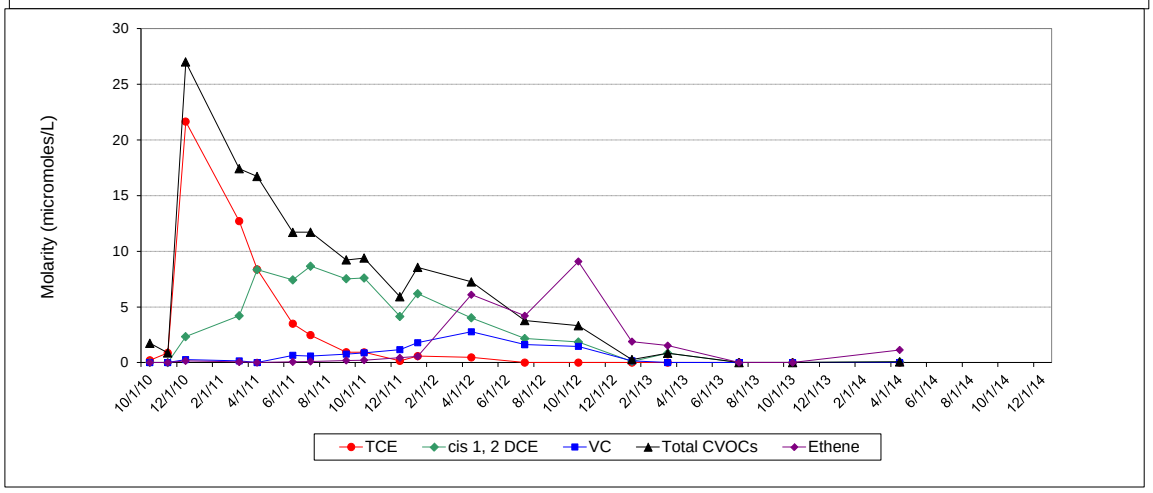



Northern Area Remediation Monitoring Data
REW-1
Former Raytheon Facility, Wayland, MA

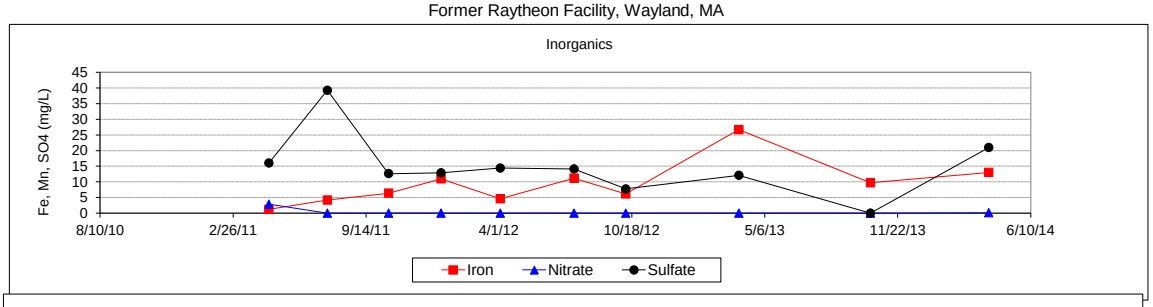


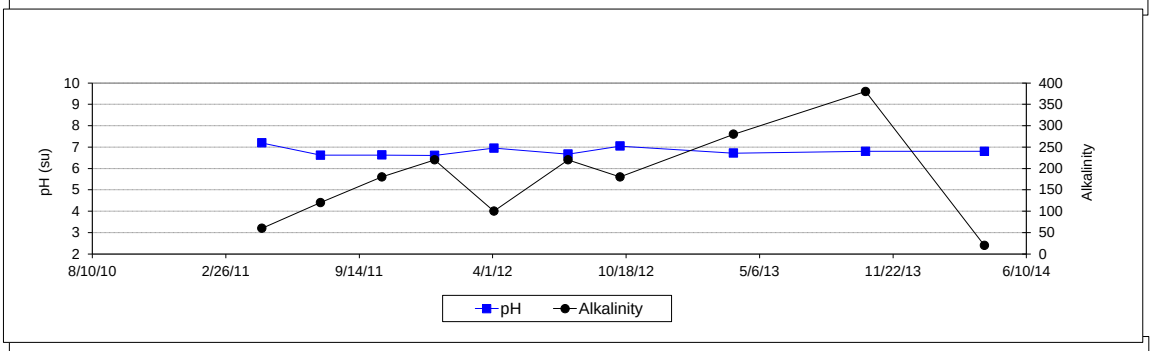



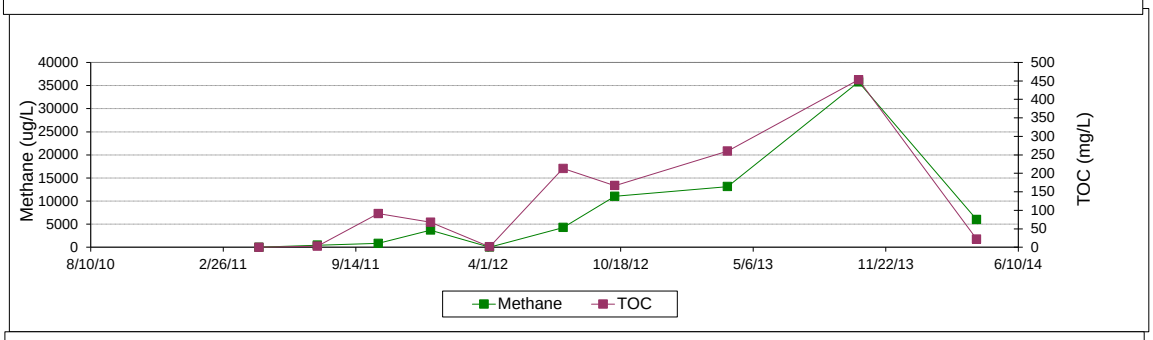



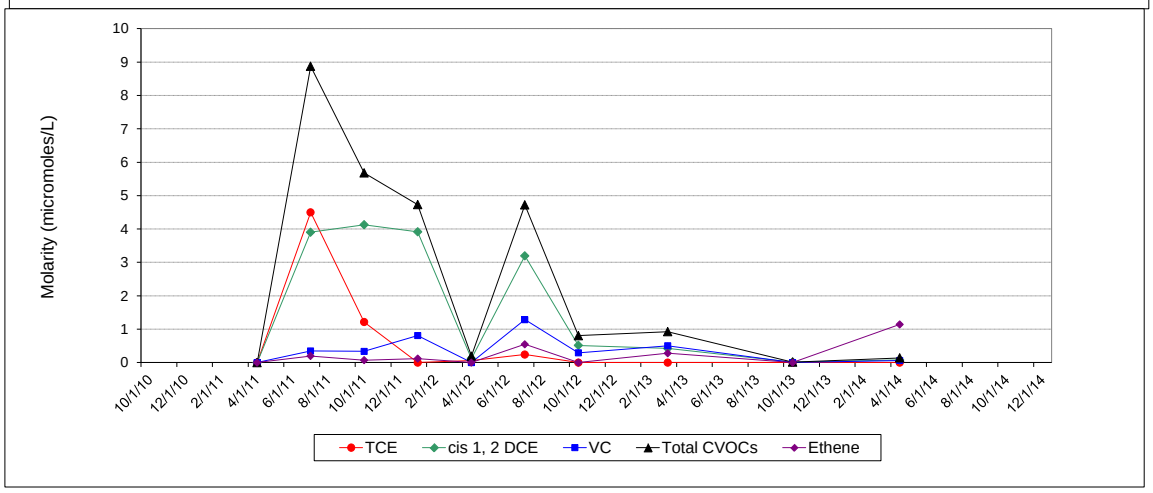



Northern Area Remediation Monitoring Data
REW-4
Former Raytheon Facility, Wayland, MA

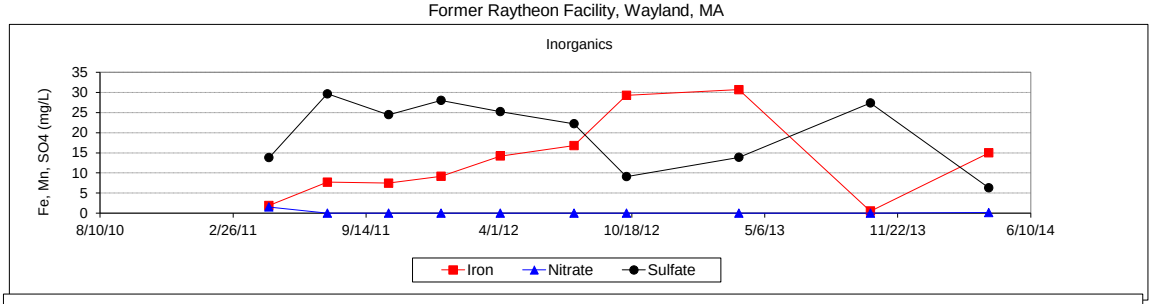


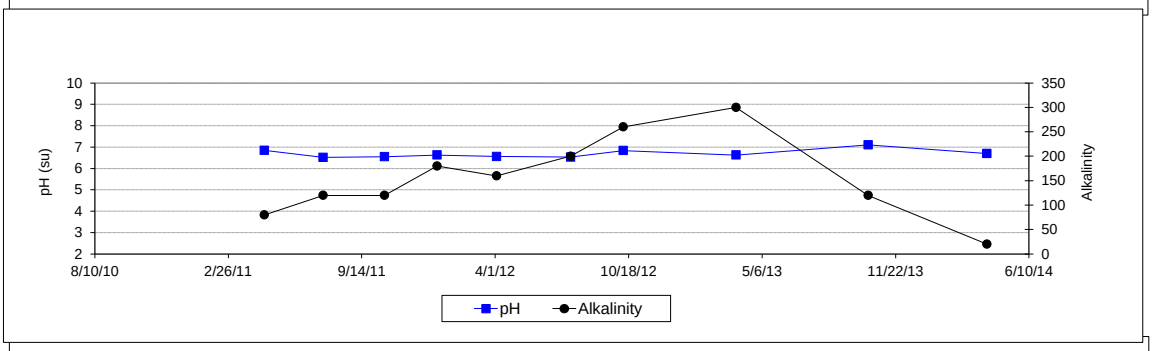



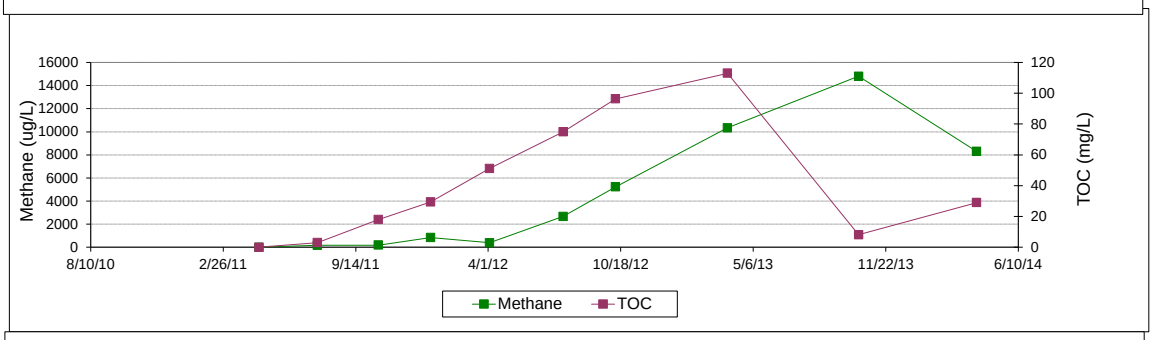



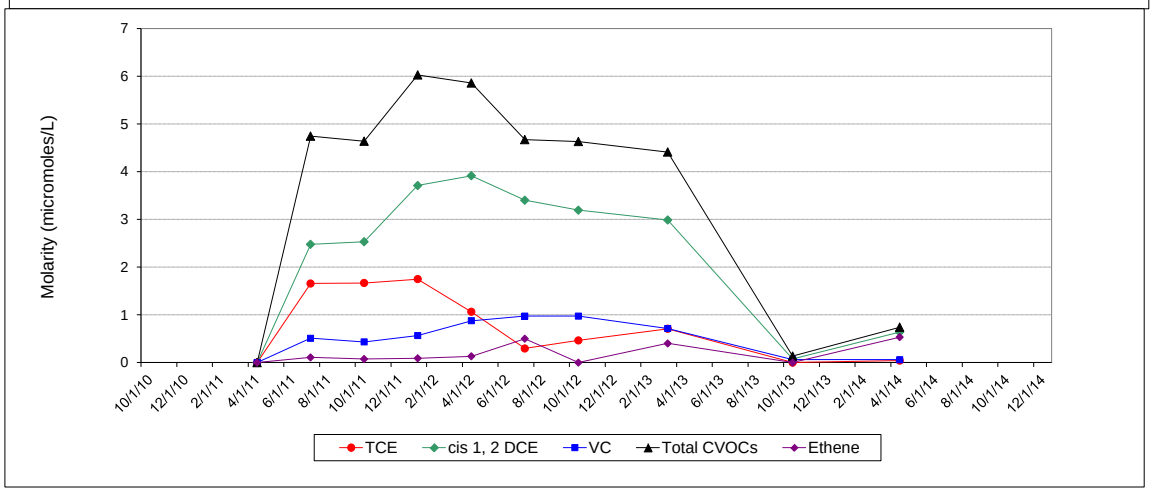



Northern Area Remediation Monitoring Data
REW-5
Former Raytheon Facility, Wayland, MA

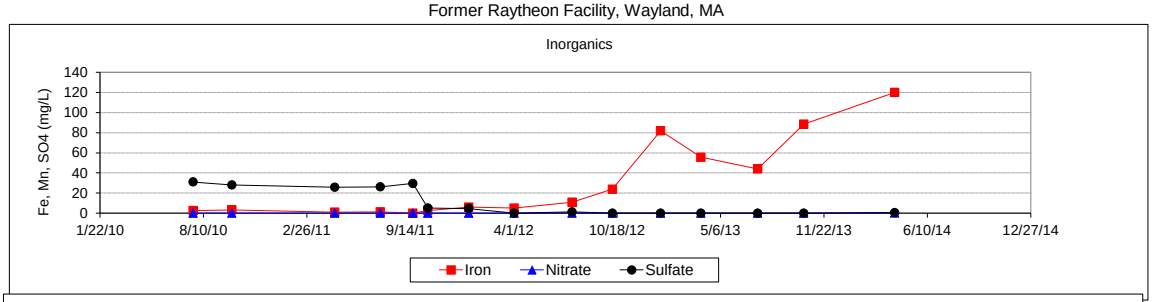


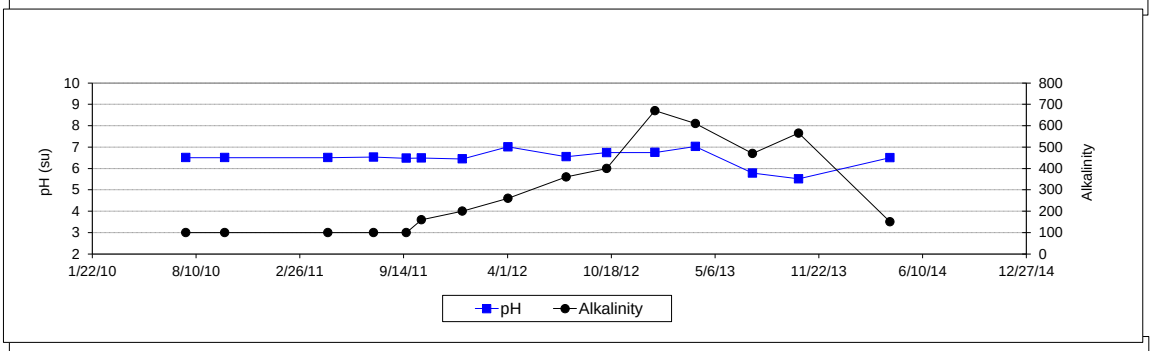



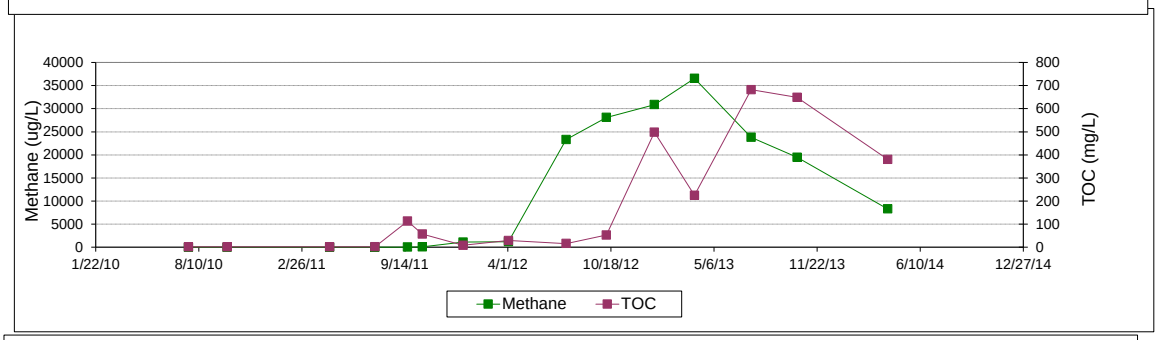



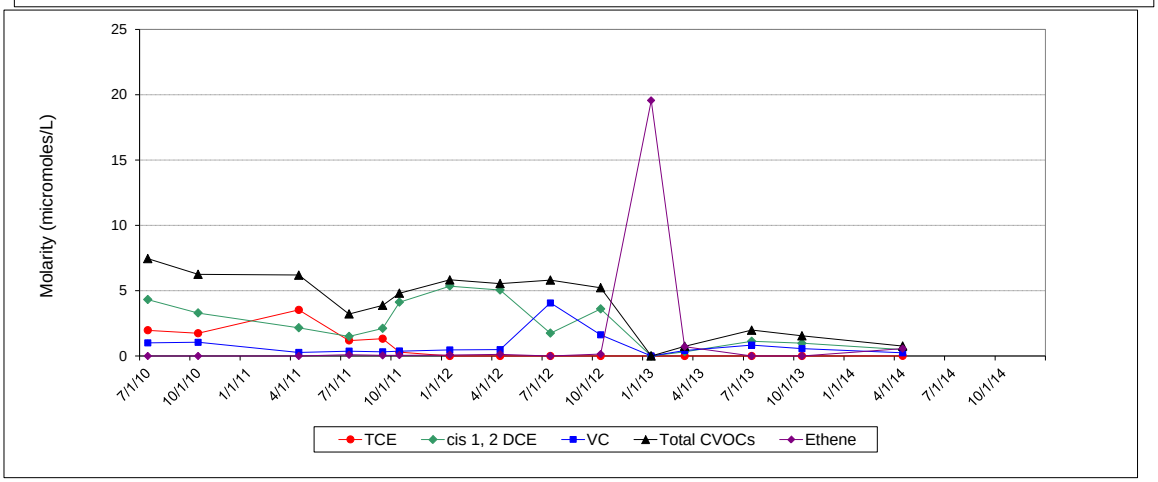



Northern Area Remediation Monitoring Data
MW-265M
Former Raytheon Facility, Wayland, MA

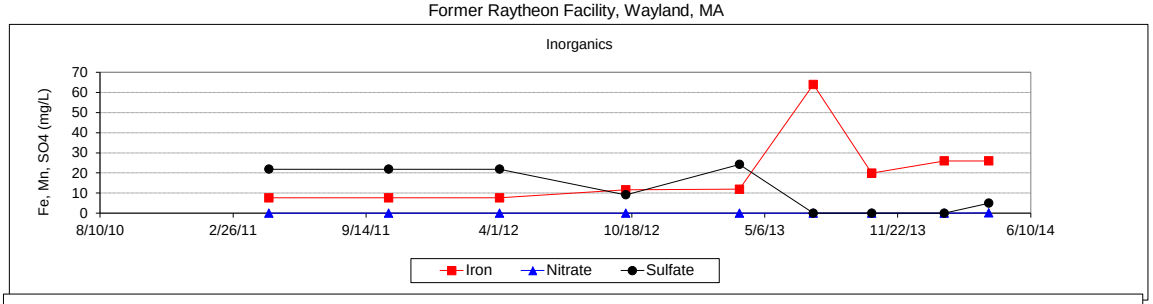


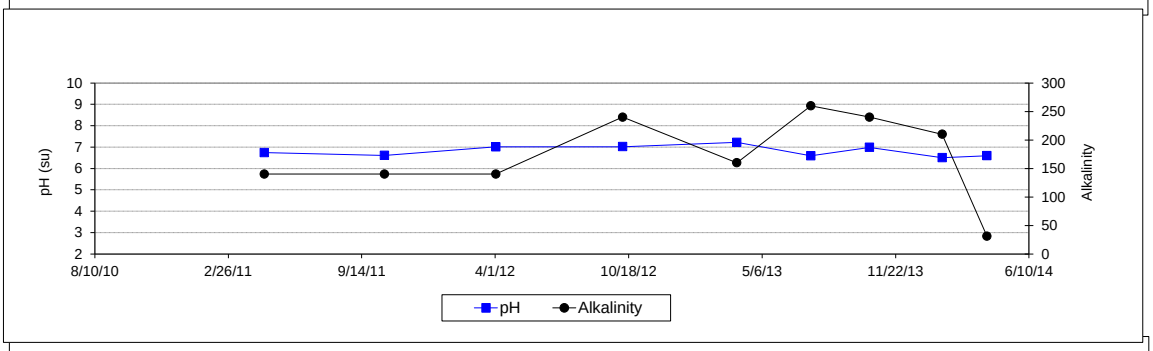



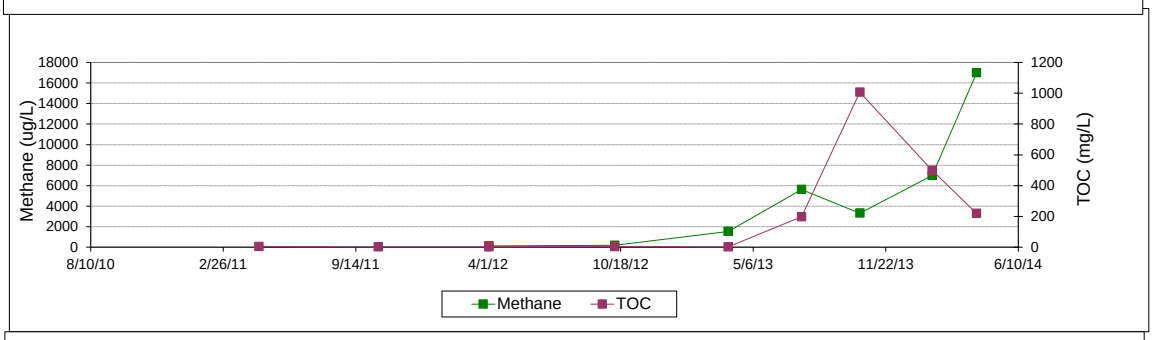



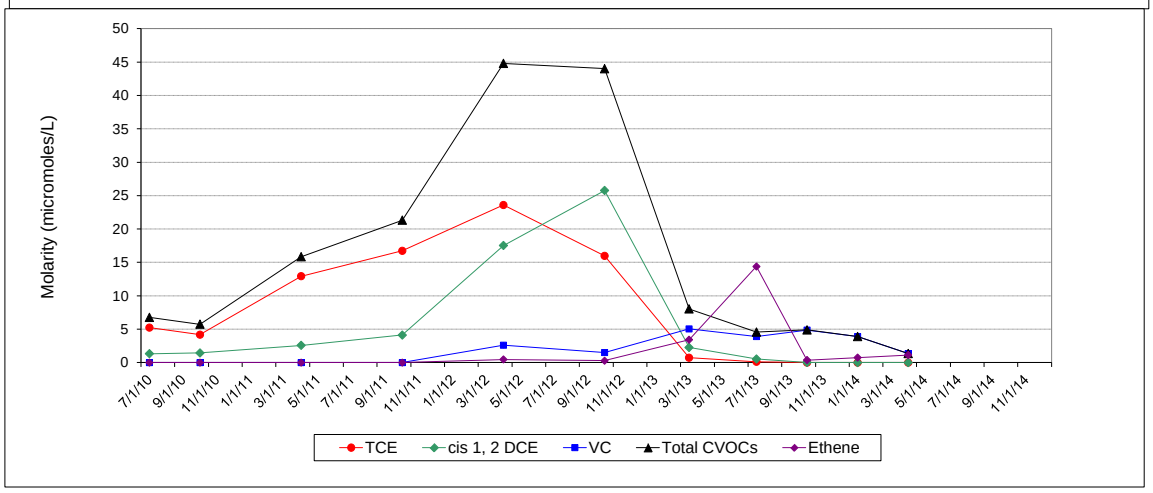



Northern Area Remediation Monitoring Data
MW-561
Former Raytheon Facility, Wayland, MA

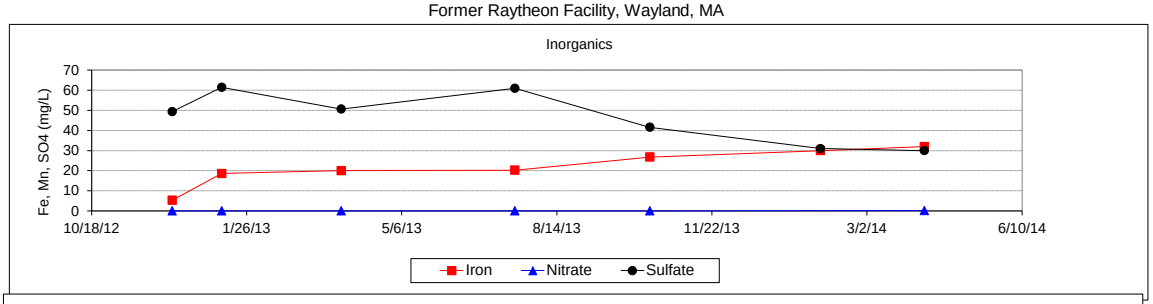


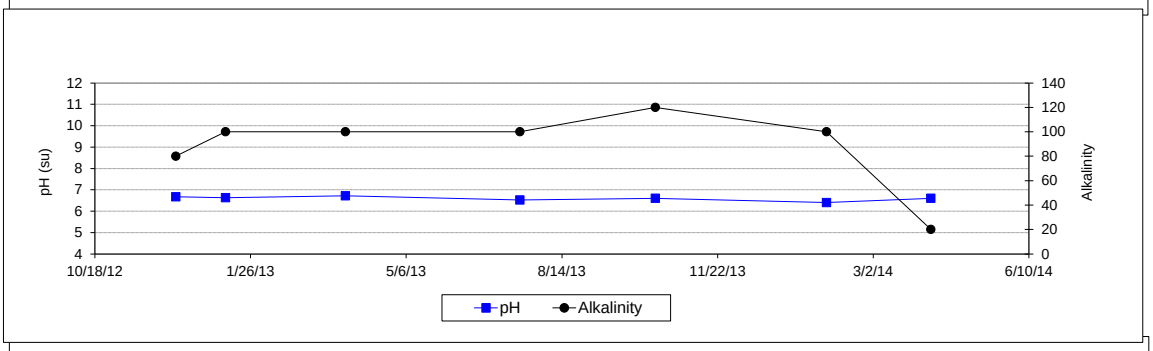



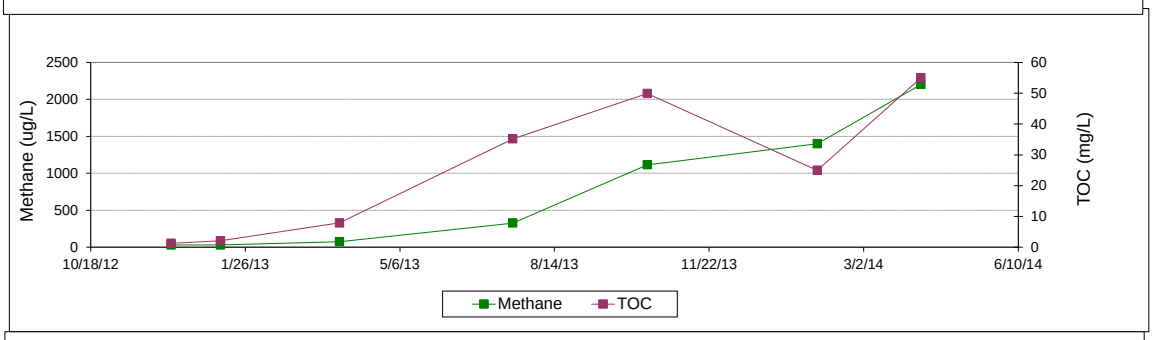



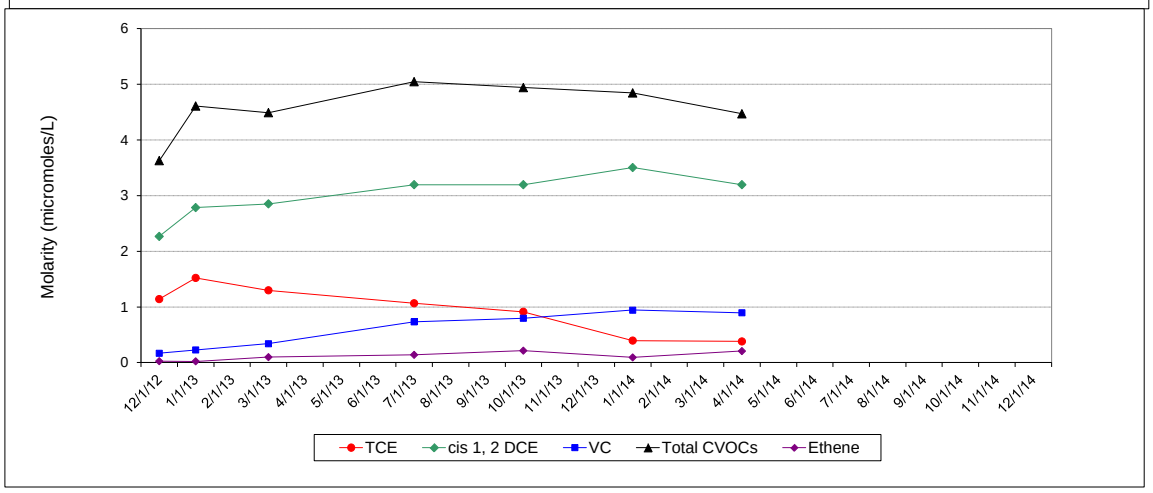



Northern Area Remediation Monitoring Data
REW-12
Former Raytheon Facility, Wayland, MA

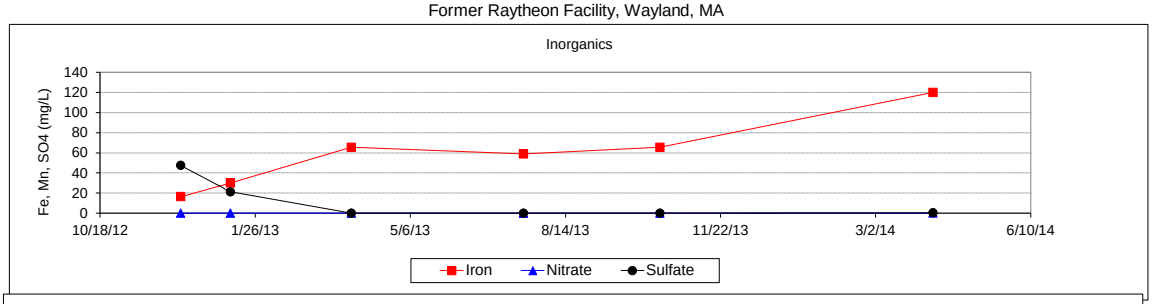


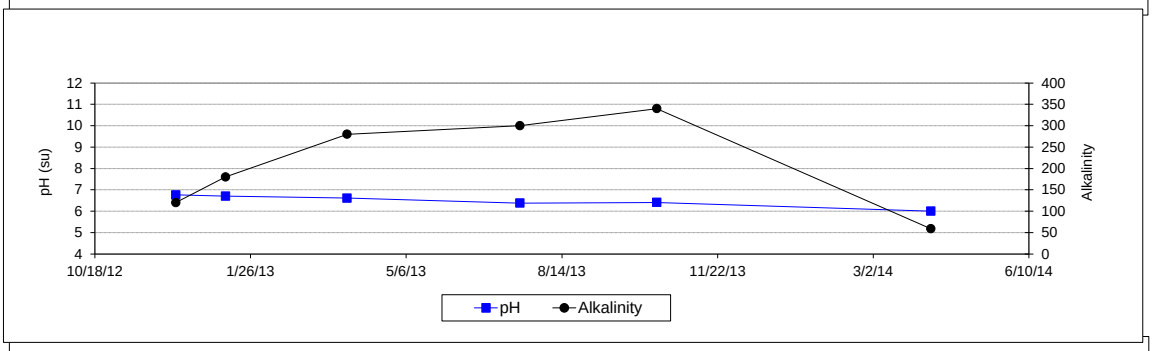



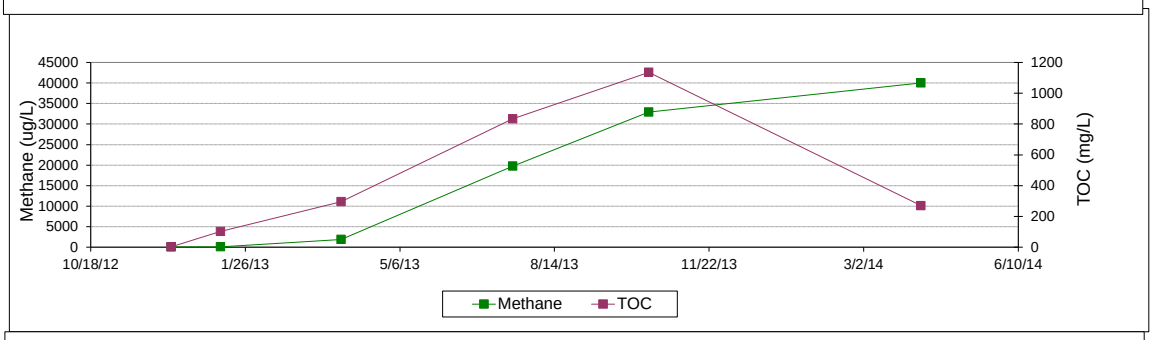



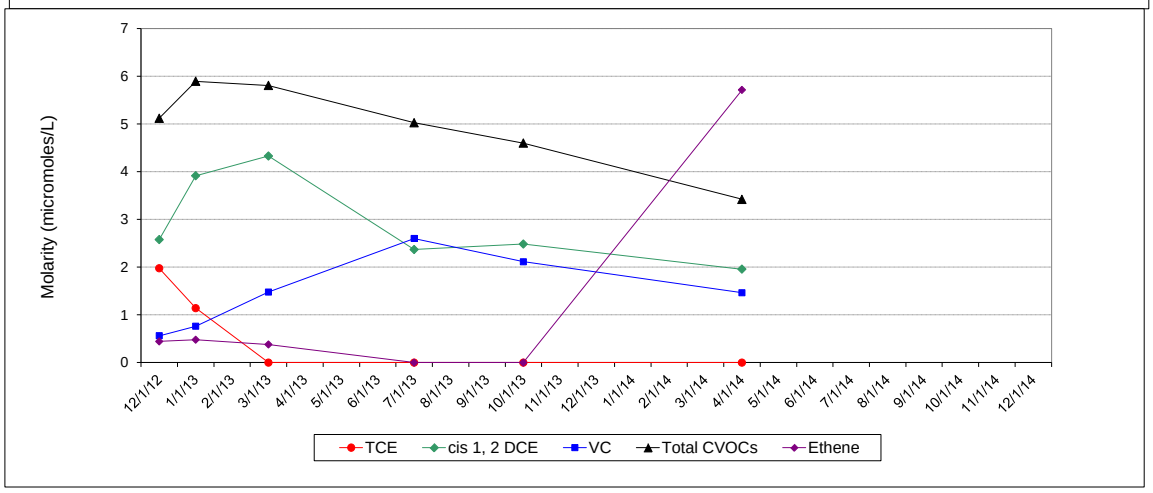



Northern Area Remediation Monitoring Data
MW-563
Former Raytheon Facility, Wayland, MA

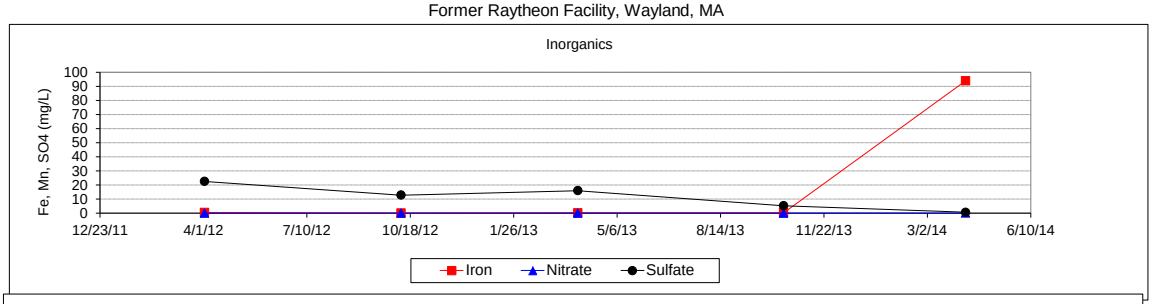


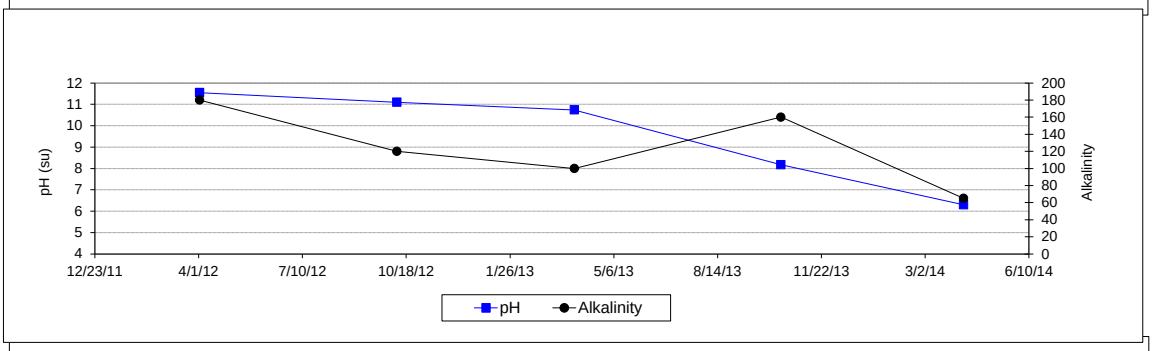



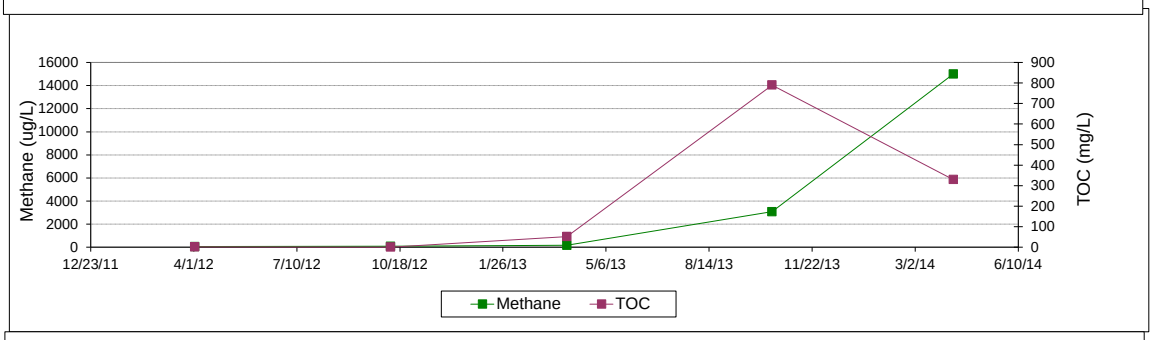



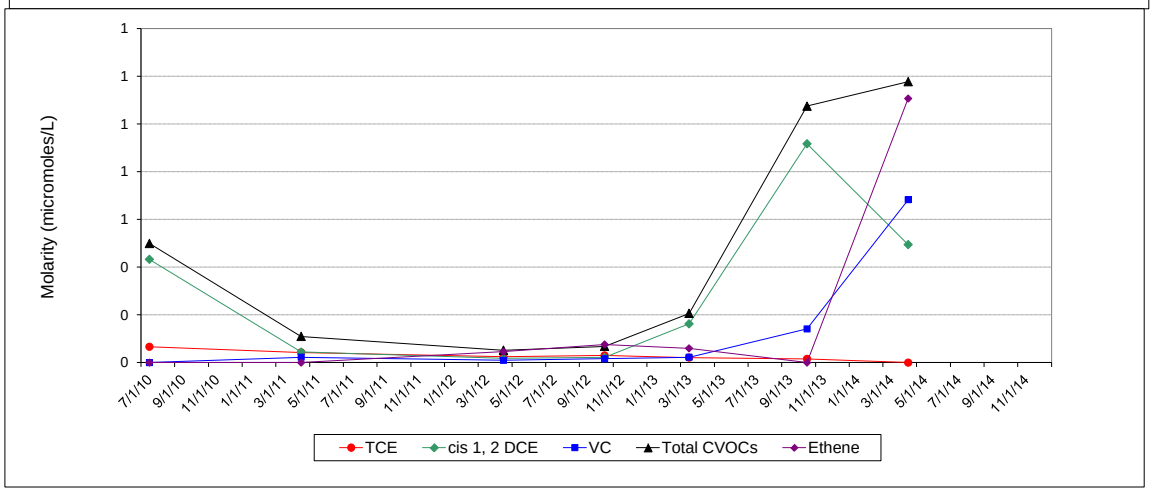



Northern Area Remediation Monitoring Data
MW-560
Former Raytheon Facility, Wayland, MA

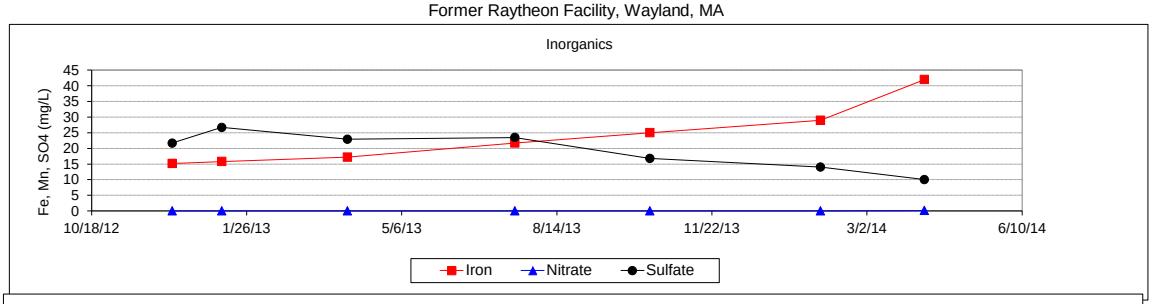


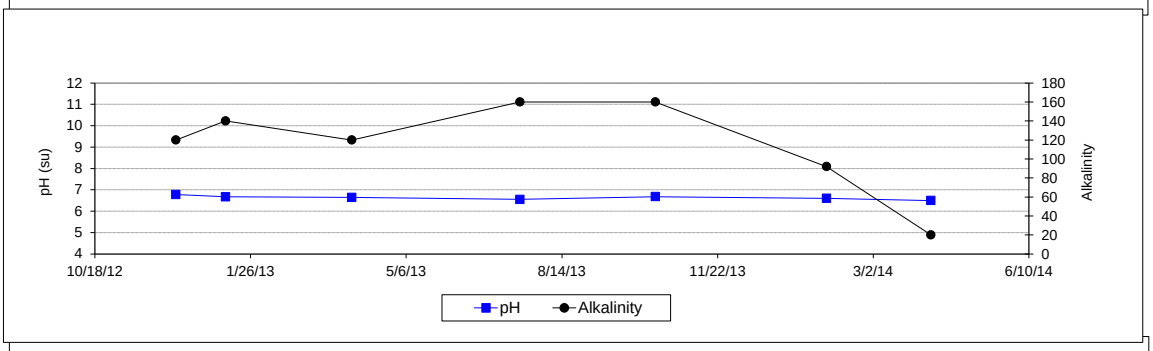



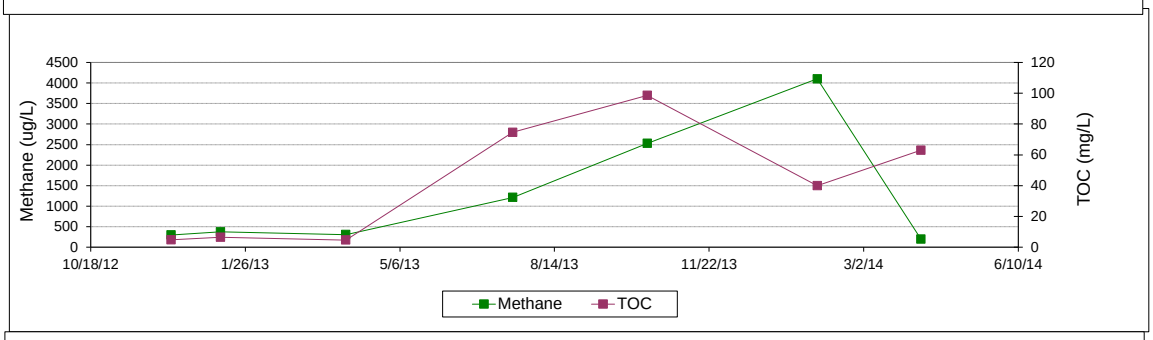



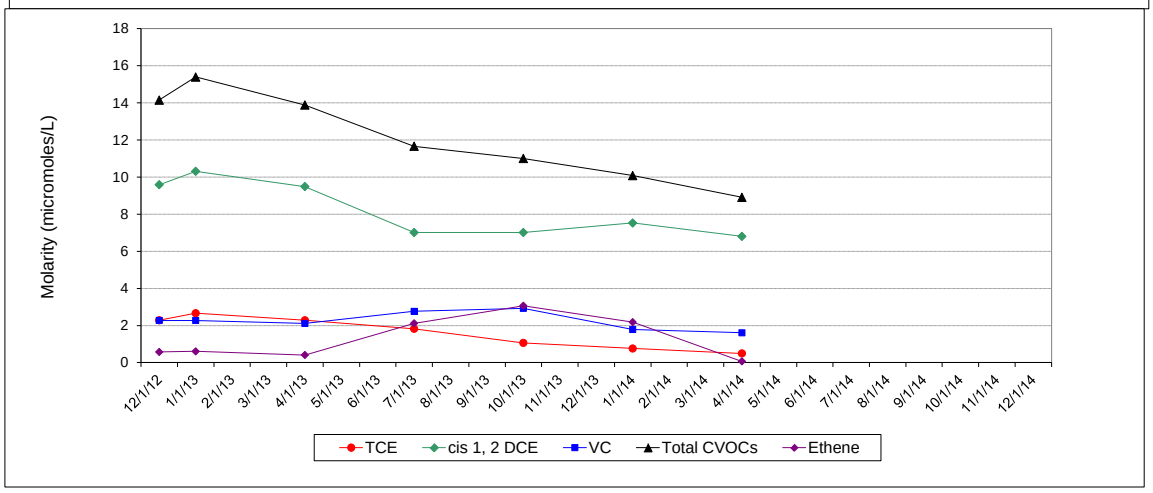



Northern Area Remediation Monitoring Data
REW-7
Former Raytheon Facility, Wayland, MA

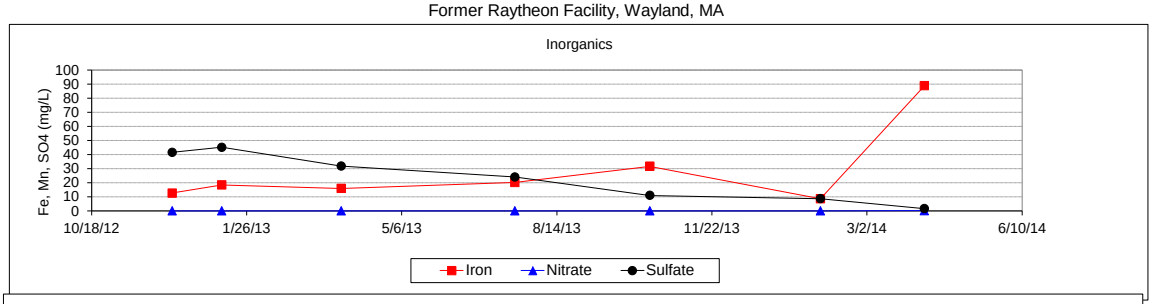


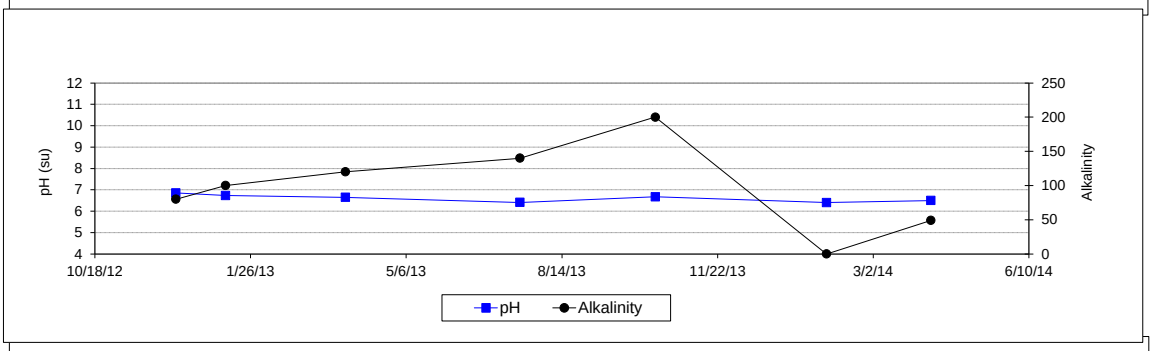



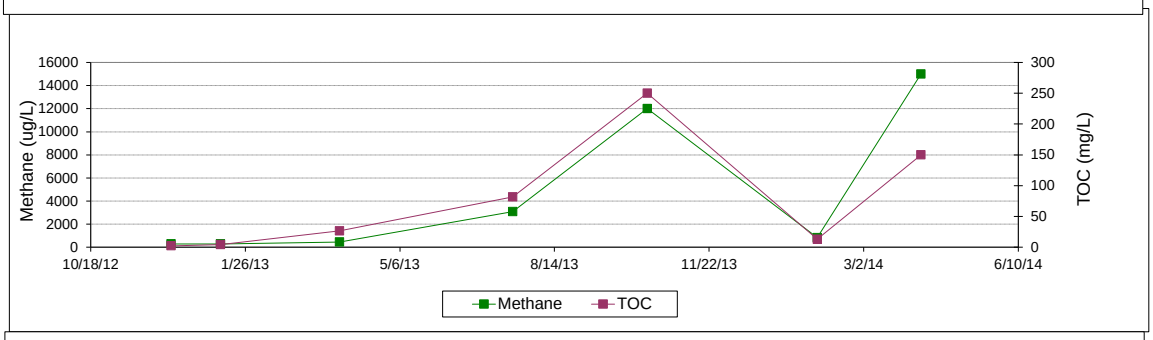



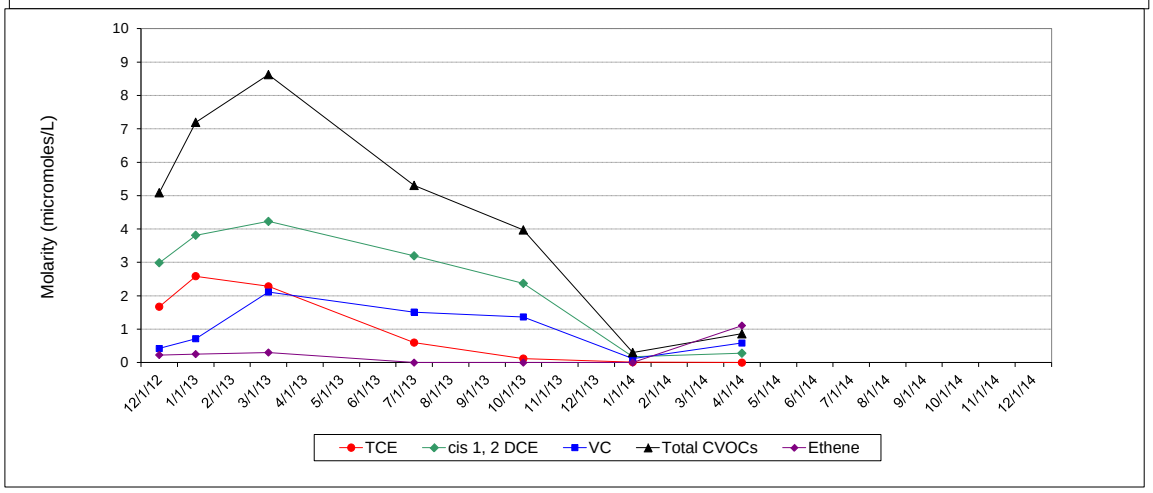



Northern Area Remediation Monitoring Data
REW-8
Former Raytheon Facility, Wayland, MA

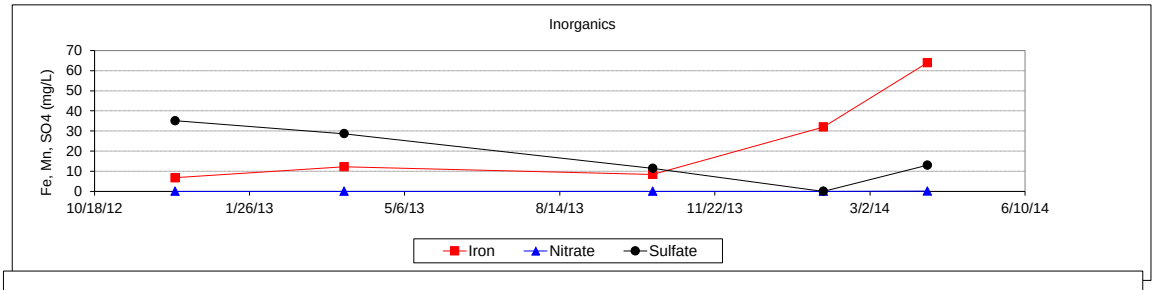


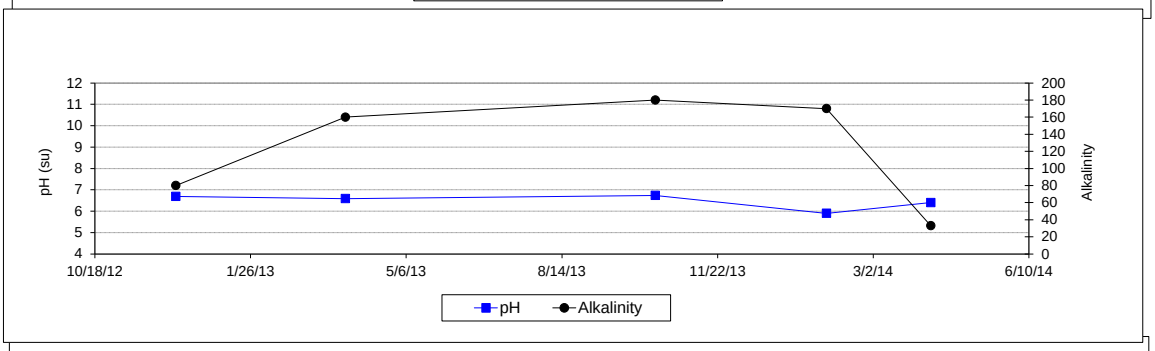



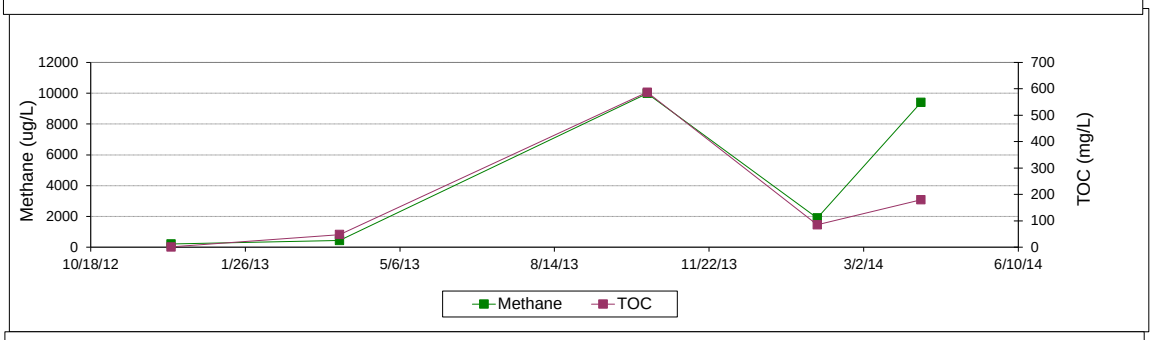



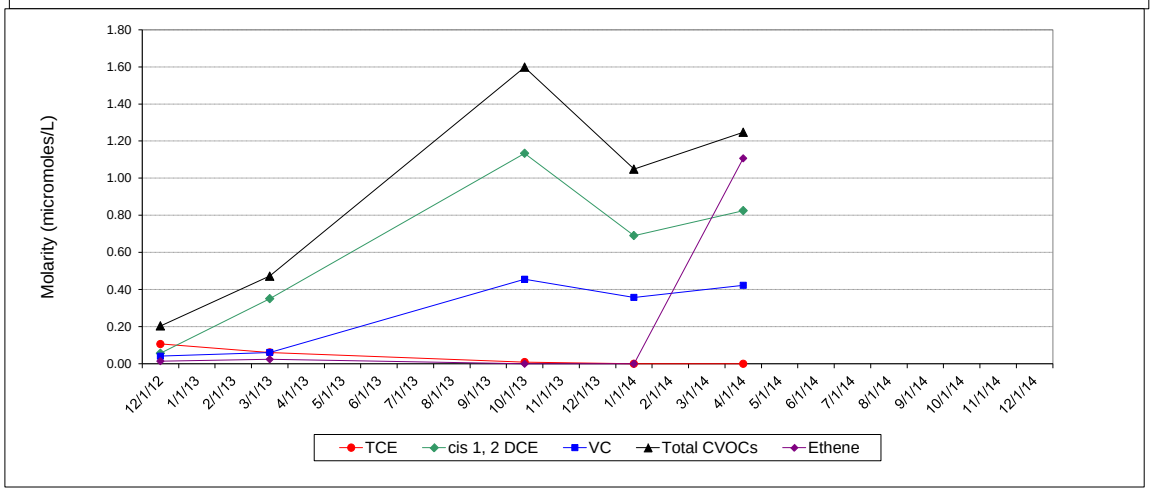



Northern Area Remediation Monitoring Data
REW-9
Former Raytheon Facility, Wayland, MA

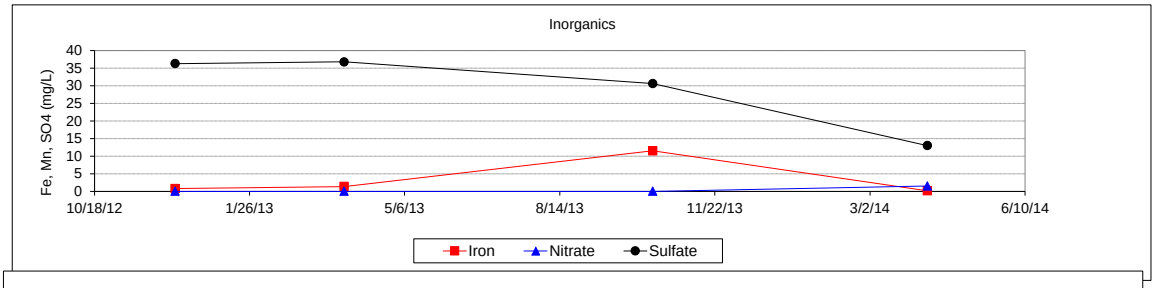


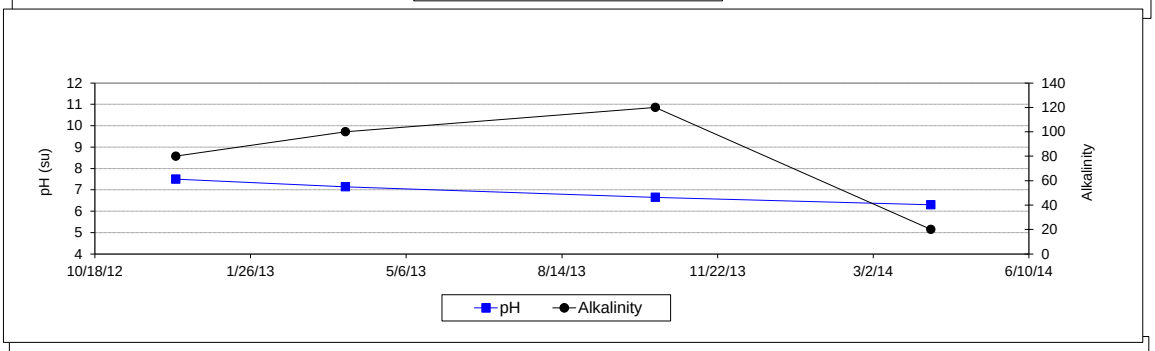



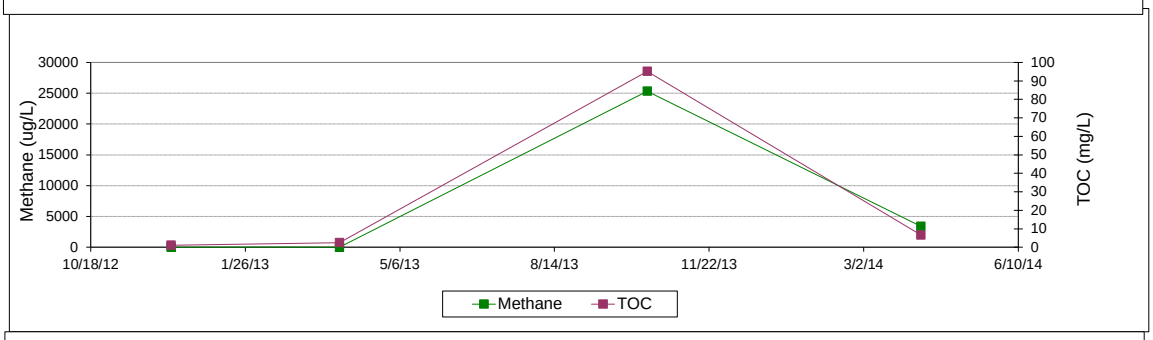



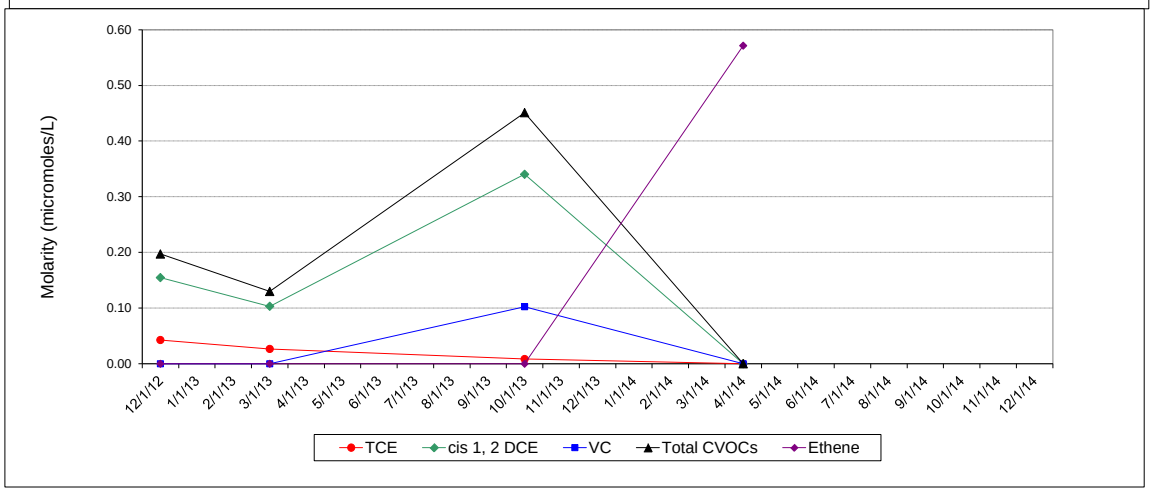



Northern Area Remediation Monitoring Data
REW-10
Former Raytheon Facility, Wayland, MA

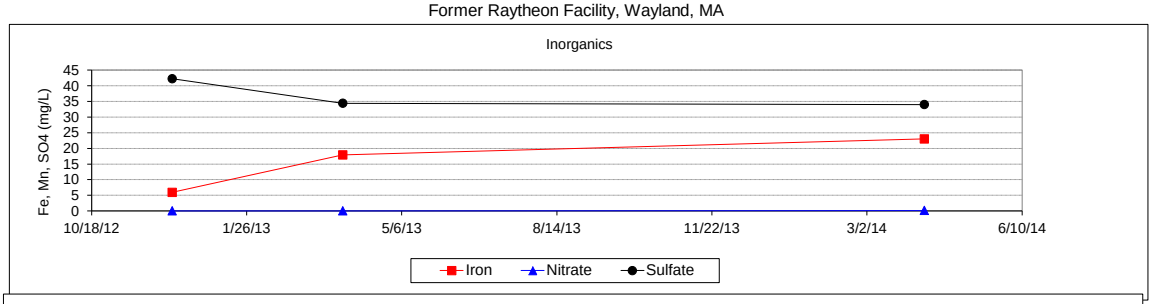


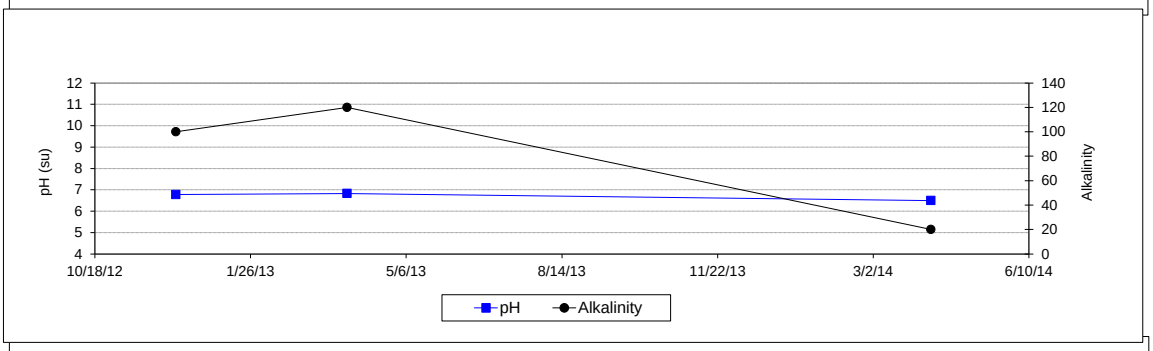



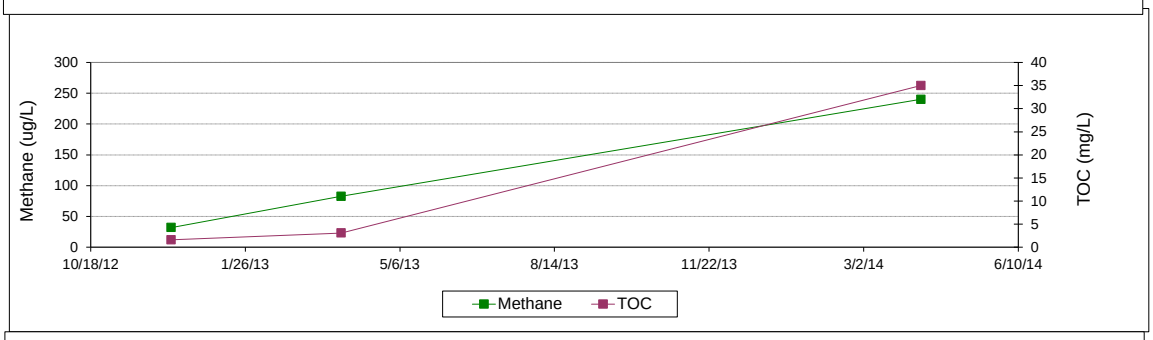



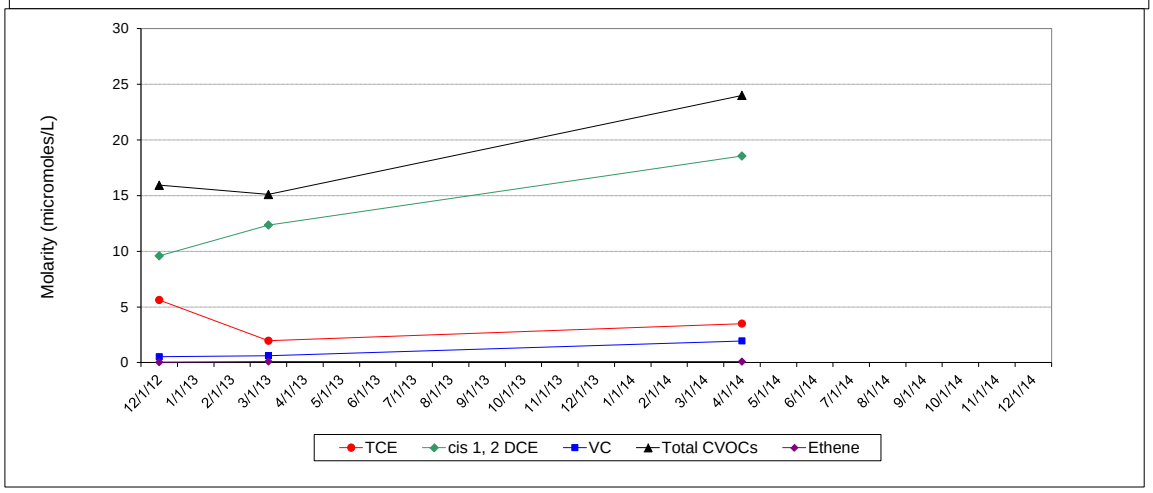



Northern Area Remediation Monitoring Data
REW-11
Former Raytheon Facility, Wayland, MA

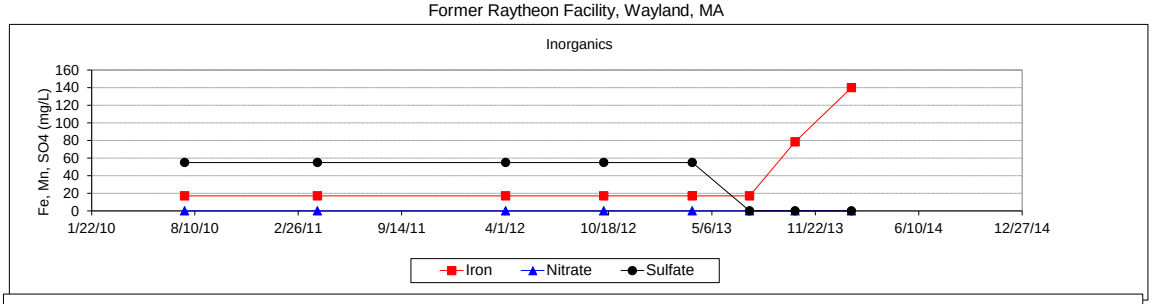


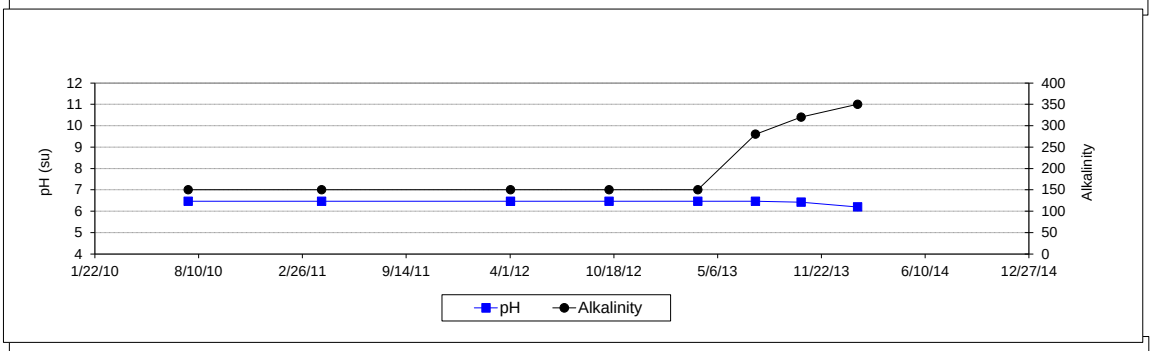



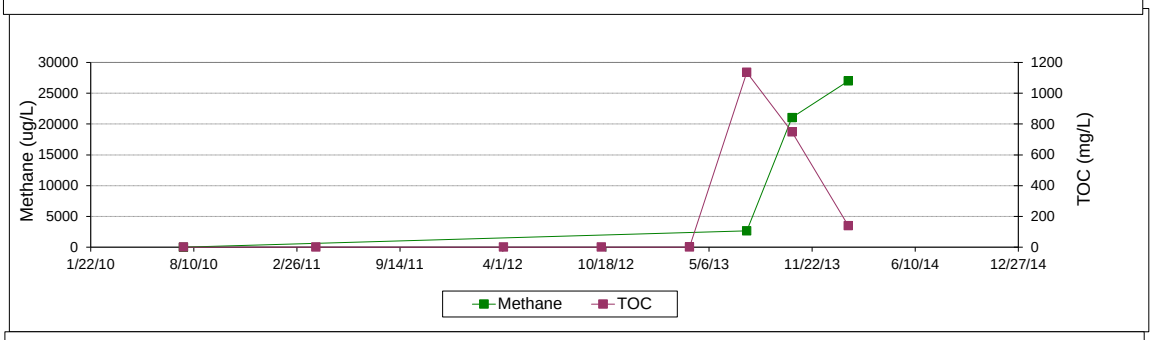



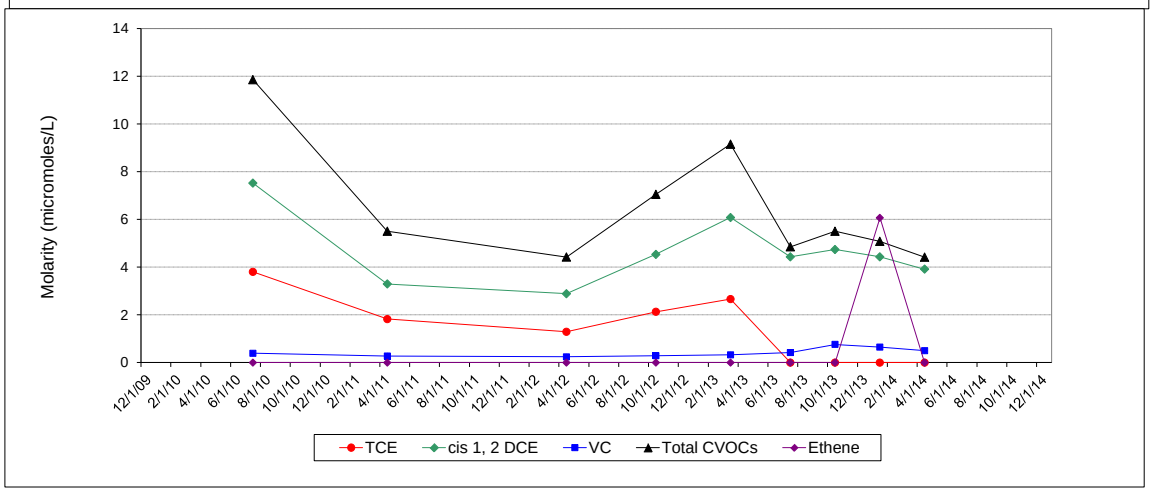



Northern Area Remediation Monitoring Data
MW-267M
Former Raytheon Facility, Wayland, MA

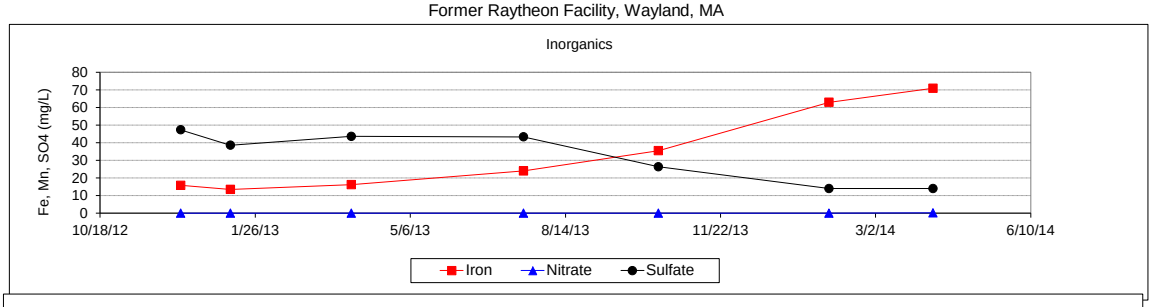


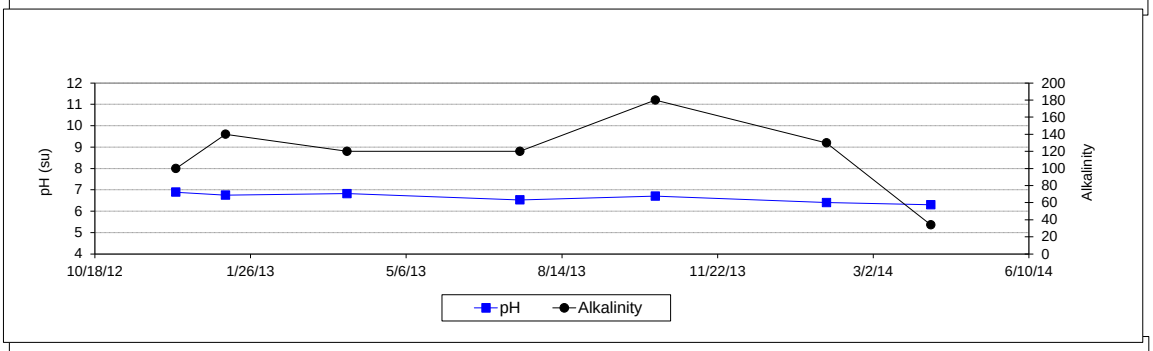



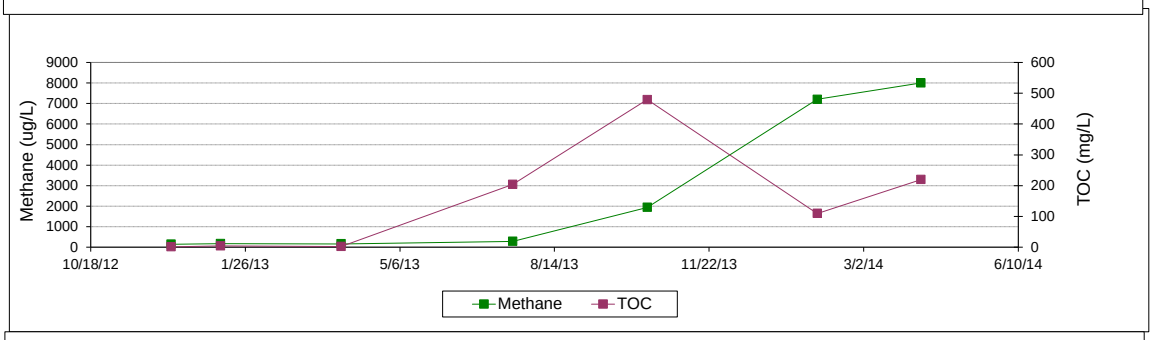



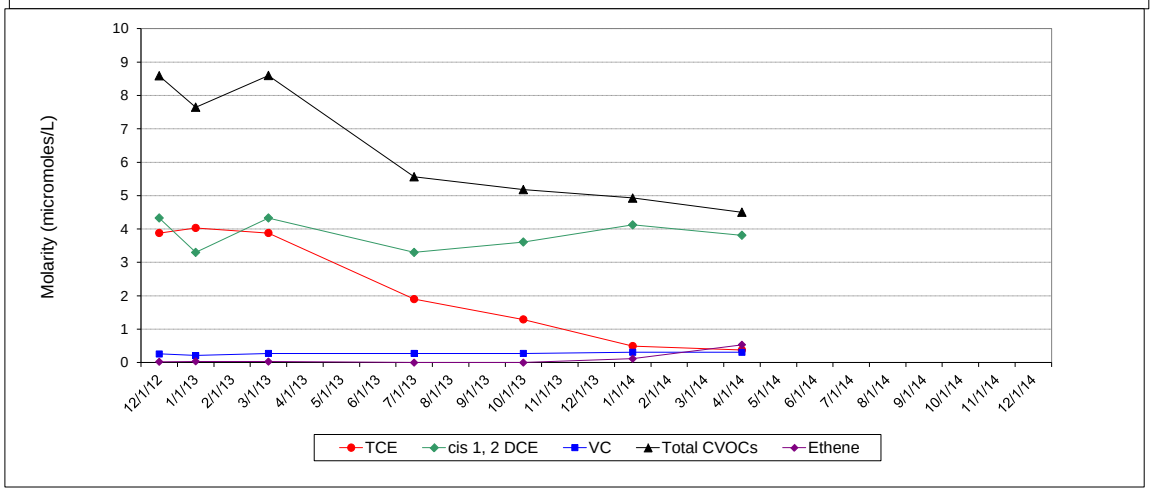



Northern Area Remediation Monitoring Data
REW-6
Former Raytheon Facility, Wayland, MA

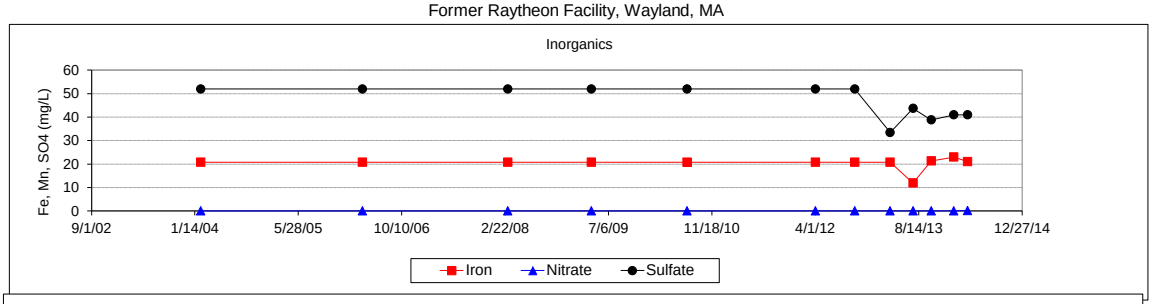


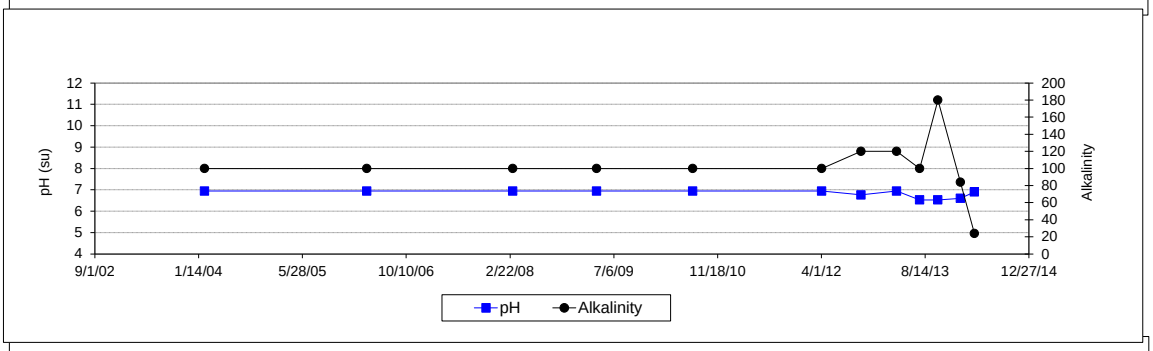



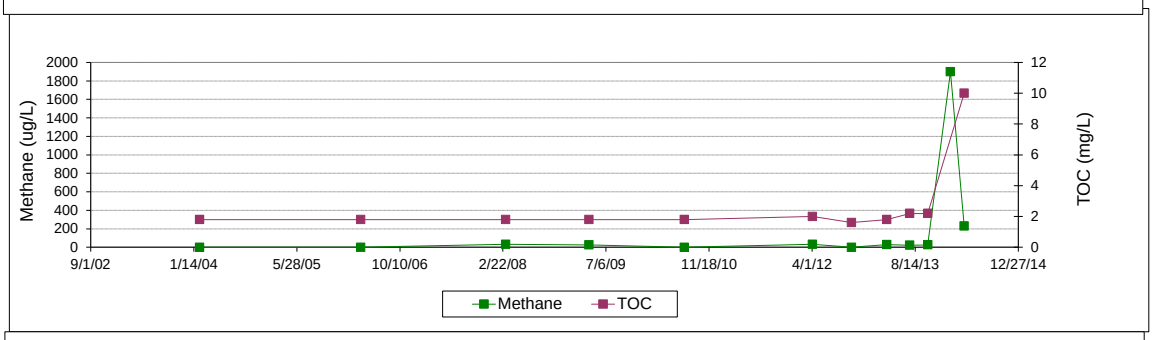



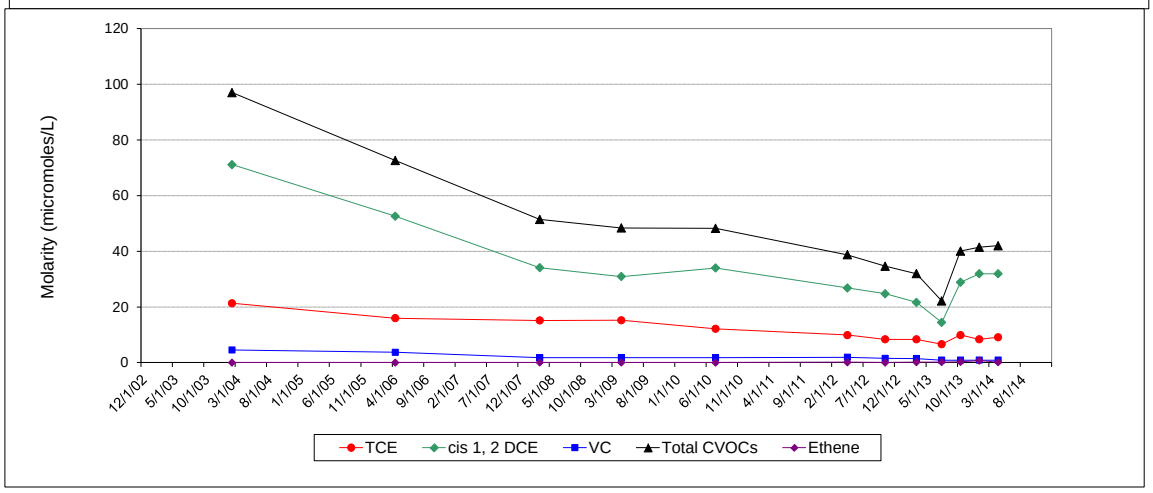



Northern Area Remediation Monitoring Data
MW-268M
Former Raytheon Facility, Wayland, MA



*Appendix B*
*Laboratory Analytical Reports*

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

# ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

TestAmerica Job ID: 480-57719-1
Client Project/Site: IDS Wayland

For:
ERM-Northeast
One Beacon Steet
5th Floor
Boston, Massachusetts 02108

Attn: Lyndsey Colburn

*Authorized for release by:*
*4/18/2014 10:30:16 AM*
Rebecca Jones, Project Management Assistant I
rebecca.jones@testamericainc.com

Designee for

Becky Mason, Project Manager II
(413)572-4000
becky.mason@testamericainc.com



*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

# Table of Contents

# Definitions/Glossary

Client: ERM-Northeast
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57719-1

## Qualifiers

### GC/MS VOA

| Qualifier | Qualifier Description |
|---|---|
| * | LCS or LCSD exceeds the control limits |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CNF | Contains no Free Liquid |
| DER | Duplicate error ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision level concentration |
| MDA | Minimum detectable activity |
| EDL | Estimated Detection Limit |
| MDC | Minimum detectable concentration |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative error ratio |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

## Job ID: 480-57719-1

### Laboratory: TestAmerica Buffalo

**Narrative**

**Job Narrative**
**480-57719-1**

**Receipt**
The samples were received on 4/11/2014 1:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.9º C.

**GC/MS VOA**
Method(s) 8260C: With the exception of diluted samples, per question G on the MassDEP Analytical Protocol Certification Form, TestAmerica's routine reporting limits do not achieve the CAM reporting limits specified in this CAM protocol for Carbon disulfide, Isopropyl ether, Naphthalene, tert-Butyl ethyl ether, tert-Amyl methyl Ether, & Tetrahydrofuran.

Method(s) 8260C: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-1025M-20140410-01 (480-57719-3). Elevated reporting limits (RLs) are provided.

Method(s) 8260C: The laboratory control sample (LCS) and / or the laboratory control sample duplicate (LCSD) for batch 175485 exceeded control limits for the following analyte: Tetrahydrofuran. MCP protocol allows for 10% of the target compounds to be outside of the limits provided the recoveries are over 10%.

Method(s) 8260C: The following sample(s) was diluted to bring the concentration of target analytes within the calibration range: MW-1018-20140410-01 (480-57719-14). Elevated reporting limits (RLs) are provided.

No other analytical or quality issues were noted.

# MassDEP Analytical Protocol Certification Form

Laboratory Name: **TestAmerica Buffalo** Project #: **480-57719-1**

Project Location: **IDS Wayland** RTN:

**This form provides certifications for the following data set: list Laboratory Sample ID Number(s):**

**480-57719-1(1-34**

Matrices: [x] Groundwater/Surface Water [ ] Soil/Sediment [ ] Drinking Water [ ] Air [ ] Other:

**CAM Protocols (check all that apply below):**

| | | | | | |
|---|---|---|---|---|---|
| 8260 VOC CAM II A [x] | 7470/7471 Hg CAM III B [ ] | Mass DEP VPH CAM IV A [ ] | 8081 Pesticides CAM V B [ ] | 7196 Hex Cr CAM VI B [ ] | Mass DEP APH CAM IX A [ ] |
| 8270 SVOC CAM II B [ ] | 7010 Metals CAM III C [ ] | Mass DEP EPH CAM IV B [ ] | 8151 Herbicides CAM V C [ ] | 8330 Explosives CAM VIII A [ ] | TO-15 VOC CAM IX B [ ] |
| 6010 Metals CAM III A [ ] | 6020 Metals CAM III D [ ] | 8082 PCB CAM V A [ ] | 9014 Total Cyanide/PAC CAM VI A [ ] | 6860 Perchlorate CAM VIII B [ ] | |

**Affirmative Responses to Questions A through F are required for "Presumptive Certainty" status**

| | | |
|---|---|---|
| **A** | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding time. | [x] Yes [ ] No |
| **B** | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | [x] Yes [ ] No |
| **C** | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | [x] Yes [ ] No |
| **D** | Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | [x] Yes [ ] No |
| **E** | a. VPH, EPH and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).<br>b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | [ ] Yes [ ] No<br>[ ] Yes [ ] No |
| **F** | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | [x] Yes [ ] No |

**Responses to Questions G, H and I below are required for "Presumptive Certainty" status**

| | | |
|---|---|---|
| **G** | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)? | [ ] Yes [x] No[1] |

***Data User Note:* Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WCS-07-350**

| | | |
|---|---|---|
| **H** | Were **all** QC performance standards specified in the CAM protocol(s) achieved? | [ ] Yes [x] No[1] |
| **I** | Were results reported for the complete analyte list specified in the selected CAM protocol(s) ? | [x] Yes [ ] No[1] |

[1] All negative responses must be addressed in an attached laboratory narrative.

***I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, is accurate and complete.***

Signature: Position: Project Management Assistant

Printed Name: Rebecca Jones Date: 4/18/14 10:27

# Detection Summary

Client: ERM-Northeast
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57719-1

## Client Sample ID: MW-1030-20140410-01 — Lab Sample ID: 480-57719-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 4.1 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| 1,1-Dichloroethene | 2.7 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Acetone | 76 | | 50 | | ug/L | 1 | | 8260C | Total/NA |
| Methyl tert-butyl ether | 1.7 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Trichloroethene | 39 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |

## Client Sample ID: MW-1028-20140410-01 — Lab Sample ID: 480-57719-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 80 | | 50 | | ug/L | 1 | | 8260C | Total/NA |
| Trichloroethene | 3.3 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |

## Client Sample ID: MW-1025M-20140410-01 — Lab Sample ID: 480-57719-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 2.9 | | 2.0 | | ug/L | 2 | | 8260C | Total/NA |
| 1,1-Dichloroethene | 4.8 | | 2.0 | | ug/L | 2 | | 8260C | Total/NA |
| cis-1,2-Dichloroethene | 3.4 | | 2.0 | | ug/L | 2 | | 8260C | Total/NA |
| Trichloroethene | 83 | | 2.0 | | ug/L | 2 | | 8260C | Total/NA |

## Client Sample ID: DUP-003-20140410-01 — Lab Sample ID: 480-57719-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 2.9 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| 1,1-Dichloroethane | 1.8 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| 1,1-Dichloroethene | 4.9 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Acetone | 81 | | 50 | | ug/L | 1 | | 8260C | Total/NA |
| cis-1,2-Dichloroethene | 3.6 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Trichloroethene | 85 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |

## Client Sample ID: MW-1015D-20140410-01 — Lab Sample ID: 480-57719-5

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 82 | | 50 | | ug/L | 1 | | 8260C | Total/NA |
| cis-1,2-Dichloroethene | 1.9 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Tetrachloroethene | 2.0 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Trichloroethene | 23 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |

## Client Sample ID: MW-1033-20140410-01 — Lab Sample ID: 480-57719-6

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 80 | | 50 | | ug/L | 1 | | 8260C | Total/NA |

## Client Sample ID: DUP-002-20140410-01 — Lab Sample ID: 480-57719-7

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | 1.5 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Acetone | 75 | | 50 | | ug/L | 1 | | 8260C | Total/NA |
| cis-1,2-Dichloroethene | 41 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Trichloroethene | 1.0 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: ERM-Northeast
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57719-1

## Client Sample ID: MW-1023-20140410-01 — Lab Sample ID: 480-57719-8

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 80 | | 50 | | ug/L | 1 | | 8260C | Total/NA |
| cis-1,2-Dichloroethene | 3.5 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Trichloroethene | 13 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |

## Client Sample ID: MW-1010M-20140410-01 — Lab Sample ID: 480-57719-9

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 77 | | 50 | | ug/L | 1 | | 8260C | Total/NA |

## Client Sample ID: MW-1022-20140410-01 — Lab Sample ID: 480-57719-10

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 79 | | 50 | | ug/L | 1 | | 8260C | Total/NA |
| Trichloroethene | 3.0 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |

## Client Sample ID: MW-1019B-20140410-01 — Lab Sample ID: 480-57719-11

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 79 | | 50 | | ug/L | 1 | | 8260C | Total/NA |
| Trichloroethene | 2.1 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |

## Client Sample ID: MW-1032-20140410-01 — Lab Sample ID: 480-57719-12

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | 1.0 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| 1,1-Dichloroethene | 1.9 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Methyl tert-butyl ether | 4.1 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Trichloroethene | 11 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |

## Client Sample ID: MW-1017D-20140410-01 — Lab Sample ID: 480-57719-13

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 78 | | 50 | | ug/L | 1 | | 8260C | Total/NA |
| cis-1,2-Dichloroethene | 11 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Trichloroethene | 29 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |

## Client Sample ID: MW-1018-20140410-01 — Lab Sample ID: 480-57719-14

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 42 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| 1,1-Dichloroethene | 3.7 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Acetone | 81 | | 50 | | ug/L | 1 | | 8260C | Total/NA |
| Trichloroethene - DL | 170 | | 4.0 | | ug/L | 4 | | 8260C | Total/NA |

## Client Sample ID: MW-1031-20140410-01 — Lab Sample ID: 480-57719-15

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 79 | | 50 | | ug/L | 1 | | 8260C | Total/NA |
| Trichloroethene | 2.9 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: ERM-Northeast
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57719-1

## Client Sample ID: MW-1008-20140410-01 — Lab Sample ID: 480-57719-16

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 83 | | 50 | | ug/L | 1 | | 8260C | Total/NA |
| Trichloroethene | 3.1 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |

## Client Sample ID: MW-1025D-20140410-01 — Lab Sample ID: 480-57719-17

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| cis-1,2-Dichloroethene | 25 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |

## Client Sample ID: MW-1011-20140410-01 — Lab Sample ID: 480-57719-18

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 80 | | 50 | | ug/L | 1 | | 8260C | Total/NA |
| cis-1,2-Dichloroethene | 12 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Trichloroethene | 22 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |

## Client Sample ID: MW-1024D-20140410-01 — Lab Sample ID: 480-57719-19

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 85 | | 50 | | ug/L | 1 | | 8260C | Total/NA |
| cis-1,2-Dichloroethene | 4.2 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Trichloroethene | 14 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |

## Client Sample ID: MW-1020-20140410-01 — Lab Sample ID: 480-57719-20

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 1.6 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| 1,1-Dichloroethane | 1.0 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Acetone | 81 | | 50 | | ug/L | 1 | | 8260C | Total/NA |
| Trichloroethene | 21 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |

## Client Sample ID: MW-1034-20140410-01 — Lab Sample ID: 480-57719-21

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 81 | | 50 | | ug/L | 1 | | 8260C | Total/NA |
| cis-1,2-Dichloroethene | 1.9 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Trichloroethene | 5.0 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |

## Client Sample ID: DUP-004-20140410-01 — Lab Sample ID: 480-57719-22

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 79 | | 50 | | ug/L | 1 | | 8260C | Total/NA |

## Client Sample ID: MW-1010D-20140410-01 — Lab Sample ID: 480-57719-23

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 83 | | 50 | | ug/L | 1 | | 8260C | Total/NA |
| cis-1,2-Dichloroethene | 1.3 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Trichloroethene | 5.3 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: ERM-Northeast
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57719-1

## Client Sample ID: MW-1027-20140410-01 — Lab Sample ID: 480-57719-24

No Detections.

## Client Sample ID: MW-1016D-20140410-01 — Lab Sample ID: 480-57719-25

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | 1.5 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Acetone | 80 | | 50 | | ug/L | 1 | | 8260C | Total/NA |
| cis-1,2-Dichloroethene | 42 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Trichloroethene | 1.1 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |

## Client Sample ID: MW-1013-20140410-01 — Lab Sample ID: 480-57719-26

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 87 | | 50 | | ug/L | 1 | | 8260C | Total/NA |

## Client Sample ID: TB-001-20140410-01 — Lab Sample ID: 480-57719-27

No Detections.

## Client Sample ID: MW-1009-20140410-01 — Lab Sample ID: 480-57719-28

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 83 | | 50 | | ug/L | 1 | | 8260C | Total/NA |
| Trichlorofluoromethane | 1.2 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |

## Client Sample ID: MW-1006-20140410-01 — Lab Sample ID: 480-57719-29

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 84 | | 50 | | ug/L | 1 | | 8260C | Total/NA |

## Client Sample ID: MW-1005-20140410-01 — Lab Sample ID: 480-57719-30

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 84 | | 50 | | ug/L | 1 | | 8260C | Total/NA |
| cis-1,2-Dichloroethene | 3.6 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Trichloroethene | 13 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |

## Client Sample ID: MW-1004-20140410-01 — Lab Sample ID: 480-57719-31

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 82 | | 50 | | ug/L | 1 | | 8260C | Total/NA |

## Client Sample ID: DUP-001-20140410-01 — Lab Sample ID: 480-57719-32

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 83 | | 50 | | ug/L | 1 | | 8260C | Total/NA |
| cis-1,2-Dichloroethene | 3.6 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Trichloroethene | 12 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |

## Client Sample ID: MW-1002B-20140410-01 — Lab Sample ID: 480-57719-33

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: ERM-Northeast
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57719-1

## Client Sample ID: MW-1002B-20140410-01 (Continued) — Lab Sample ID: 480-57719-33

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 87 | | 50 | | ug/L | 1 | | 8260C | Total/NA |

## Client Sample ID: MW-1003-20140410-01 — Lab Sample ID: 480-57719-34

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 80 | | 50 | | ug/L | 1 | | 8260C | Total/NA |
| cis-1,2-Dichloroethene | 3.3 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Trichloroethene | 5.2 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |

This Detection Summary does not include radiochemical test results.

# Client Sample Results

Client: ERM-Northeast
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57719-1

## Client Sample ID: MW-1030-20140410-01

**Lab Sample ID: 480-57719-1**

**Date Collected: 04/10/14 10:11**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 23:46 | 1 |
| **1,1,1-Trichloroethane** | **4.1** | | 1.0 | | ug/L | | | 04/11/14 23:46 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/11/14 23:46 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 23:46 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 23:46 | 1 |
| **1,1-Dichloroethene** | **2.7** | | 1.0 | | ug/L | | | 04/11/14 23:46 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/11/14 23:46 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 23:46 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 23:46 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 23:46 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 23:46 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/11/14 23:46 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 23:46 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 23:46 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 23:46 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 23:46 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 23:46 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 23:46 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 23:46 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/11/14 23:46 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 23:46 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 04/11/14 23:46 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/11/14 23:46 | 1 |
| 2-Hexanone | ND | | 10 | | ug/L | | | 04/11/14 23:46 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/11/14 23:46 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/11/14 23:46 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/11/14 23:46 | 1 |
| **Acetone** | **76** | | 50 | | ug/L | | | 04/11/14 23:46 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/11/14 23:46 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 23:46 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/11/14 23:46 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/11/14 23:46 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/11/14 23:46 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/11/14 23:46 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 23:46 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/11/14 23:46 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/11/14 23:46 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/11/14 23:46 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/11/14 23:46 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/11/14 23:46 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 23:46 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/11/14 23:46 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/11/14 23:46 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/11/14 23:46 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/11/14 23:46 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 23:46 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/11/14 23:46 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/11/14 23:46 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/11/14 23:46 | 1 |

## Client Sample ID: MW-1030-20140410-01

**Lab Sample ID: 480-57719-1**

**Date Collected: 04/10/14 10:11**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 23:46 | 1 |
| **Methyl tert-butyl ether** | **1.7** | | 1.0 | | ug/L | | | 04/11/14 23:46 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/11/14 23:46 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/11/14 23:46 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/11/14 23:46 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 23:46 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 23:46 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/11/14 23:46 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 23:46 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/11/14 23:46 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/11/14 23:46 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/11/14 23:46 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 23:46 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 23:46 | 1 |
| Tetrahydrofuran | ND | | 10 | | ug/L | | | 04/11/14 23:46 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 04/11/14 23:46 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 23:46 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/11/14 23:46 | 1 |
| **Trichloroethene** | **39** | | 1.0 | | ug/L | | | 04/11/14 23:46 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/11/14 23:46 | 1 |
| Vinyl chloride | ND | | 1.0 | | ug/L | | | 04/11/14 23:46 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/11/14 23:46 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *99* | | *70 - 130* | | *04/11/14 23:46* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *103* | | *70 - 130* | | *04/11/14 23:46* | *1* |
| *4-Bromofluorobenzene (Surr)* | *97* | | *70 - 130* | | *04/11/14 23:46* | *1* |

## Client Sample ID: MW-1028-20140410-01

**Lab Sample ID: 480-57719-2**

**Date Collected: 04/10/14 09:25**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 00:10 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 00:10 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/12/14 00:10 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 00:10 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 00:10 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/12/14 00:10 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/12/14 00:10 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 00:10 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 00:10 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 00:10 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 00:10 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/12/14 00:10 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 00:10 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 00:10 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 00:10 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 00:10 | 1 |

**Client Sample ID: MW-1028-20140410-01**
**Date Collected: 04/10/14 09:25**
**Date Received: 04/11/14 01:45**

**Lab Sample ID: 480-57719-2**
**Matrix: Water**

**Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 00:10 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 00:10 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 00:10 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/12/14 00:10 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 00:10 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 04/12/14 00:10 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/12/14 00:10 | 1 |
| 2-Hexanone | ND | | 10 | | ug/L | | | 04/12/14 00:10 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/12/14 00:10 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/12/14 00:10 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/12/14 00:10 | 1 |
| **Acetone** | **80** | | 50 | | ug/L | | | 04/12/14 00:10 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/12/14 00:10 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 00:10 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/12/14 00:10 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/12/14 00:10 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/12/14 00:10 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/12/14 00:10 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 00:10 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/12/14 00:10 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/12/14 00:10 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/12/14 00:10 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/12/14 00:10 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/12/14 00:10 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/12/14 00:10 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/12/14 00:10 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/12/14 00:10 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/12/14 00:10 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/12/14 00:10 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 00:10 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/12/14 00:10 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/12/14 00:10 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/12/14 00:10 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 00:10 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/12/14 00:10 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/12/14 00:10 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/12/14 00:10 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/12/14 00:10 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 00:10 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 00:10 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/12/14 00:10 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 00:10 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/12/14 00:10 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/12/14 00:10 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/12/14 00:10 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 00:10 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/12/14 00:10 | 1 |
| Tetrahydrofuran | ND | | 10 | | ug/L | | | 04/12/14 00:10 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 04/12/14 00:10 | 1 |

## Client Sample ID: MW-1028-20140410-01

**Lab Sample ID: 480-57719-2**

**Date Collected: 04/10/14 09:25**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/12/14 00:10 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/12/14 00:10 | 1 |
| **Trichloroethene** | **3.3** | | 1.0 | | ug/L | | | 04/12/14 00:10 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/12/14 00:10 | 1 |
| Vinyl chloride | ND | | 1.0 | | ug/L | | | 04/12/14 00:10 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/12/14 00:10 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *100* | | *70 - 130* | | *04/12/14 00:10* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *105* | | *70 - 130* | | *04/12/14 00:10* | *1* |
| *4-Bromofluorobenzene (Surr)* | *96* | | *70 - 130* | | *04/12/14 00:10* | *1* |

## Client Sample ID: MW-1025M-20140410-01

**Lab Sample ID: 480-57719-3**

**Date Collected: 04/10/14 08:55**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 2.0 | | ug/L | | | 04/12/14 00:34 | 2 |
| **1,1,1-Trichloroethane** | **2.9** | | 2.0 | | ug/L | | | 04/12/14 00:34 | 2 |
| 1,1,2,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 00:34 | 2 |
| 1,1,2-Trichloroethane | ND | | 2.0 | | ug/L | | | 04/12/14 00:34 | 2 |
| 1,1-Dichloroethane | ND | | 2.0 | | ug/L | | | 04/12/14 00:34 | 2 |
| **1,1-Dichloroethene** | **4.8** | | 2.0 | | ug/L | | | 04/12/14 00:34 | 2 |
| 1,1-Dichloropropene | ND | | 2.0 | | ug/L | | | 04/12/14 00:34 | 2 |
| 1,2,3-Trichlorobenzene | ND | | 2.0 | | ug/L | | | 04/12/14 00:34 | 2 |
| 1,2,3-Trichloropropane | ND | | 2.0 | | ug/L | | | 04/12/14 00:34 | 2 |
| 1,2,4-Trichlorobenzene | ND | | 2.0 | | ug/L | | | 04/12/14 00:34 | 2 |
| 1,2,4-Trimethylbenzene | ND | | 2.0 | | ug/L | | | 04/12/14 00:34 | 2 |
| 1,2-Dibromo-3-Chloropropane | ND | | 10 | | ug/L | | | 04/12/14 00:34 | 2 |
| 1,2-Dichlorobenzene | ND | | 2.0 | | ug/L | | | 04/12/14 00:34 | 2 |
| 1,2-Dichloroethane | ND | | 2.0 | | ug/L | | | 04/12/14 00:34 | 2 |
| 1,2-Dichloropropane | ND | | 2.0 | | ug/L | | | 04/12/14 00:34 | 2 |
| 1,3,5-Trimethylbenzene | ND | | 2.0 | | ug/L | | | 04/12/14 00:34 | 2 |
| 1,3-Dichlorobenzene | ND | | 2.0 | | ug/L | | | 04/12/14 00:34 | 2 |
| 1,3-Dichloropropane | ND | | 2.0 | | ug/L | | | 04/12/14 00:34 | 2 |
| 1,4-Dichlorobenzene | ND | | 2.0 | | ug/L | | | 04/12/14 00:34 | 2 |
| 1,4-Dioxane | ND | | 100 | | ug/L | | | 04/12/14 00:34 | 2 |
| 2,2-Dichloropropane | ND | | 2.0 | | ug/L | | | 04/12/14 00:34 | 2 |
| 2-Butanone (MEK) | ND | | 20 | | ug/L | | | 04/12/14 00:34 | 2 |
| 2-Chlorotoluene | ND | | 2.0 | | ug/L | | | 04/12/14 00:34 | 2 |
| 2-Hexanone | ND | | 20 | | ug/L | | | 04/12/14 00:34 | 2 |
| 4-Chlorotoluene | ND | | 2.0 | | ug/L | | | 04/12/14 00:34 | 2 |
| 4-Isopropyltoluene | ND | | 2.0 | | ug/L | | | 04/12/14 00:34 | 2 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 20 | | ug/L | | | 04/12/14 00:34 | 2 |
| Acetone | ND | | 100 | | ug/L | | | 04/12/14 00:34 | 2 |
| Benzene | ND | | 2.0 | | ug/L | | | 04/12/14 00:34 | 2 |
| Bromobenzene | ND | | 2.0 | | ug/L | | | 04/12/14 00:34 | 2 |
| Bromoform | ND | | 2.0 | | ug/L | | | 04/12/14 00:34 | 2 |
| Bromomethane | ND | | 4.0 | | ug/L | | | 04/12/14 00:34 | 2 |

**Client Sample ID: MW-1025M-20140410-01**
**Date Collected: 04/10/14 08:55**
**Date Received: 04/11/14 01:45**

**Lab Sample ID: 480-57719-3**
**Matrix: Water**

**Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | ND | | 20 | | ug/L | | | 04/12/14 00:34 | 2 |
| Carbon tetrachloride | ND | | 2.0 | | ug/L | | | 04/12/14 00:34 | 2 |
| Chlorobenzene | ND | | 2.0 | | ug/L | | | 04/12/14 00:34 | 2 |
| Chlorobromomethane | ND | | 2.0 | | ug/L | | | 04/12/14 00:34 | 2 |
| Chlorodibromomethane | ND | | 1.0 | | ug/L | | | 04/12/14 00:34 | 2 |
| Chloroethane | ND | | 4.0 | | ug/L | | | 04/12/14 00:34 | 2 |
| Chloroform | ND | | 2.0 | | ug/L | | | 04/12/14 00:34 | 2 |
| Chloromethane | ND | | 4.0 | | ug/L | | | 04/12/14 00:34 | 2 |
| **cis-1,2-Dichloroethene** | **3.4** | | 2.0 | | ug/L | | | 04/12/14 00:34 | 2 |
| cis-1,3-Dichloropropene | ND | | 0.80 | | ug/L | | | 04/12/14 00:34 | 2 |
| Dichlorobromomethane | ND | | 1.0 | | ug/L | | | 04/12/14 00:34 | 2 |
| Dichlorodifluoromethane | ND | | 2.0 | | ug/L | | | 04/12/14 00:34 | 2 |
| Ethyl ether | ND | | 2.0 | | ug/L | | | 04/12/14 00:34 | 2 |
| Ethylbenzene | ND | | 2.0 | | ug/L | | | 04/12/14 00:34 | 2 |
| Ethylene Dibromide | ND | | 2.0 | | ug/L | | | 04/12/14 00:34 | 2 |
| Hexachlorobutadiene | ND | | 0.80 | | ug/L | | | 04/12/14 00:34 | 2 |
| Isopropyl ether | ND | | 20 | | ug/L | | | 04/12/14 00:34 | 2 |
| Isopropylbenzene | ND | | 2.0 | | ug/L | | | 04/12/14 00:34 | 2 |
| Methyl tert-butyl ether | ND | | 2.0 | | ug/L | | | 04/12/14 00:34 | 2 |
| Methylene Chloride | ND | | 2.0 | | ug/L | | | 04/12/14 00:34 | 2 |
| m-Xylene & p-Xylene | ND | | 4.0 | | ug/L | | | 04/12/14 00:34 | 2 |
| Naphthalene | ND | | 10 | | ug/L | | | 04/12/14 00:34 | 2 |
| n-Butylbenzene | ND | | 2.0 | | ug/L | | | 04/12/14 00:34 | 2 |
| N-Propylbenzene | ND | | 2.0 | | ug/L | | | 04/12/14 00:34 | 2 |
| o-Xylene | ND | | 2.0 | | ug/L | | | 04/12/14 00:34 | 2 |
| sec-Butylbenzene | ND | | 2.0 | | ug/L | | | 04/12/14 00:34 | 2 |
| Styrene | ND | | 2.0 | | ug/L | | | 04/12/14 00:34 | 2 |
| Tert-amyl methyl ether | ND | | 10 | | ug/L | | | 04/12/14 00:34 | 2 |
| Tert-butyl ethyl ether | ND | | 10 | | ug/L | | | 04/12/14 00:34 | 2 |
| tert-Butylbenzene | ND | | 2.0 | | ug/L | | | 04/12/14 00:34 | 2 |
| Tetrachloroethene | ND | | 2.0 | | ug/L | | | 04/12/14 00:34 | 2 |
| Tetrahydrofuran | ND | | 20 | | ug/L | | | 04/12/14 00:34 | 2 |
| Toluene | ND | | 2.0 | | ug/L | | | 04/12/14 00:34 | 2 |
| trans-1,2-Dichloroethene | ND | | 2.0 | | ug/L | | | 04/12/14 00:34 | 2 |
| trans-1,3-Dichloropropene | ND | | 0.80 | | ug/L | | | 04/12/14 00:34 | 2 |
| **Trichloroethene** | **83** | | 2.0 | | ug/L | | | 04/12/14 00:34 | 2 |
| Trichlorofluoromethane | ND | | 2.0 | | ug/L | | | 04/12/14 00:34 | 2 |
| Vinyl chloride | ND | | 2.0 | | ug/L | | | 04/12/14 00:34 | 2 |
| Dibromomethane | ND | | 2.0 | | ug/L | | | 04/12/14 00:34 | 2 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *97* | | *70 - 130* | | *04/12/14 00:34* | *2* |
| *1,2-Dichloroethane-d4 (Surr)* | *101* | | *70 - 130* | | *04/12/14 00:34* | *2* |
| *4-Bromofluorobenzene (Surr)* | *95* | | *70 - 130* | | *04/12/14 00:34* | *2* |

Client: ERM-Northeast
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57719-1

**Client Sample ID: DUP-003-20140410-01**
**Date Collected: 04/10/14 03:33**
**Date Received: 04/11/14 01:45**

**Lab Sample ID: 480-57719-4**
**Matrix: Water**

**Method: 8260C - Volatile Organic Compounds (GC/MS)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 00:58 | 1 |
| **1,1,1-Trichloroethane** | **2.9** | | 1.0 | | ug/L | | | 04/12/14 00:58 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/12/14 00:58 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 00:58 | 1 |
| **1,1-Dichloroethane** | **1.8** | | 1.0 | | ug/L | | | 04/12/14 00:58 | 1 |
| **1,1-Dichloroethene** | **4.9** | | 1.0 | | ug/L | | | 04/12/14 00:58 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/12/14 00:58 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 00:58 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 00:58 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 00:58 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 00:58 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/12/14 00:58 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 00:58 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 00:58 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 00:58 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 00:58 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 00:58 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 00:58 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 00:58 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/12/14 00:58 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 00:58 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 04/12/14 00:58 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/12/14 00:58 | 1 |
| 2-Hexanone | ND | | 10 | | ug/L | | | 04/12/14 00:58 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/12/14 00:58 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/12/14 00:58 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/12/14 00:58 | 1 |
| **Acetone** | **81** | | 50 | | ug/L | | | 04/12/14 00:58 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/12/14 00:58 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 00:58 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/12/14 00:58 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/12/14 00:58 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/12/14 00:58 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/12/14 00:58 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 00:58 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/12/14 00:58 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/12/14 00:58 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/12/14 00:58 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/12/14 00:58 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/12/14 00:58 | 1 |
| **cis-1,2-Dichloroethene** | **3.6** | | 1.0 | | ug/L | | | 04/12/14 00:58 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/12/14 00:58 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/12/14 00:58 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/12/14 00:58 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/12/14 00:58 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 00:58 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/12/14 00:58 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/12/14 00:58 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/12/14 00:58 | 1 |

## Client Sample ID: DUP-003-20140410-01

**Lab Sample ID: 480-57719-4**

**Date Collected: 04/10/14 03:33**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 00:58 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/12/14 00:58 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/12/14 00:58 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/12/14 00:58 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/12/14 00:58 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 00:58 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 00:58 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/12/14 00:58 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 00:58 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/12/14 00:58 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/12/14 00:58 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/12/14 00:58 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 00:58 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/12/14 00:58 | 1 |
| Tetrahydrofuran | ND | | 10 | | ug/L | | | 04/12/14 00:58 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 04/12/14 00:58 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/12/14 00:58 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/12/14 00:58 | 1 |
| **Trichloroethene** | **85** | | 1.0 | | ug/L | | | 04/12/14 00:58 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/12/14 00:58 | 1 |
| Vinyl chloride | ND | | 1.0 | | ug/L | | | 04/12/14 00:58 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/12/14 00:58 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *100* | | *70 - 130* | | *04/12/14 00:58* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *103* | | *70 - 130* | | *04/12/14 00:58* | *1* |
| *4-Bromofluorobenzene (Surr)* | *95* | | *70 - 130* | | *04/12/14 00:58* | *1* |

## Client Sample ID: MW-1015D-20140410-01

**Lab Sample ID: 480-57719-5**

**Date Collected: 04/10/14 08:20**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 01:21 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 01:21 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/12/14 01:21 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 01:21 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 01:21 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/12/14 01:21 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/12/14 01:21 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 01:21 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 01:21 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 01:21 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 01:21 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/12/14 01:21 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 01:21 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 01:21 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 01:21 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 01:21 | 1 |

**Client Sample ID: MW-1015D-20140410-01**
**Date Collected: 04/10/14 08:20**
**Date Received: 04/11/14 01:45**

**Lab Sample ID: 480-57719-5**
**Matrix: Water**

**Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 01:21 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 01:21 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 01:21 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/12/14 01:21 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 01:21 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 04/12/14 01:21 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/12/14 01:21 | 1 |
| 2-Hexanone | ND | | 10 | | ug/L | | | 04/12/14 01:21 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/12/14 01:21 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/12/14 01:21 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/12/14 01:21 | 1 |
| **Acetone** | **82** | | 50 | | ug/L | | | 04/12/14 01:21 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/12/14 01:21 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 01:21 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/12/14 01:21 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/12/14 01:21 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/12/14 01:21 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/12/14 01:21 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 01:21 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/12/14 01:21 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/12/14 01:21 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/12/14 01:21 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/12/14 01:21 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/12/14 01:21 | 1 |
| **cis-1,2-Dichloroethene** | **1.9** | | 1.0 | | ug/L | | | 04/12/14 01:21 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/12/14 01:21 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/12/14 01:21 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/12/14 01:21 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/12/14 01:21 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 01:21 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/12/14 01:21 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/12/14 01:21 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/12/14 01:21 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 01:21 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/12/14 01:21 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/12/14 01:21 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/12/14 01:21 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/12/14 01:21 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 01:21 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 01:21 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/12/14 01:21 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 01:21 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/12/14 01:21 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/12/14 01:21 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/12/14 01:21 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 01:21 | 1 |
| **Tetrachloroethene** | **2.0** | | 1.0 | | ug/L | | | 04/12/14 01:21 | 1 |
| Tetrahydrofuran | ND | | 10 | | ug/L | | | 04/12/14 01:21 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 04/12/14 01:21 | 1 |

## Client Sample ID: MW-1015D-20140410-01

**Lab Sample ID: 480-57719-5**

**Date Collected: 04/10/14 08:20**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/12/14 01:21 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/12/14 01:21 | 1 |
| **Trichloroethene** | **23** | | 1.0 | | ug/L | | | 04/12/14 01:21 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/12/14 01:21 | 1 |
| Vinyl chloride | ND | | 1.0 | | ug/L | | | 04/12/14 01:21 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/12/14 01:21 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *101* | | *70 - 130* | | *04/12/14 01:21* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *103* | | *70 - 130* | | *04/12/14 01:21* | *1* |
| *4-Bromofluorobenzene (Surr)* | *98* | | *70 - 130* | | *04/12/14 01:21* | *1* |

## Client Sample ID: MW-1033-20140410-01

**Lab Sample ID: 480-57719-6**

**Date Collected: 04/10/14 08:58**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 01:45 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 01:45 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/12/14 01:45 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 01:45 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 01:45 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/12/14 01:45 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/12/14 01:45 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 01:45 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 01:45 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 01:45 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 01:45 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/12/14 01:45 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 01:45 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 01:45 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 01:45 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 01:45 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 01:45 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 01:45 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 01:45 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/12/14 01:45 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 01:45 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 04/12/14 01:45 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/12/14 01:45 | 1 |
| 2-Hexanone | ND | | 10 | | ug/L | | | 04/12/14 01:45 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/12/14 01:45 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/12/14 01:45 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/12/14 01:45 | 1 |
| **Acetone** | **80** | | 50 | | ug/L | | | 04/12/14 01:45 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/12/14 01:45 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 01:45 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/12/14 01:45 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/12/14 01:45 | 1 |

**Client Sample ID: MW-1033-20140410-01**
**Date Collected: 04/10/14 08:58**
**Date Received: 04/11/14 01:45**

**Lab Sample ID: 480-57719-6**
**Matrix: Water**

**Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/12/14 01:45 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/12/14 01:45 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 01:45 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/12/14 01:45 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/12/14 01:45 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/12/14 01:45 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/12/14 01:45 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/12/14 01:45 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/12/14 01:45 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/12/14 01:45 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/12/14 01:45 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/12/14 01:45 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/12/14 01:45 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 01:45 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/12/14 01:45 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/12/14 01:45 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/12/14 01:45 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 01:45 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/12/14 01:45 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/12/14 01:45 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/12/14 01:45 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/12/14 01:45 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 01:45 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 01:45 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/12/14 01:45 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 01:45 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/12/14 01:45 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/12/14 01:45 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/12/14 01:45 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 01:45 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/12/14 01:45 | 1 |
| Tetrahydrofuran | ND | | 10 | | ug/L | | | 04/12/14 01:45 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 04/12/14 01:45 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/12/14 01:45 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/12/14 01:45 | 1 |
| Trichloroethene | ND | | 1.0 | | ug/L | | | 04/12/14 01:45 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/12/14 01:45 | 1 |
| Vinyl chloride | ND | | 1.0 | | ug/L | | | 04/12/14 01:45 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/12/14 01:45 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *99* | | *70 - 130* | | *04/12/14 01:45* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *103* | | *70 - 130* | | *04/12/14 01:45* | *1* |
| *4-Bromofluorobenzene (Surr)* | *93* | | *70 - 130* | | *04/12/14 01:45* | *1* |

Client: ERM-Northeast
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57719-1

**Client Sample ID: DUP-002-20140410-01**
**Date Collected: 04/10/14 10:10**
**Date Received: 04/11/14 01:45**

**Lab Sample ID: 480-57719-7**
**Matrix: Water**

**Method: 8260C - Volatile Organic Compounds (GC/MS)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 02:09 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 02:09 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/12/14 02:09 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 02:09 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 02:09 | 1 |
| **1,1-Dichloroethene** | **1.5** | | 1.0 | | ug/L | | | 04/12/14 02:09 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/12/14 02:09 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 02:09 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 02:09 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 02:09 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 02:09 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/12/14 02:09 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 02:09 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 02:09 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 02:09 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 02:09 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 02:09 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 02:09 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 02:09 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/12/14 02:09 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 02:09 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 04/12/14 02:09 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/12/14 02:09 | 1 |
| 2-Hexanone | ND | | 10 | | ug/L | | | 04/12/14 02:09 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/12/14 02:09 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/12/14 02:09 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/12/14 02:09 | 1 |
| **Acetone** | **75** | | 50 | | ug/L | | | 04/12/14 02:09 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/12/14 02:09 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 02:09 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/12/14 02:09 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/12/14 02:09 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/12/14 02:09 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/12/14 02:09 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 02:09 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/12/14 02:09 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/12/14 02:09 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/12/14 02:09 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/12/14 02:09 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/12/14 02:09 | 1 |
| **cis-1,2-Dichloroethene** | **41** | | 1.0 | | ug/L | | | 04/12/14 02:09 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/12/14 02:09 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/12/14 02:09 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/12/14 02:09 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/12/14 02:09 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 02:09 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/12/14 02:09 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/12/14 02:09 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/12/14 02:09 | 1 |

## Client Sample ID: DUP-002-20140410-01

**Lab Sample ID: 480-57719-7**

**Date Collected: 04/10/14 10:10**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 02:09 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/12/14 02:09 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/12/14 02:09 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/12/14 02:09 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/12/14 02:09 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 02:09 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 02:09 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/12/14 02:09 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 02:09 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/12/14 02:09 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/12/14 02:09 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/12/14 02:09 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 02:09 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/12/14 02:09 | 1 |
| Tetrahydrofuran | ND | | 10 | | ug/L | | | 04/12/14 02:09 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 04/12/14 02:09 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/12/14 02:09 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/12/14 02:09 | 1 |
| **Trichloroethene** | **1.0** | | 1.0 | | ug/L | | | 04/12/14 02:09 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/12/14 02:09 | 1 |
| Vinyl chloride | ND | | 1.0 | | ug/L | | | 04/12/14 02:09 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/12/14 02:09 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *100* | | *70 - 130* | | *04/12/14 02:09* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *102* | | *70 - 130* | | *04/12/14 02:09* | *1* |
| *4-Bromofluorobenzene (Surr)* | *96* | | *70 - 130* | | *04/12/14 02:09* | *1* |

## Client Sample ID: MW-1023-20140410-01

**Lab Sample ID: 480-57719-8**

**Date Collected: 04/10/14 13:30**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 02:33 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 02:33 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/12/14 02:33 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 02:33 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 02:33 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/12/14 02:33 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/12/14 02:33 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 02:33 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 02:33 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 02:33 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 02:33 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/12/14 02:33 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 02:33 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 02:33 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 02:33 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 02:33 | 1 |

**Client Sample ID: MW-1023-20140410-01**
**Date Collected: 04/10/14 13:30**
**Date Received: 04/11/14 01:45**

**Lab Sample ID: 480-57719-8**
**Matrix: Water**

**Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 02:33 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 02:33 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 02:33 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/12/14 02:33 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 02:33 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 04/12/14 02:33 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/12/14 02:33 | 1 |
| 2-Hexanone | ND | | 10 | | ug/L | | | 04/12/14 02:33 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/12/14 02:33 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/12/14 02:33 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/12/14 02:33 | 1 |
| **Acetone** | **80** | | 50 | | ug/L | | | 04/12/14 02:33 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/12/14 02:33 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 02:33 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/12/14 02:33 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/12/14 02:33 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/12/14 02:33 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/12/14 02:33 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 02:33 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/12/14 02:33 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/12/14 02:33 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/12/14 02:33 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/12/14 02:33 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/12/14 02:33 | 1 |
| **cis-1,2-Dichloroethene** | **3.5** | | 1.0 | | ug/L | | | 04/12/14 02:33 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/12/14 02:33 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/12/14 02:33 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/12/14 02:33 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/12/14 02:33 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 02:33 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/12/14 02:33 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/12/14 02:33 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/12/14 02:33 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 02:33 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/12/14 02:33 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/12/14 02:33 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/12/14 02:33 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/12/14 02:33 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 02:33 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 02:33 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/12/14 02:33 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 02:33 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/12/14 02:33 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/12/14 02:33 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/12/14 02:33 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 02:33 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/12/14 02:33 | 1 |
| Tetrahydrofuran | ND | | 10 | | ug/L | | | 04/12/14 02:33 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 04/12/14 02:33 | 1 |

## Client Sample ID: MW-1023-20140410-01

**Lab Sample ID: 480-57719-8**

**Date Collected: 04/10/14 13:30**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/12/14 02:33 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/12/14 02:33 | 1 |
| **Trichloroethene** | **13** | | 1.0 | | ug/L | | | 04/12/14 02:33 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/12/14 02:33 | 1 |
| Vinyl chloride | ND | | 1.0 | | ug/L | | | 04/12/14 02:33 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/12/14 02:33 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *100* | | *70 - 130* | | *04/12/14 02:33* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *102* | | *70 - 130* | | *04/12/14 02:33* | *1* |
| *4-Bromofluorobenzene (Surr)* | *96* | | *70 - 130* | | *04/12/14 02:33* | *1* |

## Client Sample ID: MW-1010M-20140410-01

**Lab Sample ID: 480-57719-9**

**Date Collected: 04/10/14 10:25**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 02:56 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 02:56 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/12/14 02:56 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 02:56 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 02:56 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/12/14 02:56 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/12/14 02:56 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 02:56 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 02:56 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 02:56 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 02:56 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/12/14 02:56 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 02:56 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 02:56 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 02:56 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 02:56 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 02:56 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 02:56 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 02:56 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/12/14 02:56 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 02:56 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 04/12/14 02:56 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/12/14 02:56 | 1 |
| 2-Hexanone | ND | | 10 | | ug/L | | | 04/12/14 02:56 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/12/14 02:56 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/12/14 02:56 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/12/14 02:56 | 1 |
| **Acetone** | **77** | | 50 | | ug/L | | | 04/12/14 02:56 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/12/14 02:56 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 02:56 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/12/14 02:56 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/12/14 02:56 | 1 |

Client: ERM-Northeast
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57719-1

**Client Sample ID: MW-1010M-20140410-01**
**Date Collected: 04/10/14 10:25**
**Date Received: 04/11/14 01:45**

**Lab Sample ID: 480-57719-9**
**Matrix: Water**

**Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/12/14 02:56 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/12/14 02:56 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 02:56 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/12/14 02:56 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/12/14 02:56 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/12/14 02:56 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/12/14 02:56 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/12/14 02:56 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/12/14 02:56 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/12/14 02:56 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/12/14 02:56 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/12/14 02:56 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/12/14 02:56 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 02:56 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/12/14 02:56 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/12/14 02:56 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/12/14 02:56 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 02:56 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/12/14 02:56 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/12/14 02:56 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/12/14 02:56 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/12/14 02:56 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 02:56 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 02:56 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/12/14 02:56 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 02:56 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/12/14 02:56 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/12/14 02:56 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/12/14 02:56 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 02:56 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/12/14 02:56 | 1 |
| Tetrahydrofuran | ND | | 10 | | ug/L | | | 04/12/14 02:56 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 04/12/14 02:56 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/12/14 02:56 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/12/14 02:56 | 1 |
| Trichloroethene | ND | | 1.0 | | ug/L | | | 04/12/14 02:56 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/12/14 02:56 | 1 |
| Vinyl chloride | ND | | 1.0 | | ug/L | | | 04/12/14 02:56 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/12/14 02:56 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *98* | | *70 - 130* | | *04/12/14 02:56* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *100* | | *70 - 130* | | *04/12/14 02:56* | *1* |
| *4-Bromofluorobenzene (Surr)* | *99* | | *70 - 130* | | *04/12/14 02:56* | *1* |

Client: ERM-Northeast
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57719-1

**Client Sample ID: MW-1022-20140410-01**
**Date Collected: 04/10/14 12:35**
**Date Received: 04/11/14 01:45**

**Lab Sample ID: 480-57719-10**
**Matrix: Water**

**Method: 8260C - Volatile Organic Compounds (GC/MS)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 03:20 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 03:20 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/12/14 03:20 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 03:20 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 03:20 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/12/14 03:20 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/12/14 03:20 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 03:20 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 03:20 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 03:20 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 03:20 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/12/14 03:20 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 03:20 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 03:20 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 03:20 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 03:20 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 03:20 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 03:20 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 03:20 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/12/14 03:20 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 03:20 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 04/12/14 03:20 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/12/14 03:20 | 1 |
| 2-Hexanone | ND | | 10 | | ug/L | | | 04/12/14 03:20 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/12/14 03:20 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/12/14 03:20 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/12/14 03:20 | 1 |
| **Acetone** | **79** | | 50 | | ug/L | | | 04/12/14 03:20 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/12/14 03:20 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 03:20 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/12/14 03:20 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/12/14 03:20 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/12/14 03:20 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/12/14 03:20 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 03:20 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/12/14 03:20 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/12/14 03:20 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/12/14 03:20 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/12/14 03:20 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/12/14 03:20 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/12/14 03:20 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/12/14 03:20 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/12/14 03:20 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/12/14 03:20 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/12/14 03:20 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 03:20 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/12/14 03:20 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/12/14 03:20 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/12/14 03:20 | 1 |

## Client Sample ID: MW-1022-20140410-01

**Lab Sample ID: 480-57719-10**

**Date Collected: 04/10/14 12:35**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 03:20 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/12/14 03:20 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/12/14 03:20 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/12/14 03:20 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/12/14 03:20 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 03:20 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 03:20 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/12/14 03:20 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 03:20 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/12/14 03:20 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/12/14 03:20 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/12/14 03:20 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 03:20 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/12/14 03:20 | 1 |
| Tetrahydrofuran | ND | | 10 | | ug/L | | | 04/12/14 03:20 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 04/12/14 03:20 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/12/14 03:20 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/12/14 03:20 | 1 |
| **Trichloroethene** | **3.0** | | 1.0 | | ug/L | | | 04/12/14 03:20 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/12/14 03:20 | 1 |
| Vinyl chloride | ND | | 1.0 | | ug/L | | | 04/12/14 03:20 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/12/14 03:20 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *99* | | *70 - 130* | | *04/12/14 03:20* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *103* | | *70 - 130* | | *04/12/14 03:20* | *1* |
| *4-Bromofluorobenzene (Surr)* | *96* | | *70 - 130* | | *04/12/14 03:20* | *1* |

## Client Sample ID: MW-1019B-20140410-01

**Lab Sample ID: 480-57719-11**

**Date Collected: 04/10/14 10:10**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 03:44 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 03:44 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/12/14 03:44 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 03:44 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 03:44 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/12/14 03:44 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/12/14 03:44 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 03:44 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 03:44 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 03:44 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 03:44 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/12/14 03:44 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 03:44 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 03:44 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 03:44 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 03:44 | 1 |

**Client Sample ID: MW-1019B-20140410-01**
**Date Collected: 04/10/14 10:10**
**Date Received: 04/11/14 01:45**

**Lab Sample ID: 480-57719-11**
**Matrix: Water**

**Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 03:44 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 03:44 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 03:44 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/12/14 03:44 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 03:44 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 04/12/14 03:44 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/12/14 03:44 | 1 |
| 2-Hexanone | ND | | 10 | | ug/L | | | 04/12/14 03:44 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/12/14 03:44 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/12/14 03:44 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/12/14 03:44 | 1 |
| **Acetone** | **79** | | 50 | | ug/L | | | 04/12/14 03:44 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/12/14 03:44 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 03:44 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/12/14 03:44 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/12/14 03:44 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/12/14 03:44 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/12/14 03:44 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 03:44 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/12/14 03:44 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/12/14 03:44 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/12/14 03:44 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/12/14 03:44 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/12/14 03:44 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/12/14 03:44 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/12/14 03:44 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/12/14 03:44 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/12/14 03:44 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/12/14 03:44 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 03:44 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/12/14 03:44 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/12/14 03:44 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/12/14 03:44 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 03:44 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/12/14 03:44 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/12/14 03:44 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/12/14 03:44 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/12/14 03:44 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 03:44 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 03:44 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/12/14 03:44 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 03:44 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/12/14 03:44 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/12/14 03:44 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/12/14 03:44 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 03:44 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/12/14 03:44 | 1 |
| Tetrahydrofuran | ND | | 10 | | ug/L | | | 04/12/14 03:44 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 04/12/14 03:44 | 1 |

## Client Sample ID: MW-1019B-20140410-01

**Lab Sample ID: 480-57719-11**

**Date Collected: 04/10/14 10:10**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/12/14 03:44 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/12/14 03:44 | 1 |
| **Trichloroethene** | **2.1** | | 1.0 | | ug/L | | | 04/12/14 03:44 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/12/14 03:44 | 1 |
| Vinyl chloride | ND | | 1.0 | | ug/L | | | 04/12/14 03:44 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/12/14 03:44 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *98* | | *70 - 130* | | *04/12/14 03:44* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *102* | | *70 - 130* | | *04/12/14 03:44* | *1* |
| *4-Bromofluorobenzene (Surr)* | *95* | | *70 - 130* | | *04/12/14 03:44* | *1* |

## Client Sample ID: MW-1032-20140410-01

**Lab Sample ID: 480-57719-12**

**Date Collected: 04/10/14 11:45**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 04:08 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 04:08 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/12/14 04:08 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 04:08 | 1 |
| **1,1-Dichloroethane** | **1.0** | | 1.0 | | ug/L | | | 04/12/14 04:08 | 1 |
| **1,1-Dichloroethene** | **1.9** | | 1.0 | | ug/L | | | 04/12/14 04:08 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/12/14 04:08 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 04:08 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 04:08 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 04:08 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 04:08 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/12/14 04:08 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 04:08 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 04:08 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 04:08 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 04:08 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 04:08 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 04:08 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 04:08 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/12/14 04:08 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 04:08 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 04/12/14 04:08 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/12/14 04:08 | 1 |
| 2-Hexanone | ND | | 10 | | ug/L | | | 04/12/14 04:08 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/12/14 04:08 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/12/14 04:08 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/12/14 04:08 | 1 |
| Acetone | ND | | 50 | | ug/L | | | 04/12/14 04:08 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/12/14 04:08 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 04:08 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/12/14 04:08 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/12/14 04:08 | 1 |

**Client Sample ID: MW-1032-20140410-01**
**Date Collected: 04/10/14 11:45**
**Date Received: 04/11/14 01:45**

**Lab Sample ID: 480-57719-12**
**Matrix: Water**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/12/14 04:08 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/12/14 04:08 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 04:08 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/12/14 04:08 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/12/14 04:08 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/12/14 04:08 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/12/14 04:08 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/12/14 04:08 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/12/14 04:08 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/12/14 04:08 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/12/14 04:08 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/12/14 04:08 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/12/14 04:08 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 04:08 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/12/14 04:08 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/12/14 04:08 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/12/14 04:08 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 04:08 | 1 |
| **Methyl tert-butyl ether** | **4.1** | | 1.0 | | ug/L | | | 04/12/14 04:08 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/12/14 04:08 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/12/14 04:08 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/12/14 04:08 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 04:08 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 04:08 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/12/14 04:08 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 04:08 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/12/14 04:08 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/12/14 04:08 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/12/14 04:08 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 04:08 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/12/14 04:08 | 1 |
| Tetrahydrofuran | ND | | 10 | | ug/L | | | 04/12/14 04:08 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 04/12/14 04:08 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/12/14 04:08 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/12/14 04:08 | 1 |
| **Trichloroethene** | **11** | | 1.0 | | ug/L | | | 04/12/14 04:08 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/12/14 04:08 | 1 |
| Vinyl chloride | ND | | 1.0 | | ug/L | | | 04/12/14 04:08 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/12/14 04:08 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *100* | | *70 - 130* | | *04/12/14 04:08* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *103* | | *70 - 130* | | *04/12/14 04:08* | *1* |
| *4-Bromofluorobenzene (Surr)* | *96* | | *70 - 130* | | *04/12/14 04:08* | *1* |

Client: ERM-Northeast
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57719-1

**Client Sample ID: MW-1017D-20140410-01**
**Date Collected: 04/10/14 09:35**
**Date Received: 04/11/14 01:45**

**Lab Sample ID: 480-57719-13**
**Matrix: Water**

**Method: 8260C - Volatile Organic Compounds (GC/MS)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 04:31 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 04:31 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/12/14 04:31 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 04:31 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 04:31 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/12/14 04:31 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/12/14 04:31 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 04:31 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 04:31 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 04:31 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 04:31 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/12/14 04:31 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 04:31 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 04:31 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 04:31 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 04:31 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 04:31 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 04:31 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 04:31 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/12/14 04:31 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 04:31 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 04/12/14 04:31 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/12/14 04:31 | 1 |
| 2-Hexanone | ND | | 10 | | ug/L | | | 04/12/14 04:31 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/12/14 04:31 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/12/14 04:31 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/12/14 04:31 | 1 |
| **Acetone** | **78** | | 50 | | ug/L | | | 04/12/14 04:31 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/12/14 04:31 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 04:31 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/12/14 04:31 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/12/14 04:31 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/12/14 04:31 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/12/14 04:31 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 04:31 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/12/14 04:31 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/12/14 04:31 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/12/14 04:31 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/12/14 04:31 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/12/14 04:31 | 1 |
| **cis-1,2-Dichloroethene** | **11** | | 1.0 | | ug/L | | | 04/12/14 04:31 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/12/14 04:31 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/12/14 04:31 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/12/14 04:31 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/12/14 04:31 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 04:31 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/12/14 04:31 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/12/14 04:31 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/12/14 04:31 | 1 |

## Client Sample ID: MW-1017D-20140410-01

**Lab Sample ID: 480-57719-13**

**Date Collected: 04/10/14 09:35**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 04:31 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/12/14 04:31 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/12/14 04:31 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/12/14 04:31 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/12/14 04:31 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 04:31 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 04:31 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/12/14 04:31 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 04:31 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/12/14 04:31 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/12/14 04:31 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/12/14 04:31 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 04:31 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/12/14 04:31 | 1 |
| Tetrahydrofuran | ND | | 10 | | ug/L | | | 04/12/14 04:31 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 04/12/14 04:31 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/12/14 04:31 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/12/14 04:31 | 1 |
| **Trichloroethene** | **29** | | 1.0 | | ug/L | | | 04/12/14 04:31 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/12/14 04:31 | 1 |
| Vinyl chloride | ND | | 1.0 | | ug/L | | | 04/12/14 04:31 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/12/14 04:31 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *100* | | *70 - 130* | | *04/12/14 04:31* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *103* | | *70 - 130* | | *04/12/14 04:31* | *1* |
| *4-Bromofluorobenzene (Surr)* | *96* | | *70 - 130* | | *04/12/14 04:31* | *1* |

## Client Sample ID: MW-1018-20140410-01

**Lab Sample ID: 480-57719-14**

**Date Collected: 04/10/14 13:30**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 04:55 | 1 |
| **1,1,1-Trichloroethane** | **42** | | 1.0 | | ug/L | | | 04/12/14 04:55 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/12/14 04:55 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 04:55 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 04:55 | 1 |
| **1,1-Dichloroethene** | **3.7** | | 1.0 | | ug/L | | | 04/12/14 04:55 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/12/14 04:55 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 04:55 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 04:55 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 04:55 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 04:55 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/12/14 04:55 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 04:55 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 04:55 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 04:55 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 04:55 | 1 |

**Client Sample ID: MW-1018-20140410-01**
**Date Collected: 04/10/14 13:30**
**Date Received: 04/11/14 01:45**

**Lab Sample ID: 480-57719-14**
**Matrix: Water**

**Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 04:55 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 04:55 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 04:55 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/12/14 04:55 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 04:55 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 04/12/14 04:55 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/12/14 04:55 | 1 |
| 2-Hexanone | ND | | 10 | | ug/L | | | 04/12/14 04:55 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/12/14 04:55 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/12/14 04:55 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/12/14 04:55 | 1 |
| **Acetone** | **81** | | 50 | | ug/L | | | 04/12/14 04:55 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/12/14 04:55 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 04:55 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/12/14 04:55 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/12/14 04:55 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/12/14 04:55 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/12/14 04:55 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 04:55 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/12/14 04:55 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/12/14 04:55 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/12/14 04:55 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/12/14 04:55 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/12/14 04:55 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/12/14 04:55 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/12/14 04:55 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/12/14 04:55 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/12/14 04:55 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/12/14 04:55 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 04:55 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/12/14 04:55 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/12/14 04:55 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/12/14 04:55 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 04:55 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/12/14 04:55 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/12/14 04:55 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/12/14 04:55 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/12/14 04:55 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 04:55 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 04:55 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/12/14 04:55 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 04:55 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/12/14 04:55 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/12/14 04:55 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/12/14 04:55 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 04:55 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/12/14 04:55 | 1 |
| Tetrahydrofuran | ND | | 10 | | ug/L | | | 04/12/14 04:55 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 04/12/14 04:55 | 1 |

## Client Sample ID: MW-1018-20140410-01

**Lab Sample ID: 480-57719-14**

**Date Collected: 04/10/14 13:30**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/12/14 04:55 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/12/14 04:55 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/12/14 04:55 | 1 |
| Vinyl chloride | ND | | 1.0 | | ug/L | | | 04/12/14 04:55 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/12/14 04:55 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *99* | | *70 - 130* | | *04/12/14 04:55* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *105* | | *70 - 130* | | *04/12/14 04:55* | *1* |
| *4-Bromofluorobenzene (Surr)* | *98* | | *70 - 130* | | *04/12/14 04:55* | *1* |

### Method: 8260C - Volatile Organic Compounds (GC/MS) - DL

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Trichloroethene** | **170** | | 4.0 | | ug/L | | | 04/14/14 00:58 | 4 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *98* | | *70 - 130* | | *04/14/14 00:58* | *4* |
| *1,2-Dichloroethane-d4 (Surr)* | *107* | | *70 - 130* | | *04/14/14 00:58* | *4* |
| *4-Bromofluorobenzene (Surr)* | *97* | | *70 - 130* | | *04/14/14 00:58* | *4* |

## Client Sample ID: MW-1031-20140410-01

**Lab Sample ID: 480-57719-15**

**Date Collected: 04/10/14 10:45**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 05:19 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 05:19 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/12/14 05:19 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 05:19 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 05:19 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/12/14 05:19 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/12/14 05:19 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 05:19 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 05:19 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 05:19 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 05:19 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/12/14 05:19 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 05:19 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 05:19 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 05:19 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 05:19 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 05:19 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 05:19 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 05:19 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/12/14 05:19 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 05:19 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 04/12/14 05:19 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/12/14 05:19 | 1 |
| 2-Hexanone | ND | | 10 | | ug/L | | | 04/12/14 05:19 | 1 |

Client: ERM-Northeast
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57719-1

**Client Sample ID: MW-1031-20140410-01**
**Date Collected: 04/10/14 10:45**
**Date Received: 04/11/14 01:45**

**Lab Sample ID: 480-57719-15**
**Matrix: Water**

**Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/12/14 05:19 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/12/14 05:19 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/12/14 05:19 | 1 |
| **Acetone** | **79** | | 50 | | ug/L | | | 04/12/14 05:19 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/12/14 05:19 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 05:19 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/12/14 05:19 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/12/14 05:19 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/12/14 05:19 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/12/14 05:19 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 05:19 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/12/14 05:19 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/12/14 05:19 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/12/14 05:19 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/12/14 05:19 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/12/14 05:19 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/12/14 05:19 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/12/14 05:19 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/12/14 05:19 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/12/14 05:19 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/12/14 05:19 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 05:19 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/12/14 05:19 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/12/14 05:19 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/12/14 05:19 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 05:19 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/12/14 05:19 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/12/14 05:19 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/12/14 05:19 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/12/14 05:19 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 05:19 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 05:19 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/12/14 05:19 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 05:19 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/12/14 05:19 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/12/14 05:19 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/12/14 05:19 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 05:19 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/12/14 05:19 | 1 |
| Tetrahydrofuran | ND | | 10 | | ug/L | | | 04/12/14 05:19 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 04/12/14 05:19 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/12/14 05:19 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/12/14 05:19 | 1 |
| **Trichloroethene** | **2.9** | | 1.0 | | ug/L | | | 04/12/14 05:19 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/12/14 05:19 | 1 |
| Vinyl chloride | ND | | 1.0 | | ug/L | | | 04/12/14 05:19 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/12/14 05:19 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *99* | | *70 - 130* | | *04/12/14 05:19* | *1* |

## Client Sample ID: MW-1031-20140410-01

**Lab Sample ID: 480-57719-15**

**Date Collected: 04/10/14 10:45**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *104* | | *70 - 130* | | *04/12/14 05:19* | *1* |
| *4-Bromofluorobenzene (Surr)* | *97* | | *70 - 130* | | *04/12/14 05:19* | *1* |

## Client Sample ID: MW-1008-20140410-01

**Lab Sample ID: 480-57719-16**

**Date Collected: 04/10/14 10:45**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 05:43 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 05:43 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/12/14 05:43 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 05:43 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 05:43 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/12/14 05:43 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/12/14 05:43 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 05:43 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 05:43 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 05:43 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 05:43 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/12/14 05:43 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 05:43 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 05:43 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 05:43 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 05:43 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 05:43 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 05:43 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 05:43 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/12/14 05:43 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 05:43 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 04/12/14 05:43 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/12/14 05:43 | 1 |
| 2-Hexanone | ND | | 10 | | ug/L | | | 04/12/14 05:43 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/12/14 05:43 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/12/14 05:43 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/12/14 05:43 | 1 |
| **Acetone** | **83** | | 50 | | ug/L | | | 04/12/14 05:43 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/12/14 05:43 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 05:43 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/12/14 05:43 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/12/14 05:43 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/12/14 05:43 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/12/14 05:43 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 05:43 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/12/14 05:43 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/12/14 05:43 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/12/14 05:43 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/12/14 05:43 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/12/14 05:43 | 1 |

## Client Sample ID: MW-1008-20140410-01

**Lab Sample ID: 480-57719-16**

**Date Collected: 04/10/14 10:45**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| cis-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/12/14 05:43 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/12/14 05:43 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/12/14 05:43 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/12/14 05:43 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/12/14 05:43 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 05:43 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/12/14 05:43 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/12/14 05:43 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/12/14 05:43 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 05:43 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/12/14 05:43 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/12/14 05:43 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/12/14 05:43 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/12/14 05:43 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 05:43 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 05:43 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/12/14 05:43 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 05:43 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/12/14 05:43 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/12/14 05:43 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/12/14 05:43 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 05:43 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/12/14 05:43 | 1 |
| Tetrahydrofuran | ND | | 10 | | ug/L | | | 04/12/14 05:43 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 04/12/14 05:43 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/12/14 05:43 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/12/14 05:43 | 1 |
| **Trichloroethene** | **3.1** | | 1.0 | | ug/L | | | 04/12/14 05:43 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/12/14 05:43 | 1 |
| Vinyl chloride | ND | | 1.0 | | ug/L | | | 04/12/14 05:43 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/12/14 05:43 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *100* | | *70 - 130* | | *04/12/14 05:43* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *103* | | *70 - 130* | | *04/12/14 05:43* | *1* |
| *4-Bromofluorobenzene (Surr)* | *96* | | *70 - 130* | | *04/12/14 05:43* | *1* |

## Client Sample ID: MW-1025D-20140410-01

**Lab Sample ID: 480-57719-17**

**Date Collected: 04/10/14 09:20**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 01:22 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 01:22 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/14/14 01:22 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 01:22 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 01:22 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/14/14 01:22 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/14/14 01:22 | 1 |

**Client Sample ID: MW-1025D-20140410-01**
**Date Collected: 04/10/14 09:20**
**Date Received: 04/11/14 01:45**

**Lab Sample ID: 480-57719-17**
**Matrix: Water**

**Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 01:22 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/14/14 01:22 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 01:22 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 01:22 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/14/14 01:22 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 01:22 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 01:22 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/14/14 01:22 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 01:22 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 01:22 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/14/14 01:22 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 01:22 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/14/14 01:22 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/14/14 01:22 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 04/14/14 01:22 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/14/14 01:22 | 1 |
| 2-Hexanone | ND | | 10 | | ug/L | | | 04/14/14 01:22 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/14/14 01:22 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/14/14 01:22 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/14/14 01:22 | 1 |
| Acetone | ND | | 50 | | ug/L | | | 04/14/14 01:22 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/14/14 01:22 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 01:22 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/14/14 01:22 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/14/14 01:22 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/14/14 01:22 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/14/14 01:22 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 01:22 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/14/14 01:22 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/14/14 01:22 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/14/14 01:22 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/14/14 01:22 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/14/14 01:22 | 1 |
| **cis-1,2-Dichloroethene** | **25** | | 1.0 | | ug/L | | | 04/14/14 01:22 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/14/14 01:22 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/14/14 01:22 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/14/14 01:22 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/14/14 01:22 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 01:22 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/14/14 01:22 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/14/14 01:22 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/14/14 01:22 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 01:22 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/14/14 01:22 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/14/14 01:22 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/14/14 01:22 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/14/14 01:22 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 01:22 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 01:22 | 1 |

## Client Sample ID: MW-1025D-20140410-01

**Lab Sample ID: 480-57719-17**

**Date Collected: 04/10/14 09:20**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/14/14 01:22 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 01:22 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/14/14 01:22 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/14/14 01:22 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/14/14 01:22 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 01:22 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/14/14 01:22 | 1 |
| Tetrahydrofuran | ND | * | 10 | | ug/L | | | 04/14/14 01:22 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 04/14/14 01:22 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/14/14 01:22 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/14/14 01:22 | 1 |
| Trichloroethene | ND | | 1.0 | | ug/L | | | 04/14/14 01:22 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/14/14 01:22 | 1 |
| Vinyl chloride | ND | | 1.0 | | ug/L | | | 04/14/14 01:22 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/14/14 01:22 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *101* | | *70 - 130* | | *04/14/14 01:22* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *107* | | *70 - 130* | | *04/14/14 01:22* | *1* |
| *4-Bromofluorobenzene (Surr)* | *96* | | *70 - 130* | | *04/14/14 01:22* | *1* |

## Client Sample ID: MW-1011-20140410-01

**Lab Sample ID: 480-57719-18**

**Date Collected: 04/10/14 14:10**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 06:30 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 06:30 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/12/14 06:30 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 06:30 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 06:30 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/12/14 06:30 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/12/14 06:30 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 06:30 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 06:30 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 06:30 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 06:30 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/12/14 06:30 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 06:30 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 06:30 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 06:30 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 06:30 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 06:30 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 06:30 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 06:30 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/12/14 06:30 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 06:30 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 04/12/14 06:30 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/12/14 06:30 | 1 |

**Client Sample ID: MW-1011-20140410-01**
**Date Collected: 04/10/14 14:10**
**Date Received: 04/11/14 01:45**

**Lab Sample ID: 480-57719-18**
**Matrix: Water**

**Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 2-Hexanone | ND | | 10 | | ug/L | | | 04/12/14 06:30 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/12/14 06:30 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/12/14 06:30 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/12/14 06:30 | 1 |
| **Acetone** | **80** | | 50 | | ug/L | | | 04/12/14 06:30 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/12/14 06:30 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 06:30 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/12/14 06:30 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/12/14 06:30 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/12/14 06:30 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/12/14 06:30 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 06:30 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/12/14 06:30 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/12/14 06:30 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/12/14 06:30 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/12/14 06:30 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/12/14 06:30 | 1 |
| **cis-1,2-Dichloroethene** | **12** | | 1.0 | | ug/L | | | 04/12/14 06:30 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/12/14 06:30 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/12/14 06:30 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/12/14 06:30 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/12/14 06:30 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 06:30 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/12/14 06:30 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/12/14 06:30 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/12/14 06:30 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 06:30 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/12/14 06:30 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/12/14 06:30 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/12/14 06:30 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/12/14 06:30 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 06:30 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 06:30 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/12/14 06:30 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 06:30 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/12/14 06:30 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/12/14 06:30 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/12/14 06:30 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 06:30 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/12/14 06:30 | 1 |
| Tetrahydrofuran | ND | | 10 | | ug/L | | | 04/12/14 06:30 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 04/12/14 06:30 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/12/14 06:30 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/12/14 06:30 | 1 |
| **Trichloroethene** | **22** | | 1.0 | | ug/L | | | 04/12/14 06:30 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/12/14 06:30 | 1 |
| Vinyl chloride | ND | | 1.0 | | ug/L | | | 04/12/14 06:30 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/12/14 06:30 | 1 |

## Client Sample ID: MW-1011-20140410-01

**Lab Sample ID: 480-57719-18**

**Date Collected: 04/10/14 14:10**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| Toluene-d8 (Surr) | 98 | | 70 - 130 | | 04/12/14 06:30 | 1 |
| 1,2-Dichloroethane-d4 (Surr) | 104 | | 70 - 130 | | 04/12/14 06:30 | 1 |
| 4-Bromofluorobenzene (Surr) | 97 | | 70 - 130 | | 04/12/14 06:30 | 1 |

## Client Sample ID: MW-1024D-20140410-01

**Lab Sample ID: 480-57719-19**

**Date Collected: 04/10/14 08:30**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 06:54 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 06:54 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/12/14 06:54 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 06:54 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 06:54 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/12/14 06:54 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/12/14 06:54 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 06:54 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 06:54 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 06:54 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 06:54 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/12/14 06:54 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 06:54 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/12/14 06:54 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 06:54 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 06:54 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 06:54 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 06:54 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 06:54 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/12/14 06:54 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/12/14 06:54 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 04/12/14 06:54 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/12/14 06:54 | 1 |
| 2-Hexanone | ND | | 10 | | ug/L | | | 04/12/14 06:54 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/12/14 06:54 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/12/14 06:54 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/12/14 06:54 | 1 |
| **Acetone** | **85** | | 50 | | ug/L | | | 04/12/14 06:54 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/12/14 06:54 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 06:54 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/12/14 06:54 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/12/14 06:54 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/12/14 06:54 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/12/14 06:54 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/12/14 06:54 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/12/14 06:54 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/12/14 06:54 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/12/14 06:54 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/12/14 06:54 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/12/14 06:54 | 1 |

## Client Sample ID: MW-1024D-20140410-01

**Lab Sample ID: 480-57719-19**

**Date Collected: 04/10/14 08:30**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **cis-1,2-Dichloroethene** | **4.2** | | 1.0 | | ug/L | | | 04/12/14 06:54 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/12/14 06:54 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/12/14 06:54 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/12/14 06:54 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/12/14 06:54 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 06:54 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/12/14 06:54 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/12/14 06:54 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/12/14 06:54 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 06:54 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/12/14 06:54 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/12/14 06:54 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/12/14 06:54 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/12/14 06:54 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 06:54 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 06:54 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/12/14 06:54 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 06:54 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/12/14 06:54 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/12/14 06:54 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/12/14 06:54 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/12/14 06:54 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/12/14 06:54 | 1 |
| Tetrahydrofuran | ND | | 10 | | ug/L | | | 04/12/14 06:54 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 04/12/14 06:54 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/12/14 06:54 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/12/14 06:54 | 1 |
| **Trichloroethene** | **14** | | 1.0 | | ug/L | | | 04/12/14 06:54 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/12/14 06:54 | 1 |
| Vinyl chloride | ND | | 1.0 | | ug/L | | | 04/12/14 06:54 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/12/14 06:54 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *99* | | *70 - 130* | | *04/12/14 06:54* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *104* | | *70 - 130* | | *04/12/14 06:54* | *1* |
| *4-Bromofluorobenzene (Surr)* | *94* | | *70 - 130* | | *04/12/14 06:54* | *1* |

## Client Sample ID: MW-1020-20140410-01

**Lab Sample ID: 480-57719-20**

**Date Collected: 04/10/14 10:45**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 01:46 | 1 |
| **1,1,1-Trichloroethane** | **1.6** | | 1.0 | | ug/L | | | 04/14/14 01:46 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/14/14 01:46 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 01:46 | 1 |
| **1,1-Dichloroethane** | **1.0** | | 1.0 | | ug/L | | | 04/14/14 01:46 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/14/14 01:46 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/14/14 01:46 | 1 |

**Client Sample ID: MW-1020-20140410-01**
**Date Collected: 04/10/14 10:45**
**Date Received: 04/11/14 01:45**

**Lab Sample ID: 480-57719-20**
**Matrix: Water**

**Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 01:46 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/14/14 01:46 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 01:46 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 01:46 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/14/14 01:46 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 01:46 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 01:46 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/14/14 01:46 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 01:46 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 01:46 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/14/14 01:46 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 01:46 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/14/14 01:46 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/14/14 01:46 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 04/14/14 01:46 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/14/14 01:46 | 1 |
| 2-Hexanone | ND | | 10 | | ug/L | | | 04/14/14 01:46 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/14/14 01:46 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/14/14 01:46 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/14/14 01:46 | 1 |
| **Acetone** | **81** | | 50 | | ug/L | | | 04/14/14 01:46 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/14/14 01:46 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 01:46 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/14/14 01:46 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/14/14 01:46 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/14/14 01:46 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/14/14 01:46 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 01:46 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/14/14 01:46 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/14/14 01:46 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/14/14 01:46 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/14/14 01:46 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/14/14 01:46 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/14/14 01:46 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/14/14 01:46 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/14/14 01:46 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/14/14 01:46 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/14/14 01:46 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 01:46 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/14/14 01:46 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/14/14 01:46 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/14/14 01:46 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 01:46 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/14/14 01:46 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/14/14 01:46 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/14/14 01:46 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/14/14 01:46 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 01:46 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 01:46 | 1 |

## Client Sample ID: MW-1020-20140410-01

**Lab Sample ID: 480-57719-20**

**Date Collected: 04/10/14 10:45**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/14/14 01:46 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 01:46 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/14/14 01:46 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/14/14 01:46 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/14/14 01:46 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 01:46 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/14/14 01:46 | 1 |
| Tetrahydrofuran | ND | * | 10 | | ug/L | | | 04/14/14 01:46 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 04/14/14 01:46 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/14/14 01:46 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/14/14 01:46 | 1 |
| **Trichloroethene** | **21** | | 1.0 | | ug/L | | | 04/14/14 01:46 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/14/14 01:46 | 1 |
| Vinyl chloride | ND | | 1.0 | | ug/L | | | 04/14/14 01:46 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/14/14 01:46 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *96* | | *70 - 130* | | *04/14/14 01:46* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *104* | | *70 - 130* | | *04/14/14 01:46* | *1* |
| *4-Bromofluorobenzene (Surr)* | *97* | | *70 - 130* | | *04/14/14 01:46* | *1* |

## Client Sample ID: MW-1034-20140410-01

**Lab Sample ID: 480-57719-21**

**Date Collected: 04/10/14 08:30**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 02:09 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 02:09 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/14/14 02:09 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 02:09 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 02:09 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/14/14 02:09 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/14/14 02:09 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 02:09 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/14/14 02:09 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 02:09 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 02:09 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/14/14 02:09 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 02:09 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 02:09 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/14/14 02:09 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 02:09 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 02:09 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/14/14 02:09 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 02:09 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/14/14 02:09 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/14/14 02:09 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 04/14/14 02:09 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/14/14 02:09 | 1 |

**Client Sample ID: MW-1034-20140410-01**
**Date Collected: 04/10/14 08:30**
**Date Received: 04/11/14 01:45**

**Lab Sample ID: 480-57719-21**
**Matrix: Water**

**Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 2-Hexanone | ND | | 10 | | ug/L | | | 04/14/14 02:09 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/14/14 02:09 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/14/14 02:09 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/14/14 02:09 | 1 |
| **Acetone** | **81** | | 50 | | ug/L | | | 04/14/14 02:09 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/14/14 02:09 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 02:09 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/14/14 02:09 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/14/14 02:09 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/14/14 02:09 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/14/14 02:09 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 02:09 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/14/14 02:09 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/14/14 02:09 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/14/14 02:09 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/14/14 02:09 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/14/14 02:09 | 1 |
| **cis-1,2-Dichloroethene** | **1.9** | | 1.0 | | ug/L | | | 04/14/14 02:09 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/14/14 02:09 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/14/14 02:09 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/14/14 02:09 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/14/14 02:09 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 02:09 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/14/14 02:09 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/14/14 02:09 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/14/14 02:09 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 02:09 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/14/14 02:09 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/14/14 02:09 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/14/14 02:09 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/14/14 02:09 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 02:09 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 02:09 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/14/14 02:09 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 02:09 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/14/14 02:09 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/14/14 02:09 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/14/14 02:09 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 02:09 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/14/14 02:09 | 1 |
| Tetrahydrofuran | ND | * | 10 | | ug/L | | | 04/14/14 02:09 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 04/14/14 02:09 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/14/14 02:09 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/14/14 02:09 | 1 |
| **Trichloroethene** | **5.0** | | 1.0 | | ug/L | | | 04/14/14 02:09 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/14/14 02:09 | 1 |
| Vinyl chloride | ND | | 1.0 | | ug/L | | | 04/14/14 02:09 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/14/14 02:09 | 1 |

## Client Sample ID: MW-1034-20140410-01

**Lab Sample ID: 480-57719-21**

**Date Collected: 04/10/14 08:30**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| Toluene-d8 (Surr) | 98 | | 70 - 130 | | 04/14/14 02:09 | 1 |
| 1,2-Dichloroethane-d4 (Surr) | 107 | | 70 - 130 | | 04/14/14 02:09 | 1 |
| 4-Bromofluorobenzene (Surr) | 96 | | 70 - 130 | | 04/14/14 02:09 | 1 |

## Client Sample ID: DUP-004-20140410-01

**Lab Sample ID: 480-57719-22**

**Date Collected: 04/10/14 13:13**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 02:33 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 02:33 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/14/14 02:33 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 02:33 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 02:33 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/14/14 02:33 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/14/14 02:33 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 02:33 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/14/14 02:33 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 02:33 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 02:33 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/14/14 02:33 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 02:33 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 02:33 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/14/14 02:33 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 02:33 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 02:33 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/14/14 02:33 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 02:33 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/14/14 02:33 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/14/14 02:33 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 04/14/14 02:33 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/14/14 02:33 | 1 |
| 2-Hexanone | ND | | 10 | | ug/L | | | 04/14/14 02:33 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/14/14 02:33 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/14/14 02:33 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/14/14 02:33 | 1 |
| **Acetone** | **79** | | 50 | | ug/L | | | 04/14/14 02:33 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/14/14 02:33 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 02:33 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/14/14 02:33 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/14/14 02:33 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/14/14 02:33 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/14/14 02:33 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 02:33 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/14/14 02:33 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/14/14 02:33 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/14/14 02:33 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/14/14 02:33 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/14/14 02:33 | 1 |

## Client Sample ID: DUP-004-20140410-01

**Lab Sample ID: 480-57719-22**

**Date Collected: 04/10/14 13:13**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| cis-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/14/14 02:33 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/14/14 02:33 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/14/14 02:33 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/14/14 02:33 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/14/14 02:33 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 02:33 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/14/14 02:33 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/14/14 02:33 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/14/14 02:33 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 02:33 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/14/14 02:33 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/14/14 02:33 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/14/14 02:33 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/14/14 02:33 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 02:33 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 02:33 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/14/14 02:33 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 02:33 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/14/14 02:33 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/14/14 02:33 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/14/14 02:33 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 02:33 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/14/14 02:33 | 1 |
| Tetrahydrofuran | ND | * | 10 | | ug/L | | | 04/14/14 02:33 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 04/14/14 02:33 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/14/14 02:33 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/14/14 02:33 | 1 |
| Trichloroethene | ND | | 1.0 | | ug/L | | | 04/14/14 02:33 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/14/14 02:33 | 1 |
| Vinyl chloride | ND | | 1.0 | | ug/L | | | 04/14/14 02:33 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/14/14 02:33 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *100* | | *70 - 130* | | *04/14/14 02:33* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *105* | | *70 - 130* | | *04/14/14 02:33* | *1* |
| *4-Bromofluorobenzene (Surr)* | *95* | | *70 - 130* | | *04/14/14 02:33* | *1* |

## Client Sample ID: MW-1010D-20140410-01

**Lab Sample ID: 480-57719-23**

**Date Collected: 04/10/14 10:00**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 02:57 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 02:57 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/14/14 02:57 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 02:57 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 02:57 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/14/14 02:57 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/14/14 02:57 | 1 |

Client: ERM-Northeast
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57719-1

**Client Sample ID: MW-1010D-20140410-01**
**Date Collected: 04/10/14 10:00**
**Date Received: 04/11/14 01:45**

**Lab Sample ID: 480-57719-23**
**Matrix: Water**

**Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 02:57 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/14/14 02:57 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 02:57 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 02:57 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/14/14 02:57 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 02:57 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 02:57 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/14/14 02:57 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 02:57 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 02:57 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/14/14 02:57 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 02:57 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/14/14 02:57 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/14/14 02:57 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 04/14/14 02:57 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/14/14 02:57 | 1 |
| 2-Hexanone | ND | | 10 | | ug/L | | | 04/14/14 02:57 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/14/14 02:57 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/14/14 02:57 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/14/14 02:57 | 1 |
| **Acetone** | **83** | | 50 | | ug/L | | | 04/14/14 02:57 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/14/14 02:57 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 02:57 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/14/14 02:57 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/14/14 02:57 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/14/14 02:57 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/14/14 02:57 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 02:57 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/14/14 02:57 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/14/14 02:57 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/14/14 02:57 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/14/14 02:57 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/14/14 02:57 | 1 |
| **cis-1,2-Dichloroethene** | **1.3** | | 1.0 | | ug/L | | | 04/14/14 02:57 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/14/14 02:57 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/14/14 02:57 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/14/14 02:57 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/14/14 02:57 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 02:57 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/14/14 02:57 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/14/14 02:57 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/14/14 02:57 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 02:57 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/14/14 02:57 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/14/14 02:57 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/14/14 02:57 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/14/14 02:57 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 02:57 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 02:57 | 1 |

## Client Sample ID: MW-1010D-20140410-01

**Lab Sample ID: 480-57719-23**

**Date Collected: 04/10/14 10:00**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/14/14 02:57 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 02:57 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/14/14 02:57 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/14/14 02:57 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/14/14 02:57 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 02:57 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/14/14 02:57 | 1 |
| Tetrahydrofuran | ND | * | 10 | | ug/L | | | 04/14/14 02:57 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 04/14/14 02:57 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/14/14 02:57 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/14/14 02:57 | 1 |
| **Trichloroethene** | **5.3** | | 1.0 | | ug/L | | | 04/14/14 02:57 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/14/14 02:57 | 1 |
| Vinyl chloride | ND | | 1.0 | | ug/L | | | 04/14/14 02:57 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/14/14 02:57 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *97* | | *70 - 130* | | *04/14/14 02:57* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *107* | | *70 - 130* | | *04/14/14 02:57* | *1* |
| *4-Bromofluorobenzene (Surr)* | *96* | | *70 - 130* | | *04/14/14 02:57* | *1* |

## Client Sample ID: MW-1027-20140410-01

**Lab Sample ID: 480-57719-24**

**Date Collected: 04/10/14 09:35**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 03:21 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 03:21 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/14/14 03:21 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 03:21 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 03:21 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/14/14 03:21 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/14/14 03:21 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 03:21 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/14/14 03:21 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 03:21 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 03:21 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/14/14 03:21 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 03:21 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 03:21 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/14/14 03:21 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 03:21 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 03:21 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/14/14 03:21 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 03:21 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/14/14 03:21 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/14/14 03:21 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 04/14/14 03:21 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/14/14 03:21 | 1 |

**Client Sample ID: MW-1027-20140410-01**
**Date Collected: 04/10/14 09:35**
**Date Received: 04/11/14 01:45**

**Lab Sample ID: 480-57719-24**
**Matrix: Water**

**Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 2-Hexanone | ND | | 10 | | ug/L | | | 04/14/14 03:21 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/14/14 03:21 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/14/14 03:21 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/14/14 03:21 | 1 |
| Acetone | ND | | 50 | | ug/L | | | 04/14/14 03:21 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/14/14 03:21 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 03:21 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/14/14 03:21 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/14/14 03:21 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/14/14 03:21 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/14/14 03:21 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 03:21 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/14/14 03:21 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/14/14 03:21 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/14/14 03:21 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/14/14 03:21 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/14/14 03:21 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/14/14 03:21 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/14/14 03:21 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/14/14 03:21 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/14/14 03:21 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/14/14 03:21 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 03:21 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/14/14 03:21 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/14/14 03:21 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/14/14 03:21 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 03:21 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/14/14 03:21 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/14/14 03:21 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/14/14 03:21 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/14/14 03:21 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 03:21 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 03:21 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/14/14 03:21 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 03:21 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/14/14 03:21 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/14/14 03:21 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/14/14 03:21 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 03:21 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/14/14 03:21 | 1 |
| Tetrahydrofuran | ND | * | 10 | | ug/L | | | 04/14/14 03:21 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 04/14/14 03:21 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/14/14 03:21 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/14/14 03:21 | 1 |
| Trichloroethene | ND | | 1.0 | | ug/L | | | 04/14/14 03:21 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/14/14 03:21 | 1 |
| Vinyl chloride | ND | | 1.0 | | ug/L | | | 04/14/14 03:21 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/14/14 03:21 | 1 |

## Client Sample ID: MW-1027-20140410-01

**Lab Sample ID: 480-57719-24**

**Date Collected: 04/10/14 09:35**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| Toluene-d8 (Surr) | 99 | | 70 - 130 | | 04/14/14 03:21 | 1 |
| 1,2-Dichloroethane-d4 (Surr) | 107 | | 70 - 130 | | 04/14/14 03:21 | 1 |
| 4-Bromofluorobenzene (Surr) | 97 | | 70 - 130 | | 04/14/14 03:21 | 1 |

## Client Sample ID: MW-1016D-20140410-01

**Lab Sample ID: 480-57719-25**

**Date Collected: 04/10/14 09:15**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 03:44 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 03:44 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/14/14 03:44 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 03:44 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 03:44 | 1 |
| **1,1-Dichloroethene** | **1.5** | | 1.0 | | ug/L | | | 04/14/14 03:44 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/14/14 03:44 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 03:44 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/14/14 03:44 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 03:44 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 03:44 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/14/14 03:44 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 03:44 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 03:44 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/14/14 03:44 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 03:44 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 03:44 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/14/14 03:44 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 03:44 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/14/14 03:44 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/14/14 03:44 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 04/14/14 03:44 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/14/14 03:44 | 1 |
| 2-Hexanone | ND | | 10 | | ug/L | | | 04/14/14 03:44 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/14/14 03:44 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/14/14 03:44 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/14/14 03:44 | 1 |
| **Acetone** | **80** | | 50 | | ug/L | | | 04/14/14 03:44 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/14/14 03:44 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 03:44 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/14/14 03:44 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/14/14 03:44 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/14/14 03:44 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/14/14 03:44 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 03:44 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/14/14 03:44 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/14/14 03:44 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/14/14 03:44 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/14/14 03:44 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/14/14 03:44 | 1 |

## Client Sample ID: MW-1016D-20140410-01

**Lab Sample ID: 480-57719-25**

**Date Collected: 04/10/14 09:15**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **cis-1,2-Dichloroethene** | **42** | | 1.0 | | ug/L | | | 04/14/14 03:44 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/14/14 03:44 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/14/14 03:44 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/14/14 03:44 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/14/14 03:44 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 03:44 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/14/14 03:44 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/14/14 03:44 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/14/14 03:44 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 03:44 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/14/14 03:44 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/14/14 03:44 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/14/14 03:44 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/14/14 03:44 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 03:44 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 03:44 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/14/14 03:44 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 03:44 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/14/14 03:44 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/14/14 03:44 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/14/14 03:44 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 03:44 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/14/14 03:44 | 1 |
| Tetrahydrofuran | ND | * | 10 | | ug/L | | | 04/14/14 03:44 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 04/14/14 03:44 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/14/14 03:44 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/14/14 03:44 | 1 |
| **Trichloroethene** | **1.1** | | 1.0 | | ug/L | | | 04/14/14 03:44 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/14/14 03:44 | 1 |
| Vinyl chloride | ND | | 1.0 | | ug/L | | | 04/14/14 03:44 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/14/14 03:44 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *98* | | *70 - 130* | | *04/14/14 03:44* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *108* | | *70 - 130* | | *04/14/14 03:44* | *1* |
| *4-Bromofluorobenzene (Surr)* | *95* | | *70 - 130* | | *04/14/14 03:44* | *1* |

## Client Sample ID: MW-1013-20140410-01

**Lab Sample ID: 480-57719-26**

**Date Collected: 04/10/14 08:45**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 04:08 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 04:08 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/14/14 04:08 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 04:08 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 04:08 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/14/14 04:08 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/14/14 04:08 | 1 |

**Client Sample ID: MW-1013-20140410-01**
**Date Collected: 04/10/14 08:45**
**Date Received: 04/11/14 01:45**

**Lab Sample ID: 480-57719-26**
**Matrix: Water**

**Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 04:08 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/14/14 04:08 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 04:08 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 04:08 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/14/14 04:08 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 04:08 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 04:08 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/14/14 04:08 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 04:08 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 04:08 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/14/14 04:08 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 04:08 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/14/14 04:08 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/14/14 04:08 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 04/14/14 04:08 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/14/14 04:08 | 1 |
| 2-Hexanone | ND | | 10 | | ug/L | | | 04/14/14 04:08 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/14/14 04:08 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/14/14 04:08 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/14/14 04:08 | 1 |
| **Acetone** | **87** | | 50 | | ug/L | | | 04/14/14 04:08 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/14/14 04:08 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 04:08 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/14/14 04:08 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/14/14 04:08 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/14/14 04:08 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/14/14 04:08 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 04:08 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/14/14 04:08 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/14/14 04:08 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/14/14 04:08 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/14/14 04:08 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/14/14 04:08 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/14/14 04:08 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/14/14 04:08 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/14/14 04:08 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/14/14 04:08 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/14/14 04:08 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 04:08 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/14/14 04:08 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/14/14 04:08 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/14/14 04:08 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 04:08 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/14/14 04:08 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/14/14 04:08 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/14/14 04:08 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/14/14 04:08 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 04:08 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 04:08 | 1 |

## Client Sample ID: MW-1013-20140410-01

**Lab Sample ID: 480-57719-26**

**Date Collected: 04/10/14 08:45**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/14/14 04:08 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 04:08 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/14/14 04:08 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/14/14 04:08 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/14/14 04:08 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 04:08 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/14/14 04:08 | 1 |
| Tetrahydrofuran | ND | * | 10 | | ug/L | | | 04/14/14 04:08 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 04/14/14 04:08 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/14/14 04:08 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/14/14 04:08 | 1 |
| Trichloroethene | ND | | 1.0 | | ug/L | | | 04/14/14 04:08 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/14/14 04:08 | 1 |
| Vinyl chloride | ND | | 1.0 | | ug/L | | | 04/14/14 04:08 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/14/14 04:08 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *100* | | *70 - 130* | | *04/14/14 04:08* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *107* | | *70 - 130* | | *04/14/14 04:08* | *1* |
| *4-Bromofluorobenzene (Surr)* | *96* | | *70 - 130* | | *04/14/14 04:08* | *1* |

## Client Sample ID: TB-001-20140410-01

**Lab Sample ID: 480-57719-27**

**Date Collected: 04/10/14 00:00**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 04:32 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 04:32 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/14/14 04:32 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 04:32 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 04:32 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/14/14 04:32 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/14/14 04:32 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 04:32 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/14/14 04:32 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 04:32 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 04:32 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/14/14 04:32 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 04:32 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 04:32 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/14/14 04:32 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 04:32 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 04:32 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/14/14 04:32 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 04:32 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/14/14 04:32 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/14/14 04:32 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 04/14/14 04:32 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/14/14 04:32 | 1 |

Client: ERM-Northeast
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57719-1

**Client Sample ID: TB-001-20140410-01**
**Date Collected: 04/10/14 00:00**
**Date Received: 04/11/14 01:45**

**Lab Sample ID: 480-57719-27**
**Matrix: Water**

**Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 2-Hexanone | ND | | 10 | | ug/L | | | 04/14/14 04:32 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/14/14 04:32 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/14/14 04:32 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/14/14 04:32 | 1 |
| Acetone | ND | | 50 | | ug/L | | | 04/14/14 04:32 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/14/14 04:32 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 04:32 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/14/14 04:32 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/14/14 04:32 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/14/14 04:32 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/14/14 04:32 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 04:32 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/14/14 04:32 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/14/14 04:32 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/14/14 04:32 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/14/14 04:32 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/14/14 04:32 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/14/14 04:32 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/14/14 04:32 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/14/14 04:32 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/14/14 04:32 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/14/14 04:32 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 04:32 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/14/14 04:32 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/14/14 04:32 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/14/14 04:32 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 04:32 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/14/14 04:32 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/14/14 04:32 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/14/14 04:32 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/14/14 04:32 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 04:32 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 04:32 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/14/14 04:32 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 04:32 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/14/14 04:32 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/14/14 04:32 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/14/14 04:32 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 04:32 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/14/14 04:32 | 1 |
| Tetrahydrofuran | ND | * | 10 | | ug/L | | | 04/14/14 04:32 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 04/14/14 04:32 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/14/14 04:32 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/14/14 04:32 | 1 |
| Trichloroethene | ND | | 1.0 | | ug/L | | | 04/14/14 04:32 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/14/14 04:32 | 1 |
| Vinyl chloride | ND | | 1.0 | | ug/L | | | 04/14/14 04:32 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/14/14 04:32 | 1 |

## Client Sample ID: TB-001-20140410-01

**Lab Sample ID: 480-57719-27**

**Date Collected: 04/10/14 00:00**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *97* | | *70 - 130* | | *04/14/14 04:32* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *108* | | *70 - 130* | | *04/14/14 04:32* | *1* |
| *4-Bromofluorobenzene (Surr)* | *99* | | *70 - 130* | | *04/14/14 04:32* | *1* |

## Client Sample ID: MW-1009-20140410-01

**Lab Sample ID: 480-57719-28**

**Date Collected: 04/10/14 11:30**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 04:56 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 04:56 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/14/14 04:56 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 04:56 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 04:56 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/14/14 04:56 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/14/14 04:56 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 04:56 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/14/14 04:56 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 04:56 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 04:56 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/14/14 04:56 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 04:56 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 04:56 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/14/14 04:56 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 04:56 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 04:56 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/14/14 04:56 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 04:56 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/14/14 04:56 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/14/14 04:56 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 04/14/14 04:56 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/14/14 04:56 | 1 |
| 2-Hexanone | ND | | 10 | | ug/L | | | 04/14/14 04:56 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/14/14 04:56 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/14/14 04:56 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/14/14 04:56 | 1 |
| **Acetone** | **83** | | 50 | | ug/L | | | 04/14/14 04:56 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/14/14 04:56 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 04:56 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/14/14 04:56 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/14/14 04:56 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/14/14 04:56 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/14/14 04:56 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 04:56 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/14/14 04:56 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/14/14 04:56 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/14/14 04:56 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/14/14 04:56 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/14/14 04:56 | 1 |

## Client Sample ID: MW-1009-20140410-01

**Lab Sample ID: 480-57719-28**

**Date Collected: 04/10/14 11:30**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| cis-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/14/14 04:56 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/14/14 04:56 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/14/14 04:56 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/14/14 04:56 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/14/14 04:56 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 04:56 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/14/14 04:56 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/14/14 04:56 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/14/14 04:56 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 04:56 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/14/14 04:56 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/14/14 04:56 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/14/14 04:56 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/14/14 04:56 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 04:56 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 04:56 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/14/14 04:56 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 04:56 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/14/14 04:56 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/14/14 04:56 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/14/14 04:56 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 04:56 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/14/14 04:56 | 1 |
| Tetrahydrofuran | ND | * | 10 | | ug/L | | | 04/14/14 04:56 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 04/14/14 04:56 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/14/14 04:56 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/14/14 04:56 | 1 |
| Trichloroethene | ND | | 1.0 | | ug/L | | | 04/14/14 04:56 | 1 |
| **Trichlorofluoromethane** | **1.2** | | 1.0 | | ug/L | | | 04/14/14 04:56 | 1 |
| Vinyl chloride | ND | | 1.0 | | ug/L | | | 04/14/14 04:56 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/14/14 04:56 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *98* | | *70 - 130* | | *04/14/14 04:56* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *107* | | *70 - 130* | | *04/14/14 04:56* | *1* |
| *4-Bromofluorobenzene (Surr)* | *96* | | *70 - 130* | | *04/14/14 04:56* | *1* |

## Client Sample ID: MW-1006-20140410-01

**Lab Sample ID: 480-57719-29**

**Date Collected: 04/10/14 11:15**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 05:20 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 05:20 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/14/14 05:20 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 05:20 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 05:20 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/14/14 05:20 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/14/14 05:20 | 1 |

Client: ERM-Northeast
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57719-1

**Client Sample ID: MW-1006-20140410-01**
**Date Collected: 04/10/14 11:15**
**Date Received: 04/11/14 01:45**

**Lab Sample ID: 480-57719-29**
**Matrix: Water**

**Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 05:20 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/14/14 05:20 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 05:20 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 05:20 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/14/14 05:20 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 05:20 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 05:20 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/14/14 05:20 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 05:20 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 05:20 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/14/14 05:20 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 05:20 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/14/14 05:20 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/14/14 05:20 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 04/14/14 05:20 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/14/14 05:20 | 1 |
| 2-Hexanone | ND | | 10 | | ug/L | | | 04/14/14 05:20 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/14/14 05:20 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/14/14 05:20 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/14/14 05:20 | 1 |
| **Acetone** | **84** | | 50 | | ug/L | | | 04/14/14 05:20 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/14/14 05:20 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 05:20 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/14/14 05:20 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/14/14 05:20 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/14/14 05:20 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/14/14 05:20 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 05:20 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/14/14 05:20 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/14/14 05:20 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/14/14 05:20 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/14/14 05:20 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/14/14 05:20 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/14/14 05:20 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/14/14 05:20 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/14/14 05:20 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/14/14 05:20 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/14/14 05:20 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 05:20 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/14/14 05:20 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/14/14 05:20 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/14/14 05:20 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 05:20 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/14/14 05:20 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/14/14 05:20 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/14/14 05:20 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/14/14 05:20 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 05:20 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 05:20 | 1 |

## Client Sample ID: MW-1006-20140410-01

**Lab Sample ID: 480-57719-29**

**Date Collected: 04/10/14 11:15**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/14/14 05:20 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 05:20 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/14/14 05:20 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/14/14 05:20 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/14/14 05:20 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 05:20 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/14/14 05:20 | 1 |
| Tetrahydrofuran | ND | * | 10 | | ug/L | | | 04/14/14 05:20 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 04/14/14 05:20 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/14/14 05:20 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/14/14 05:20 | 1 |
| Trichloroethene | ND | | 1.0 | | ug/L | | | 04/14/14 05:20 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/14/14 05:20 | 1 |
| Vinyl chloride | ND | | 1.0 | | ug/L | | | 04/14/14 05:20 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/14/14 05:20 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *98* | | *70 - 130* | | *04/14/14 05:20* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *111* | | *70 - 130* | | *04/14/14 05:20* | *1* |
| *4-Bromofluorobenzene (Surr)* | *97* | | *70 - 130* | | *04/14/14 05:20* | *1* |

## Client Sample ID: MW-1005-20140410-01

**Lab Sample ID: 480-57719-30**

**Date Collected: 04/10/14 11:50**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 05:44 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 05:44 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/14/14 05:44 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 05:44 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 05:44 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/14/14 05:44 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/14/14 05:44 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 05:44 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/14/14 05:44 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 05:44 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 05:44 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/14/14 05:44 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 05:44 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 05:44 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/14/14 05:44 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 05:44 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 05:44 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/14/14 05:44 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 05:44 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/14/14 05:44 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/14/14 05:44 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 04/14/14 05:44 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/14/14 05:44 | 1 |

Client: ERM-Northeast
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57719-1

**Client Sample ID: MW-1005-20140410-01**
**Date Collected: 04/10/14 11:50**
**Date Received: 04/11/14 01:45**

**Lab Sample ID: 480-57719-30**
**Matrix: Water**

**Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 2-Hexanone | ND | | 10 | | ug/L | | | 04/14/14 05:44 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/14/14 05:44 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/14/14 05:44 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/14/14 05:44 | 1 |
| **Acetone** | **84** | | 50 | | ug/L | | | 04/14/14 05:44 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/14/14 05:44 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 05:44 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/14/14 05:44 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/14/14 05:44 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/14/14 05:44 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/14/14 05:44 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 05:44 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/14/14 05:44 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/14/14 05:44 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/14/14 05:44 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/14/14 05:44 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/14/14 05:44 | 1 |
| **cis-1,2-Dichloroethene** | **3.6** | | 1.0 | | ug/L | | | 04/14/14 05:44 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/14/14 05:44 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/14/14 05:44 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/14/14 05:44 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/14/14 05:44 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 05:44 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/14/14 05:44 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/14/14 05:44 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/14/14 05:44 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 05:44 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/14/14 05:44 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/14/14 05:44 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/14/14 05:44 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/14/14 05:44 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 05:44 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 05:44 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/14/14 05:44 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 05:44 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/14/14 05:44 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/14/14 05:44 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/14/14 05:44 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 05:44 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/14/14 05:44 | 1 |
| Tetrahydrofuran | ND | * | 10 | | ug/L | | | 04/14/14 05:44 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 04/14/14 05:44 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/14/14 05:44 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/14/14 05:44 | 1 |
| **Trichloroethene** | **13** | | 1.0 | | ug/L | | | 04/14/14 05:44 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/14/14 05:44 | 1 |
| Vinyl chloride | ND | | 1.0 | | ug/L | | | 04/14/14 05:44 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/14/14 05:44 | 1 |

## Client Sample ID: MW-1005-20140410-01

**Lab Sample ID: 480-57719-30**

**Date Collected: 04/10/14 11:50**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| Toluene-d8 (Surr) | 101 | | 70 - 130 | | 04/14/14 05:44 | 1 |
| 1,2-Dichloroethane-d4 (Surr) | 108 | | 70 - 130 | | 04/14/14 05:44 | 1 |
| 4-Bromofluorobenzene (Surr) | 99 | | 70 - 130 | | 04/14/14 05:44 | 1 |

## Client Sample ID: MW-1004-20140410-01

**Lab Sample ID: 480-57719-31**

**Date Collected: 04/10/14 12:00**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 06:07 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 06:07 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/14/14 06:07 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 06:07 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 06:07 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/14/14 06:07 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/14/14 06:07 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 06:07 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/14/14 06:07 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 06:07 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 06:07 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/14/14 06:07 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 06:07 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 06:07 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/14/14 06:07 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 06:07 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 06:07 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/14/14 06:07 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 06:07 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/14/14 06:07 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/14/14 06:07 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 04/14/14 06:07 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/14/14 06:07 | 1 |
| 2-Hexanone | ND | | 10 | | ug/L | | | 04/14/14 06:07 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/14/14 06:07 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/14/14 06:07 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/14/14 06:07 | 1 |
| **Acetone** | **82** | | 50 | | ug/L | | | 04/14/14 06:07 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/14/14 06:07 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 06:07 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/14/14 06:07 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/14/14 06:07 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/14/14 06:07 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/14/14 06:07 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 06:07 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/14/14 06:07 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/14/14 06:07 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/14/14 06:07 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/14/14 06:07 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/14/14 06:07 | 1 |

## Client Sample ID: MW-1004-20140410-01

**Lab Sample ID: 480-57719-31**

**Date Collected: 04/10/14 12:00**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| cis-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/14/14 06:07 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/14/14 06:07 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/14/14 06:07 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/14/14 06:07 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/14/14 06:07 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 06:07 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/14/14 06:07 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/14/14 06:07 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/14/14 06:07 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 06:07 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/14/14 06:07 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/14/14 06:07 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/14/14 06:07 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/14/14 06:07 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 06:07 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 06:07 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/14/14 06:07 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 06:07 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/14/14 06:07 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/14/14 06:07 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/14/14 06:07 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 06:07 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/14/14 06:07 | 1 |
| Tetrahydrofuran | ND | * | 10 | | ug/L | | | 04/14/14 06:07 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 04/14/14 06:07 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/14/14 06:07 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/14/14 06:07 | 1 |
| Trichloroethene | ND | | 1.0 | | ug/L | | | 04/14/14 06:07 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/14/14 06:07 | 1 |
| Vinyl chloride | ND | | 1.0 | | ug/L | | | 04/14/14 06:07 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/14/14 06:07 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *98* | | *70 - 130* | | *04/14/14 06:07* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *110* | | *70 - 130* | | *04/14/14 06:07* | *1* |
| *4-Bromofluorobenzene (Surr)* | *94* | | *70 - 130* | | *04/14/14 06:07* | *1* |

## Client Sample ID: DUP-001-20140410-01

**Lab Sample ID: 480-57719-32**

**Date Collected: 04/10/14 11:11**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/15/14 00:55 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/15/14 00:55 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/15/14 00:55 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/15/14 00:55 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/15/14 00:55 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/15/14 00:55 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/15/14 00:55 | 1 |

**Client Sample ID: DUP-001-20140410-01**
**Date Collected: 04/10/14 11:11**
**Date Received: 04/11/14 01:45**

**Lab Sample ID: 480-57719-32**
**Matrix: Water**

**Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/15/14 00:55 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/15/14 00:55 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/15/14 00:55 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/15/14 00:55 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/15/14 00:55 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/15/14 00:55 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/15/14 00:55 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/15/14 00:55 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/15/14 00:55 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/15/14 00:55 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/15/14 00:55 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/15/14 00:55 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/15/14 00:55 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/15/14 00:55 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 04/15/14 00:55 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/15/14 00:55 | 1 |
| 2-Hexanone | ND | | 10 | | ug/L | | | 04/15/14 00:55 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/15/14 00:55 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/15/14 00:55 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/15/14 00:55 | 1 |
| **Acetone** | **83** | | 50 | | ug/L | | | 04/15/14 00:55 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/15/14 00:55 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/15/14 00:55 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/15/14 00:55 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/15/14 00:55 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/15/14 00:55 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/15/14 00:55 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/15/14 00:55 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/15/14 00:55 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/15/14 00:55 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/15/14 00:55 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/15/14 00:55 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/15/14 00:55 | 1 |
| **cis-1,2-Dichloroethene** | **3.6** | | 1.0 | | ug/L | | | 04/15/14 00:55 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/15/14 00:55 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/15/14 00:55 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/15/14 00:55 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/15/14 00:55 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/15/14 00:55 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/15/14 00:55 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/15/14 00:55 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/15/14 00:55 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/15/14 00:55 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/15/14 00:55 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/15/14 00:55 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/15/14 00:55 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/15/14 00:55 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/15/14 00:55 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/15/14 00:55 | 1 |

## Client Sample ID: DUP-001-20140410-01

**Lab Sample ID: 480-57719-32**

**Date Collected: 04/10/14 11:11**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/15/14 00:55 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/15/14 00:55 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/15/14 00:55 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/15/14 00:55 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/15/14 00:55 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/15/14 00:55 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/15/14 00:55 | 1 |
| Tetrahydrofuran | ND | | 10 | | ug/L | | | 04/15/14 00:55 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 04/15/14 00:55 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/15/14 00:55 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/15/14 00:55 | 1 |
| **Trichloroethene** | **12** | | 1.0 | | ug/L | | | 04/15/14 00:55 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/15/14 00:55 | 1 |
| Vinyl chloride | ND | | 1.0 | | ug/L | | | 04/15/14 00:55 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/15/14 00:55 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *100* | | *70 - 130* | | *04/15/14 00:55* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *103* | | *70 - 130* | | *04/15/14 00:55* | *1* |
| *4-Bromofluorobenzene (Surr)* | *99* | | *70 - 130* | | *04/15/14 00:55* | *1* |

## Client Sample ID: MW-1002B-20140410-01

**Lab Sample ID: 480-57719-33**

**Date Collected: 04/10/14 12:30**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 06:55 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 06:55 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/14/14 06:55 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 06:55 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 06:55 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/14/14 06:55 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/14/14 06:55 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 06:55 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/14/14 06:55 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 06:55 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 06:55 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/14/14 06:55 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 06:55 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 06:55 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/14/14 06:55 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 06:55 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 06:55 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/14/14 06:55 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 06:55 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/14/14 06:55 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/14/14 06:55 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 04/14/14 06:55 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/14/14 06:55 | 1 |

Client: ERM-Northeast
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57719-1

**Client Sample ID: MW-1002B-20140410-01**
**Date Collected: 04/10/14 12:30**
**Date Received: 04/11/14 01:45**

**Lab Sample ID: 480-57719-33**
**Matrix: Water**

**Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 2-Hexanone | ND | | 10 | | ug/L | | | 04/14/14 06:55 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/14/14 06:55 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/14/14 06:55 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/14/14 06:55 | 1 |
| **Acetone** | **87** | | 50 | | ug/L | | | 04/14/14 06:55 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/14/14 06:55 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 06:55 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/14/14 06:55 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/14/14 06:55 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/14/14 06:55 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/14/14 06:55 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 06:55 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/14/14 06:55 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/14/14 06:55 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/14/14 06:55 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/14/14 06:55 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/14/14 06:55 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/14/14 06:55 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/14/14 06:55 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/14/14 06:55 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/14/14 06:55 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/14/14 06:55 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 06:55 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/14/14 06:55 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/14/14 06:55 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/14/14 06:55 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 06:55 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/14/14 06:55 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/14/14 06:55 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/14/14 06:55 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/14/14 06:55 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 06:55 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 06:55 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/14/14 06:55 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 06:55 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/14/14 06:55 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/14/14 06:55 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/14/14 06:55 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 06:55 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/14/14 06:55 | 1 |
| Tetrahydrofuran | ND | * | 10 | | ug/L | | | 04/14/14 06:55 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 04/14/14 06:55 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/14/14 06:55 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/14/14 06:55 | 1 |
| Trichloroethene | ND | | 1.0 | | ug/L | | | 04/14/14 06:55 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/14/14 06:55 | 1 |
| Vinyl chloride | ND | | 1.0 | | ug/L | | | 04/14/14 06:55 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/14/14 06:55 | 1 |

## Client Sample ID: MW-1002B-20140410-01

**Lab Sample ID: 480-57719-33**

**Date Collected: 04/10/14 12:30**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *100* | | *70 - 130* | | *04/14/14 06:55* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *111* | | *70 - 130* | | *04/14/14 06:55* | *1* |
| *4-Bromofluorobenzene (Surr)* | *95* | | *70 - 130* | | *04/14/14 06:55* | *1* |

## Client Sample ID: MW-1003-20140410-01

**Lab Sample ID: 480-57719-34**

**Date Collected: 04/10/14 13:15**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/15/14 01:19 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/15/14 01:19 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/15/14 01:19 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/15/14 01:19 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/15/14 01:19 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/15/14 01:19 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/15/14 01:19 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/15/14 01:19 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/15/14 01:19 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/15/14 01:19 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/15/14 01:19 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/15/14 01:19 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/15/14 01:19 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/15/14 01:19 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/15/14 01:19 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/15/14 01:19 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/15/14 01:19 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/15/14 01:19 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/15/14 01:19 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/15/14 01:19 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/15/14 01:19 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 04/15/14 01:19 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/15/14 01:19 | 1 |
| 2-Hexanone | ND | | 10 | | ug/L | | | 04/15/14 01:19 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/15/14 01:19 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/15/14 01:19 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/15/14 01:19 | 1 |
| **Acetone** | **80** | | 50 | | ug/L | | | 04/15/14 01:19 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/15/14 01:19 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/15/14 01:19 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/15/14 01:19 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/15/14 01:19 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/15/14 01:19 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/15/14 01:19 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/15/14 01:19 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/15/14 01:19 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/15/14 01:19 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/15/14 01:19 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/15/14 01:19 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/15/14 01:19 | 1 |

## Client Sample ID: MW-1003-20140410-01

**Lab Sample ID: 480-57719-34**

**Date Collected: 04/10/14 13:15**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **cis-1,2-Dichloroethene** | **3.3** | | 1.0 | | ug/L | | | 04/15/14 01:19 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/15/14 01:19 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/15/14 01:19 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/15/14 01:19 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/15/14 01:19 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/15/14 01:19 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/15/14 01:19 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/15/14 01:19 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/15/14 01:19 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/15/14 01:19 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/15/14 01:19 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/15/14 01:19 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/15/14 01:19 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/15/14 01:19 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/15/14 01:19 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/15/14 01:19 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/15/14 01:19 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/15/14 01:19 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/15/14 01:19 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/15/14 01:19 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/15/14 01:19 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/15/14 01:19 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/15/14 01:19 | 1 |
| Tetrahydrofuran | ND | | 10 | | ug/L | | | 04/15/14 01:19 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 04/15/14 01:19 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/15/14 01:19 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/15/14 01:19 | 1 |
| **Trichloroethene** | **5.2** | | 1.0 | | ug/L | | | 04/15/14 01:19 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/15/14 01:19 | 1 |
| Vinyl chloride | ND | | 1.0 | | ug/L | | | 04/15/14 01:19 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/15/14 01:19 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *98* | | *70 - 130* | | *04/15/14 01:19* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *104* | | *70 - 130* | | *04/15/14 01:19* | *1* |
| *4-Bromofluorobenzene (Surr)* | *99* | | *70 - 130* | | *04/15/14 01:19* | *1* |

# Surrogate Summary

Client: ERM-Northeast
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57719-1

## Method: 8260C - Volatile Organic Compounds (GC/MS)

**Matrix: Water** **Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | | |
|---|---|---|---|---|
| | | TOL | 12DCE | BFB |
| Lab Sample ID | Client Sample ID | (70-130) | (70-130) | (70-130) |
| 480-57719-1 | MW-1030-20140410-01 | 99 | 103 | 97 |
| 480-57719-2 | MW-1028-20140410-01 | 100 | 105 | 96 |
| 480-57719-3 | MW-1025M-20140410-01 | 97 | 101 | 95 |
| 480-57719-4 | DUP-003-20140410-01 | 100 | 103 | 95 |
| 480-57719-5 | MW-1015D-20140410-01 | 101 | 103 | 98 |
| 480-57719-6 | MW-1033-20140410-01 | 99 | 103 | 93 |
| 480-57719-7 | DUP-002-20140410-01 | 100 | 102 | 96 |
| 480-57719-8 | MW-1023-20140410-01 | 100 | 102 | 96 |
| 480-57719-9 | MW-1010M-20140410-01 | 98 | 100 | 99 |
| 480-57719-10 | MW-1022-20140410-01 | 99 | 103 | 96 |
| 480-57719-11 | MW-1019B-20140410-01 | 98 | 102 | 95 |
| 480-57719-12 | MW-1032-20140410-01 | 100 | 103 | 96 |
| 480-57719-13 | MW-1017D-20140410-01 | 100 | 103 | 96 |
| 480-57719-14 | MW-1018-20140410-01 | 99 | 105 | 98 |
| 480-57719-14 - DL | MW-1018-20140410-01 | 98 | 107 | 97 |
| 480-57719-15 | MW-1031-20140410-01 | 99 | 104 | 97 |
| 480-57719-16 | MW-1008-20140410-01 | 100 | 103 | 96 |
| 480-57719-17 | MW-1025D-20140410-01 | 101 | 107 | 96 |
| 480-57719-18 | MW-1011-20140410-01 | 98 | 104 | 97 |
| 480-57719-19 | MW-1024D-20140410-01 | 99 | 104 | 94 |
| 480-57719-20 | MW-1020-20140410-01 | 96 | 104 | 97 |
| 480-57719-21 | MW-1034-20140410-01 | 98 | 107 | 96 |
| 480-57719-22 | DUP-004-20140410-01 | 100 | 105 | 95 |
| 480-57719-23 | MW-1010D-20140410-01 | 97 | 107 | 96 |
| 480-57719-24 | MW-1027-20140410-01 | 99 | 107 | 97 |
| 480-57719-25 | MW-1016D-20140410-01 | 98 | 108 | 95 |
| 480-57719-26 | MW-1013-20140410-01 | 100 | 107 | 96 |
| 480-57719-27 | TB-001-20140410-01 | 97 | 108 | 99 |
| 480-57719-28 | MW-1009-20140410-01 | 98 | 107 | 96 |
| 480-57719-29 | MW-1006-20140410-01 | 98 | 111 | 97 |
| 480-57719-30 | MW-1005-20140410-01 | 101 | 108 | 99 |
| 480-57719-31 | MW-1004-20140410-01 | 98 | 110 | 94 |
| 480-57719-32 | DUP-001-20140410-01 | 100 | 103 | 99 |
| 480-57719-33 | MW-1002B-20140410-01 | 100 | 111 | 95 |
| 480-57719-34 | MW-1003-20140410-01 | 98 | 104 | 99 |
| LCS 480-175358/5 | Lab Control Sample | 98 | 101 | 99 |
| LCS 480-175485/6 | Lab Control Sample | 98 | 105 | 99 |
| LCS 480-175755/4 | Lab Control Sample | 99 | 101 | 103 |
| LCSD 480-175358/6 | Lab Control Sample Dup | 99 | 101 | 98 |
| LCSD 480-175485/7 | Lab Control Sample Dup | 96 | 106 | 96 |
| LCSD 480-175755/5 | Lab Control Sample Dup | 98 | 105 | 100 |
| MB 480-175358/8 | Method Blank | 101 | 102 | 99 |
| MB 480-175485/9 | Method Blank | 99 | 105 | 96 |
| MB 480-175755/7 | Method Blank | 99 | 104 | 97 |

**Surrogate Legend**

TOL = Toluene-d8 (Surr)

12DCE = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

## Method: 8260C - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 480-175358/8**
**Matrix: Water**
**Analysis Batch: 175358**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 23:23 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 23:23 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/11/14 23:23 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 23:23 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 23:23 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 23:23 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/11/14 23:23 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 23:23 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 23:23 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 23:23 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 23:23 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/11/14 23:23 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 23:23 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 23:23 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 23:23 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 23:23 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 23:23 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 23:23 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 23:23 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/11/14 23:23 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 23:23 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 04/11/14 23:23 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/11/14 23:23 | 1 |
| 2-Hexanone | ND | | 10 | | ug/L | | | 04/11/14 23:23 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/11/14 23:23 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/11/14 23:23 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/11/14 23:23 | 1 |
| Acetone | ND | | 50 | | ug/L | | | 04/11/14 23:23 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/11/14 23:23 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 23:23 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/11/14 23:23 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/11/14 23:23 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/11/14 23:23 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/11/14 23:23 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 23:23 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/11/14 23:23 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/11/14 23:23 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/11/14 23:23 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/11/14 23:23 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/11/14 23:23 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 23:23 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/11/14 23:23 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/11/14 23:23 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/11/14 23:23 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/11/14 23:23 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 23:23 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/11/14 23:23 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/11/14 23:23 | 1 |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 480-175358/8**
**Matrix: Water**
**Analysis Batch: 175358**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/11/14 23:23 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 23:23 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/11/14 23:23 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/11/14 23:23 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/11/14 23:23 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/11/14 23:23 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 23:23 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 23:23 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/11/14 23:23 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 23:23 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/11/14 23:23 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/11/14 23:23 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/11/14 23:23 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 23:23 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 23:23 | 1 |
| Tetrahydrofuran | ND | | 10 | | ug/L | | | 04/11/14 23:23 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 04/11/14 23:23 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 23:23 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/11/14 23:23 | 1 |
| Trichloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 23:23 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/11/14 23:23 | 1 |
| Vinyl chloride | ND | | 1.0 | | ug/L | | | 04/11/14 23:23 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/11/14 23:23 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *101* | | *70 - 130* | | *04/11/14 23:23* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *102* | | *70 - 130* | | *04/11/14 23:23* | *1* |
| *4-Bromofluorobenzene (Surr)* | *99* | | *70 - 130* | | *04/11/14 23:23* | *1* |

**Lab Sample ID: LCS 480-175358/5**
**Matrix: Water**
**Analysis Batch: 175358**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 25.0 | 24.0 | | ug/L | | 96 | 70 - 130 |
| 1,1,1-Trichloroethane | 25.0 | 23.4 | | ug/L | | 94 | 70 - 130 |
| 1,1,2,2-Tetrachloroethane | 25.0 | 24.8 | | ug/L | | 99 | 70 - 130 |
| 1,1,2-Trichloroethane | 25.0 | 25.2 | | ug/L | | 101 | 70 - 130 |
| 1,1-Dichloroethane | 25.0 | 23.7 | | ug/L | | 95 | 70 - 130 |
| 1,1-Dichloroethene | 25.0 | 23.8 | | ug/L | | 95 | 70 - 130 |
| 1,1-Dichloropropene | 25.0 | 23.5 | | ug/L | | 94 | 70 - 130 |
| 1,2,3-Trichlorobenzene | 25.0 | 26.2 | | ug/L | | 105 | 70 - 130 |
| 1,2,3-Trichloropropane | 25.0 | 25.3 | | ug/L | | 101 | 70 - 130 |
| 1,2,4-Trichlorobenzene | 25.0 | 25.7 | | ug/L | | 103 | 70 - 130 |
| 1,2,4-Trimethylbenzene | 25.0 | 24.0 | | ug/L | | 96 | 70 - 130 |
| 1,2-Dibromo-3-Chloropropane | 25.0 | 23.9 | | ug/L | | 96 | 70 - 130 |
| 1,2-Dichlorobenzene | 25.0 | 25.4 | | ug/L | | 101 | 70 - 130 |
| 1,2-Dichloroethane | 25.0 | 25.3 | | ug/L | | 101 | 70 - 130 |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 480-175358/5**
**Matrix: Water**
**Analysis Batch: 175358**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,2-Dichloropropane | 25.0 | 24.9 | | ug/L | | 99 | 70 - 130 |
| 1,3,5-Trimethylbenzene | 25.0 | 23.9 | | ug/L | | 95 | 70 - 130 |
| 1,3-Dichlorobenzene | 25.0 | 24.7 | | ug/L | | 99 | 70 - 130 |
| 1,3-Dichloropropane | 25.0 | 24.7 | | ug/L | | 99 | 70 - 130 |
| 1,4-Dichlorobenzene | 25.0 | 24.2 | | ug/L | | 97 | 70 - 130 |
| 1,4-Dioxane | 500 | 431 | | ug/L | | 86 | 70 - 130 |
| 2,2-Dichloropropane | 25.0 | 21.5 | | ug/L | | 86 | 70 - 130 |
| 2-Butanone (MEK) | 125 | 132 | | ug/L | | 105 | 70 - 130 |
| 2-Chlorotoluene | 25.0 | 24.0 | | ug/L | | 96 | 70 - 130 |
| 2-Hexanone | 125 | 126 | | ug/L | | 101 | 70 - 130 |
| 4-Chlorotoluene | 25.0 | 22.1 | | ug/L | | 88 | 70 - 130 |
| 4-Isopropyltoluene | 25.0 | 24.2 | | ug/L | | 97 | 70 - 130 |
| 4-Methyl-2-pentanone (MIBK) | 125 | 123 | | ug/L | | 98 | 70 - 130 |
| Acetone | 125 | 124 | | ug/L | | 99 | 70 - 130 |
| Benzene | 25.0 | 24.1 | | ug/L | | 97 | 70 - 130 |
| Bromobenzene | 25.0 | 24.7 | | ug/L | | 99 | 70 - 130 |
| Bromoform | 25.0 | 20.6 | | ug/L | | 82 | 70 - 130 |
| Bromomethane | 25.0 | 29.6 | | ug/L | | 118 | 70 - 130 |
| Carbon disulfide | 25.0 | 20.3 | | ug/L | | 81 | 70 - 130 |
| Carbon tetrachloride | 25.0 | 23.1 | | ug/L | | 92 | 70 - 130 |
| Chlorobenzene | 25.0 | 24.4 | | ug/L | | 97 | 70 - 130 |
| Chlorobromomethane | 25.0 | 24.0 | | ug/L | | 96 | 70 - 130 |
| Chlorodibromomethane | 24.5 | 23.6 | | ug/L | | 96 | 70 - 130 |
| Chloroethane | 25.0 | 28.4 | | ug/L | | 114 | 70 - 130 |
| Chloroform | 25.0 | 24.1 | | ug/L | | 96 | 70 - 130 |
| Chloromethane | 25.0 | 23.7 | | ug/L | | 95 | 70 - 130 |
| cis-1,2-Dichloroethene | 25.0 | 23.0 | | ug/L | | 92 | 70 - 130 |
| cis-1,3-Dichloropropene | 25.0 | 25.5 | | ug/L | | 102 | 70 - 130 |
| Dichlorobromomethane | 25.0 | 24.3 | | ug/L | | 97 | 70 - 130 |
| Dichlorodifluoromethane | 25.0 | 24.7 | | ug/L | | 99 | 70 - 130 |
| Ethyl ether | 25.0 | 25.7 | | ug/L | | 103 | 70 - 130 |
| Ethylbenzene | 25.0 | 24.0 | | ug/L | | 96 | 70 - 130 |
| Ethylene Dibromide | 25.0 | 24.1 | | ug/L | | 96 | 70 - 130 |
| Hexachlorobutadiene | 25.0 | 23.7 | | ug/L | | 95 | 70 - 130 |
| Isopropyl ether | 25.0 | 25.4 | | ug/L | | 102 | 70 - 130 |
| Isopropylbenzene | 25.0 | 23.7 | | ug/L | | 95 | 70 - 130 |
| Methyl tert-butyl ether | 25.0 | 24.1 | | ug/L | | 96 | 70 - 130 |
| Methylene Chloride | 25.0 | 23.6 | | ug/L | | 95 | 70 - 130 |
| m-Xylene & p-Xylene | 25.0 | 23.6 | | ug/L | | 95 | 70 - 130 |
| Naphthalene | 25.0 | 26.1 | | ug/L | | 104 | 70 - 130 |
| n-Butylbenzene | 25.0 | 24.9 | | ug/L | | 99 | 70 - 130 |
| N-Propylbenzene | 25.0 | 23.6 | | ug/L | | 94 | 70 - 130 |
| o-Xylene | 25.0 | 23.6 | | ug/L | | 94 | 70 - 130 |
| sec-Butylbenzene | 25.0 | 23.8 | | ug/L | | 95 | 70 - 130 |
| Styrene | 25.0 | 24.4 | | ug/L | | 97 | 70 - 130 |
| Tert-amyl methyl ether | 25.0 | 25.0 | | ug/L | | 100 | 70 - 130 |
| Tert-butyl ethyl ether | 25.0 | 25.0 | | ug/L | | 100 | 70 - 130 |
| tert-Butylbenzene | 25.0 | 24.1 | | ug/L | | 96 | 70 - 130 |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 480-175358/5**
**Matrix: Water**
**Analysis Batch: 175358**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 25.0 | 26.1 | | ug/L | | 104 | 70 - 130 |
| Tetrahydrofuran | 50.0 | 64.8 | | ug/L | | 130 | 70 - 130 |
| Toluene | 25.0 | 23.9 | | ug/L | | 96 | 70 - 130 |
| trans-1,2-Dichloroethene | 25.0 | 22.9 | | ug/L | | 91 | 70 - 130 |
| trans-1,3-Dichloropropene | 25.0 | 23.6 | | ug/L | | 94 | 70 - 130 |
| Trichloroethene | 25.0 | 23.9 | | ug/L | | 96 | 70 - 130 |
| Trichlorofluoromethane | 25.0 | 26.3 | | ug/L | | 105 | 70 - 130 |
| Vinyl chloride | 25.0 | 24.1 | | ug/L | | 96 | 70 - 130 |
| Dibromomethane | 25.0 | 25.2 | | ug/L | | 101 | 70 - 130 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Toluene-d8 (Surr)* | *98* | | *70 - 130* |
| *1,2-Dichloroethane-d4 (Surr)* | *101* | | *70 - 130* |
| *4-Bromofluorobenzene (Surr)* | *99* | | *70 - 130* |

**Lab Sample ID: LCSD 480-175358/6**
**Matrix: Water**
**Analysis Batch: 175358**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 25.0 | 24.6 | | ug/L | | 99 | 70 - 130 | 3 | 20 |
| 1,1,1-Trichloroethane | 25.0 | 22.6 | | ug/L | | 90 | 70 - 130 | 4 | 20 |
| 1,1,2,2-Tetrachloroethane | 25.0 | 24.6 | | ug/L | | 99 | 70 - 130 | 1 | 20 |
| 1,1,2-Trichloroethane | 25.0 | 24.4 | | ug/L | | 98 | 70 - 130 | 3 | 20 |
| 1,1-Dichloroethane | 25.0 | 23.7 | | ug/L | | 95 | 70 - 130 | 0 | 20 |
| 1,1-Dichloroethene | 25.0 | 23.0 | | ug/L | | 92 | 70 - 130 | 3 | 20 |
| 1,1-Dichloropropene | 25.0 | 23.3 | | ug/L | | 93 | 70 - 130 | 1 | 20 |
| 1,2,3-Trichlorobenzene | 25.0 | 26.1 | | ug/L | | 104 | 70 - 130 | 1 | 20 |
| 1,2,3-Trichloropropane | 25.0 | 24.4 | | ug/L | | 97 | 70 - 130 | 4 | 20 |
| 1,2,4-Trichlorobenzene | 25.0 | 25.2 | | ug/L | | 101 | 70 - 130 | 2 | 20 |
| 1,2,4-Trimethylbenzene | 25.0 | 23.6 | | ug/L | | 94 | 70 - 130 | 2 | 20 |
| 1,2-Dibromo-3-Chloropropane | 25.0 | 22.8 | | ug/L | | 91 | 70 - 130 | 5 | 20 |
| 1,2-Dichlorobenzene | 25.0 | 24.5 | | ug/L | | 98 | 70 - 130 | 3 | 20 |
| 1,2-Dichloroethane | 25.0 | 25.2 | | ug/L | | 101 | 70 - 130 | 1 | 20 |
| 1,2-Dichloropropane | 25.0 | 25.0 | | ug/L | | 100 | 70 - 130 | 0 | 20 |
| 1,3,5-Trimethylbenzene | 25.0 | 23.4 | | ug/L | | 93 | 70 - 130 | 2 | 20 |
| 1,3-Dichlorobenzene | 25.0 | 24.0 | | ug/L | | 96 | 70 - 130 | 3 | 20 |
| 1,3-Dichloropropane | 25.0 | 24.3 | | ug/L | | 97 | 70 - 130 | 2 | 20 |
| 1,4-Dichlorobenzene | 25.0 | 23.5 | | ug/L | | 94 | 70 - 130 | 3 | 20 |
| 1,4-Dioxane | 500 | 450 | | ug/L | | 90 | 70 - 130 | 4 | 20 |
| 2,2-Dichloropropane | 25.0 | 20.5 | | ug/L | | 82 | 70 - 130 | 5 | 20 |
| 2-Butanone (MEK) | 125 | 129 | | ug/L | | 103 | 70 - 130 | 2 | 20 |
| 2-Chlorotoluene | 25.0 | 23.7 | | ug/L | | 95 | 70 - 130 | 1 | 20 |
| 2-Hexanone | 125 | 125 | | ug/L | | 100 | 70 - 130 | 1 | 20 |
| 4-Chlorotoluene | 25.0 | 21.5 | | ug/L | | 86 | 70 - 130 | 3 | 20 |
| 4-Isopropyltoluene | 25.0 | 23.8 | | ug/L | | 95 | 70 - 130 | 2 | 20 |
| 4-Methyl-2-pentanone (MIBK) | 125 | 123 | | ug/L | | 99 | 70 - 130 | 0 | 20 |
| Acetone | 125 | 122 | | ug/L | | 98 | 70 - 130 | 1 | 20 |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 480-175358/6**
**Matrix: Water**
**Analysis Batch: 175358**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | 25.0 | 23.8 | | ug/L | | 95 | 70 - 130 | 1 | 20 |
| Bromobenzene | 25.0 | 24.2 | | ug/L | | 97 | 70 - 130 | 2 | 20 |
| Bromoform | 25.0 | 20.6 | | ug/L | | 82 | 70 - 130 | 0 | 20 |
| Bromomethane | 25.0 | 29.6 | | ug/L | | 119 | 70 - 130 | 0 | 20 |
| Carbon disulfide | 25.0 | 20.6 | | ug/L | | 82 | 70 - 130 | 1 | 20 |
| Carbon tetrachloride | 25.0 | 22.8 | | ug/L | | 91 | 70 - 130 | 1 | 20 |
| Chlorobenzene | 25.0 | 24.2 | | ug/L | | 97 | 70 - 130 | 1 | 20 |
| Chlorobromomethane | 25.0 | 24.7 | | ug/L | | 99 | 70 - 130 | 3 | 20 |
| Chlorodibromomethane | 24.5 | 23.7 | | ug/L | | 97 | 70 - 130 | 1 | 20 |
| Chloroethane | 25.0 | 28.2 | | ug/L | | 113 | 70 - 130 | 1 | 20 |
| Chloroform | 25.0 | 23.7 | | ug/L | | 95 | 70 - 130 | 2 | 20 |
| Chloromethane | 25.0 | 23.4 | | ug/L | | 93 | 70 - 130 | 1 | 20 |
| cis-1,2-Dichloroethene | 25.0 | 23.4 | | ug/L | | 94 | 70 - 130 | 2 | 20 |
| cis-1,3-Dichloropropene | 25.0 | 25.0 | | ug/L | | 100 | 70 - 130 | 2 | 20 |
| Dichlorobromomethane | 25.0 | 24.6 | | ug/L | | 98 | 70 - 130 | 1 | 20 |
| Dichlorodifluoromethane | 25.0 | 22.9 | | ug/L | | 92 | 70 - 130 | 7 | 20 |
| Ethyl ether | 25.0 | 25.5 | | ug/L | | 102 | 70 - 130 | 1 | 20 |
| Ethylbenzene | 25.0 | 23.8 | | ug/L | | 95 | 70 - 130 | 1 | 20 |
| Ethylene Dibromide | 25.0 | 24.6 | | ug/L | | 98 | 70 - 130 | 2 | 20 |
| Hexachlorobutadiene | 25.0 | 23.6 | | ug/L | | 94 | 70 - 130 | 0 | 20 |
| Isopropyl ether | 25.0 | 25.7 | | ug/L | | 103 | 70 - 130 | 1 | 20 |
| Isopropylbenzene | 25.0 | 23.0 | | ug/L | | 92 | 70 - 130 | 3 | 20 |
| Methyl tert-butyl ether | 25.0 | 24.1 | | ug/L | | 96 | 70 - 130 | 0 | 20 |
| Methylene Chloride | 25.0 | 23.8 | | ug/L | | 95 | 70 - 130 | 1 | 20 |
| m-Xylene & p-Xylene | 25.0 | 23.4 | | ug/L | | 94 | 70 - 130 | 1 | 20 |
| Naphthalene | 25.0 | 25.8 | | ug/L | | 103 | 70 - 130 | 1 | 20 |
| n-Butylbenzene | 25.0 | 24.0 | | ug/L | | 96 | 70 - 130 | 3 | 20 |
| N-Propylbenzene | 25.0 | 23.1 | | ug/L | | 92 | 70 - 130 | 2 | 20 |
| o-Xylene | 25.0 | 23.9 | | ug/L | | 96 | 70 - 130 | 1 | 20 |
| sec-Butylbenzene | 25.0 | 23.0 | | ug/L | | 92 | 70 - 130 | 3 | 20 |
| Styrene | 25.0 | 24.1 | | ug/L | | 96 | 70 - 130 | 1 | 20 |
| Tert-amyl methyl ether | 25.0 | 25.3 | | ug/L | | 101 | 70 - 130 | 1 | 20 |
| Tert-butyl ethyl ether | 25.0 | 25.1 | | ug/L | | 100 | 70 - 130 | 0 | 20 |
| tert-Butylbenzene | 25.0 | 22.8 | | ug/L | | 91 | 70 - 130 | 6 | 20 |
| Tetrachloroethene | 25.0 | 26.8 | | ug/L | | 107 | 70 - 130 | 3 | 20 |
| Tetrahydrofuran | 50.0 | 65.1 | | ug/L | | 130 | 70 - 130 | 0 | 20 |
| Toluene | 25.0 | 23.6 | | ug/L | | 95 | 70 - 130 | 1 | 20 |
| trans-1,2-Dichloroethene | 25.0 | 22.1 | | ug/L | | 88 | 70 - 130 | 3 | 20 |
| trans-1,3-Dichloropropene | 25.0 | 24.1 | | ug/L | | 96 | 70 - 130 | 2 | 20 |
| Trichloroethene | 25.0 | 23.1 | | ug/L | | 92 | 70 - 130 | 4 | 20 |
| Trichlorofluoromethane | 25.0 | 26.3 | | ug/L | | 105 | 70 - 130 | 0 | 20 |
| Vinyl chloride | 25.0 | 23.2 | | ug/L | | 93 | 70 - 130 | 4 | 20 |
| Dibromomethane | 25.0 | 25.0 | | ug/L | | 100 | 70 - 130 | 1 | 20 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *Toluene-d8 (Surr)* | *99* | | *70 - 130* |
| *1,2-Dichloroethane-d4 (Surr)* | *101* | | *70 - 130* |
| *4-Bromofluorobenzene (Surr)* | *98* | | *70 - 130* |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 480-175485/9**
**Matrix: Water**
**Analysis Batch: 175485**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/13/14 22:07 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/13/14 22:07 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 04/13/14 22:07 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 2-Hexanone | ND | | 10 | | ug/L | | | 04/13/14 22:07 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/13/14 22:07 | 1 |
| Acetone | ND | | 50 | | ug/L | | | 04/13/14 22:07 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/13/14 22:07 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/13/14 22:07 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/13/14 22:07 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/13/14 22:07 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/13/14 22:07 | 1 |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 480-175485/9**
**Matrix: Water**
**Analysis Batch: 175485**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/13/14 22:07 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Tetrahydrofuran | ND | | 10 | | ug/L | | | 04/13/14 22:07 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/13/14 22:07 | 1 |
| Trichloroethene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Vinyl chloride | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *99* | | *70 - 130* | | *04/13/14 22:07* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *105* | | *70 - 130* | | *04/13/14 22:07* | *1* |
| *4-Bromofluorobenzene (Surr)* | *96* | | *70 - 130* | | *04/13/14 22:07* | *1* |

**Lab Sample ID: LCS 480-175485/6**
**Matrix: Water**
**Analysis Batch: 175485**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 25.0 | 24.4 | | ug/L | | 97 | 70 - 130 |
| 1,1,1-Trichloroethane | 25.0 | 24.8 | | ug/L | | 99 | 70 - 130 |
| 1,1,2,2-Tetrachloroethane | 25.0 | 24.9 | | ug/L | | 100 | 70 - 130 |
| 1,1,2-Trichloroethane | 25.0 | 24.9 | | ug/L | | 99 | 70 - 130 |
| 1,1-Dichloroethane | 25.0 | 24.7 | | ug/L | | 99 | 70 - 130 |
| 1,1-Dichloroethene | 25.0 | 23.8 | | ug/L | | 95 | 70 - 130 |
| 1,1-Dichloropropene | 25.0 | 25.5 | | ug/L | | 102 | 70 - 130 |
| 1,2,3-Trichlorobenzene | 25.0 | 25.2 | | ug/L | | 101 | 70 - 130 |
| 1,2,3-Trichloropropane | 25.0 | 24.3 | | ug/L | | 97 | 70 - 130 |
| 1,2,4-Trichlorobenzene | 25.0 | 25.3 | | ug/L | | 101 | 70 - 130 |
| 1,2,4-Trimethylbenzene | 25.0 | 24.6 | | ug/L | | 98 | 70 - 130 |
| 1,2-Dibromo-3-Chloropropane | 25.0 | 23.3 | | ug/L | | 93 | 70 - 130 |
| 1,2-Dichlorobenzene | 25.0 | 24.9 | | ug/L | | 99 | 70 - 130 |
| 1,2-Dichloroethane | 25.0 | 26.4 | | ug/L | | 106 | 70 - 130 |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 480-175485/6**
**Matrix: Water**
**Analysis Batch: 175485**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,2-Dichloropropane | 25.0 | 26.1 | | ug/L | | 104 | 70 - 130 |
| 1,3,5-Trimethylbenzene | 25.0 | 24.2 | | ug/L | | 97 | 70 - 130 |
| 1,3-Dichlorobenzene | 25.0 | 24.9 | | ug/L | | 100 | 70 - 130 |
| 1,3-Dichloropropane | 25.0 | 24.4 | | ug/L | | 98 | 70 - 130 |
| 1,4-Dichlorobenzene | 25.0 | 24.1 | | ug/L | | 97 | 70 - 130 |
| 1,4-Dioxane | 500 | 452 | | ug/L | | 90 | 70 - 130 |
| 2,2-Dichloropropane | 25.0 | 23.3 | | ug/L | | 93 | 70 - 130 |
| 2-Butanone (MEK) | 125 | 142 | | ug/L | | 113 | 70 - 130 |
| 2-Chlorotoluene | 25.0 | 24.4 | | ug/L | | 98 | 70 - 130 |
| 2-Hexanone | 125 | 125 | | ug/L | | 100 | 70 - 130 |
| 4-Chlorotoluene | 25.0 | 22.0 | | ug/L | | 88 | 70 - 130 |
| 4-Isopropyltoluene | 25.0 | 24.9 | | ug/L | | 100 | 70 - 130 |
| 4-Methyl-2-pentanone (MIBK) | 125 | 124 | | ug/L | | 99 | 70 - 130 |
| Acetone | 125 | 125 | | ug/L | | 100 | 70 - 130 |
| Benzene | 25.0 | 24.9 | | ug/L | | 100 | 70 - 130 |
| Bromobenzene | 25.0 | 24.3 | | ug/L | | 97 | 70 - 130 |
| Bromoform | 25.0 | 21.2 | | ug/L | | 85 | 70 - 130 |
| Bromomethane | 25.0 | 29.6 | | ug/L | | 118 | 70 - 130 |
| Carbon disulfide | 25.0 | 21.1 | | ug/L | | 84 | 70 - 130 |
| Carbon tetrachloride | 25.0 | 25.3 | | ug/L | | 101 | 70 - 130 |
| Chlorobenzene | 25.0 | 24.9 | | ug/L | | 99 | 70 - 130 |
| Chlorobromomethane | 25.0 | 25.3 | | ug/L | | 101 | 70 - 130 |
| Chlorodibromomethane | 24.5 | 24.5 | | ug/L | | 100 | 70 - 130 |
| Chloroethane | 25.0 | 28.9 | | ug/L | | 116 | 70 - 130 |
| Chloroform | 25.0 | 25.1 | | ug/L | | 100 | 70 - 130 |
| Chloromethane | 25.0 | 24.2 | | ug/L | | 97 | 70 - 130 |
| cis-1,2-Dichloroethene | 25.0 | 24.7 | | ug/L | | 99 | 70 - 130 |
| cis-1,3-Dichloropropene | 25.0 | 26.2 | | ug/L | | 105 | 70 - 130 |
| Dichlorobromomethane | 25.0 | 25.5 | | ug/L | | 102 | 70 - 130 |
| Dichlorodifluoromethane | 25.0 | 22.6 | | ug/L | | 90 | 70 - 130 |
| Ethyl ether | 25.0 | 25.0 | | ug/L | | 100 | 70 - 130 |
| Ethylbenzene | 25.0 | 24.2 | | ug/L | | 97 | 70 - 130 |
| Ethylene Dibromide | 25.0 | 24.8 | | ug/L | | 99 | 70 - 130 |
| Hexachlorobutadiene | 25.0 | 25.5 | | ug/L | | 102 | 70 - 130 |
| Isopropyl ether | 25.0 | 26.3 | | ug/L | | 105 | 70 - 130 |
| Isopropylbenzene | 25.0 | 24.1 | | ug/L | | 96 | 70 - 130 |
| Methyl tert-butyl ether | 25.0 | 24.3 | | ug/L | | 97 | 70 - 130 |
| Methylene Chloride | 25.0 | 23.7 | | ug/L | | 95 | 70 - 130 |
| m-Xylene & p-Xylene | 25.0 | 24.7 | | ug/L | | 99 | 70 - 130 |
| Naphthalene | 25.0 | 25.8 | | ug/L | | 103 | 70 - 130 |
| n-Butylbenzene | 25.0 | 25.4 | | ug/L | | 102 | 70 - 130 |
| N-Propylbenzene | 25.0 | 24.2 | | ug/L | | 97 | 70 - 130 |
| o-Xylene | 25.0 | 24.1 | | ug/L | | 96 | 70 - 130 |
| sec-Butylbenzene | 25.0 | 24.7 | | ug/L | | 99 | 70 - 130 |
| Styrene | 25.0 | 24.9 | | ug/L | | 99 | 70 - 130 |
| Tert-amyl methyl ether | 25.0 | 25.7 | | ug/L | | 103 | 70 - 130 |
| Tert-butyl ethyl ether | 25.0 | 25.4 | | ug/L | | 101 | 70 - 130 |
| tert-Butylbenzene | 25.0 | 24.0 | | ug/L | | 96 | 70 - 130 |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 480-175485/6**
**Matrix: Water**
**Analysis Batch: 175485**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 25.0 | 26.1 | | ug/L | | 104 | 70 - 130 |
| Tetrahydrofuran | 50.0 | 65.3 | * | ug/L | | 131 | 70 - 130 |
| Toluene | 25.0 | 24.2 | | ug/L | | 97 | 70 - 130 |
| trans-1,2-Dichloroethene | 25.0 | 24.1 | | ug/L | | 96 | 70 - 130 |
| trans-1,3-Dichloropropene | 25.0 | 23.7 | | ug/L | | 95 | 70 - 130 |
| Trichloroethene | 25.0 | 24.0 | | ug/L | | 96 | 70 - 130 |
| Trichlorofluoromethane | 25.0 | 27.1 | | ug/L | | 108 | 70 - 130 |
| Vinyl chloride | 25.0 | 23.8 | | ug/L | | 95 | 70 - 130 |
| Dibromomethane | 25.0 | 26.1 | | ug/L | | 104 | 70 - 130 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Toluene-d8 (Surr)* | *98* | | *70 - 130* |
| *1,2-Dichloroethane-d4 (Surr)* | *105* | | *70 - 130* |
| *4-Bromofluorobenzene (Surr)* | *99* | | *70 - 130* |

**Lab Sample ID: LCSD 480-175485/7**
**Matrix: Water**
**Analysis Batch: 175485**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 25.0 | 24.1 | | ug/L | | 96 | 70 - 130 | 1 | 20 |
| 1,1,1-Trichloroethane | 25.0 | 24.3 | | ug/L | | 97 | 70 - 130 | 2 | 20 |
| 1,1,2,2-Tetrachloroethane | 25.0 | 24.2 | | ug/L | | 97 | 70 - 130 | 3 | 20 |
| 1,1,2-Trichloroethane | 25.0 | 24.9 | | ug/L | | 100 | 70 - 130 | 0 | 20 |
| 1,1-Dichloroethane | 25.0 | 24.6 | | ug/L | | 98 | 70 - 130 | 1 | 20 |
| 1,1-Dichloroethene | 25.0 | 24.1 | | ug/L | | 96 | 70 - 130 | 1 | 20 |
| 1,1-Dichloropropene | 25.0 | 24.6 | | ug/L | | 98 | 70 - 130 | 4 | 20 |
| 1,2,3-Trichlorobenzene | 25.0 | 25.2 | | ug/L | | 101 | 70 - 130 | 0 | 20 |
| 1,2,3-Trichloropropane | 25.0 | 24.2 | | ug/L | | 97 | 70 - 130 | 0 | 20 |
| 1,2,4-Trichlorobenzene | 25.0 | 25.1 | | ug/L | | 101 | 70 - 130 | 1 | 20 |
| 1,2,4-Trimethylbenzene | 25.0 | 23.1 | | ug/L | | 92 | 70 - 130 | 6 | 20 |
| 1,2-Dibromo-3-Chloropropane | 25.0 | 22.7 | | ug/L | | 91 | 70 - 130 | 2 | 20 |
| 1,2-Dichlorobenzene | 25.0 | 23.9 | | ug/L | | 96 | 70 - 130 | 4 | 20 |
| 1,2-Dichloroethane | 25.0 | 25.9 | | ug/L | | 104 | 70 - 130 | 2 | 20 |
| 1,2-Dichloropropane | 25.0 | 25.8 | | ug/L | | 103 | 70 - 130 | 1 | 20 |
| 1,3,5-Trimethylbenzene | 25.0 | 23.1 | | ug/L | | 92 | 70 - 130 | 4 | 20 |
| 1,3-Dichlorobenzene | 25.0 | 23.8 | | ug/L | | 95 | 70 - 130 | 4 | 20 |
| 1,3-Dichloropropane | 25.0 | 24.4 | | ug/L | | 98 | 70 - 130 | 0 | 20 |
| 1,4-Dichlorobenzene | 25.0 | 23.2 | | ug/L | | 93 | 70 - 130 | 4 | 20 |
| 1,4-Dioxane | 500 | 463 | | ug/L | | 93 | 70 - 130 | 2 | 20 |
| 2,2-Dichloropropane | 25.0 | 22.8 | | ug/L | | 91 | 70 - 130 | 2 | 20 |
| 2-Butanone (MEK) | 125 | 135 | | ug/L | | 108 | 70 - 130 | 4 | 20 |
| 2-Chlorotoluene | 25.0 | 23.8 | | ug/L | | 95 | 70 - 130 | 2 | 20 |
| 2-Hexanone | 125 | 123 | | ug/L | | 99 | 70 - 130 | 1 | 20 |
| 4-Chlorotoluene | 25.0 | 21.2 | | ug/L | | 85 | 70 - 130 | 4 | 20 |
| 4-Isopropyltoluene | 25.0 | 24.0 | | ug/L | | 96 | 70 - 130 | 4 | 20 |
| 4-Methyl-2-pentanone (MIBK) | 125 | 121 | | ug/L | | 97 | 70 - 130 | 2 | 20 |
| Acetone | 125 | 126 | | ug/L | | 101 | 70 - 130 | 0 | 20 |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 480-175485/7**
**Matrix: Water**
**Analysis Batch: 175485**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | 25.0 | 24.7 | | ug/L | | 99 | 70 - 130 | 1 | 20 |
| Bromobenzene | 25.0 | 23.6 | | ug/L | | 95 | 70 - 130 | 3 | 20 |
| Bromoform | 25.0 | 21.4 | | ug/L | | 86 | 70 - 130 | 1 | 20 |
| Bromomethane | 25.0 | 30.4 | | ug/L | | 122 | 70 - 130 | 3 | 20 |
| Carbon disulfide | 25.0 | 20.4 | | ug/L | | 82 | 70 - 130 | 3 | 20 |
| Carbon tetrachloride | 25.0 | 24.7 | | ug/L | | 99 | 70 - 130 | 2 | 20 |
| Chlorobenzene | 25.0 | 23.8 | | ug/L | | 95 | 70 - 130 | 5 | 20 |
| Chlorobromomethane | 25.0 | 24.8 | | ug/L | | 99 | 70 - 130 | 2 | 20 |
| Chlorodibromomethane | 24.5 | 24.0 | | ug/L | | 98 | 70 - 130 | 2 | 20 |
| Chloroethane | 25.0 | 28.7 | | ug/L | | 115 | 70 - 130 | 1 | 20 |
| Chloroform | 25.0 | 25.0 | | ug/L | | 100 | 70 - 130 | 0 | 20 |
| Chloromethane | 25.0 | 24.6 | | ug/L | | 98 | 70 - 130 | 2 | 20 |
| cis-1,2-Dichloroethene | 25.0 | 24.2 | | ug/L | | 97 | 70 - 130 | 2 | 20 |
| cis-1,3-Dichloropropene | 25.0 | 26.2 | | ug/L | | 105 | 70 - 130 | 0 | 20 |
| Dichlorobromomethane | 25.0 | 25.6 | | ug/L | | 102 | 70 - 130 | 0 | 20 |
| Dichlorodifluoromethane | 25.0 | 23.1 | | ug/L | | 92 | 70 - 130 | 2 | 20 |
| Ethyl ether | 25.0 | 25.1 | | ug/L | | 100 | 70 - 130 | 0 | 20 |
| Ethylbenzene | 25.0 | 24.0 | | ug/L | | 96 | 70 - 130 | 1 | 20 |
| Ethylene Dibromide | 25.0 | 24.2 | | ug/L | | 97 | 70 - 130 | 2 | 20 |
| Hexachlorobutadiene | 25.0 | 24.3 | | ug/L | | 97 | 70 - 130 | 5 | 20 |
| Isopropyl ether | 25.0 | 26.0 | | ug/L | | 104 | 70 - 130 | 1 | 20 |
| Isopropylbenzene | 25.0 | 23.1 | | ug/L | | 93 | 70 - 130 | 4 | 20 |
| Methyl tert-butyl ether | 25.0 | 24.5 | | ug/L | | 98 | 70 - 130 | 1 | 20 |
| Methylene Chloride | 25.0 | 23.9 | | ug/L | | 95 | 70 - 130 | 1 | 20 |
| m-Xylene & p-Xylene | 25.0 | 24.0 | | ug/L | | 96 | 70 - 130 | 3 | 20 |
| Naphthalene | 25.0 | 25.0 | | ug/L | | 100 | 70 - 130 | 3 | 20 |
| n-Butylbenzene | 25.0 | 23.9 | | ug/L | | 96 | 70 - 130 | 6 | 20 |
| N-Propylbenzene | 25.0 | 23.3 | | ug/L | | 93 | 70 - 130 | 4 | 20 |
| o-Xylene | 25.0 | 23.7 | | ug/L | | 95 | 70 - 130 | 2 | 20 |
| sec-Butylbenzene | 25.0 | 23.5 | | ug/L | | 94 | 70 - 130 | 5 | 20 |
| Styrene | 25.0 | 24.1 | | ug/L | | 96 | 70 - 130 | 3 | 20 |
| Tert-amyl methyl ether | 25.0 | 25.9 | | ug/L | | 103 | 70 - 130 | 1 | 20 |
| Tert-butyl ethyl ether | 25.0 | 26.0 | | ug/L | | 104 | 70 - 130 | 2 | 20 |
| tert-Butylbenzene | 25.0 | 23.3 | | ug/L | | 93 | 70 - 130 | 3 | 20 |
| Tetrachloroethene | 25.0 | 24.5 | | ug/L | | 98 | 70 - 130 | 6 | 20 |
| Tetrahydrofuran | 50.0 | 66.1 | * | ug/L | | 132 | 70 - 130 | 1 | 20 |
| Toluene | 25.0 | 23.3 | | ug/L | | 93 | 70 - 130 | 4 | 20 |
| trans-1,2-Dichloroethene | 25.0 | 23.8 | | ug/L | | 95 | 70 - 130 | 1 | 20 |
| trans-1,3-Dichloropropene | 25.0 | 23.9 | | ug/L | | 95 | 70 - 130 | 1 | 20 |
| Trichloroethene | 25.0 | 24.1 | | ug/L | | 96 | 70 - 130 | 1 | 20 |
| Trichlorofluoromethane | 25.0 | 26.2 | | ug/L | | 105 | 70 - 130 | 3 | 20 |
| Vinyl chloride | 25.0 | 23.2 | | ug/L | | 93 | 70 - 130 | 3 | 20 |
| Dibromomethane | 25.0 | 25.6 | | ug/L | | 103 | 70 - 130 | 2 | 20 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *Toluene-d8 (Surr)* | *96* | | *70 - 130* |
| *1,2-Dichloroethane-d4 (Surr)* | *106* | | *70 - 130* |
| *4-Bromofluorobenzene (Surr)* | *96* | | *70 - 130* |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 480-175755/7**
**Matrix: Water**
**Analysis Batch: 175755**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/15/14 00:13 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/15/14 00:13 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/15/14 00:13 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/15/14 00:13 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/15/14 00:13 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/15/14 00:13 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/15/14 00:13 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/15/14 00:13 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/15/14 00:13 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/15/14 00:13 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/15/14 00:13 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/15/14 00:13 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/15/14 00:13 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/15/14 00:13 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/15/14 00:13 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/15/14 00:13 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/15/14 00:13 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/15/14 00:13 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/15/14 00:13 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/15/14 00:13 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/15/14 00:13 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 04/15/14 00:13 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/15/14 00:13 | 1 |
| 2-Hexanone | ND | | 10 | | ug/L | | | 04/15/14 00:13 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/15/14 00:13 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/15/14 00:13 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/15/14 00:13 | 1 |
| Acetone | ND | | 50 | | ug/L | | | 04/15/14 00:13 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/15/14 00:13 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/15/14 00:13 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/15/14 00:13 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/15/14 00:13 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/15/14 00:13 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/15/14 00:13 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/15/14 00:13 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/15/14 00:13 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/15/14 00:13 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/15/14 00:13 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/15/14 00:13 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/15/14 00:13 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/15/14 00:13 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/15/14 00:13 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/15/14 00:13 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/15/14 00:13 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/15/14 00:13 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/15/14 00:13 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/15/14 00:13 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/15/14 00:13 | 1 |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 480-175755/7**
**Matrix: Water**
**Analysis Batch: 175755**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/15/14 00:13 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/15/14 00:13 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/15/14 00:13 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/15/14 00:13 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/15/14 00:13 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/15/14 00:13 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/15/14 00:13 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/15/14 00:13 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/15/14 00:13 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/15/14 00:13 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/15/14 00:13 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/15/14 00:13 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/15/14 00:13 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/15/14 00:13 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/15/14 00:13 | 1 |
| Tetrahydrofuran | ND | | 10 | | ug/L | | | 04/15/14 00:13 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 04/15/14 00:13 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/15/14 00:13 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/15/14 00:13 | 1 |
| Trichloroethene | ND | | 1.0 | | ug/L | | | 04/15/14 00:13 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/15/14 00:13 | 1 |
| Vinyl chloride | ND | | 1.0 | | ug/L | | | 04/15/14 00:13 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/15/14 00:13 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *99* | | *70 - 130* | | *04/15/14 00:13* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *104* | | *70 - 130* | | *04/15/14 00:13* | *1* |
| *4-Bromofluorobenzene (Surr)* | *97* | | *70 - 130* | | *04/15/14 00:13* | *1* |

**Lab Sample ID: LCS 480-175755/4**
**Matrix: Water**
**Analysis Batch: 175755**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 25.0 | 23.4 | | ug/L | | 94 | 70 - 130 |
| 1,1,1-Trichloroethane | 25.0 | 22.9 | | ug/L | | 92 | 70 - 130 |
| 1,1,2,2-Tetrachloroethane | 25.0 | 23.7 | | ug/L | | 95 | 70 - 130 |
| 1,1,2-Trichloroethane | 25.0 | 23.4 | | ug/L | | 93 | 70 - 130 |
| 1,1-Dichloroethane | 25.0 | 22.9 | | ug/L | | 92 | 70 - 130 |
| 1,1-Dichloroethene | 25.0 | 21.3 | | ug/L | | 85 | 70 - 130 |
| 1,1-Dichloropropene | 25.0 | 22.9 | | ug/L | | 92 | 70 - 130 |
| 1,2,3-Trichlorobenzene | 25.0 | 26.0 | | ug/L | | 104 | 70 - 130 |
| 1,2,3-Trichloropropane | 25.0 | 23.9 | | ug/L | | 96 | 70 - 130 |
| 1,2,4-Trichlorobenzene | 25.0 | 25.6 | | ug/L | | 103 | 70 - 130 |
| 1,2,4-Trimethylbenzene | 25.0 | 23.3 | | ug/L | | 93 | 70 - 130 |
| 1,2-Dibromo-3-Chloropropane | 25.0 | 21.8 | | ug/L | | 87 | 70 - 130 |
| 1,2-Dichlorobenzene | 25.0 | 24.6 | | ug/L | | 98 | 70 - 130 |
| 1,2-Dichloroethane | 25.0 | 24.5 | | ug/L | | 98 | 70 - 130 |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 480-175755/4**
**Matrix: Water**
**Analysis Batch: 175755**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,2-Dichloropropane | 25.0 | 24.1 | | ug/L | | 96 | 70 - 130 |
| 1,3,5-Trimethylbenzene | 25.0 | 23.4 | | ug/L | | 93 | 70 - 130 |
| 1,3-Dichlorobenzene | 25.0 | 24.1 | | ug/L | | 96 | 70 - 130 |
| 1,3-Dichloropropane | 25.0 | 23.3 | | ug/L | | 93 | 70 - 130 |
| 1,4-Dichlorobenzene | 25.0 | 24.1 | | ug/L | | 96 | 70 - 130 |
| 1,4-Dioxane | 500 | 408 | | ug/L | | 82 | 70 - 130 |
| 2,2-Dichloropropane | 25.0 | 21.9 | | ug/L | | 88 | 70 - 130 |
| 2-Butanone (MEK) | 125 | 120 | | ug/L | | 96 | 70 - 130 |
| 2-Chlorotoluene | 25.0 | 24.0 | | ug/L | | 96 | 70 - 130 |
| 2-Hexanone | 125 | 124 | | ug/L | | 99 | 70 - 130 |
| 4-Chlorotoluene | 25.0 | 21.4 | | ug/L | | 86 | 70 - 130 |
| 4-Isopropyltoluene | 25.0 | 24.4 | | ug/L | | 98 | 70 - 130 |
| 4-Methyl-2-pentanone (MIBK) | 125 | 120 | | ug/L | | 96 | 70 - 130 |
| Acetone | 125 | 112 | | ug/L | | 90 | 70 - 130 |
| Benzene | 25.0 | 23.0 | | ug/L | | 92 | 70 - 130 |
| Bromobenzene | 25.0 | 23.6 | | ug/L | | 94 | 70 - 130 |
| Bromoform | 25.0 | 19.2 | | ug/L | | 77 | 70 - 130 |
| Bromomethane | 25.0 | 25.0 | | ug/L | | 100 | 70 - 130 |
| Carbon disulfide | 25.0 | 17.8 | | ug/L | | 71 | 70 - 130 |
| Carbon tetrachloride | 25.0 | 22.5 | | ug/L | | 90 | 70 - 130 |
| Chlorobenzene | 25.0 | 23.4 | | ug/L | | 94 | 70 - 130 |
| Chlorobromomethane | 25.0 | 23.8 | | ug/L | | 95 | 70 - 130 |
| Chlorodibromomethane | 24.5 | 22.1 | | ug/L | | 90 | 70 - 130 |
| Chloroethane | 25.0 | 24.3 | | ug/L | | 97 | 70 - 130 |
| Chloroform | 25.0 | 23.1 | | ug/L | | 93 | 70 - 130 |
| Chloromethane | 25.0 | 21.5 | | ug/L | | 86 | 70 - 130 |
| cis-1,2-Dichloroethene | 25.0 | 22.4 | | ug/L | | 90 | 70 - 130 |
| cis-1,3-Dichloropropene | 25.0 | 23.2 | | ug/L | | 93 | 70 - 130 |
| Dichlorobromomethane | 25.0 | 23.4 | | ug/L | | 94 | 70 - 130 |
| Dichlorodifluoromethane | 25.0 | 18.7 | | ug/L | | 75 | 70 - 130 |
| Ethyl ether | 25.0 | 23.5 | | ug/L | | 94 | 70 - 130 |
| Ethylbenzene | 25.0 | 23.6 | | ug/L | | 94 | 70 - 130 |
| Ethylene Dibromide | 25.0 | 23.4 | | ug/L | | 94 | 70 - 130 |
| Hexachlorobutadiene | 25.0 | 25.7 | | ug/L | | 103 | 70 - 130 |
| Isopropyl ether | 25.0 | 24.5 | | ug/L | | 98 | 70 - 130 |
| Isopropylbenzene | 25.0 | 23.0 | | ug/L | | 92 | 70 - 130 |
| Methyl tert-butyl ether | 25.0 | 22.0 | | ug/L | | 88 | 70 - 130 |
| Methylene Chloride | 25.0 | 21.8 | | ug/L | | 87 | 70 - 130 |
| m-Xylene & p-Xylene | 25.0 | 24.1 | | ug/L | | 96 | 70 - 130 |
| Naphthalene | 25.0 | 24.8 | | ug/L | | 99 | 70 - 130 |
| n-Butylbenzene | 25.0 | 24.5 | | ug/L | | 98 | 70 - 130 |
| N-Propylbenzene | 25.0 | 23.7 | | ug/L | | 95 | 70 - 130 |
| o-Xylene | 25.0 | 23.3 | | ug/L | | 93 | 70 - 130 |
| sec-Butylbenzene | 25.0 | 23.6 | | ug/L | | 94 | 70 - 130 |
| Styrene | 25.0 | 24.2 | | ug/L | | 97 | 70 - 130 |
| Tert-amyl methyl ether | 25.0 | 23.4 | | ug/L | | 93 | 70 - 130 |
| Tert-butyl ethyl ether | 25.0 | 23.8 | | ug/L | | 95 | 70 - 130 |
| tert-Butylbenzene | 25.0 | 24.0 | | ug/L | | 96 | 70 - 130 |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 480-175755/4**
**Matrix: Water**
**Analysis Batch: 175755**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 25.0 | 23.9 | | ug/L | | 95 | 70 - 130 |
| Tetrahydrofuran | 50.0 | 60.8 | | ug/L | | 122 | 70 - 130 |
| Toluene | 25.0 | 23.1 | | ug/L | | 92 | 70 - 130 |
| trans-1,2-Dichloroethene | 25.0 | 22.1 | | ug/L | | 89 | 70 - 130 |
| trans-1,3-Dichloropropene | 25.0 | 22.5 | | ug/L | | 90 | 70 - 130 |
| Trichloroethene | 25.0 | 22.6 | | ug/L | | 91 | 70 - 130 |
| Trichlorofluoromethane | 25.0 | 23.3 | | ug/L | | 93 | 70 - 130 |
| Vinyl chloride | 25.0 | 20.9 | | ug/L | | 84 | 70 - 130 |
| Dibromomethane | 25.0 | 23.9 | | ug/L | | 96 | 70 - 130 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Toluene-d8 (Surr)* | *99* | | *70 - 130* |
| *1,2-Dichloroethane-d4 (Surr)* | *101* | | *70 - 130* |
| *4-Bromofluorobenzene (Surr)* | *103* | | *70 - 130* |

**Lab Sample ID: LCSD 480-175755/5**
**Matrix: Water**
**Analysis Batch: 175755**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 25.0 | 23.0 | | ug/L | | 92 | 70 - 130 | 2 | 20 |
| 1,1,1-Trichloroethane | 25.0 | 23.0 | | ug/L | | 92 | 70 - 130 | 0 | 20 |
| 1,1,2,2-Tetrachloroethane | 25.0 | 23.8 | | ug/L | | 95 | 70 - 130 | 1 | 20 |
| 1,1,2-Trichloroethane | 25.0 | 22.8 | | ug/L | | 91 | 70 - 130 | 2 | 20 |
| 1,1-Dichloroethane | 25.0 | 22.9 | | ug/L | | 92 | 70 - 130 | 0 | 20 |
| 1,1-Dichloroethene | 25.0 | 21.2 | | ug/L | | 85 | 70 - 130 | 1 | 20 |
| 1,1-Dichloropropene | 25.0 | 23.1 | | ug/L | | 92 | 70 - 130 | 1 | 20 |
| 1,2,3-Trichlorobenzene | 25.0 | 25.7 | | ug/L | | 103 | 70 - 130 | 1 | 20 |
| 1,2,3-Trichloropropane | 25.0 | 25.1 | | ug/L | | 100 | 70 - 130 | 5 | 20 |
| 1,2,4-Trichlorobenzene | 25.0 | 25.0 | | ug/L | | 100 | 70 - 130 | 2 | 20 |
| 1,2,4-Trimethylbenzene | 25.0 | 23.2 | | ug/L | | 93 | 70 - 130 | 1 | 20 |
| 1,2-Dibromo-3-Chloropropane | 25.0 | 22.1 | | ug/L | | 89 | 70 - 130 | 1 | 20 |
| 1,2-Dichlorobenzene | 25.0 | 24.6 | | ug/L | | 98 | 70 - 130 | 0 | 20 |
| 1,2-Dichloroethane | 25.0 | 24.8 | | ug/L | | 99 | 70 - 130 | 1 | 20 |
| 1,2-Dichloropropane | 25.0 | 24.2 | | ug/L | | 97 | 70 - 130 | 1 | 20 |
| 1,3,5-Trimethylbenzene | 25.0 | 22.7 | | ug/L | | 91 | 70 - 130 | 3 | 20 |
| 1,3-Dichlorobenzene | 25.0 | 23.8 | | ug/L | | 95 | 70 - 130 | 1 | 20 |
| 1,3-Dichloropropane | 25.0 | 23.1 | | ug/L | | 92 | 70 - 130 | 1 | 20 |
| 1,4-Dichlorobenzene | 25.0 | 23.6 | | ug/L | | 94 | 70 - 130 | 2 | 20 |
| 1,4-Dioxane | 500 | 420 | | ug/L | | 84 | 70 - 130 | 3 | 20 |
| 2,2-Dichloropropane | 25.0 | 21.9 | | ug/L | | 88 | 70 - 130 | 0 | 20 |
| 2-Butanone (MEK) | 125 | 129 | | ug/L | | 103 | 70 - 130 | 8 | 20 |
| 2-Chlorotoluene | 25.0 | 23.4 | | ug/L | | 94 | 70 - 130 | 3 | 20 |
| 2-Hexanone | 125 | 121 | | ug/L | | 96 | 70 - 130 | 3 | 20 |
| 4-Chlorotoluene | 25.0 | 20.7 | | ug/L | | 83 | 70 - 130 | 3 | 20 |
| 4-Isopropyltoluene | 25.0 | 23.9 | | ug/L | | 96 | 70 - 130 | 2 | 20 |
| 4-Methyl-2-pentanone (MIBK) | 125 | 117 | | ug/L | | 94 | 70 - 130 | 2 | 20 |
| Acetone | 125 | 118 | | ug/L | | 94 | 70 - 130 | 5 | 20 |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 480-175755/5**
**Matrix: Water**
**Analysis Batch: 175755**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | 25.0 | 22.9 | | ug/L | | 92 | 70 - 130 | 0 | 20 |
| Bromobenzene | 25.0 | 23.6 | | ug/L | | 94 | 70 - 130 | 0 | 20 |
| Bromoform | 25.0 | 19.3 | | ug/L | | 77 | 70 - 130 | 1 | 20 |
| Bromomethane | 25.0 | 26.6 | | ug/L | | 106 | 70 - 130 | 6 | 20 |
| Carbon disulfide | 25.0 | 17.8 | | ug/L | | 71 | 70 - 130 | 0 | 20 |
| Carbon tetrachloride | 25.0 | 22.5 | | ug/L | | 90 | 70 - 130 | 0 | 20 |
| Chlorobenzene | 25.0 | 22.9 | | ug/L | | 92 | 70 - 130 | 2 | 20 |
| Chlorobromomethane | 25.0 | 23.4 | | ug/L | | 93 | 70 - 130 | 2 | 20 |
| Chlorodibromomethane | 24.5 | 22.0 | | ug/L | | 90 | 70 - 130 | 0 | 20 |
| Chloroethane | 25.0 | 25.4 | | ug/L | | 102 | 70 - 130 | 5 | 20 |
| Chloroform | 25.0 | 23.3 | | ug/L | | 93 | 70 - 130 | 1 | 20 |
| Chloromethane | 25.0 | 22.0 | | ug/L | | 88 | 70 - 130 | 2 | 20 |
| cis-1,2-Dichloroethene | 25.0 | 22.2 | | ug/L | | 89 | 70 - 130 | 1 | 20 |
| cis-1,3-Dichloropropene | 25.0 | 23.4 | | ug/L | | 94 | 70 - 130 | 1 | 20 |
| Dichlorobromomethane | 25.0 | 23.3 | | ug/L | | 93 | 70 - 130 | 1 | 20 |
| Dichlorodifluoromethane | 25.0 | 18.8 | | ug/L | | 75 | 70 - 130 | 0 | 20 |
| Ethyl ether | 25.0 | 23.6 | | ug/L | | 94 | 70 - 130 | 0 | 20 |
| Ethylbenzene | 25.0 | 22.5 | | ug/L | | 90 | 70 - 130 | 5 | 20 |
| Ethylene Dibromide | 25.0 | 23.0 | | ug/L | | 92 | 70 - 130 | 2 | 20 |
| Hexachlorobutadiene | 25.0 | 24.7 | | ug/L | | 99 | 70 - 130 | 4 | 20 |
| Isopropyl ether | 25.0 | 24.6 | | ug/L | | 98 | 70 - 130 | 1 | 20 |
| Isopropylbenzene | 25.0 | 22.3 | | ug/L | | 89 | 70 - 130 | 3 | 20 |
| Methyl tert-butyl ether | 25.0 | 22.6 | | ug/L | | 90 | 70 - 130 | 3 | 20 |
| Methylene Chloride | 25.0 | 22.2 | | ug/L | | 89 | 70 - 130 | 2 | 20 |
| m-Xylene & p-Xylene | 25.0 | 22.3 | | ug/L | | 89 | 70 - 130 | 8 | 20 |
| Naphthalene | 25.0 | 24.5 | | ug/L | | 98 | 70 - 130 | 1 | 20 |
| n-Butylbenzene | 25.0 | 23.9 | | ug/L | | 96 | 70 - 130 | 3 | 20 |
| N-Propylbenzene | 25.0 | 22.6 | | ug/L | | 90 | 70 - 130 | 5 | 20 |
| o-Xylene | 25.0 | 22.5 | | ug/L | | 90 | 70 - 130 | 3 | 20 |
| sec-Butylbenzene | 25.0 | 23.0 | | ug/L | | 92 | 70 - 130 | 2 | 20 |
| Styrene | 25.0 | 22.9 | | ug/L | | 92 | 70 - 130 | 5 | 20 |
| Tert-amyl methyl ether | 25.0 | 24.4 | | ug/L | | 98 | 70 - 130 | 4 | 20 |
| Tert-butyl ethyl ether | 25.0 | 24.2 | | ug/L | | 97 | 70 - 130 | 2 | 20 |
| tert-Butylbenzene | 25.0 | 23.3 | | ug/L | | 93 | 70 - 130 | 3 | 20 |
| Tetrachloroethene | 25.0 | 23.1 | | ug/L | | 93 | 70 - 130 | 3 | 20 |
| Tetrahydrofuran | 50.0 | 63.5 | | ug/L | | 127 | 70 - 130 | 4 | 20 |
| Toluene | 25.0 | 22.3 | | ug/L | | 89 | 70 - 130 | 4 | 20 |
| trans-1,2-Dichloroethene | 25.0 | 21.7 | | ug/L | | 87 | 70 - 130 | 2 | 20 |
| trans-1,3-Dichloropropene | 25.0 | 22.1 | | ug/L | | 88 | 70 - 130 | 2 | 20 |
| Trichloroethene | 25.0 | 22.0 | | ug/L | | 88 | 70 - 130 | 3 | 20 |
| Trichlorofluoromethane | 25.0 | 23.1 | | ug/L | | 92 | 70 - 130 | 1 | 20 |
| Vinyl chloride | 25.0 | 20.6 | | ug/L | | 82 | 70 - 130 | 1 | 20 |
| Dibromomethane | 25.0 | 24.0 | | ug/L | | 96 | 70 - 130 | 0 | 20 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *Toluene-d8 (Surr)* | *98* | | *70 - 130* |
| *1,2-Dichloroethane-d4 (Surr)* | *105* | | *70 - 130* |
| *4-Bromofluorobenzene (Surr)* | *100* | | *70 - 130* |

# QC Association Summary

Client: ERM-Northeast
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57719-1

## GC/MS VOA

### Analysis Batch: 175358

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 480-57719-1 | MW-1030-20140410-01 | Total/NA | Water | 8260C | |
| 480-57719-2 | MW-1028-20140410-01 | Total/NA | Water | 8260C | |
| 480-57719-3 | MW-1025M-20140410-01 | Total/NA | Water | 8260C | |
| 480-57719-4 | DUP-003-20140410-01 | Total/NA | Water | 8260C | |
| 480-57719-5 | MW-1015D-20140410-01 | Total/NA | Water | 8260C | |
| 480-57719-6 | MW-1033-20140410-01 | Total/NA | Water | 8260C | |
| 480-57719-7 | DUP-002-20140410-01 | Total/NA | Water | 8260C | |
| 480-57719-8 | MW-1023-20140410-01 | Total/NA | Water | 8260C | |
| 480-57719-9 | MW-1010M-20140410-01 | Total/NA | Water | 8260C | |
| 480-57719-10 | MW-1022-20140410-01 | Total/NA | Water | 8260C | |
| 480-57719-11 | MW-1019B-20140410-01 | Total/NA | Water | 8260C | |
| 480-57719-12 | MW-1032-20140410-01 | Total/NA | Water | 8260C | |
| 480-57719-13 | MW-1017D-20140410-01 | Total/NA | Water | 8260C | |
| 480-57719-14 | MW-1018-20140410-01 | Total/NA | Water | 8260C | |
| 480-57719-15 | MW-1031-20140410-01 | Total/NA | Water | 8260C | |
| 480-57719-16 | MW-1008-20140410-01 | Total/NA | Water | 8260C | |
| 480-57719-18 | MW-1011-20140410-01 | Total/NA | Water | 8260C | |
| 480-57719-19 | MW-1024D-20140410-01 | Total/NA | Water | 8260C | |
| LCS 480-175358/5 | Lab Control Sample | Total/NA | Water | 8260C | |
| LCSD 480-175358/6 | Lab Control Sample Dup | Total/NA | Water | 8260C | |
| MB 480-175358/8 | Method Blank | Total/NA | Water | 8260C | |

### Analysis Batch: 175485

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 480-57719-14 - DL | MW-1018-20140410-01 | Total/NA | Water | 8260C | |
| 480-57719-17 | MW-1025D-20140410-01 | Total/NA | Water | 8260C | |
| 480-57719-20 | MW-1020-20140410-01 | Total/NA | Water | 8260C | |
| 480-57719-21 | MW-1034-20140410-01 | Total/NA | Water | 8260C | |
| 480-57719-22 | DUP-004-20140410-01 | Total/NA | Water | 8260C | |
| 480-57719-23 | MW-1010D-20140410-01 | Total/NA | Water | 8260C | |
| 480-57719-24 | MW-1027-20140410-01 | Total/NA | Water | 8260C | |
| 480-57719-25 | MW-1016D-20140410-01 | Total/NA | Water | 8260C | |
| 480-57719-26 | MW-1013-20140410-01 | Total/NA | Water | 8260C | |
| 480-57719-27 | TB-001-20140410-01 | Total/NA | Water | 8260C | |
| 480-57719-28 | MW-1009-20140410-01 | Total/NA | Water | 8260C | |
| 480-57719-29 | MW-1006-20140410-01 | Total/NA | Water | 8260C | |
| 480-57719-30 | MW-1005-20140410-01 | Total/NA | Water | 8260C | |
| 480-57719-31 | MW-1004-20140410-01 | Total/NA | Water | 8260C | |
| 480-57719-33 | MW-1002B-20140410-01 | Total/NA | Water | 8260C | |
| LCS 480-175485/6 | Lab Control Sample | Total/NA | Water | 8260C | |
| LCSD 480-175485/7 | Lab Control Sample Dup | Total/NA | Water | 8260C | |
| MB 480-175485/9 | Method Blank | Total/NA | Water | 8260C | |

### Analysis Batch: 175755

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 480-57719-32 | DUP-001-20140410-01 | Total/NA | Water | 8260C | |
| 480-57719-34 | MW-1003-20140410-01 | Total/NA | Water | 8260C | |
| LCS 480-175755/4 | Lab Control Sample | Total/NA | Water | 8260C | |
| LCSD 480-175755/5 | Lab Control Sample Dup | Total/NA | Water | 8260C | |
| MB 480-175755/7 | Method Blank | Total/NA | Water | 8260C | |

# Lab Chronicle

Client: ERM-Northeast
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57719-1

## Client Sample ID: MW-1030-20140410-01 — Lab Sample ID: 480-57719-1

**Date Collected: 04/10/14 10:11** — **Matrix: Water**
**Date Received: 04/11/14 01:45**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 175358 | 04/11/14 23:46 | RAL | TAL BUF |

## Client Sample ID: MW-1028-20140410-01 — Lab Sample ID: 480-57719-2

**Date Collected: 04/10/14 09:25** — **Matrix: Water**
**Date Received: 04/11/14 01:45**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 175358 | 04/12/14 00:10 | RAL | TAL BUF |

## Client Sample ID: MW-1025M-20140410-01 — Lab Sample ID: 480-57719-3

**Date Collected: 04/10/14 08:55** — **Matrix: Water**
**Date Received: 04/11/14 01:45**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 2 | 175358 | 04/12/14 00:34 | RAL | TAL BUF |

## Client Sample ID: DUP-003-20140410-01 — Lab Sample ID: 480-57719-4

**Date Collected: 04/10/14 03:33** — **Matrix: Water**
**Date Received: 04/11/14 01:45**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 175358 | 04/12/14 00:58 | RAL | TAL BUF |

## Client Sample ID: MW-1015D-20140410-01 — Lab Sample ID: 480-57719-5

**Date Collected: 04/10/14 08:20** — **Matrix: Water**
**Date Received: 04/11/14 01:45**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 175358 | 04/12/14 01:21 | RAL | TAL BUF |

## Client Sample ID: MW-1033-20140410-01 — Lab Sample ID: 480-57719-6

**Date Collected: 04/10/14 08:58** — **Matrix: Water**
**Date Received: 04/11/14 01:45**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 175358 | 04/12/14 01:45 | RAL | TAL BUF |

# Lab Chronicle

Client: ERM-Northeast
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57719-1

## Client Sample ID: DUP-002-20140410-01 — Lab Sample ID: 480-57719-7

**Date Collected: 04/10/14 10:10** — **Matrix: Water**
**Date Received: 04/11/14 01:45**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 175358 | 04/12/14 02:09 | RAL | TAL BUF |

## Client Sample ID: MW-1023-20140410-01 — Lab Sample ID: 480-57719-8

**Date Collected: 04/10/14 13:30** — **Matrix: Water**
**Date Received: 04/11/14 01:45**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 175358 | 04/12/14 02:33 | RAL | TAL BUF |

## Client Sample ID: MW-1010M-20140410-01 — Lab Sample ID: 480-57719-9

**Date Collected: 04/10/14 10:25** — **Matrix: Water**
**Date Received: 04/11/14 01:45**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 175358 | 04/12/14 02:56 | RAL | TAL BUF |

## Client Sample ID: MW-1022-20140410-01 — Lab Sample ID: 480-57719-10

**Date Collected: 04/10/14 12:35** — **Matrix: Water**
**Date Received: 04/11/14 01:45**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 175358 | 04/12/14 03:20 | RAL | TAL BUF |

## Client Sample ID: MW-1019B-20140410-01 — Lab Sample ID: 480-57719-11

**Date Collected: 04/10/14 10:10** — **Matrix: Water**
**Date Received: 04/11/14 01:45**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 175358 | 04/12/14 03:44 | RAL | TAL BUF |

## Client Sample ID: MW-1032-20140410-01 — Lab Sample ID: 480-57719-12

**Date Collected: 04/10/14 11:45** — **Matrix: Water**
**Date Received: 04/11/14 01:45**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 175358 | 04/12/14 04:08 | RAL | TAL BUF |

# Lab Chronicle

Client: ERM-Northeast
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57719-1

## Client Sample ID: MW-1017D-20140410-01 — Lab Sample ID: 480-57719-13

**Date Collected: 04/10/14 09:35** — **Matrix: Water**
**Date Received: 04/11/14 01:45**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 175358 | 04/12/14 04:31 | RAL | TAL BUF |

## Client Sample ID: MW-1018-20140410-01 — Lab Sample ID: 480-57719-14

**Date Collected: 04/10/14 13:30** — **Matrix: Water**
**Date Received: 04/11/14 01:45**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 175358 | 04/12/14 04:55 | RAL | TAL BUF |
| Total/NA | Analysis | 8260C | DL | 4 | 175485 | 04/14/14 00:58 | LCH | TAL BUF |

## Client Sample ID: MW-1031-20140410-01 — Lab Sample ID: 480-57719-15

**Date Collected: 04/10/14 10:45** — **Matrix: Water**
**Date Received: 04/11/14 01:45**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 175358 | 04/12/14 05:19 | RAL | TAL BUF |

## Client Sample ID: MW-1008-20140410-01 — Lab Sample ID: 480-57719-16

**Date Collected: 04/10/14 10:45** — **Matrix: Water**
**Date Received: 04/11/14 01:45**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 175358 | 04/12/14 05:43 | RAL | TAL BUF |

## Client Sample ID: MW-1025D-20140410-01 — Lab Sample ID: 480-57719-17

**Date Collected: 04/10/14 09:20** — **Matrix: Water**
**Date Received: 04/11/14 01:45**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 175485 | 04/14/14 01:22 | LCH | TAL BUF |

## Client Sample ID: MW-1011-20140410-01 — Lab Sample ID: 480-57719-18

**Date Collected: 04/10/14 14:10** — **Matrix: Water**
**Date Received: 04/11/14 01:45**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 175358 | 04/12/14 06:30 | RAL | TAL BUF |

# Lab Chronicle

Client: ERM-Northeast
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57719-1

## Client Sample ID: MW-1024D-20140410-01 — Lab Sample ID: 480-57719-19

**Date Collected: 04/10/14 08:30** — **Matrix: Water**
**Date Received: 04/11/14 01:45**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 175358 | 04/12/14 06:54 | RAL | TAL BUF |

## Client Sample ID: MW-1020-20140410-01 — Lab Sample ID: 480-57719-20

**Date Collected: 04/10/14 10:45** — **Matrix: Water**
**Date Received: 04/11/14 01:45**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 175485 | 04/14/14 01:46 | LCH | TAL BUF |

## Client Sample ID: MW-1034-20140410-01 — Lab Sample ID: 480-57719-21

**Date Collected: 04/10/14 08:30** — **Matrix: Water**
**Date Received: 04/11/14 01:45**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 175485 | 04/14/14 02:09 | LCH | TAL BUF |

## Client Sample ID: DUP-004-20140410-01 — Lab Sample ID: 480-57719-22

**Date Collected: 04/10/14 13:13** — **Matrix: Water**
**Date Received: 04/11/14 01:45**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 175485 | 04/14/14 02:33 | LCH | TAL BUF |

## Client Sample ID: MW-1010D-20140410-01 — Lab Sample ID: 480-57719-23

**Date Collected: 04/10/14 10:00** — **Matrix: Water**
**Date Received: 04/11/14 01:45**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 175485 | 04/14/14 02:57 | LCH | TAL BUF |

## Client Sample ID: MW-1027-20140410-01 — Lab Sample ID: 480-57719-24

**Date Collected: 04/10/14 09:35** — **Matrix: Water**
**Date Received: 04/11/14 01:45**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 175485 | 04/14/14 03:21 | LCH | TAL BUF |

# Lab Chronicle

Client: ERM-Northeast
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57719-1

## Client Sample ID: MW-1016D-20140410-01 — Lab Sample ID: 480-57719-25

**Date Collected: 04/10/14 09:15** — **Matrix: Water**
**Date Received: 04/11/14 01:45**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 175485 | 04/14/14 03:44 | LCH | TAL BUF |

## Client Sample ID: MW-1013-20140410-01 — Lab Sample ID: 480-57719-26

**Date Collected: 04/10/14 08:45** — **Matrix: Water**
**Date Received: 04/11/14 01:45**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 175485 | 04/14/14 04:08 | LCH | TAL BUF |

## Client Sample ID: TB-001-20140410-01 — Lab Sample ID: 480-57719-27

**Date Collected: 04/10/14 00:00** — **Matrix: Water**
**Date Received: 04/11/14 01:45**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 175485 | 04/14/14 04:32 | LCH | TAL BUF |

## Client Sample ID: MW-1009-20140410-01 — Lab Sample ID: 480-57719-28

**Date Collected: 04/10/14 11:30** — **Matrix: Water**
**Date Received: 04/11/14 01:45**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 175485 | 04/14/14 04:56 | LCH | TAL BUF |

## Client Sample ID: MW-1006-20140410-01 — Lab Sample ID: 480-57719-29

**Date Collected: 04/10/14 11:15** — **Matrix: Water**
**Date Received: 04/11/14 01:45**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 175485 | 04/14/14 05:20 | LCH | TAL BUF |

## Client Sample ID: MW-1005-20140410-01 — Lab Sample ID: 480-57719-30

**Date Collected: 04/10/14 11:50** — **Matrix: Water**
**Date Received: 04/11/14 01:45**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 175485 | 04/14/14 05:44 | LCH | TAL BUF |

# Lab Chronicle

Client: ERM-Northeast
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57719-1

## Client Sample ID: MW-1004-20140410-01 — Lab Sample ID: 480-57719-31

**Date Collected: 04/10/14 12:00** — **Matrix: Water**
**Date Received: 04/11/14 01:45**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 175485 | 04/14/14 06:07 | LCH | TAL BUF |

## Client Sample ID: DUP-001-20140410-01 — Lab Sample ID: 480-57719-32

**Date Collected: 04/10/14 11:11** — **Matrix: Water**
**Date Received: 04/11/14 01:45**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 175755 | 04/15/14 00:55 | LCH | TAL BUF |

## Client Sample ID: MW-1002B-20140410-01 — Lab Sample ID: 480-57719-33

**Date Collected: 04/10/14 12:30** — **Matrix: Water**
**Date Received: 04/11/14 01:45**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 175485 | 04/14/14 06:55 | LCH | TAL BUF |

## Client Sample ID: MW-1003-20140410-01 — Lab Sample ID: 480-57719-34

**Date Collected: 04/10/14 13:15** — **Matrix: Water**
**Date Received: 04/11/14 01:45**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 175755 | 04/15/14 01:19 | LCH | TAL BUF |

**Laboratory References:**

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

# Certification Summary

Client: ERM-Northeast
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57719-1

## Laboratory: TestAmerica Buffalo

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

| Authority | Program | EPA Region | Certification ID | Expiration Date |
|---|---|---|---|---|
| Arkansas DEQ | State Program | 6 | 88-0686 | 07-06-14 |
| California | State Program | 9 | 1169CA | 09-30-14 |
| Connecticut | State Program | 1 | PH-0568 | 09-30-14 |
| Florida | NELAP | 4 | E87672 | 06-30-14 |
| Georgia | State Program | 4 | N/A | 03-31-15 |
| Illinois | NELAP | 5 | 200003 | 09-30-14 |
| Iowa | State Program | 7 | 374 | 03-01-15 |
| Kansas | NELAP | 7 | E-10187 | 01-31-15 * |
| Kentucky (DW) | State Program | 4 | 90029 | 12-31-14 |
| Kentucky (UST) | State Program | 4 | 30 | 03-31-15 |
| Louisiana | NELAP | 6 | 02031 | 06-30-14 |
| Maine | State Program | 1 | NY00044 | 12-04-14 |
| Maryland | State Program | 3 | 294 | 03-31-15 |
| Massachusetts | State Program | 1 | M-NY044 | 06-30-14 |
| Michigan | State Program | 5 | 9937 | 04-01-14 * |
| Minnesota | NELAP | 5 | 036-999-337 | 12-31-14 |
| New Hampshire | NELAP | 1 | 2337 | 11-17-14 |
| New Jersey | NELAP | 2 | NY455 | 06-30-14 |
| New York | NELAP | 2 | 10026 | 03-31-15 |
| North Dakota | State Program | 8 | R-176 | 03-31-14 * |
| Oklahoma | State Program | 6 | 9421 | 08-31-14 |
| Oregon | NELAP | 10 | NY200003 | 06-09-14 |
| Pennsylvania | NELAP | 3 | 68-00281 | 07-31-14 |
| Rhode Island | State Program | 1 | LAO00328 | 12-30-14 |
| Tennessee | State Program | 4 | TN02970 | 03-31-15 |
| Texas | NELAP | 6 | T104704412-11-2 | 07-31-14 |
| USDA | Federal | | P330-11-00386 | 11-22-14 |
| Virginia | NELAP | 3 | 460185 | 09-14-14 |
| Washington | State Program | 10 | C784 | 02-10-15 |
| West Virginia DEP | State Program | 3 | 252 | 05-31-14 |
| Wisconsin | State Program | 5 | 998310390 | 08-31-14 |

* Expired certification is currently pending renewal and is considered valid.

# Method Summary

Client: ERM-Northeast
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57719-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 8260C | Volatile Organic Compounds (GC/MS) | MA DEP | TAL BUF |

**Protocol References:**

MA DEP = Massachusetts Department Of Environmental Protection

**Laboratory References:**

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

# Sample Summary

Client: ERM-Northeast
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57719-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 480-57719-1 | MW-1030-20140410-01 | Water | 04/10/14 10:11 | 04/11/14 01:45 |
| 480-57719-2 | MW-1028-20140410-01 | Water | 04/10/14 09:25 | 04/11/14 01:45 |
| 480-57719-3 | MW-1025M-20140410-01 | Water | 04/10/14 08:55 | 04/11/14 01:45 |
| 480-57719-4 | DUP-003-20140410-01 | Water | 04/10/14 03:33 | 04/11/14 01:45 |
| 480-57719-5 | MW-1015D-20140410-01 | Water | 04/10/14 08:20 | 04/11/14 01:45 |
| 480-57719-6 | MW-1033-20140410-01 | Water | 04/10/14 08:58 | 04/11/14 01:45 |
| 480-57719-7 | DUP-002-20140410-01 | Water | 04/10/14 10:10 | 04/11/14 01:45 |
| 480-57719-8 | MW-1023-20140410-01 | Water | 04/10/14 13:30 | 04/11/14 01:45 |
| 480-57719-9 | MW-1010M-20140410-01 | Water | 04/10/14 10:25 | 04/11/14 01:45 |
| 480-57719-10 | MW-1022-20140410-01 | Water | 04/10/14 12:35 | 04/11/14 01:45 |
| 480-57719-11 | MW-1019B-20140410-01 | Water | 04/10/14 10:10 | 04/11/14 01:45 |
| 480-57719-12 | MW-1032-20140410-01 | Water | 04/10/14 11:45 | 04/11/14 01:45 |
| 480-57719-13 | MW-1017D-20140410-01 | Water | 04/10/14 09:35 | 04/11/14 01:45 |
| 480-57719-14 | MW-1018-20140410-01 | Water | 04/10/14 13:30 | 04/11/14 01:45 |
| 480-57719-15 | MW-1031-20140410-01 | Water | 04/10/14 10:45 | 04/11/14 01:45 |
| 480-57719-16 | MW-1008-20140410-01 | Water | 04/10/14 10:45 | 04/11/14 01:45 |
| 480-57719-17 | MW-1025D-20140410-01 | Water | 04/10/14 09:20 | 04/11/14 01:45 |
| 480-57719-18 | MW-1011-20140410-01 | Water | 04/10/14 14:10 | 04/11/14 01:45 |
| 480-57719-19 | MW-1024D-20140410-01 | Water | 04/10/14 08:30 | 04/11/14 01:45 |
| 480-57719-20 | MW-1020-20140410-01 | Water | 04/10/14 10:45 | 04/11/14 01:45 |
| 480-57719-21 | MW-1034-20140410-01 | Water | 04/10/14 08:30 | 04/11/14 01:45 |
| 480-57719-22 | DUP-004-20140410-01 | Water | 04/10/14 13:13 | 04/11/14 01:45 |
| 480-57719-23 | MW-1010D-20140410-01 | Water | 04/10/14 10:00 | 04/11/14 01:45 |
| 480-57719-24 | MW-1027-20140410-01 | Water | 04/10/14 09:35 | 04/11/14 01:45 |
| 480-57719-25 | MW-1016D-20140410-01 | Water | 04/10/14 09:15 | 04/11/14 01:45 |
| 480-57719-26 | MW-1013-20140410-01 | Water | 04/10/14 08:45 | 04/11/14 01:45 |
| 480-57719-27 | TB-001-20140410-01 | Water | 04/10/14 00:00 | 04/11/14 01:45 |
| 480-57719-28 | MW-1009-20140410-01 | Water | 04/10/14 11:30 | 04/11/14 01:45 |
| 480-57719-29 | MW-1006-20140410-01 | Water | 04/10/14 11:15 | 04/11/14 01:45 |
| 480-57719-30 | MW-1005-20140410-01 | Water | 04/10/14 11:50 | 04/11/14 01:45 |
| 480-57719-31 | MW-1004-20140410-01 | Water | 04/10/14 12:00 | 04/11/14 01:45 |
| 480-57719-32 | DUP-001-20140410-01 | Water | 04/10/14 11:11 | 04/11/14 01:45 |
| 480-57719-33 | MW-1002B-20140410-01 | Water | 04/10/14 12:30 | 04/11/14 01:45 |
| 480-57719-34 | MW-1003-20140410-01 | Water | 04/10/14 13:15 | 04/11/14 01:45 |

# Login Sample Receipt Checklist

Client: ERM-Northeast

Job Number: 480-57719-1

**Login Number: 57719**
**List Number: 1**
**Creator: Wienke, Robert K**

**List Source: TestAmerica Buffalo**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity either was not measured or, if measured, is at or below background | True | |
| The cooler's custody seal, if present, is intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the sample IDs on the containers and the COC. | True | |
| Samples are received within Holding Time. | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified | N/A | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter. | True | |
| If necessary, staff have been informed of any short hold time or quick TAT needs | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Sampling Company provided. | True | |
| Samples received within 48 hours of sampling. | True | |
| Samples requiring field filtration have been filtered in the field. | N/A | |
| Chlorine Residual checked. | N/A | |

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

480-57719 Chain of Custody

| Client Information | | |
|---|---|---|
| Client Contact: ~~Mr. Ethan Gyles~~ Joshua Klement | Sampler: Stacey Braga | Lab Ma |
| | Phone: 978-875-0426 | E-M bec |
| Company: ERM-Northeast | | |
| Address: One Beacon Steet 5th Floor | Due Date Requested: | |
| City: Boston | TAT Requested (days): Normal TAT | |
| State, Zip: MA, 02108 | | |
| Phone: 1-617-646-7800 | PO #: Purchase Order not required | |
| Email: ~~ethan.gyles@erm.com~~ Joshua.Klement@erm.com | WO #: | |
| Project Name: IDS Wayland | Project #: 48007117 | |
| Site: Wayland | SSOW#: | |

Analysis Requested

COC No: 480-47206-10762.5
Page: ~~Page 5 of 7~~ Page 1
Job #:

**Preservation Codes:**

| | |
|---|---|
| A - HCL | M - Hexane |
| B - NaOH | N - None |
| C - Zn Acetate | O - AsNaO2 |
| D - Nitric Acid | P - Na2O4S |
| E - NaHSO4 | Q - Na2SO3 |
| F - MeOH | R - Na2S2SO3 |
| G - Amchlor | S - H2SO4 |
| H - Ascorbic Acid | T - TSP Dodecahydrate |
| I - Ice | U - Acetone |
| J - DI Water | V - MCAA |
| K - EDTA | W - ph 4-5 |
| L - EDA | Z - other (specify) |

Other:

| Sample Identification | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 8260MCP - 8260 | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | A | | |
| MW-1030-20140410-01 | 4/10/14 | 10:11 | C | Water | N | N | 3 | | |
| MW-1028-20140410-01 | 4/10/14 | 9:25 | C | Water | N | N | 3 | | |
| MW-1025M-20140410-01 | 4/10/14 | 8:55 | C | Water | N | N | 3 | | |
| DUP-003-20140410-01 | 4/10/14 | 3:33 | C | Water | N | N | 3 | | |
| MW-1015D-20140410-01 | 4/10/14 | 8:20 | C | Water | N | N | 3 | | |
| MW-1033-20140410-01 | 4/10/14 | 8:58 | C | Water | N | N | 3 | | |
| DUP-002-20140410-01 | 4/10/14 | 10:10 | C | Water | N | N | 2 | | Only 2 vials collected |
| MW-1023-20140410-01 | 4/10/14 | 13:30 | C | Water | N | N | 3 | | |
| MW-1010M-20140410-01 | 4/10/14 | 10:25 | C | Water | N | N | 3 | | |
| MW-1022-20140410-01 | 4/10/14 | 12:35 | C | Water | N | N | 3 | | |
| MW-1019B-20140410-01 | 4/10/14 | 10:10 | C | Water | N | N | 3 | | |

*Possible Hazard Identification*
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

*Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)*
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|
| [signature] | 4/10/14 1548 | ERM | [signature] | 4/10/14 1540 | TAL |
| [signature] | 4/10/14 1600 | TAL | [signature] | 4/11/14 0145 | TAL |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

Custody Seals Intact: Δ Yes Δ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks: 2.9 #1

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

| Client Information | Sampler: Stacey Braga | Lab PM: Mason, Becky C | Carrier Tracking No(s): | COC No: 480-47206-10762.2 |
|---|---|---|---|---|
| Client Contact: ~~Mr. Ethan Gyles~~ Joshua Klement | Phone: 978-875-0426 | E-Mail: becky.mason@testamericainc.com | | Page: ~~Page 2 of 7~~ Page 2 |
| Company: ERM-Northeast | | | | Job #: |
| Address: One Beacon Steet 5th Floor | Due Date Requested: | | | |
| City: Boston | TAT Requested (days): Normal TAT | | | |
| State, Zip: MA, 02108 | | | | |
| Phone: 1-617-646-7800 | PO #: Purchase Order not required | | | |
| Email: ~~ethan.gyles@erm.com~~ Joshua.Klement@erm.com | WO #: | | | |
| Project Name: IDS Wayland | Project #: 48007117 | | | |
| Site: Wayland, MA | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)

Other:

| Sample Identification | Sample Date | Sample Time | Sample Type (C=comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 8260MCP - 8260 | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | A | | |
| MW-1032-20140410-01 | 4/10/14 | 11:45 | C | Water | N | N | 3 | | |
| MW-1017D-20140410-01 | 4/10/14 | 9:35 | C | Water | N | N | 3 | | |
| MW-1018-20140410-01 | 4/10/14 | 13:30 | C | Water | N | N | 3 | | |
| MW-1031-20140410-01 | 4/10/14 | 10:45 | C | Water | N | N | 3 | | |
| MW-1008-20140410-01 | 4/10/14 | 10:48 | C | Water | N | N | 3 | | |
| MW-1025D-20140410-01 | 4/10/14 | 9:20 | C | Water | N | N | 3 | | |
| MW-1011-20140410-01 | 4/10/14 | 14:10 | C | Water | N | N | 3 | | |
| MW-1024D-20140410-01 | 4/10/14 | 8:30 | C | Water | N | N | 3 | | |
| MW-1020-20140410-01 | 4/10/14 | 10:45 | C | Water | N | N | 3 | | |
| MW-1034-20140410-01 | 4/10/14 | 8:30 | C | Water | N | N | 3 | | |
| DUP-004-20140410-01 | 4/10/14 | 13:13 | C | Water | N | N | 3 | | |

*Possible Hazard Identification*
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

*Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)*
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|
| [signature] | 4/10/14 1540 | ERM | [signature] | 4/10/14 1540 | TAL |
| [signature] | 4/10/14 1600 | TAL | [signature] | 4.11.14 0145 | TA |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

Custody Seals Intact: Δ Yes Δ No

Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 2-8 #1

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

| Client Information | Sampler: Stacey Bragg | Lab PM: Mason, Becky C | Carrier Tracking No(s): | COC No: 480-47206-10762.7 |
|---|---|---|---|---|
| Client Contact: ~~Mr. Ethan Gyles~~ Joshua Klement | Phone: 978-875-0426 | E-Mail: becky.mason@testamericainc.com | | Page: ~~Page 7 of 7~~ Page 3 |
| Company: ERM-Northeast | | | | Job #: |
| Address: One Beacon Steet 5th Floor | Due Date Requested: | | | |
| City: Boston | TAT Requested (days): Normal TAT | | | |
| State, Zip: MA, 02108 | | | | |
| Phone: 1-617-646-7800 | PO #: Purchase Order not required | | | |
| Email: ~~ethan.gyles@erm.com~~ Joshua.Klement@erm.com | WO #: | | | |
| Project Name: IDS Wayland | Project #: 48007117 | | | |
| Site: Wayland, MA | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

| | |
|---|---|
| A - HCL | M - Hexane |
| B - NaOH | N - None |
| C - Zn Acetate | O - AsNaO2 |
| D - Nitric Acid | P - Na2O4S |
| E - NaHSO4 | Q - Na2SO3 |
| F - MeOH | R - Na2S2SO3 |
| G - Amchlor | S - H2SO4 |
| H - Ascorbic Acid | T - TSP Dodecahydrate |
| I - Ice | U - Acetone |
| J - DI Water | V - MCAA |
| K - EDTA | W - ph 4-5 |
| L - EDA | Z - other (specify) |

Other:

| Sample Identification | Sample Date | Sample Time | Sample Type (C=comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 8260MCP - 8260 | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | A | | |
| MW-1010D-20140410-01 | 4/10/14 | 10:00 | ~~G~~ C | Water | N | N | 3 | | |
| MW-1027-20140410-01 | 4/10/14 | 9:35 | C | Water | N | N | 3 | | |
| MW-1016D-20140410-01 | 4/10/14 | 9:15 | C | Water | N | N | 3 | | |
| MW-1013-20140410-01 | 4/10/14 | 8:45 | C | Water | N | N | 3 | | |
| TB-001-20140410-01 | 4/10/14 | — | C | Water | N | N | 1 | | Trip Blank |
| MW-1009-20140410-01 | 4/10/14 | 11:30 | C | Water | N | N | 3 | | |
| MW-1006-20140410-01 | 4/10/14 | 11:15 | C | Water | N | N | 3 | | |
| MW-1005-20140410-01 | 4/10/14 | 11:50 | C | Water | N | N | 3 | | |
| MW-1004-20140410-01 | 4/10/14 | 12:00 | C | Water | N | N | 3 | | |
| DUP-001-20140410-01 | 4/10/14 | 11:11 | C | Water | N | N | 3 | | |
| MW-1002B-20140410-01 | 4/10/14 | 12:30 | C | Water | N | N | | | |

*Possible Hazard Identification*
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

*Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)*
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by: | Date: | Time: | Method of Shipment:

| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|
| [signature] | 4/10/14 15:40 | ERM | [signature] | 4/10/14 1540 | TAL |
| [signature] | 4/10/14 1600 | TAL | [signature] | 4-11-14 0145 | TAL |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 2-9 #1

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

| Client Information | Sampler: Stacey Bragg | Lab PM: Mason, Becky C | Carrier Tracking No(s): | COC No: 480-47206-10762.6 |
|---|---|---|---|---|
| Client Contact: Mr. ~~Ethan Gyles~~ Joshua Klement | Phone: 978-875-0426 | E-Mail: becky.mason@testamericainc.com | | Page: ~~Page 6 of 7~~ Page 4 |
| Company: ERM-Northeast | | | | Job #: |
| Address: One Beacon Steet 5th Floor | Due Date Requested: | | | |
| City: Boston | TAT Requested (days): Normal TAT | | | |
| State, Zip: MA, 02108 | | | | |
| Phone: 1-617-646-7800 | PO #: Purchase Order not required | | | |
| Email: ~~ethan.gyles@erm.com~~ Joshua.Klement@erm.com | WO #: | | | |
| Project Name: IDS Wayland | Project #: 48007117 | | | |
| Site: Wayland, MA | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)

Other:

| Sample Identification | Sample Date | Sample Time | Sample Type (C=comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 8260MCP - 8260 | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | A | | |
| MW-1003-20140410-01 | 4/10/14 | 13:15 | C | Water | N | N | 3 | | |
| | | | | Water | | | | | |
| | | | | Water | | | | | |
| | | | | Water | | | | | |
| | | | | Water | | | | | |
| | | | | Water | | | | | |
| | | | | Water | | | | | |
| | | | | Water | | | | | |
| | | | | Water | | | | | |
| | | | | Water | | | | | |
| | | | | Water | | | | | |

**Possible Hazard Identification**
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

**Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)**
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|
| [signature] | 4/10/14 15:40 | ERM | [signature] | 4/10/14 1540 | TAL |
| [signature] | 4/10/14 1600 | TAL | [signature] | 4.11.14 0145 | TN |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

Custody Seals Intact: Δ Yes Δ No

Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 2.9 #1

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

# ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

TestAmerica Job ID: 480-57720-1
Client Project/Site: IDS Wayland

For:
ERM-Northeast
One Beacon Steet
5th Floor
Boston, Massachusetts 02108

Attn: Lyndsey Colburn

*Authorized for release by:*
*4/18/2014 11:04:00 AM*
Rebecca Jones, Project Management Assistant I
rebecca.jones@testamericainc.com

Designee for

Becky Mason, Project Manager II
(413)572-4000
becky.mason@testamericainc.com



*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

# Table of Contents

## Qualifiers

### GC/MS VOA

| Qualifier | Qualifier Description |
|---|---|
| * | LCS or LCSD exceeds the control limits |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CNF | Contains no Free Liquid |
| DER | Duplicate error ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision level concentration |
| MDA | Minimum detectable activity |
| EDL | Estimated Detection Limit |
| MDC | Minimum detectable concentration |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative error ratio |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

## Job ID: 480-57720-1

### Laboratory: TestAmerica Buffalo

**Narrative**

**Job Narrative**
**480-57720-1**

**Receipt**
The samples were received on 4/11/2014 1:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.9º C.

**GC/MS VOA**
Method(s) 8260C: With the exception of diluted samples, per question G on the MassDEP Analytical Protocol Certification Form, TestAmerica's routine reporting limits do not achieve the CAM reporting limits specified in this CAM protocol for Carbon disulfide, Isopropyl ether, Naphthalene, tert-Butyl ethyl ether, tert-Amyl methyl Ether, & Tetrahydrofuran.

Method(s) 8260C: The laboratory control sample (LCS) and / or the laboratory control sample duplicate (LCSD) for batch 175163 exceeded control limits for the following analyte: 2-Hexanone. MCP protocol allows for 10% of the target compounds to be outside of the limits provided the recoveries are over 10%.

Method(s) 8260C: The laboratory control sample (LCS) and / or the laboratory control sample duplicate (LCSD) for batch 175485 exceeded control limits for the following analyte: Tetrahydrofuran. MCP protocol allows for 10% of the target compounds to be outside of the limits provided the recoveries are over 10%.

No other analytical or quality issues were noted.

# MassDEP Analytical Protocol Certification Form

Laboratory Name: **TestAmerica Buffalo** Project #: **480-57720-1**

Project Location: **IDS Wayland** RTN:

**This form provides certifications for the following data set: list Laboratory Sample ID Number(s):**

**480-57720-1(1-3)**

Matrices: [x] Groundwater/Surface Water [ ] Soil/Sediment [ ] Drinking Water [ ] Air [ ] Other:

**CAM Protocols (check all that apply below):**

| | | | | | |
|---|---|---|---|---|---|
| 8260 VOC CAM II A [x] | 7470/7471 Hg CAM III B [ ] | Mass DEP VPH CAM IV A [ ] | 8081 Pesticides CAM V B [ ] | 7196 Hex Cr CAM VI B [ ] | Mass DEP APH CAM IX A [ ] |
| 8270 SVOC CAM II B [ ] | 7010 Metals CAM III C [ ] | Mass DEP EPH CAM IV B [ ] | 8151 Herbicides CAM V C [ ] | 8330 Explosives CAM VIII A [ ] | TO-15 VOC CAM IX B [ ] |
| 6010 Metals CAM III A [ ] | 6020 Metals CAM III D [ ] | 8082 PCB CAM V A [ ] | 9014 Total Cyanide/PAC CAM VI A [ ] | 6860 Perchlorate CAM VIII B [ ] | |

**Affirmative Responses to Questions A through F are required for "Presumptive Certainty" status**

| | | |
|---|---|---|
| **A** | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding time. | [x] Yes [ ] No |
| **B** | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | [x] Yes [ ] No |
| **C** | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | [x] Yes [ ] No |
| **D** | Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | [x] Yes [ ] No |
| **E** | a. VPH, EPH and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).<br>b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | [ ] Yes [ ] No<br>[ ] Yes [ ] No |
| **F** | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | [x] Yes [ ] No |

**Responses to Questions G, H and I below are required for "Presumptive Certainty" status**

| | | |
|---|---|---|
| **G** | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)? | [ ] Yes [x] No[1] |

***Data User Note:* Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WCS-07-350**

| | | |
|---|---|---|
| **H** | Were all QC performance standards specified in the CAM protocol(s) achieved? | [ ] Yes [x] No[1] |
| **I** | Were results reported for the complete analyte list specified in the selected CAM protocol(s) ? | [x] Yes [ ] No[1] |

[1] All negative responses must be addressed in an attached laboratory narrative.

***I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, is accurate and complete.***

Signature: Position: Project Management Assistant

Printed Name: Rebecca Jones Date: 4/18/14 10:40

# Detection Summary

Client: ERM-Northeast
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57720-1

## Client Sample ID: MW-217S-20140410-01 — Lab Sample ID: 480-57720-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 70 | | 50 | | ug/L | 1 | | 8260C | Total/NA |

## Client Sample ID: MW-217M-20140410-01 — Lab Sample ID: 480-57720-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | 2.6 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| 1,2-Dichlorobenzene | 1.8 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| cis-1,2-Dichloroethene | 1.1 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Methyl tert-butyl ether | 10 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |
| Tert-amyl methyl ether | 5.6 | | 5.0 | | ug/L | 1 | | 8260C | Total/NA |
| Trichloroethene | 8.9 | | 1.0 | | ug/L | 1 | | 8260C | Total/NA |

## Client Sample ID: MW-217D-20140410-01 — Lab Sample ID: 480-57720-3

No Detections.

This Detection Summary does not include radiochemical test results.

Client: ERM-Northeast
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57720-1

**Client Sample ID: MW-217S-20140410-01**
**Date Collected: 04/10/14 11:15**
**Date Received: 04/11/14 01:45**

**Lab Sample ID: 480-57720-1**
**Matrix: Water**

**Method: 8260C - Volatile Organic Compounds (GC/MS)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 18:49 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 18:49 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/11/14 18:49 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 18:49 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 18:49 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 18:49 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/11/14 18:49 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 18:49 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 18:49 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 18:49 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 18:49 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/11/14 18:49 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 18:49 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 18:49 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 18:49 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 18:49 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 18:49 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 18:49 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 18:49 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/11/14 18:49 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 18:49 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 04/11/14 18:49 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/11/14 18:49 | 1 |
| 2-Hexanone | ND | * | 10 | | ug/L | | | 04/11/14 18:49 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/11/14 18:49 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/11/14 18:49 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/11/14 18:49 | 1 |
| **Acetone** | **70** | | 50 | | ug/L | | | 04/11/14 18:49 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/11/14 18:49 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 18:49 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/11/14 18:49 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/11/14 18:49 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/11/14 18:49 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/11/14 18:49 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 18:49 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/11/14 18:49 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/11/14 18:49 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/11/14 18:49 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/11/14 18:49 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/11/14 18:49 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 18:49 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/11/14 18:49 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/11/14 18:49 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/11/14 18:49 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/11/14 18:49 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 18:49 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/11/14 18:49 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/11/14 18:49 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/11/14 18:49 | 1 |

## Client Sample ID: MW-217S-20140410-01

**Lab Sample ID: 480-57720-1**

**Date Collected: 04/10/14 11:15**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 18:49 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/11/14 18:49 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/11/14 18:49 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/11/14 18:49 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/11/14 18:49 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 18:49 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 18:49 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/11/14 18:49 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 18:49 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/11/14 18:49 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/11/14 18:49 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/11/14 18:49 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 18:49 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 18:49 | 1 |
| Tetrahydrofuran | ND | | 10 | | ug/L | | | 04/11/14 18:49 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 04/11/14 18:49 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 18:49 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/11/14 18:49 | 1 |
| Trichloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 18:49 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/11/14 18:49 | 1 |
| Vinyl chloride | ND | | 1.0 | | ug/L | | | 04/11/14 18:49 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/11/14 18:49 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *96* | | *70 - 130* | | *04/11/14 18:49* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *97* | | *70 - 130* | | *04/11/14 18:49* | *1* |
| *4-Bromofluorobenzene (Surr)* | *98* | | *70 - 130* | | *04/11/14 18:49* | *1* |

## Client Sample ID: MW-217M-20140410-01

**Lab Sample ID: 480-57720-2**

**Date Collected: 04/10/14 12:35**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 00:34 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 00:34 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/14/14 00:34 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 00:34 | 1 |
| **1,1-Dichloroethane** | **2.6** | | 1.0 | | ug/L | | | 04/14/14 00:34 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/14/14 00:34 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/14/14 00:34 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 00:34 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/14/14 00:34 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 00:34 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 00:34 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/14/14 00:34 | 1 |
| **1,2-Dichlorobenzene** | **1.8** | | 1.0 | | ug/L | | | 04/14/14 00:34 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/14/14 00:34 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/14/14 00:34 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 00:34 | 1 |

Client: ERM-Northeast
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57720-1

**Client Sample ID: MW-217M-20140410-01**
**Date Collected: 04/10/14 12:35**
**Date Received: 04/11/14 01:45**

**Lab Sample ID: 480-57720-2**
**Matrix: Water**

**Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 00:34 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/14/14 00:34 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 00:34 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/14/14 00:34 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/14/14 00:34 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 04/14/14 00:34 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/14/14 00:34 | 1 |
| 2-Hexanone | ND | | 10 | | ug/L | | | 04/14/14 00:34 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/14/14 00:34 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/14/14 00:34 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/14/14 00:34 | 1 |
| Acetone | ND | | 50 | | ug/L | | | 04/14/14 00:34 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/14/14 00:34 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 00:34 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/14/14 00:34 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/14/14 00:34 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/14/14 00:34 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/14/14 00:34 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/14/14 00:34 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/14/14 00:34 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/14/14 00:34 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/14/14 00:34 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/14/14 00:34 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/14/14 00:34 | 1 |
| **cis-1,2-Dichloroethene** | **1.1** | | 1.0 | | ug/L | | | 04/14/14 00:34 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/14/14 00:34 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/14/14 00:34 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/14/14 00:34 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/14/14 00:34 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 00:34 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/14/14 00:34 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/14/14 00:34 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/14/14 00:34 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 00:34 | 1 |
| **Methyl tert-butyl ether** | **10** | | 1.0 | | ug/L | | | 04/14/14 00:34 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/14/14 00:34 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/14/14 00:34 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/14/14 00:34 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 00:34 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 00:34 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/14/14 00:34 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 00:34 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/14/14 00:34 | 1 |
| **Tert-amyl methyl ether** | **5.6** | | 5.0 | | ug/L | | | 04/14/14 00:34 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/14/14 00:34 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/14/14 00:34 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/14/14 00:34 | 1 |
| Tetrahydrofuran | ND | * | 10 | | ug/L | | | 04/14/14 00:34 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 04/14/14 00:34 | 1 |

## Client Sample ID: MW-217M-20140410-01

**Lab Sample ID: 480-57720-2**

**Date Collected: 04/10/14 12:35**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

### Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/14/14 00:34 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/14/14 00:34 | 1 |
| **Trichloroethene** | **8.9** | | 1.0 | | ug/L | | | 04/14/14 00:34 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/14/14 00:34 | 1 |
| Vinyl chloride | ND | | 1.0 | | ug/L | | | 04/14/14 00:34 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/14/14 00:34 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *99* | | *70 - 130* | | *04/14/14 00:34* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *104* | | *70 - 130* | | *04/14/14 00:34* | *1* |
| *4-Bromofluorobenzene (Surr)* | *97* | | *70 - 130* | | *04/14/14 00:34* | *1* |

## Client Sample ID: MW-217D-20140410-01

**Lab Sample ID: 480-57720-3**

**Date Collected: 04/10/14 11:45**

**Matrix: Water**

**Date Received: 04/11/14 01:45**

### Method: 8260C - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 19:40 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 19:40 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/11/14 19:40 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 19:40 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 19:40 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 19:40 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/11/14 19:40 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 19:40 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 19:40 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 19:40 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 19:40 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/11/14 19:40 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 19:40 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 19:40 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 19:40 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 19:40 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 19:40 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 19:40 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 19:40 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/11/14 19:40 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 19:40 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 04/11/14 19:40 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/11/14 19:40 | 1 |
| 2-Hexanone | ND | * | 10 | | ug/L | | | 04/11/14 19:40 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/11/14 19:40 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/11/14 19:40 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/11/14 19:40 | 1 |
| Acetone | ND | | 50 | | ug/L | | | 04/11/14 19:40 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/11/14 19:40 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 19:40 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/11/14 19:40 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/11/14 19:40 | 1 |

Client: ERM-Northeast
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57720-1

**Client Sample ID: MW-217D-20140410-01**
**Date Collected: 04/10/14 11:45**
**Date Received: 04/11/14 01:45**

**Lab Sample ID: 480-57720-3**
**Matrix: Water**

**Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/11/14 19:40 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/11/14 19:40 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 19:40 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/11/14 19:40 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/11/14 19:40 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/11/14 19:40 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/11/14 19:40 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/11/14 19:40 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 19:40 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/11/14 19:40 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/11/14 19:40 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/11/14 19:40 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/11/14 19:40 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 19:40 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/11/14 19:40 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/11/14 19:40 | 1 |
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/11/14 19:40 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 19:40 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/11/14 19:40 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/11/14 19:40 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/11/14 19:40 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/11/14 19:40 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 19:40 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 19:40 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/11/14 19:40 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 19:40 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/11/14 19:40 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/11/14 19:40 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/11/14 19:40 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 19:40 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 19:40 | 1 |
| Tetrahydrofuran | ND | | 10 | | ug/L | | | 04/11/14 19:40 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 04/11/14 19:40 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 19:40 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/11/14 19:40 | 1 |
| Trichloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 19:40 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/11/14 19:40 | 1 |
| Vinyl chloride | ND | | 1.0 | | ug/L | | | 04/11/14 19:40 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/11/14 19:40 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *95* | | *70 - 130* | | *04/11/14 19:40* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *96* | | *70 - 130* | | *04/11/14 19:40* | *1* |
| *4-Bromofluorobenzene (Surr)* | *99* | | *70 - 130* | | *04/11/14 19:40* | *1* |

# Surrogate Summary

Client: ERM-Northeast
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57720-1

## Method: 8260C - Volatile Organic Compounds (GC/MS)

**Matrix: Water** **Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | | |
|---|---|---|---|---|
| | | TOL | 12DCE | BFB |
| Lab Sample ID | Client Sample ID | (70-130) | (70-130) | (70-130) |
| 480-57720-1 | MW-217S-20140410-01 | 96 | 97 | 98 |
| 480-57720-2 | MW-217M-20140410-01 | 99 | 104 | 97 |
| 480-57720-3 | MW-217D-20140410-01 | 95 | 96 | 99 |
| LCS 480-175163/5 | Lab Control Sample | 101 | 103 | 103 |
| LCS 480-175485/6 | Lab Control Sample | 98 | 105 | 99 |
| LCSD 480-175163/6 | Lab Control Sample Dup | 100 | 103 | 104 |
| LCSD 480-175485/7 | Lab Control Sample Dup | 96 | 106 | 96 |
| MB 480-175163/8 | Method Blank | 97 | 92 | 101 |
| MB 480-175485/9 | Method Blank | 99 | 105 | 96 |

**Surrogate Legend**

TOL = Toluene-d8 (Surr)
12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)

## Method: 8260C - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 480-175163/8**
**Matrix: Water**
**Analysis Batch: 175163**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/11/14 12:27 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/11/14 12:27 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 04/11/14 12:27 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| 2-Hexanone | ND | | 10 | | ug/L | | | 04/11/14 12:27 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/11/14 12:27 | 1 |
| Acetone | ND | | 50 | | ug/L | | | 04/11/14 12:27 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/11/14 12:27 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/11/14 12:27 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/11/14 12:27 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/11/14 12:27 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/11/14 12:27 | 1 |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 480-175163/8**
**Matrix: Water**
**Analysis Batch: 175163**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/11/14 12:27 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| Tetrahydrofuran | ND | | 10 | | ug/L | | | 04/11/14 12:27 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/11/14 12:27 | 1 |
| Trichloroethene | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| Vinyl chloride | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/11/14 12:27 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *97* | | *70 - 130* | | *04/11/14 12:27* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *92* | | *70 - 130* | | *04/11/14 12:27* | *1* |
| *4-Bromofluorobenzene (Surr)* | *101* | | *70 - 130* | | *04/11/14 12:27* | *1* |

**Lab Sample ID: LCS 480-175163/5**
**Matrix: Water**
**Analysis Batch: 175163**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 25.0 | 26.3 | | ug/L | | 105 | 70 - 130 |
| 1,1,1-Trichloroethane | 25.0 | 23.6 | | ug/L | | 94 | 70 - 130 |
| 1,1,2,2-Tetrachloroethane | 25.0 | 24.9 | | ug/L | | 100 | 70 - 130 |
| 1,1,2-Trichloroethane | 25.0 | 24.7 | | ug/L | | 99 | 70 - 130 |
| 1,1-Dichloroethane | 25.0 | 24.3 | | ug/L | | 97 | 70 - 130 |
| 1,1-Dichloroethene | 25.0 | 23.3 | | ug/L | | 93 | 70 - 130 |
| 1,1-Dichloropropene | 25.0 | 24.1 | | ug/L | | 96 | 70 - 130 |
| 1,2,3-Trichlorobenzene | 25.0 | 26.0 | | ug/L | | 104 | 70 - 130 |
| 1,2,3-Trichloropropane | 25.0 | 25.2 | | ug/L | | 101 | 70 - 130 |
| 1,2,4-Trichlorobenzene | 25.0 | 25.6 | | ug/L | | 103 | 70 - 130 |
| 1,2,4-Trimethylbenzene | 25.0 | 26.9 | | ug/L | | 108 | 70 - 130 |
| 1,2-Dibromo-3-Chloropropane | 25.0 | 25.5 | | ug/L | | 102 | 70 - 130 |
| 1,2-Dichlorobenzene | 25.0 | 25.5 | | ug/L | | 102 | 70 - 130 |
| 1,2-Dichloroethane | 25.0 | 22.2 | | ug/L | | 89 | 70 - 130 |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 480-175163/5**
**Matrix: Water**
**Analysis Batch: 175163**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,2-Dichloropropane | 25.0 | 24.9 | | ug/L | | 100 | 70 - 130 |
| 1,3,5-Trimethylbenzene | 25.0 | 26.6 | | ug/L | | 106 | 70 - 130 |
| 1,3-Dichlorobenzene | 25.0 | 25.7 | | ug/L | | 103 | 70 - 130 |
| 1,3-Dichloropropane | 25.0 | 24.7 | | ug/L | | 99 | 70 - 130 |
| 1,4-Dichlorobenzene | 25.0 | 25.5 | | ug/L | | 102 | 70 - 130 |
| 1,4-Dioxane | 500 | 395 | | ug/L | | 79 | 70 - 130 |
| 2,2-Dichloropropane | 25.0 | 25.0 | | ug/L | | 100 | 70 - 130 |
| 2-Butanone (MEK) | 125 | 131 | | ug/L | | 105 | 70 - 130 |
| 2-Chlorotoluene | 25.0 | 26.4 | | ug/L | | 106 | 70 - 130 |
| 2-Hexanone | 125 | 182 | * | ug/L | | 145 | 70 - 130 |
| 4-Chlorotoluene | 25.0 | 28.0 | | ug/L | | 112 | 70 - 130 |
| 4-Isopropyltoluene | 25.0 | 26.8 | | ug/L | | 107 | 70 - 130 |
| 4-Methyl-2-pentanone (MIBK) | 125 | 126 | | ug/L | | 101 | 70 - 130 |
| Acetone | 125 | 104 | | ug/L | | 83 | 70 - 130 |
| Benzene | 25.0 | 24.2 | | ug/L | | 97 | 70 - 130 |
| Bromobenzene | 25.0 | 25.4 | | ug/L | | 101 | 70 - 130 |
| Bromoform | 25.0 | 23.9 | | ug/L | | 95 | 70 - 130 |
| Bromomethane | 25.0 | 20.9 | | ug/L | | 83 | 70 - 130 |
| Carbon disulfide | 25.0 | 24.7 | | ug/L | | 99 | 70 - 130 |
| Carbon tetrachloride | 25.0 | 24.5 | | ug/L | | 98 | 70 - 130 |
| Chlorobenzene | 25.0 | 25.4 | | ug/L | | 102 | 70 - 130 |
| Chlorobromomethane | 25.0 | 25.1 | | ug/L | | 100 | 70 - 130 |
| Chlorodibromomethane | 24.5 | 25.8 | | ug/L | | 105 | 70 - 130 |
| Chloroethane | 25.0 | 22.1 | | ug/L | | 89 | 70 - 130 |
| Chloroform | 25.0 | 23.3 | | ug/L | | 93 | 70 - 130 |
| Chloromethane | 25.0 | 22.7 | | ug/L | | 91 | 70 - 130 |
| cis-1,2-Dichloroethene | 25.0 | 25.3 | | ug/L | | 101 | 70 - 130 |
| cis-1,3-Dichloropropene | 25.0 | 24.8 | | ug/L | | 99 | 70 - 130 |
| Dichlorobromomethane | 25.0 | 24.5 | | ug/L | | 98 | 70 - 130 |
| Dichlorodifluoromethane | 25.0 | 24.2 | | ug/L | | 97 | 70 - 130 |
| Ethyl ether | 25.0 | 24.7 | | ug/L | | 99 | 70 - 130 |
| Ethylbenzene | 25.0 | 24.9 | | ug/L | | 100 | 70 - 130 |
| Ethylene Dibromide | 25.0 | 25.0 | | ug/L | | 100 | 70 - 130 |
| Hexachlorobutadiene | 25.0 | 27.8 | | ug/L | | 111 | 70 - 130 |
| Isopropyl ether | 25.0 | 22.5 | | ug/L | | 90 | 70 - 130 |
| Isopropylbenzene | 25.0 | 25.7 | | ug/L | | 103 | 70 - 130 |
| Methyl tert-butyl ether | 25.0 | 23.8 | | ug/L | | 95 | 70 - 130 |
| Methylene Chloride | 25.0 | 23.9 | | ug/L | | 95 | 70 - 130 |
| m-Xylene & p-Xylene | 25.0 | 25.9 | | ug/L | | 104 | 70 - 130 |
| Naphthalene | 25.0 | 25.0 | | ug/L | | 100 | 70 - 130 |
| n-Butylbenzene | 25.0 | 25.7 | | ug/L | | 103 | 70 - 130 |
| N-Propylbenzene | 25.0 | 25.3 | | ug/L | | 101 | 70 - 130 |
| o-Xylene | 25.0 | 25.9 | | ug/L | | 104 | 70 - 130 |
| sec-Butylbenzene | 25.0 | 25.5 | | ug/L | | 102 | 70 - 130 |
| Styrene | 25.0 | 26.0 | | ug/L | | 104 | 70 - 130 |
| Tert-amyl methyl ether | 25.0 | 22.6 | | ug/L | | 91 | 70 - 130 |
| Tert-butyl ethyl ether | 25.0 | 21.9 | | ug/L | | 88 | 70 - 130 |
| tert-Butylbenzene | 25.0 | 26.6 | | ug/L | | 106 | 70 - 130 |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 480-175163/5**
**Matrix: Water**
**Analysis Batch: 175163**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 25.0 | 25.9 | | ug/L | | 104 | 70 - 130 |
| Tetrahydrofuran | 50.0 | 47.9 | | ug/L | | 96 | 70 - 130 |
| Toluene | 25.0 | 25.5 | | ug/L | | 102 | 70 - 130 |
| trans-1,2-Dichloroethene | 25.0 | 24.2 | | ug/L | | 97 | 70 - 130 |
| trans-1,3-Dichloropropene | 25.0 | 25.9 | | ug/L | | 104 | 70 - 130 |
| Trichloroethene | 25.0 | 25.1 | | ug/L | | 100 | 70 - 130 |
| Trichlorofluoromethane | 25.0 | 20.6 | | ug/L | | 83 | 70 - 130 |
| Vinyl chloride | 25.0 | 21.3 | | ug/L | | 85 | 70 - 130 |
| Dibromomethane | 25.0 | 23.0 | | ug/L | | 92 | 70 - 130 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Toluene-d8 (Surr)* | *101* | | *70 - 130* |
| *1,2-Dichloroethane-d4 (Surr)* | *103* | | *70 - 130* |
| *4-Bromofluorobenzene (Surr)* | *103* | | *70 - 130* |

**Lab Sample ID: LCSD 480-175163/6**
**Matrix: Water**
**Analysis Batch: 175163**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 25.0 | 25.8 | | ug/L | | 103 | 70 - 130 | 2 | 20 |
| 1,1,1-Trichloroethane | 25.0 | 23.0 | | ug/L | | 92 | 70 - 130 | 3 | 20 |
| 1,1,2,2-Tetrachloroethane | 25.0 | 24.9 | | ug/L | | 100 | 70 - 130 | 0 | 20 |
| 1,1,2-Trichloroethane | 25.0 | 24.5 | | ug/L | | 98 | 70 - 130 | 1 | 20 |
| 1,1-Dichloroethane | 25.0 | 23.8 | | ug/L | | 95 | 70 - 130 | 2 | 20 |
| 1,1-Dichloroethene | 25.0 | 22.5 | | ug/L | | 90 | 70 - 130 | 4 | 20 |
| 1,1-Dichloropropene | 25.0 | 23.2 | | ug/L | | 93 | 70 - 130 | 4 | 20 |
| 1,2,3-Trichlorobenzene | 25.0 | 25.9 | | ug/L | | 104 | 70 - 130 | 0 | 20 |
| 1,2,3-Trichloropropane | 25.0 | 25.1 | | ug/L | | 100 | 70 - 130 | 0 | 20 |
| 1,2,4-Trichlorobenzene | 25.0 | 25.5 | | ug/L | | 102 | 70 - 130 | 1 | 20 |
| 1,2,4-Trimethylbenzene | 25.0 | 26.2 | | ug/L | | 105 | 70 - 130 | 3 | 20 |
| 1,2-Dibromo-3-Chloropropane | 25.0 | 25.8 | | ug/L | | 103 | 70 - 130 | 1 | 20 |
| 1,2-Dichlorobenzene | 25.0 | 25.1 | | ug/L | | 101 | 70 - 130 | 2 | 20 |
| 1,2-Dichloroethane | 25.0 | 22.3 | | ug/L | | 89 | 70 - 130 | 0 | 20 |
| 1,2-Dichloropropane | 25.0 | 24.4 | | ug/L | | 98 | 70 - 130 | 2 | 20 |
| 1,3,5-Trimethylbenzene | 25.0 | 26.0 | | ug/L | | 104 | 70 - 130 | 2 | 20 |
| 1,3-Dichlorobenzene | 25.0 | 25.3 | | ug/L | | 101 | 70 - 130 | 2 | 20 |
| 1,3-Dichloropropane | 25.0 | 24.4 | | ug/L | | 98 | 70 - 130 | 1 | 20 |
| 1,4-Dichlorobenzene | 25.0 | 25.2 | | ug/L | | 101 | 70 - 130 | 1 | 20 |
| 1,4-Dioxane | 500 | 466 | | ug/L | | 93 | 70 - 130 | 16 | 20 |
| 2,2-Dichloropropane | 25.0 | 23.9 | | ug/L | | 96 | 70 - 130 | 5 | 20 |
| 2-Butanone (MEK) | 125 | 127 | | ug/L | | 101 | 70 - 130 | 3 | 20 |
| 2-Chlorotoluene | 25.0 | 26.0 | | ug/L | | 104 | 70 - 130 | 2 | 20 |
| 2-Hexanone | 125 | 182 | * | ug/L | | 145 | 70 - 130 | 0 | 20 |
| 4-Chlorotoluene | 25.0 | 26.7 | | ug/L | | 107 | 70 - 130 | 5 | 20 |
| 4-Isopropyltoluene | 25.0 | 26.0 | | ug/L | | 104 | 70 - 130 | 3 | 20 |
| 4-Methyl-2-pentanone (MIBK) | 125 | 125 | | ug/L | | 100 | 70 - 130 | 1 | 20 |
| Acetone | 125 | 103 | | ug/L | | 82 | 70 - 130 | 1 | 20 |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 480-175163/6**
**Matrix: Water**
**Analysis Batch: 175163**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | 25.0 | 23.6 | | ug/L | | 95 | 70 - 130 | 3 | 20 |
| Bromobenzene | 25.0 | 25.4 | | ug/L | | 102 | 70 - 130 | 0 | 20 |
| Bromoform | 25.0 | 24.1 | | ug/L | | 96 | 70 - 130 | 1 | 20 |
| Bromomethane | 25.0 | 20.3 | | ug/L | | 81 | 70 - 130 | 3 | 20 |
| Carbon disulfide | 25.0 | 24.0 | | ug/L | | 96 | 70 - 130 | 3 | 20 |
| Carbon tetrachloride | 25.0 | 23.8 | | ug/L | | 95 | 70 - 130 | 3 | 20 |
| Chlorobenzene | 25.0 | 24.5 | | ug/L | | 98 | 70 - 130 | 4 | 20 |
| Chlorobromomethane | 25.0 | 24.4 | | ug/L | | 97 | 70 - 130 | 3 | 20 |
| Chlorodibromomethane | 24.5 | 25.7 | | ug/L | | 105 | 70 - 130 | 0 | 20 |
| Chloroethane | 25.0 | 21.3 | | ug/L | | 85 | 70 - 130 | 4 | 20 |
| Chloroform | 25.0 | 22.8 | | ug/L | | 91 | 70 - 130 | 2 | 20 |
| Chloromethane | 25.0 | 21.5 | | ug/L | | 86 | 70 - 130 | 5 | 20 |
| cis-1,2-Dichloroethene | 25.0 | 24.7 | | ug/L | | 99 | 70 - 130 | 2 | 20 |
| cis-1,3-Dichloropropene | 25.0 | 24.7 | | ug/L | | 99 | 70 - 130 | 0 | 20 |
| Dichlorobromomethane | 25.0 | 24.0 | | ug/L | | 96 | 70 - 130 | 2 | 20 |
| Dichlorodifluoromethane | 25.0 | 22.6 | | ug/L | | 90 | 70 - 130 | 7 | 20 |
| Ethyl ether | 25.0 | 24.4 | | ug/L | | 98 | 70 - 130 | 1 | 20 |
| Ethylbenzene | 25.0 | 24.3 | | ug/L | | 97 | 70 - 130 | 2 | 20 |
| Ethylene Dibromide | 25.0 | 24.2 | | ug/L | | 97 | 70 - 130 | 3 | 20 |
| Hexachlorobutadiene | 25.0 | 27.6 | | ug/L | | 111 | 70 - 130 | 0 | 20 |
| Isopropyl ether | 25.0 | 22.1 | | ug/L | | 88 | 70 - 130 | 2 | 20 |
| Isopropylbenzene | 25.0 | 24.9 | | ug/L | | 99 | 70 - 130 | 3 | 20 |
| Methyl tert-butyl ether | 25.0 | 24.0 | | ug/L | | 96 | 70 - 130 | 1 | 20 |
| Methylene Chloride | 25.0 | 23.2 | | ug/L | | 93 | 70 - 130 | 3 | 20 |
| m-Xylene & p-Xylene | 25.0 | 25.2 | | ug/L | | 101 | 70 - 130 | 3 | 20 |
| Naphthalene | 25.0 | 25.5 | | ug/L | | 102 | 70 - 130 | 2 | 20 |
| n-Butylbenzene | 25.0 | 25.4 | | ug/L | | 102 | 70 - 130 | 1 | 20 |
| N-Propylbenzene | 25.0 | 24.5 | | ug/L | | 98 | 70 - 130 | 3 | 20 |
| o-Xylene | 25.0 | 25.2 | | ug/L | | 101 | 70 - 130 | 3 | 20 |
| sec-Butylbenzene | 25.0 | 25.0 | | ug/L | | 100 | 70 - 130 | 2 | 20 |
| Styrene | 25.0 | 25.4 | | ug/L | | 102 | 70 - 130 | 2 | 20 |
| Tert-amyl methyl ether | 25.0 | 22.3 | | ug/L | | 89 | 70 - 130 | 1 | 20 |
| Tert-butyl ethyl ether | 25.0 | 21.6 | | ug/L | | 86 | 70 - 130 | 1 | 20 |
| tert-Butylbenzene | 25.0 | 25.7 | | ug/L | | 103 | 70 - 130 | 3 | 20 |
| Tetrachloroethene | 25.0 | 25.5 | | ug/L | | 102 | 70 - 130 | 2 | 20 |
| Tetrahydrofuran | 50.0 | 47.5 | | ug/L | | 95 | 70 - 130 | 1 | 20 |
| Toluene | 25.0 | 24.8 | | ug/L | | 99 | 70 - 130 | 3 | 20 |
| trans-1,2-Dichloroethene | 25.0 | 23.2 | | ug/L | | 93 | 70 - 130 | 4 | 20 |
| trans-1,3-Dichloropropene | 25.0 | 25.4 | | ug/L | | 102 | 70 - 130 | 2 | 20 |
| Trichloroethene | 25.0 | 24.1 | | ug/L | | 96 | 70 - 130 | 4 | 20 |
| Trichlorofluoromethane | 25.0 | 19.6 | | ug/L | | 78 | 70 - 130 | 5 | 20 |
| Vinyl chloride | 25.0 | 20.3 | | ug/L | | 81 | 70 - 130 | 5 | 20 |
| Dibromomethane | 25.0 | 23.0 | | ug/L | | 92 | 70 - 130 | 0 | 20 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *Toluene-d8 (Surr)* | *100* | | *70 - 130* |
| *1,2-Dichloroethane-d4 (Surr)* | *103* | | *70 - 130* |
| *4-Bromofluorobenzene (Surr)* | *104* | | *70 - 130* |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 480-175485/9**
**Matrix: Water**
**Analysis Batch: 175485**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | | ug/L | | | 04/13/14 22:07 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 1,1-Dichloropropene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 1,2,3-Trichloropropane | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 1,4-Dioxane | ND | | 50 | | ug/L | | | 04/13/14 22:07 | 1 |
| 2,2-Dichloropropane | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 2-Butanone (MEK) | ND | | 10 | | ug/L | | | 04/13/14 22:07 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 2-Hexanone | ND | | 10 | | ug/L | | | 04/13/14 22:07 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 4-Isopropyltoluene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10 | | ug/L | | | 04/13/14 22:07 | 1 |
| Acetone | ND | | 50 | | ug/L | | | 04/13/14 22:07 | 1 |
| Benzene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Bromoform | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Bromomethane | ND | | 2.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Carbon disulfide | ND | | 10 | | ug/L | | | 04/13/14 22:07 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Chlorobromomethane | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Chlorodibromomethane | ND | | 0.50 | | ug/L | | | 04/13/14 22:07 | 1 |
| Chloroethane | ND | | 2.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Chloroform | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Chloromethane | ND | | 2.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/13/14 22:07 | 1 |
| Dichlorobromomethane | ND | | 0.50 | | ug/L | | | 04/13/14 22:07 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Ethyl ether | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Ethylene Dibromide | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Hexachlorobutadiene | ND | | 0.40 | | ug/L | | | 04/13/14 22:07 | 1 |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 480-175485/9**
**Matrix: Water**
**Analysis Batch: 175485**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Isopropyl ether | ND | | 10 | | ug/L | | | 04/13/14 22:07 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Methylene Chloride | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| m-Xylene & p-Xylene | ND | | 2.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Naphthalene | ND | | 5.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| N-Propylbenzene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| o-Xylene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Styrene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Tert-butyl ethyl ether | ND | | 5.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Tetrahydrofuran | ND | | 10 | | ug/L | | | 04/13/14 22:07 | 1 |
| Toluene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.40 | | ug/L | | | 04/13/14 22:07 | 1 |
| Trichloroethene | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Vinyl chloride | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/L | | | 04/13/14 22:07 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *99* | | *70 - 130* | | *04/13/14 22:07* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *105* | | *70 - 130* | | *04/13/14 22:07* | *1* |
| *4-Bromofluorobenzene (Surr)* | *96* | | *70 - 130* | | *04/13/14 22:07* | *1* |

**Lab Sample ID: LCS 480-175485/6**
**Matrix: Water**
**Analysis Batch: 175485**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 25.0 | 24.4 | | ug/L | | 97 | 70 - 130 |
| 1,1,1-Trichloroethane | 25.0 | 24.8 | | ug/L | | 99 | 70 - 130 |
| 1,1,2,2-Tetrachloroethane | 25.0 | 24.9 | | ug/L | | 100 | 70 - 130 |
| 1,1,2-Trichloroethane | 25.0 | 24.9 | | ug/L | | 99 | 70 - 130 |
| 1,1-Dichloroethane | 25.0 | 24.7 | | ug/L | | 99 | 70 - 130 |
| 1,1-Dichloroethene | 25.0 | 23.8 | | ug/L | | 95 | 70 - 130 |
| 1,1-Dichloropropene | 25.0 | 25.5 | | ug/L | | 102 | 70 - 130 |
| 1,2,3-Trichlorobenzene | 25.0 | 25.2 | | ug/L | | 101 | 70 - 130 |
| 1,2,3-Trichloropropane | 25.0 | 24.3 | | ug/L | | 97 | 70 - 130 |
| 1,2,4-Trichlorobenzene | 25.0 | 25.3 | | ug/L | | 101 | 70 - 130 |
| 1,2,4-Trimethylbenzene | 25.0 | 24.6 | | ug/L | | 98 | 70 - 130 |
| 1,2-Dibromo-3-Chloropropane | 25.0 | 23.3 | | ug/L | | 93 | 70 - 130 |
| 1,2-Dichlorobenzene | 25.0 | 24.9 | | ug/L | | 99 | 70 - 130 |
| 1,2-Dichloroethane | 25.0 | 26.4 | | ug/L | | 106 | 70 - 130 |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 480-175485/6**
**Matrix: Water**
**Analysis Batch: 175485**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,2-Dichloropropane | 25.0 | 26.1 | | ug/L | | 104 | 70 - 130 |
| 1,3,5-Trimethylbenzene | 25.0 | 24.2 | | ug/L | | 97 | 70 - 130 |
| 1,3-Dichlorobenzene | 25.0 | 24.9 | | ug/L | | 100 | 70 - 130 |
| 1,3-Dichloropropane | 25.0 | 24.4 | | ug/L | | 98 | 70 - 130 |
| 1,4-Dichlorobenzene | 25.0 | 24.1 | | ug/L | | 97 | 70 - 130 |
| 1,4-Dioxane | 500 | 452 | | ug/L | | 90 | 70 - 130 |
| 2,2-Dichloropropane | 25.0 | 23.3 | | ug/L | | 93 | 70 - 130 |
| 2-Butanone (MEK) | 125 | 142 | | ug/L | | 113 | 70 - 130 |
| 2-Chlorotoluene | 25.0 | 24.4 | | ug/L | | 98 | 70 - 130 |
| 2-Hexanone | 125 | 125 | | ug/L | | 100 | 70 - 130 |
| 4-Chlorotoluene | 25.0 | 22.0 | | ug/L | | 88 | 70 - 130 |
| 4-Isopropyltoluene | 25.0 | 24.9 | | ug/L | | 100 | 70 - 130 |
| 4-Methyl-2-pentanone (MIBK) | 125 | 124 | | ug/L | | 99 | 70 - 130 |
| Acetone | 125 | 125 | | ug/L | | 100 | 70 - 130 |
| Benzene | 25.0 | 24.9 | | ug/L | | 100 | 70 - 130 |
| Bromobenzene | 25.0 | 24.3 | | ug/L | | 97 | 70 - 130 |
| Bromoform | 25.0 | 21.2 | | ug/L | | 85 | 70 - 130 |
| Bromomethane | 25.0 | 29.6 | | ug/L | | 118 | 70 - 130 |
| Carbon disulfide | 25.0 | 21.1 | | ug/L | | 84 | 70 - 130 |
| Carbon tetrachloride | 25.0 | 25.3 | | ug/L | | 101 | 70 - 130 |
| Chlorobenzene | 25.0 | 24.9 | | ug/L | | 99 | 70 - 130 |
| Chlorobromomethane | 25.0 | 25.3 | | ug/L | | 101 | 70 - 130 |
| Chlorodibromomethane | 24.5 | 24.5 | | ug/L | | 100 | 70 - 130 |
| Chloroethane | 25.0 | 28.9 | | ug/L | | 116 | 70 - 130 |
| Chloroform | 25.0 | 25.1 | | ug/L | | 100 | 70 - 130 |
| Chloromethane | 25.0 | 24.2 | | ug/L | | 97 | 70 - 130 |
| cis-1,2-Dichloroethene | 25.0 | 24.7 | | ug/L | | 99 | 70 - 130 |
| cis-1,3-Dichloropropene | 25.0 | 26.2 | | ug/L | | 105 | 70 - 130 |
| Dichlorobromomethane | 25.0 | 25.5 | | ug/L | | 102 | 70 - 130 |
| Dichlorodifluoromethane | 25.0 | 22.6 | | ug/L | | 90 | 70 - 130 |
| Ethyl ether | 25.0 | 25.0 | | ug/L | | 100 | 70 - 130 |
| Ethylbenzene | 25.0 | 24.2 | | ug/L | | 97 | 70 - 130 |
| Ethylene Dibromide | 25.0 | 24.8 | | ug/L | | 99 | 70 - 130 |
| Hexachlorobutadiene | 25.0 | 25.5 | | ug/L | | 102 | 70 - 130 |
| Isopropyl ether | 25.0 | 26.3 | | ug/L | | 105 | 70 - 130 |
| Isopropylbenzene | 25.0 | 24.1 | | ug/L | | 96 | 70 - 130 |
| Methyl tert-butyl ether | 25.0 | 24.3 | | ug/L | | 97 | 70 - 130 |
| Methylene Chloride | 25.0 | 23.7 | | ug/L | | 95 | 70 - 130 |
| m-Xylene & p-Xylene | 25.0 | 24.7 | | ug/L | | 99 | 70 - 130 |
| Naphthalene | 25.0 | 25.8 | | ug/L | | 103 | 70 - 130 |
| n-Butylbenzene | 25.0 | 25.4 | | ug/L | | 102 | 70 - 130 |
| N-Propylbenzene | 25.0 | 24.2 | | ug/L | | 97 | 70 - 130 |
| o-Xylene | 25.0 | 24.1 | | ug/L | | 96 | 70 - 130 |
| sec-Butylbenzene | 25.0 | 24.7 | | ug/L | | 99 | 70 - 130 |
| Styrene | 25.0 | 24.9 | | ug/L | | 99 | 70 - 130 |
| Tert-amyl methyl ether | 25.0 | 25.7 | | ug/L | | 103 | 70 - 130 |
| Tert-butyl ethyl ether | 25.0 | 25.4 | | ug/L | | 101 | 70 - 130 |
| tert-Butylbenzene | 25.0 | 24.0 | | ug/L | | 96 | 70 - 130 |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 480-175485/6**
**Matrix: Water**
**Analysis Batch: 175485**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 25.0 | 26.1 | | ug/L | | 104 | 70 - 130 |
| Tetrahydrofuran | 50.0 | 65.3 | * | ug/L | | 131 | 70 - 130 |
| Toluene | 25.0 | 24.2 | | ug/L | | 97 | 70 - 130 |
| trans-1,2-Dichloroethene | 25.0 | 24.1 | | ug/L | | 96 | 70 - 130 |
| trans-1,3-Dichloropropene | 25.0 | 23.7 | | ug/L | | 95 | 70 - 130 |
| Trichloroethene | 25.0 | 24.0 | | ug/L | | 96 | 70 - 130 |
| Trichlorofluoromethane | 25.0 | 27.1 | | ug/L | | 108 | 70 - 130 |
| Vinyl chloride | 25.0 | 23.8 | | ug/L | | 95 | 70 - 130 |
| Dibromomethane | 25.0 | 26.1 | | ug/L | | 104 | 70 - 130 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Toluene-d8 (Surr)* | *98* | | *70 - 130* |
| *1,2-Dichloroethane-d4 (Surr)* | *105* | | *70 - 130* |
| *4-Bromofluorobenzene (Surr)* | *99* | | *70 - 130* |

**Lab Sample ID: LCSD 480-175485/7**
**Matrix: Water**
**Analysis Batch: 175485**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 25.0 | 24.1 | | ug/L | | 96 | 70 - 130 | 1 | 20 |
| 1,1,1-Trichloroethane | 25.0 | 24.3 | | ug/L | | 97 | 70 - 130 | 2 | 20 |
| 1,1,2,2-Tetrachloroethane | 25.0 | 24.2 | | ug/L | | 97 | 70 - 130 | 3 | 20 |
| 1,1,2-Trichloroethane | 25.0 | 24.9 | | ug/L | | 100 | 70 - 130 | 0 | 20 |
| 1,1-Dichloroethane | 25.0 | 24.6 | | ug/L | | 98 | 70 - 130 | 1 | 20 |
| 1,1-Dichloroethene | 25.0 | 24.1 | | ug/L | | 96 | 70 - 130 | 1 | 20 |
| 1,1-Dichloropropene | 25.0 | 24.6 | | ug/L | | 98 | 70 - 130 | 4 | 20 |
| 1,2,3-Trichlorobenzene | 25.0 | 25.2 | | ug/L | | 101 | 70 - 130 | 0 | 20 |
| 1,2,3-Trichloropropane | 25.0 | 24.2 | | ug/L | | 97 | 70 - 130 | 0 | 20 |
| 1,2,4-Trichlorobenzene | 25.0 | 25.1 | | ug/L | | 101 | 70 - 130 | 1 | 20 |
| 1,2,4-Trimethylbenzene | 25.0 | 23.1 | | ug/L | | 92 | 70 - 130 | 6 | 20 |
| 1,2-Dibromo-3-Chloropropane | 25.0 | 22.7 | | ug/L | | 91 | 70 - 130 | 2 | 20 |
| 1,2-Dichlorobenzene | 25.0 | 23.9 | | ug/L | | 96 | 70 - 130 | 4 | 20 |
| 1,2-Dichloroethane | 25.0 | 25.9 | | ug/L | | 104 | 70 - 130 | 2 | 20 |
| 1,2-Dichloropropane | 25.0 | 25.8 | | ug/L | | 103 | 70 - 130 | 1 | 20 |
| 1,3,5-Trimethylbenzene | 25.0 | 23.1 | | ug/L | | 92 | 70 - 130 | 4 | 20 |
| 1,3-Dichlorobenzene | 25.0 | 23.8 | | ug/L | | 95 | 70 - 130 | 4 | 20 |
| 1,3-Dichloropropane | 25.0 | 24.4 | | ug/L | | 98 | 70 - 130 | 0 | 20 |
| 1,4-Dichlorobenzene | 25.0 | 23.2 | | ug/L | | 93 | 70 - 130 | 4 | 20 |
| 1,4-Dioxane | 500 | 463 | | ug/L | | 93 | 70 - 130 | 2 | 20 |
| 2,2-Dichloropropane | 25.0 | 22.8 | | ug/L | | 91 | 70 - 130 | 2 | 20 |
| 2-Butanone (MEK) | 125 | 135 | | ug/L | | 108 | 70 - 130 | 4 | 20 |
| 2-Chlorotoluene | 25.0 | 23.8 | | ug/L | | 95 | 70 - 130 | 2 | 20 |
| 2-Hexanone | 125 | 123 | | ug/L | | 99 | 70 - 130 | 1 | 20 |
| 4-Chlorotoluene | 25.0 | 21.2 | | ug/L | | 85 | 70 - 130 | 4 | 20 |
| 4-Isopropyltoluene | 25.0 | 24.0 | | ug/L | | 96 | 70 - 130 | 4 | 20 |
| 4-Methyl-2-pentanone (MIBK) | 125 | 121 | | ug/L | | 97 | 70 - 130 | 2 | 20 |
| Acetone | 125 | 126 | | ug/L | | 101 | 70 - 130 | 0 | 20 |

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 480-175485/7**
**Matrix: Water**
**Analysis Batch: 175485**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | 25.0 | 24.7 | | ug/L | | 99 | 70 - 130 | 1 | 20 |
| Bromobenzene | 25.0 | 23.6 | | ug/L | | 95 | 70 - 130 | 3 | 20 |
| Bromoform | 25.0 | 21.4 | | ug/L | | 86 | 70 - 130 | 1 | 20 |
| Bromomethane | 25.0 | 30.4 | | ug/L | | 122 | 70 - 130 | 3 | 20 |
| Carbon disulfide | 25.0 | 20.4 | | ug/L | | 82 | 70 - 130 | 3 | 20 |
| Carbon tetrachloride | 25.0 | 24.7 | | ug/L | | 99 | 70 - 130 | 2 | 20 |
| Chlorobenzene | 25.0 | 23.8 | | ug/L | | 95 | 70 - 130 | 5 | 20 |
| Chlorobromomethane | 25.0 | 24.8 | | ug/L | | 99 | 70 - 130 | 2 | 20 |
| Chlorodibromomethane | 24.5 | 24.0 | | ug/L | | 98 | 70 - 130 | 2 | 20 |
| Chloroethane | 25.0 | 28.7 | | ug/L | | 115 | 70 - 130 | 1 | 20 |
| Chloroform | 25.0 | 25.0 | | ug/L | | 100 | 70 - 130 | 0 | 20 |
| Chloromethane | 25.0 | 24.6 | | ug/L | | 98 | 70 - 130 | 2 | 20 |
| cis-1,2-Dichloroethene | 25.0 | 24.2 | | ug/L | | 97 | 70 - 130 | 2 | 20 |
| cis-1,3-Dichloropropene | 25.0 | 26.2 | | ug/L | | 105 | 70 - 130 | 0 | 20 |
| Dichlorobromomethane | 25.0 | 25.6 | | ug/L | | 102 | 70 - 130 | 0 | 20 |
| Dichlorodifluoromethane | 25.0 | 23.1 | | ug/L | | 92 | 70 - 130 | 2 | 20 |
| Ethyl ether | 25.0 | 25.1 | | ug/L | | 100 | 70 - 130 | 0 | 20 |
| Ethylbenzene | 25.0 | 24.0 | | ug/L | | 96 | 70 - 130 | 1 | 20 |
| Ethylene Dibromide | 25.0 | 24.2 | | ug/L | | 97 | 70 - 130 | 2 | 20 |
| Hexachlorobutadiene | 25.0 | 24.3 | | ug/L | | 97 | 70 - 130 | 5 | 20 |
| Isopropyl ether | 25.0 | 26.0 | | ug/L | | 104 | 70 - 130 | 1 | 20 |
| Isopropylbenzene | 25.0 | 23.1 | | ug/L | | 93 | 70 - 130 | 4 | 20 |
| Methyl tert-butyl ether | 25.0 | 24.5 | | ug/L | | 98 | 70 - 130 | 1 | 20 |
| Methylene Chloride | 25.0 | 23.9 | | ug/L | | 95 | 70 - 130 | 1 | 20 |
| m-Xylene & p-Xylene | 25.0 | 24.0 | | ug/L | | 96 | 70 - 130 | 3 | 20 |
| Naphthalene | 25.0 | 25.0 | | ug/L | | 100 | 70 - 130 | 3 | 20 |
| n-Butylbenzene | 25.0 | 23.9 | | ug/L | | 96 | 70 - 130 | 6 | 20 |
| N-Propylbenzene | 25.0 | 23.3 | | ug/L | | 93 | 70 - 130 | 4 | 20 |
| o-Xylene | 25.0 | 23.7 | | ug/L | | 95 | 70 - 130 | 2 | 20 |
| sec-Butylbenzene | 25.0 | 23.5 | | ug/L | | 94 | 70 - 130 | 5 | 20 |
| Styrene | 25.0 | 24.1 | | ug/L | | 96 | 70 - 130 | 3 | 20 |
| Tert-amyl methyl ether | 25.0 | 25.9 | | ug/L | | 103 | 70 - 130 | 1 | 20 |
| Tert-butyl ethyl ether | 25.0 | 26.0 | | ug/L | | 104 | 70 - 130 | 2 | 20 |
| tert-Butylbenzene | 25.0 | 23.3 | | ug/L | | 93 | 70 - 130 | 3 | 20 |
| Tetrachloroethene | 25.0 | 24.5 | | ug/L | | 98 | 70 - 130 | 6 | 20 |
| Tetrahydrofuran | 50.0 | 66.1 | * | ug/L | | 132 | 70 - 130 | 1 | 20 |
| Toluene | 25.0 | 23.3 | | ug/L | | 93 | 70 - 130 | 4 | 20 |
| trans-1,2-Dichloroethene | 25.0 | 23.8 | | ug/L | | 95 | 70 - 130 | 1 | 20 |
| trans-1,3-Dichloropropene | 25.0 | 23.9 | | ug/L | | 95 | 70 - 130 | 1 | 20 |
| Trichloroethene | 25.0 | 24.1 | | ug/L | | 96 | 70 - 130 | 1 | 20 |
| Trichlorofluoromethane | 25.0 | 26.2 | | ug/L | | 105 | 70 - 130 | 3 | 20 |
| Vinyl chloride | 25.0 | 23.2 | | ug/L | | 93 | 70 - 130 | 3 | 20 |
| Dibromomethane | 25.0 | 25.6 | | ug/L | | 103 | 70 - 130 | 2 | 20 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *Toluene-d8 (Surr)* | *96* | | *70 - 130* |
| *1,2-Dichloroethane-d4 (Surr)* | *106* | | *70 - 130* |
| *4-Bromofluorobenzene (Surr)* | *96* | | *70 - 130* |

# QC Association Summary

Client: ERM-Northeast
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57720-1

## GC/MS VOA

### Analysis Batch: 175163

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 480-57720-1 | MW-217S-20140410-01 | Total/NA | Water | 8260C | |
| 480-57720-3 | MW-217D-20140410-01 | Total/NA | Water | 8260C | |
| LCS 480-175163/5 | Lab Control Sample | Total/NA | Water | 8260C | |
| LCSD 480-175163/6 | Lab Control Sample Dup | Total/NA | Water | 8260C | |
| MB 480-175163/8 | Method Blank | Total/NA | Water | 8260C | |

### Analysis Batch: 175485

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 480-57720-2 | MW-217M-20140410-01 | Total/NA | Water | 8260C | |
| LCS 480-175485/6 | Lab Control Sample | Total/NA | Water | 8260C | |
| LCSD 480-175485/7 | Lab Control Sample Dup | Total/NA | Water | 8260C | |
| MB 480-175485/9 | Method Blank | Total/NA | Water | 8260C | |

# Lab Chronicle

Client: ERM-Northeast
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57720-1

## Client Sample ID: MW-217S-20140410-01

**Lab Sample ID: 480-57720-1**

**Date Collected: 04/10/14 11:15**
**Matrix: Water**
**Date Received: 04/11/14 01:45**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 175163 | 04/11/14 18:49 | NMD1 | TAL BUF |

## Client Sample ID: MW-217M-20140410-01

**Lab Sample ID: 480-57720-2**

**Date Collected: 04/10/14 12:35**
**Matrix: Water**
**Date Received: 04/11/14 01:45**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 175485 | 04/14/14 00:34 | LCH | TAL BUF |

## Client Sample ID: MW-217D-20140410-01

**Lab Sample ID: 480-57720-3**

**Date Collected: 04/10/14 11:45**
**Matrix: Water**
**Date Received: 04/11/14 01:45**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 175163 | 04/11/14 19:40 | NMD1 | TAL BUF |

**Laboratory References:**

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

# Certification Summary

Client: ERM-Northeast
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57720-1

## Laboratory: TestAmerica Buffalo

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

| Authority | Program | EPA Region | Certification ID | Expiration Date |
|---|---|---|---|---|
| Arkansas DEQ | State Program | 6 | 88-0686 | 07-06-14 |
| California | State Program | 9 | 1169CA | 09-30-14 |
| Connecticut | State Program | 1 | PH-0568 | 09-30-14 |
| Florida | NELAP | 4 | E87672 | 06-30-14 |
| Georgia | State Program | 4 | N/A | 03-31-15 |
| Illinois | NELAP | 5 | 200003 | 09-30-14 |
| Iowa | State Program | 7 | 374 | 03-01-15 |
| Kansas | NELAP | 7 | E-10187 | 01-31-15 * |
| Kentucky (DW) | State Program | 4 | 90029 | 12-31-14 |
| Kentucky (UST) | State Program | 4 | 30 | 03-31-15 |
| Louisiana | NELAP | 6 | 02031 | 06-30-14 |
| Maine | State Program | 1 | NY00044 | 12-04-14 |
| Maryland | State Program | 3 | 294 | 03-31-15 |
| Massachusetts | State Program | 1 | M-NY044 | 06-30-14 |
| Michigan | State Program | 5 | 9937 | 04-01-14 * |
| Minnesota | NELAP | 5 | 036-999-337 | 12-31-14 |
| New Hampshire | NELAP | 1 | 2337 | 11-17-14 |
| New Jersey | NELAP | 2 | NY455 | 06-30-14 |
| New York | NELAP | 2 | 10026 | 03-31-15 |
| North Dakota | State Program | 8 | R-176 | 03-31-14 * |
| Oklahoma | State Program | 6 | 9421 | 08-31-14 |
| Oregon | NELAP | 10 | NY200003 | 06-09-14 |
| Pennsylvania | NELAP | 3 | 68-00281 | 07-31-14 |
| Rhode Island | State Program | 1 | LAO00328 | 12-30-14 |
| Tennessee | State Program | 4 | TN02970 | 03-31-15 |
| Texas | NELAP | 6 | T104704412-11-2 | 07-31-14 |
| USDA | Federal | | P330-11-00386 | 11-22-14 |
| Virginia | NELAP | 3 | 460185 | 09-14-14 |
| Washington | State Program | 10 | C784 | 02-10-15 |
| West Virginia DEP | State Program | 3 | 252 | 05-31-14 |
| Wisconsin | State Program | 5 | 998310390 | 08-31-14 |

* Expired certification is currently pending renewal and is considered valid.

# Method Summary

Client: ERM-Northeast
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57720-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 8260C | Volatile Organic Compounds (GC/MS) | MA DEP | TAL BUF |

**Protocol References:**

MA DEP = Massachusetts Department Of Environmental Protection

**Laboratory References:**

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

# Sample Summary

Client: ERM-Northeast
Project/Site: IDS Wayland

TestAmerica Job ID: 480-57720-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 480-57720-1 | MW-217S-20140410-01 | Water | 04/10/14 11:15 | 04/11/14 01:45 |
| 480-57720-2 | MW-217M-20140410-01 | Water | 04/10/14 12:35 | 04/11/14 01:45 |
| 480-57720-3 | MW-217D-20140410-01 | Water | 04/10/14 11:45 | 04/11/14 01:45 |

# Login Sample Receipt Checklist

Client: ERM-Northeast

Job Number: 480-57720-1

**Login Number: 57720**
**List Number: 1**
**Creator: Wienke, Robert K**

**List Source: TestAmerica Buffalo**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity either was not measured or, if measured, is at or below background | True | |
| The cooler's custody seal, if present, is intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the sample IDs on the containers and the COC. | True | |
| Samples are received within Holding Time. | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified | N/A | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter. | True | |
| If necessary, staff have been informed of any short hold time or quick TAT needs | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Sampling Company provided. | True | |
| Samples received within 48 hours of sampling. | True | |
| Samples requiring field filtration have been filtered in the field. | N/A | |
| Chlorine Residual checked. | N/A | |

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

480-57720 Chain of Custody

| Client Information | | | |
|---|---|---|---|
| Client Contact: Mr. Ethan Gyles Joshua Klement | Sampler: Stacey Braga | | COC No: 480-47206-10762.4 |
| Company: ERM-Northeast | Phone: 1-617-646-7800 | | Page: ~~Page 4 of 7~~ Page 1 |
| Address: One Beacon Steet 5th Floor | Due Date Requested: | | Job #: |
| City: Boston | TAT Requested (days): Normal TAT | | |
| State, Zip: MA, 02108 | | | |
| Phone: 1-617-646-7800 | PO #: Purchase Order not required | | |
| Email: ~~ethan.gyles@erm.com~~ Joshua.klement@erm.com | WO #: | | |
| Project Name: IDS Wayland | Project #: 48007117 | | |
| Site: Wayland, MA | SSOW#: | | |

**Preservation Codes:**

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)

Other:

| Sample Identification | Sample Date | Sample Time | Sample Type (C=comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 8260MCP - 8260 | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | A | | |
| MW-217S-20140410-01 | 4/10/14 | 11:15 | C | Water | N | N | 3 | | |
| MW-217M-20140410-01 | 4/10/14 | 12:35 | C | Water | N | N | 3 | | |
| MW-217D-20140410-01 | 4/10/14 | 11:45 | C | Water | N | N | 3 | | |
| | | | | Water | | | | | |
| | | | | Water | | | | | |
| | | | | Water | | | | | |
| | | | | Water | | | | | |
| | | | | Water | | | | | |
| | | | | Water | | | | | |
| | | | | Water | | | | | |
| | | | | Water | | | | | |

**Possible Hazard Identification**
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

**Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)**
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|
| [signature] | 4/10/14 15:40 | ERM | [signature] | 4/10/14 1540 | TAL |
| [signature] | 4/10/14 1600 | TAL | [signature] | 4.11.14 0845 | TAL |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 2-9 #1 |
|---|---|---|

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

# ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

TestAmerica Job ID: 480-58121-1
Client Project/Site: IDS Wayland

For:
ERM-Northeast
One Beacon Steet
5th Floor
Boston, Massachusetts 02108

Attn: Lyndsey Colburn

*Authorized for release by:*
*4/23/2014 9:20:25 AM*
Rich Emerich, Analyst V
rich.emerich@testamericainc.com

Designee for

Becky Mason, Project Manager II
(413)572-4000
becky.mason@testamericainc.com



*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

# Table of Contents

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CNF | Contains no Free Liquid |
| DER | Duplicate error ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision level concentration |
| MDA | Minimum detectable activity |
| EDL | Estimated Detection Limit |
| MDC | Minimum detectable concentration |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative error ratio |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

# Case Narrative

Client: ERM-Northeast
Project/Site: IDS Wayland

TestAmerica Job ID: 480-58121-1

## Job ID: 480-58121-1

### Laboratory: TestAmerica Buffalo

**Narrative**

**Receipt**
The samples were received on 4/17/2014 at 3:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.8º C.

**GC/MS VOA**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

**GC/MS Semi VOA**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

**Organic Prep**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Detection Summary

Client: ERM-Northeast
Project/Site: IDS Wayland

TestAmerica Job ID: 480-58121-1

## Client Sample ID: MW-1023-20140414-01 — Lab Sample ID: 480-58121-1

No Detections.

## Client Sample ID: MW-1034-20140414-01 — Lab Sample ID: 480-58121-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | 0.32 | | 0.20 | | ug/L | 1 | | 522 MOD | Total/NA |

## Client Sample ID: MW-1033-20140414-01 — Lab Sample ID: 480-58121-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | 0.49 | | 0.20 | | ug/L | 1 | | 522 MOD | Total/NA |

## Client Sample ID: MW-1025M-20140414-01 — Lab Sample ID: 480-58121-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | 1.2 | | 0.20 | | ug/L | 1 | | 522 MOD | Total/NA |

## Client Sample ID: MW-1025D-20140414-01 — Lab Sample ID: 480-58121-5

No Detections.

## Client Sample ID: MW-1020-20140414-01 — Lab Sample ID: 480-58121-6

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | 0.53 | | 0.20 | | ug/L | 1 | | 522 MOD | Total/NA |

## Client Sample ID: MW-1011-20140414-01 — Lab Sample ID: 480-58121-7

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | 0.22 | | 0.20 | | ug/L | 1 | | 522 MOD | Total/NA |

## Client Sample ID: MW-1022-20140414-01 — Lab Sample ID: 480-58121-8

No Detections.

## Client Sample ID: MW-1024D-20140414-01 — Lab Sample ID: 480-58121-9

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | 0.24 | | 0.20 | | ug/L | 1 | | 522 MOD | Total/NA |

## Client Sample ID: TRIP BLANK-20140414-01 — Lab Sample ID: 480-58121-10

No Detections.

This Detection Summary does not include radiochemical test results.

# Client Sample Results

Client: ERM-Northeast
Project/Site: IDS Wayland

TestAmerica Job ID: 480-58121-1

## Client Sample ID: MW-1023-20140414-01

**Lab Sample ID: 480-58121-1**

**Date Collected: 04/14/14 10:55**
**Matrix: Water**
**Date Received: 04/17/14 03:00**

### Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | ND | | 1.6 | | ug/L | | | 04/18/14 15:12 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *TBA-d9 (Surr)* | *97* | | *50 - 150* | | *04/18/14 15:12* | *1* |
| *Dibromofluoromethane (Surr)* | *90* | | *50 - 150* | | *04/18/14 15:12* | *1* |

### Method: 522 MOD - 1,4 Dioxane (GC/MS SIM)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | ND | | 0.20 | | ug/L | | 04/22/14 08:51 | 04/22/14 12:43 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,4-Dioxane-d8 (Surr)* | *94* | | *70 - 130* | *04/22/14 08:51* | *04/22/14 12:43* | *1* |

## Client Sample ID: MW-1034-20140414-01

**Lab Sample ID: 480-58121-2**

**Date Collected: 04/14/14 11:20**
**Matrix: Water**
**Date Received: 04/17/14 03:00**

### Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | ND | | 1.6 | | ug/L | | | 04/18/14 15:36 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *TBA-d9 (Surr)* | *87* | | *50 - 150* | | *04/18/14 15:36* | *1* |
| *Dibromofluoromethane (Surr)* | *89* | | *50 - 150* | | *04/18/14 15:36* | *1* |

### Method: 522 MOD - 1,4 Dioxane (GC/MS SIM)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **1,4-Dioxane** | **0.32** | | 0.20 | | ug/L | | 04/22/14 08:51 | 04/22/14 12:59 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,4-Dioxane-d8 (Surr)* | *95* | | *70 - 130* | *04/22/14 08:51* | *04/22/14 12:59* | *1* |

## Client Sample ID: MW-1033-20140414-01

**Lab Sample ID: 480-58121-3**

**Date Collected: 04/14/14 11:35**
**Matrix: Water**
**Date Received: 04/17/14 03:00**

### Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | ND | | 1.6 | | ug/L | | | 04/18/14 16:00 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *TBA-d9 (Surr)* | *85* | | *50 - 150* | | *04/18/14 16:00* | *1* |
| *Dibromofluoromethane (Surr)* | *89* | | *50 - 150* | | *04/18/14 16:00* | *1* |

### Method: 522 MOD - 1,4 Dioxane (GC/MS SIM)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **1,4-Dioxane** | **0.49** | | 0.20 | | ug/L | | 04/22/14 08:51 | 04/22/14 13:16 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,4-Dioxane-d8 (Surr)* | *91* | | *70 - 130* | *04/22/14 08:51* | *04/22/14 13:16* | *1* |

# Client Sample Results

Client: ERM-Northeast
Project/Site: IDS Wayland

TestAmerica Job ID: 480-58121-1

## Client Sample ID: MW-1025M-20140414-01

**Lab Sample ID: 480-58121-4**

**Date Collected: 04/14/14 10:30**
**Matrix: Water**
**Date Received: 04/17/14 03:00**

### Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | ND | | 1.6 | | ug/L | | | 04/18/14 16:23 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *TBA-d9 (Surr)* | *120* | | *50 - 150* | | *04/18/14 16:23* | *1* |
| *Dibromofluoromethane (Surr)* | *91* | | *50 - 150* | | *04/18/14 16:23* | *1* |

### Method: 522 MOD - 1,4 Dioxane (GC/MS SIM)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **1,4-Dioxane** | **1.2** | | 0.20 | | ug/L | | 04/22/14 08:51 | 04/22/14 13:32 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,4-Dioxane-d8 (Surr)* | *96* | | *70 - 130* | *04/22/14 08:51* | *04/22/14 13:32* | *1* |

## Client Sample ID: MW-1025D-20140414-01

**Lab Sample ID: 480-58121-5**

**Date Collected: 04/14/14 10:25**
**Matrix: Water**
**Date Received: 04/17/14 03:00**

### Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | ND | | 1.6 | | ug/L | | | 04/18/14 16:47 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *TBA-d9 (Surr)* | *104* | | *50 - 150* | | *04/18/14 16:47* | *1* |
| *Dibromofluoromethane (Surr)* | *89* | | *50 - 150* | | *04/18/14 16:47* | *1* |

### Method: 522 MOD - 1,4 Dioxane (GC/MS SIM)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | ND | | 0.20 | | ug/L | | 04/22/14 08:51 | 04/22/14 13:49 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,4-Dioxane-d8 (Surr)* | *93* | | *70 - 130* | *04/22/14 08:51* | *04/22/14 13:49* | *1* |

## Client Sample ID: MW-1020-20140414-01

**Lab Sample ID: 480-58121-6**

**Date Collected: 04/14/14 10:10**
**Matrix: Water**
**Date Received: 04/17/14 03:00**

### Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | ND | | 1.6 | | ug/L | | | 04/18/14 17:10 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *TBA-d9 (Surr)* | *85* | | *50 - 150* | | *04/18/14 17:10* | *1* |
| *Dibromofluoromethane (Surr)* | *90* | | *50 - 150* | | *04/18/14 17:10* | *1* |

### Method: 522 MOD - 1,4 Dioxane (GC/MS SIM)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **1,4-Dioxane** | **0.53** | | 0.20 | | ug/L | | 04/22/14 08:51 | 04/22/14 14:05 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,4-Dioxane-d8 (Surr)* | *92* | | *70 - 130* | *04/22/14 08:51* | *04/22/14 14:05* | *1* |

# Client Sample Results

Client: ERM-Northeast
Project/Site: IDS Wayland

TestAmerica Job ID: 480-58121-1

## Client Sample ID: MW-1011-20140414-01

**Lab Sample ID: 480-58121-7**
**Date Collected: 04/14/14 10:00**
**Matrix: Water**
**Date Received: 04/17/14 03:00**

### Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | ND | | 1.6 | | ug/L | | | 04/18/14 17:34 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *TBA-d9 (Surr)* | *77* | | *50 - 150* | | *04/18/14 17:34* | *1* |
| *Dibromofluoromethane (Surr)* | *90* | | *50 - 150* | | *04/18/14 17:34* | *1* |

### Method: 522 MOD - 1,4 Dioxane (GC/MS SIM)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **1,4-Dioxane** | **0.22** | | 0.20 | | ug/L | | 04/22/14 08:51 | 04/22/14 14:22 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,4-Dioxane-d8 (Surr)* | *97* | | *70 - 130* | *04/22/14 08:51* | *04/22/14 14:22* | *1* |

## Client Sample ID: MW-1022-20140414-01

**Lab Sample ID: 480-58121-8**
**Date Collected: 04/14/14 11:10**
**Matrix: Water**
**Date Received: 04/17/14 03:00**

### Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | ND | | 1.6 | | ug/L | | | 04/18/14 17:58 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *TBA-d9 (Surr)* | *85* | | *50 - 150* | | *04/18/14 17:58* | *1* |
| *Dibromofluoromethane (Surr)* | *90* | | *50 - 150* | | *04/18/14 17:58* | *1* |

### Method: 522 MOD - 1,4 Dioxane (GC/MS SIM)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | ND | | 0.20 | | ug/L | | 04/22/14 08:51 | 04/22/14 14:38 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,4-Dioxane-d8 (Surr)* | *104* | | *70 - 130* | *04/22/14 08:51* | *04/22/14 14:38* | *1* |

## Client Sample ID: MW-1024D-20140414-01

**Lab Sample ID: 480-58121-9**
**Date Collected: 04/14/14 10:45**
**Matrix: Water**
**Date Received: 04/17/14 03:00**

### Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | ND | | 1.6 | | ug/L | | | 04/18/14 18:21 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *TBA-d9 (Surr)* | *93* | | *50 - 150* | | *04/18/14 18:21* | *1* |
| *Dibromofluoromethane (Surr)* | *91* | | *50 - 150* | | *04/18/14 18:21* | *1* |

### Method: 522 MOD - 1,4 Dioxane (GC/MS SIM)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **1,4-Dioxane** | **0.24** | | 0.20 | | ug/L | | 04/22/14 08:51 | 04/22/14 14:55 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,4-Dioxane-d8 (Surr)* | *89* | | *70 - 130* | *04/22/14 08:51* | *04/22/14 14:55* | *1* |

# Client Sample Results

Client: ERM-Northeast
Project/Site: IDS Wayland

TestAmerica Job ID: 480-58121-1

## Client Sample ID: TRIP BLANK-20140414-01

**Lab Sample ID: 480-58121-10**

**Date Collected: 04/14/14 14:20**
**Matrix: Water**
**Date Received: 04/17/14 03:00**

### Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | ND | | 1.6 | | ug/L | | | 04/18/14 18:45 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *TBA-d9 (Surr)* | *92* | | *50 - 150* | | *04/18/14 18:45* | *1* |
| *Dibromofluoromethane (Surr)* | *88* | | *50 - 150* | | *04/18/14 18:45* | *1* |

# Surrogate Summary

Client: ERM-Northeast
Project/Site: IDS Wayland

TestAmerica Job ID: 480-58121-1

## Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

**Matrix: Water** **Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lab Sample ID | Client Sample ID | BA-d9 (Sur (50-150) | DBFM (50-150) | | | | | | | | |
| 480-58121-1 | MW-1023-20140414-01 | 97 | 90 | | | | | | | | |
| 480-58121-2 | MW-1034-20140414-01 | 87 | 89 | | | | | | | | |
| 480-58121-3 | MW-1033-20140414-01 | 85 | 89 | | | | | | | | |
| 480-58121-4 | MW-1025M-20140414-01 | 120 | 91 | | | | | | | | |
| 480-58121-5 | MW-1025D-20140414-01 | 104 | 89 | | | | | | | | |
| 480-58121-6 | MW-1020-20140414-01 | 85 | 90 | | | | | | | | |
| 480-58121-7 | MW-1011-20140414-01 | 77 | 90 | | | | | | | | |
| 480-58121-8 | MW-1022-20140414-01 | 85 | 90 | | | | | | | | |
| 480-58121-9 | MW-1024D-20140414-01 | 93 | 91 | | | | | | | | |
| 480-58121-10 | TRIP BLANK-20140414-01 | 92 | 88 | | | | | | | | |
| LCS 480-176698/4 | Lab Control Sample | 86 | 96 | | | | | | | | |
| LCSD 480-176698/5 | Lab Control Sample Dup | 90 | 96 | | | | | | | | |
| MB 480-176698/6 | Method Blank | 85 | 88 | | | | | | | | |

**Surrogate Legend**

TBA-d9 (Surr) = TBA-d9 (Surr)

DBFM = Dibromofluoromethane (Surr)

## Method: 522 MOD - 1,4 Dioxane (GC/MS SIM)

**Matrix: Water** **Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lab Sample ID | Client Sample ID | 14DD8 (70-130) | | | | | | | | | |
| 480-58121-1 | MW-1023-20140414-01 | 94 | | | | | | | | | |
| 480-58121-2 | MW-1034-20140414-01 | 95 | | | | | | | | | |
| 480-58121-3 | MW-1033-20140414-01 | 91 | | | | | | | | | |
| 480-58121-4 | MW-1025M-20140414-01 | 96 | | | | | | | | | |
| 480-58121-5 | MW-1025D-20140414-01 | 93 | | | | | | | | | |
| 480-58121-6 | MW-1020-20140414-01 | 92 | | | | | | | | | |
| 480-58121-7 | MW-1011-20140414-01 | 97 | | | | | | | | | |
| 480-58121-8 | MW-1022-20140414-01 | 104 | | | | | | | | | |
| 480-58121-9 | MW-1024D-20140414-01 | 89 | | | | | | | | | |
| LCS 200-71040/2-A | Lab Control Sample | 90 | | | | | | | | | |
| MB 200-71040/1-A | Method Blank | 100 | | | | | | | | | |

**Surrogate Legend**

14DD8 = 1,4-Dioxane-d8 (Surr)

## Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 480-176698/6**
**Matrix: Water**
**Analysis Batch: 176698**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | ND | | 1.6 | | ug/L | | | 04/18/14 10:44 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *TBA-d9 (Surr)* | *85* | | *50 - 150* | | *04/18/14 10:44* | *1* |
| *Dibromofluoromethane (Surr)* | *88* | | *50 - 150* | | *04/18/14 10:44* | *1* |

**Lab Sample ID: LCS 480-176698/4**
**Matrix: Water**
**Analysis Batch: 176698**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | 16.0 | 16.9 | | ug/L | | 106 | 50 - 150 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *TBA-d9 (Surr)* | *86* | | *50 - 150* |
| *Dibromofluoromethane (Surr)* | *96* | | *50 - 150* |

**Lab Sample ID: LCSD 480-176698/5**
**Matrix: Water**
**Analysis Batch: 176698**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | 16.0 | 17.4 | | ug/L | | 109 | 50 - 150 | 3 | 20 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *TBA-d9 (Surr)* | *90* | | *50 - 150* |
| *Dibromofluoromethane (Surr)* | *96* | | *50 - 150* |

## Method: 522 MOD - 1,4 Dioxane (GC/MS SIM)

**Lab Sample ID: MB 200-71040/1-A**
**Matrix: Water**
**Analysis Batch: 71059**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 71040**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | ND | | 0.20 | | ug/L | | 04/22/14 08:51 | 04/22/14 12:10 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,4-Dioxane-d8 (Surr)* | *100* | | *70 - 130* | *04/22/14 08:51* | *04/22/14 12:10* | *1* |

**Lab Sample ID: LCS 200-71040/2-A**
**Matrix: Water**
**Analysis Batch: 71059**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 71040**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | 2.00 | 1.70 | | ug/L | | 85 | 70 - 130 |

## Method: 522 MOD - 1,4 Dioxane (GC/MS SIM) (Continued)

**Lab Sample ID: LCS 200-71040/2-A**
**Matrix: Water**
**Analysis Batch: 71059**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 71040**

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *1,4-Dioxane-d8 (Surr)* | *90* | | *70 - 130* |

# QC Association Summary

Client: ERM-Northeast
Project/Site: IDS Wayland

TestAmerica Job ID: 480-58121-1

## GC/MS VOA

### Analysis Batch: 176698

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 480-58121-1 | MW-1023-20140414-01 | Total/NA | Water | 8260C SIM | |
| 480-58121-2 | MW-1034-20140414-01 | Total/NA | Water | 8260C SIM | |
| 480-58121-3 | MW-1033-20140414-01 | Total/NA | Water | 8260C SIM | |
| 480-58121-4 | MW-1025M-20140414-01 | Total/NA | Water | 8260C SIM | |
| 480-58121-5 | MW-1025D-20140414-01 | Total/NA | Water | 8260C SIM | |
| 480-58121-6 | MW-1020-20140414-01 | Total/NA | Water | 8260C SIM | |
| 480-58121-7 | MW-1011-20140414-01 | Total/NA | Water | 8260C SIM | |
| 480-58121-8 | MW-1022-20140414-01 | Total/NA | Water | 8260C SIM | |
| 480-58121-9 | MW-1024D-20140414-01 | Total/NA | Water | 8260C SIM | |
| 480-58121-10 | TRIP BLANK-20140414-01 | Total/NA | Water | 8260C SIM | |
| LCS 480-176698/4 | Lab Control Sample | Total/NA | Water | 8260C SIM | |
| LCSD 480-176698/5 | Lab Control Sample Dup | Total/NA | Water | 8260C SIM | |
| MB 480-176698/6 | Method Blank | Total/NA | Water | 8260C SIM | |

## GC/MS Semi VOA

### Prep Batch: 71040

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 480-58121-1 | MW-1023-20140414-01 | Total/NA | Water | 3535A | |
| 480-58121-2 | MW-1034-20140414-01 | Total/NA | Water | 3535A | |
| 480-58121-3 | MW-1033-20140414-01 | Total/NA | Water | 3535A | |
| 480-58121-4 | MW-1025M-20140414-01 | Total/NA | Water | 3535A | |
| 480-58121-5 | MW-1025D-20140414-01 | Total/NA | Water | 3535A | |
| 480-58121-6 | MW-1020-20140414-01 | Total/NA | Water | 3535A | |
| 480-58121-7 | MW-1011-20140414-01 | Total/NA | Water | 3535A | |
| 480-58121-8 | MW-1022-20140414-01 | Total/NA | Water | 3535A | |
| 480-58121-9 | MW-1024D-20140414-01 | Total/NA | Water | 3535A | |
| LCS 200-71040/2-A | Lab Control Sample | Total/NA | Water | 3535A | |
| MB 200-71040/1-A | Method Blank | Total/NA | Water | 3535A | |

### Analysis Batch: 71059

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 480-58121-1 | MW-1023-20140414-01 | Total/NA | Water | 522 MOD | 71040 |
| 480-58121-2 | MW-1034-20140414-01 | Total/NA | Water | 522 MOD | 71040 |
| 480-58121-3 | MW-1033-20140414-01 | Total/NA | Water | 522 MOD | 71040 |
| 480-58121-4 | MW-1025M-20140414-01 | Total/NA | Water | 522 MOD | 71040 |
| 480-58121-5 | MW-1025D-20140414-01 | Total/NA | Water | 522 MOD | 71040 |
| 480-58121-6 | MW-1020-20140414-01 | Total/NA | Water | 522 MOD | 71040 |
| 480-58121-7 | MW-1011-20140414-01 | Total/NA | Water | 522 MOD | 71040 |
| 480-58121-8 | MW-1022-20140414-01 | Total/NA | Water | 522 MOD | 71040 |
| 480-58121-9 | MW-1024D-20140414-01 | Total/NA | Water | 522 MOD | 71040 |
| LCS 200-71040/2-A | Lab Control Sample | Total/NA | Water | 522 MOD | 71040 |
| MB 200-71040/1-A | Method Blank | Total/NA | Water | 522 MOD | 71040 |

# Lab Chronicle

Client: ERM-Northeast
Project/Site: IDS Wayland

TestAmerica Job ID: 480-58121-1

## Client Sample ID: MW-1023-20140414-01 — Lab Sample ID: 480-58121-1

**Date Collected: 04/14/14 10:55** — **Matrix: Water**
**Date Received: 04/17/14 03:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C SIM | | 1 | 176698 | 04/18/14 15:12 | TRB | TAL BUF |
| Total/NA | Prep | 3535A | | | 71040 | 04/22/14 08:51 | EAN | TAL BUR |
| Total/NA | Analysis | 522 MOD | | 1 | 71059 | 04/22/14 12:43 | KHW | TAL BUR |

## Client Sample ID: MW-1034-20140414-01 — Lab Sample ID: 480-58121-2

**Date Collected: 04/14/14 11:20** — **Matrix: Water**
**Date Received: 04/17/14 03:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C SIM | | 1 | 176698 | 04/18/14 15:36 | TRB | TAL BUF |
| Total/NA | Prep | 3535A | | | 71040 | 04/22/14 08:51 | EAN | TAL BUR |
| Total/NA | Analysis | 522 MOD | | 1 | 71059 | 04/22/14 12:59 | KHW | TAL BUR |

## Client Sample ID: MW-1033-20140414-01 — Lab Sample ID: 480-58121-3

**Date Collected: 04/14/14 11:35** — **Matrix: Water**
**Date Received: 04/17/14 03:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C SIM | | 1 | 176698 | 04/18/14 16:00 | TRB | TAL BUF |
| Total/NA | Prep | 3535A | | | 71040 | 04/22/14 08:51 | EAN | TAL BUR |
| Total/NA | Analysis | 522 MOD | | 1 | 71059 | 04/22/14 13:16 | KHW | TAL BUR |

## Client Sample ID: MW-1025M-20140414-01 — Lab Sample ID: 480-58121-4

**Date Collected: 04/14/14 10:30** — **Matrix: Water**
**Date Received: 04/17/14 03:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C SIM | | 1 | 176698 | 04/18/14 16:23 | TRB | TAL BUF |
| Total/NA | Prep | 3535A | | | 71040 | 04/22/14 08:51 | EAN | TAL BUR |
| Total/NA | Analysis | 522 MOD | | 1 | 71059 | 04/22/14 13:32 | KHW | TAL BUR |

## Client Sample ID: MW-1025D-20140414-01 — Lab Sample ID: 480-58121-5

**Date Collected: 04/14/14 10:25** — **Matrix: Water**
**Date Received: 04/17/14 03:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C SIM | | 1 | 176698 | 04/18/14 16:47 | TRB | TAL BUF |
| Total/NA | Prep | 3535A | | | 71040 | 04/22/14 08:51 | EAN | TAL BUR |
| Total/NA | Analysis | 522 MOD | | 1 | 71059 | 04/22/14 13:49 | KHW | TAL BUR |

# Lab Chronicle

Client: ERM-Northeast
Project/Site: IDS Wayland

TestAmerica Job ID: 480-58121-1

## Client Sample ID: MW-1020-20140414-01 — Lab Sample ID: 480-58121-6

**Date Collected: 04/14/14 10:10** — **Matrix: Water**
**Date Received: 04/17/14 03:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C SIM | | 1 | 176698 | 04/18/14 17:10 | TRB | TAL BUF |
| Total/NA | Prep | 3535A | | | 71040 | 04/22/14 08:51 | EAN | TAL BUR |
| Total/NA | Analysis | 522 MOD | | 1 | 71059 | 04/22/14 14:05 | KHW | TAL BUR |

## Client Sample ID: MW-1011-20140414-01 — Lab Sample ID: 480-58121-7

**Date Collected: 04/14/14 10:00** — **Matrix: Water**
**Date Received: 04/17/14 03:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C SIM | | 1 | 176698 | 04/18/14 17:34 | TRB | TAL BUF |
| Total/NA | Prep | 3535A | | | 71040 | 04/22/14 08:51 | EAN | TAL BUR |
| Total/NA | Analysis | 522 MOD | | 1 | 71059 | 04/22/14 14:22 | KHW | TAL BUR |

## Client Sample ID: MW-1022-20140414-01 — Lab Sample ID: 480-58121-8

**Date Collected: 04/14/14 11:10** — **Matrix: Water**
**Date Received: 04/17/14 03:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C SIM | | 1 | 176698 | 04/18/14 17:58 | TRB | TAL BUF |
| Total/NA | Prep | 3535A | | | 71040 | 04/22/14 08:51 | EAN | TAL BUR |
| Total/NA | Analysis | 522 MOD | | 1 | 71059 | 04/22/14 14:38 | KHW | TAL BUR |

## Client Sample ID: MW-1024D-20140414-01 — Lab Sample ID: 480-58121-9

**Date Collected: 04/14/14 10:45** — **Matrix: Water**
**Date Received: 04/17/14 03:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C SIM | | 1 | 176698 | 04/18/14 18:21 | TRB | TAL BUF |
| Total/NA | Prep | 3535A | | | 71040 | 04/22/14 08:51 | EAN | TAL BUR |
| Total/NA | Analysis | 522 MOD | | 1 | 71059 | 04/22/14 14:55 | KHW | TAL BUR |

## Client Sample ID: TRIP BLANK-20140414-01 — Lab Sample ID: 480-58121-10

**Date Collected: 04/14/14 14:20** — **Matrix: Water**
**Date Received: 04/17/14 03:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C SIM | | 1 | 176698 | 04/18/14 18:45 | TRB | TAL BUF |

**Laboratory References:**

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL BUR = TestAmerica Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

# Certification Summary

Client: ERM-Northeast
Project/Site: IDS Wayland

TestAmerica Job ID: 480-58121-1

## Laboratory: TestAmerica Buffalo

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

| Authority | Program | EPA Region | Certification ID | Expiration Date |
|---|---|---|---|---|
| Arkansas DEQ | State Program | 6 | 88-0686 | 07-06-14 |
| California | State Program | 9 | 1169CA | 09-30-14 |
| Connecticut | State Program | 1 | PH-0568 | 09-30-14 |
| Florida | NELAP | 4 | E87672 | 06-30-14 |
| Georgia | State Program | 4 | N/A | 03-31-15 |
| Illinois | NELAP | 5 | 200003 | 09-30-14 |
| Iowa | State Program | 7 | 374 | 03-01-15 |
| Kansas | NELAP | 7 | E-10187 | 01-31-15 * |
| Kentucky (DW) | State Program | 4 | 90029 | 12-31-14 |
| Kentucky (UST) | State Program | 4 | 30 | 03-31-15 |
| Louisiana | NELAP | 6 | 02031 | 06-30-14 |
| Maine | State Program | 1 | NY00044 | 12-04-14 |
| Maryland | State Program | 3 | 294 | 03-31-15 |
| Massachusetts | State Program | 1 | M-NY044 | 06-30-14 |
| Michigan | State Program | 5 | 9937 | 04-01-14 * |
| Minnesota | NELAP | 5 | 036-999-337 | 12-31-14 |
| New Hampshire | NELAP | 1 | 2337 | 11-17-14 |
| New Jersey | NELAP | 2 | NY455 | 06-30-14 |
| New York | NELAP | 2 | 10026 | 03-31-15 |
| North Dakota | State Program | 8 | R-176 | 03-31-14 * |
| Oklahoma | State Program | 6 | 9421 | 08-31-14 |
| Oregon | NELAP | 10 | NY200003 | 06-09-14 |
| Pennsylvania | NELAP | 3 | 68-00281 | 07-31-14 |
| Rhode Island | State Program | 1 | LAO00328 | 12-30-14 |
| Tennessee | State Program | 4 | TN02970 | 03-31-15 |
| Texas | NELAP | 6 | T104704412-11-2 | 07-31-14 |
| USDA | Federal | | P330-11-00386 | 11-22-14 |
| Virginia | NELAP | 3 | 460185 | 09-14-14 |
| Washington | State Program | 10 | C784 | 02-10-15 |
| West Virginia DEP | State Program | 3 | 252 | 05-31-14 |
| Wisconsin | State Program | 5 | 998310390 | 08-31-14 |

## Laboratory: TestAmerica Burlington

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

| Authority | Program | EPA Region | Certification ID | Expiration Date |
|---|---|---|---|---|
| Connecticut | State Program | 1 | PH-0751 | 09-30-15 |
| DE Haz. Subst. Cleanup Act (HSCA) | State Program | 3 | NA | 02-13-15 |
| Florida | NELAP | 4 | E87467 | 06-30-14 |
| L-A-B | DoD ELAP | | L2336 | 02-26-17 |
| Louisiana | NELAP | 6 | 176292 | 06-30-14 |
| Maine | State Program | 1 | VT00008 | 04-17-15 |
| Minnesota | NELAP | 5 | 050-999-436 | 12-31-14 |
| New Hampshire | NELAP | 1 | 2006 | 12-18-14 |
| New Jersey | NELAP | 2 | VT972 | 06-30-14 * |
| New York | NELAP | 2 | 10391 | 03-31-15 |
| Pennsylvania | NELAP | 3 | 68-00489 | 04-30-15 |
| Rhode Island | State Program | 1 | LAO00298 | 12-30-14 |
| US Fish & Wildlife | Federal | | LE-058448-0 | 02-28-15 |
| USDA | Federal | | P330-11-00093 | 10-28-16 |

* Expired certification is currently pending renewal and is considered valid.

# Certification Summary

Client: ERM-Northeast
Project/Site: IDS Wayland

TestAmerica Job ID: 480-58121-1

## Laboratory: TestAmerica Burlington (Continued)

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

| Authority | Program | EPA Region | Certification ID | Expiration Date |
|---|---|---|---|---|
| Vermont | State Program | 1 | VT-4000 | 12-31-14 |
| Virginia | NELAP | 3 | 460209 | 12-14-14 |

# Method Summary

Client: ERM-Northeast
Project/Site: IDS Wayland

TestAmerica Job ID: 480-58121-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 8260C SIM | Volatile Organic Compounds (GC/MS) | SW846 | TAL BUF |
| 522 MOD | 1,4 Dioxane (GC/MS SIM) | EPA | TAL BUR |

**Protocol References:**

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL BUR = TestAmerica Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

# Sample Summary

Client: ERM-Northeast
Project/Site: IDS Wayland

TestAmerica Job ID: 480-58121-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 480-58121-1 | MW-1023-20140414-01 | Water | 04/14/14 10:55 | 04/17/14 03:00 |
| 480-58121-2 | MW-1034-20140414-01 | Water | 04/14/14 11:20 | 04/17/14 03:00 |
| 480-58121-3 | MW-1033-20140414-01 | Water | 04/14/14 11:35 | 04/17/14 03:00 |
| 480-58121-4 | MW-1025M-20140414-01 | Water | 04/14/14 10:30 | 04/17/14 03:00 |
| 480-58121-5 | MW-1025D-20140414-01 | Water | 04/14/14 10:25 | 04/17/14 03:00 |
| 480-58121-6 | MW-1020-20140414-01 | Water | 04/14/14 10:10 | 04/17/14 03:00 |
| 480-58121-7 | MW-1011-20140414-01 | Water | 04/14/14 10:00 | 04/17/14 03:00 |
| 480-58121-8 | MW-1022-20140414-01 | Water | 04/14/14 11:10 | 04/17/14 03:00 |
| 480-58121-9 | MW-1024D-20140414-01 | Water | 04/14/14 10:45 | 04/17/14 03:00 |
| 480-58121-10 | TRIP BLANK-20140414-01 | Water | 04/14/14 14:20 | 04/17/14 03:00 |

# Login Sample Receipt Checklist

Client: ERM-Northeast

Job Number: 480-58121-1

**Login Number: 58121**

**List Source: TestAmerica Buffalo**

**List Number: 1**

**Creator: Wienke, Robert K**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity either was not measured or, if measured, is at or below background | True | |
| The cooler's custody seal, if present, is intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the sample IDs on the containers and the COC. | True | |
| Samples are received within Holding Time. | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified | N/A | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter. | True | |
| If necessary, staff have been informed of any short hold time or quick TAT needs | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Sampling Company provided. | True | |
| Samples received within 48 hours of sampling. | True | |
| Samples requiring field filtration have been filtered in the field. | N/A | |
| Chlorine Residual checked. | N/A | |

# Login Sample Receipt Checklist

Client: ERM-Northeast

Job Number: 480-58121-1

**Login Number: 58121**
**List Number: 2**
**Creator: Gagne, Eric M**

**List Source: TestAmerica Burlington**
**List Creation: 04/17/14 11:38 AM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | N/A | Lab does not accept radioactive samples. |
| The cooler's custody seal, if present, is intact. | True | No NUMBERS |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 0.6ºC. IR GUN ID 181. CF = 0 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time. | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

**TestAmerica Westfield**
Westfield Executive Park 53 Southampton Road
Westfield, MA 01085
Phone (413) 572-4000 Fax (413) 572-3707

**Boston Service Center**
240 Bear Hill Rd. Suite 104
Waltham, MA 02451
Phone (781) 466-6900 Fax (781) 466-

480-58121 Chain of Custody

**dy Record**

**TestAmerica**
THE LEADER IN ENVIRONMENTAL TESTING

| | |
|---|---|
| **Client Information** | |
| Client Contact: | Lindsey Colburn |
| Company: | ERM |
| Address: | One Beacon St. 5th Floor |
| City: | Boston, MA |
| State, Zip: | 02108 |
| Phone: | 1-617-646-7800 |
| Email: | lindsey.colburn@erm.com |
| Project Name/number: | IDS Wayland |
| Site: | Wayland, MA |
| Sampler: | S. Braga |
| Phone: | 1-978-875-0426 |
| Due Date Requested: | |
| TAT Requested (days): | Normal TAT |
| Quote #: | |
| PO #: | |
| WO #: | |
| SSOW#: | |
| Carrier Tracking No(s): | |
| COC No: | 22960 |
| Page: | 1 of 1 |
| Job #: | 0237233 |

**Preservation Codes:**
A - HCL J - DI Water
B - NaOH M - Hexane
C - Zn Acetate N - None
D - Nitric Acid P - Na2O4S
E - NaHSO4 Q - Na2SO3
F - MeOH R - Na2S2SO3
H - Ascorbic Acid S - H2SO4
I - Ice Z - other (specify)

**Regulatory programs:**
MCP ☐ GW1/S1 ☐
RCP ☐ CT RSR ☐
DEP Form ☐ EDD Required ☐

**Analysis Requested**

| Sample Identification | Sample Date | Sample Time | Sample Type (C=comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Sampler's Initials | Field Filtered Sample? | Perform MS/MSD? | 8522 1,4 Dioxane | SIM 1,4 Dioxane | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Preservation Code: | X | X | X | A | A | | |
| MW-1033-20140414-01 | 4/14/14 | 10:55 | G | W | SB | N | N | 1 | 2 | 3 | Run SIM analysis |
| MW-1034-20140414-01 | 4/14/14 | 11:20 | G | W | SB | N | N | 1 | 2 | 3 | first; for NDs please |
| MW-1033-20140414-01 | 4/14/14 | 11:35 | G | W | SB | N | N | 1 | 2 | 3 | run 522 analysis |
| MW-1025M-20140414-01 | 4/14/14 | 10:30 | G | W | SB | N | N | 1 | 2 | 3 | |
| MW-1025D-20140414-01 | 4/14/14 | 10:25 | G | W | SB | N | N | 1 | 2 | 3 | |
| MW-1020-20140414-01 | 4/14/14 | 10:10 | G | W | SB | N | N | 1 | 2 | 3 | |
| MW-1011-20140414-01 | 4/14/14 | 10:00 | G | W | SB | N | N | 1 | 2 | 3 | |
| MW-1022-20140414-01 | 4/14/14 | 11:10 | G | W | SB | N | N | 1 | 2 | 3 | |
| MW-1024D-20140414-01 | 4/14/14 | 10:45 | G | W | SB | N | N | 1 | 2 | 3 | |
| TRIP BLANK-20140414-01 | 4/14/14 | 14:20 | G | W | SB | N | N | — | 2 | 2 | |

*Possible Hazard Identification*
☒ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* ☐ *Poison B* ☐ *Unknown* ☐ *Radiological*

Deliverable Requested: I, II, III, IV, Other (specify)

*Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)*
☐ *Return To Client* ☒ *Disposal By Lab* ☐ *Archive For* ______ *Months*

Special Instructions/QC Requirements:

| | | | | | |
|---|---|---|---|---|---|
| Relinquished by: | Date/Time: 4/16/14 13:55 | Company | Received by: | Date/Time: 4-16-14 1400 | Company TAL |
| Relinquished by: | Date/Time: 4-16-14 1630 | Company | Received by: | Date/Time: 4-17-14 0320 | Company TAL |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

Custody Seals Intact: Δ Yes Δ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks: 2.4 #1

TAL-8245-360 1111

*Appendix C*
*BWSC Transmittal Forms*
*(Submitted Concurrently via*
*eDEP)*

**Massachusetts Department of Environmental Protection**
*Bureau of Waste Site Cleanup*

**BWSC 108**

Release Tracking Number
3 - 13302

# COMPREHENSIVE RESPONSE ACTION TRANSMITTAL FORM & PHASE I COMPLETION STATEMENT

Pursuant to 310 CMR 40.0484 (Subpart D) and 40.0800 (Subpart H)

## A. SITE LOCATION:

1. Site Name: RAYTHEON COMPANY

2. Street Address: 430 BOSTON POST RD

3. City/Town: WAYLAND 4. ZIP Code: 017780000

☑ 5. Check here if the disposal site that is the source of the release is Tier Classified. Check the current Tier Classification Category:

☑ a. Tier I ☐ b. Tier ID ☐ c. Tier II

## B. THIS FORM IS BEING USED TO: (check all that apply)

☐ 1. Submit a **Phase I Completion Statement,** pursuant to 310 CMR 40.0484.

☐ 2. Submit a **Revised Phase I Completion Statement,** pursuant to 310 CMR 40.0484.

☐ 3. Submit a **Phase II Scope of Work,** pursuant to 310 CMR 40.0834.

☐ 4. Submit an **interim Phase II Report.** This report does not satisfy the response action deadline requirements in 310 CMR 40.0500.

☐ 5. Submit a **final Phase II Report and Completion Statement,** pursuant to 310 CMR 40.0836.

☐ 6. Submit a **Revised Phase II Report and Completion Statement,** pursuant to 310 CMR 40.0836.

☐ 7. Submit a **Phase III Remedial Action Plan and Completion Statement,** pursuant to 310 CMR 40.0862.

☐ 8. Submit a **Revised Phase III Remedial Action Plan and Completion Statement,** pursuant to 310 CMR 40.0862.

☐ 9. Submit a **Phase IV Remedy Implementation Plan,** pursuant to 310 CMR 40.0874.

☐ 10. Submit a **Modified Phase IV Remedy Implementation Plan,** pursuant to 310 CMR 40.0874.

☐ 11. Submit an **As-Built Construction Report,** pursuant to 310 CMR 40.0875.

☐ 12. Submit a **Phase IV Status Report,** pursuant to 310 CMR 40.0877.

☐ 13. Submit a **Phase IV Completion Statement,** pursuant to 310 CMR 40.0878 and 40.0879.

Specify the outcome of Phase IV activities: (check one)

☐ a. Phase V Operation, Maintenance or Monitoring of the Comprehensive Remedial Action is necessary to achieve a Permanent or Temporary Solution.

☐ b. The requirements of a Permanent Solution have been met. A completed Permanent Solution Statement and Report (BWSC104) will be submitted to DEP.

☐ c. The requirements of a Temporary Solution have been met. A completed Temporary Solution Statement and Report (BWSC104) will be submitted to DEP.

☐ 14. Submit a **Revised Phase IV Completion Statement,** pursuant to 310 CMR 40.0878 and 40.0879.

☐ 15. Submit a **Phase V Status Report,** pursuant to 310 CMR 40.0892.

☑ 16. Submit a **Remedial Monitoring Report.** (This report can only be submitted through eDEP.)

a. Type of Report: (check one) ☐ i. Initial Report ☑ ii. Interim Report ☐ iii. Final Report

b. Frequency of Submittal: (check all that apply)

☐ i. A Remedial Monitoring Report(s) submitted monthly to address an Imminent Hazard.

☐ ii. A Remedial Monitoring Report(s) submitted monthly to address a Condition of Substantial Release Migration.

☑ iii. A Remedial Monitoring Report(s) submitted every six months, concurrent with a Status Report.

☐ iv. A Remedial Monitoring Report(s) submitted annually, concurrent with a Status Report.

c. Status of Site: (check one) ☐ i. Phase IV ☐ ii. Phase V ☑ iii. Remedy Operation Status ☐ iv. Temporary Solution

d. Number of Remedial Systems and/or Monitoring Programs:

2

A separate BWSC108A, CRA Remedial Monitoring Report, must be filled out for each Remedial System and/or Monitoring Program addressed by this transmittal form.

☐ 17. Submit a **Remedy Operation Status,** pursuant to 310 CMR 40.0893.

☑ 18. Submit a **Status Report to maintain a Remedy Operation Status,** pursuant to 310 CMR 40.0893(2).

☐ 19. Submit a **Transfer and/or a Modification of Persons Maintaining a Remedy Operation Status (ROS),** pursuant to 310 CMR 40.0893(5) (check one, or both, if applicable).

☐ a. Submit a Transfer of Persons Maintaining an ROS (the transferee should be the person listed in Section D, "Person Undertaking Response Actions").

☐ b. Submit a Modification of Persons Maintaining an ROS (the primary representative should be the person listed in Section D, "Person Undertaking Response Actions").

c. Number of Persons Maintaining an ROS not including the primary representative:

☐ 20. Submit a **Termination of a Remedy Operation Status,** pursuant to 310 CMR 40.0893(6).(check one)

☐ a. Submit a notice indicating ROS performance standards have not been met. A plan and timetable pursuant to 310 CMR 40.0893(6)(b) for resuming the ROS are attached.

☐ b. Submit a notice of Termination of ROS.

21. Submit a **Phase V Completion Statement,** pursuant to 310 CMR 40.0894.

☐ Specify the outcome of Phase V activities: (check one)

☐ a. The requirements of a Permanent Solution have been met. A completed Permanent Solution Statement and Report (BWSC104) will be submitted to DEP.

☐ b. The requirements for a Temporary Solution have been met. A completed Temporary Solution Statement and Report (BWSC104) will be submitted to DEP.

☐ 22. Submit a **Revised Phase V Completion Statement,** pursuant to 310 CMR 40.0894.

☐ 23. Submit a **Temporary Solution Status Report,** pursuant to 310 CMR 40.0898.

☐ 24. Submit a **Plan for the Application of Remedial Additives** near a sensitive receptor, pursuant to 310 CMR 40.0046(3).

a. Status of Site: (check one)

☐ i. Phase IV ☐ ii. Phase V ☐ iii. Remedy Operation Status ☐ iv. Temporary Solution

## C. LSP SIGNATURE AND STAMP:

I attest under the pains and penalties of perjury that I have personally examined and am familiar with this transmittal form, including any and all documents accompanying this submittal. In my professional opinion and judgment based upon application of (i) the standard of care in 309 CMR 4.02(1), (ii) the applicable provisions of 309 CMR 4.02(2) and (3), and 309 CMR 4.03(2), and (iii) the provisions of 309 CMR 4.03(3), to the best of my knowledge, information and belief,

> *if Section B indicates that a **Phase I, Phase II, Phase III, Phase IV or Phase V Completion Statement** and/or a **Termination of a Remedy Operation Status** is being submitted*, the response action(s) that is (are) the subject of this submittal (i) has (have) been developed and implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal;

> *if Section B indicates that a **Phase II Scope of Work** or a **Phase IV Remedy Implementation Plan** is being submitted,* the response action(s) that is (are) the subject of this submittal (i) has (have) been developed in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal;

> *if Section B indicates that an **As-Built Construction Report,** a **Remedy Operation Status,** a **Phase IV, Phase V or Temporary Solution Status Report,** a **Status Report to Maintain a Remedy Operation Status,** a **Transfer or Modification of Persons Maintaining a Remedy Operation Status** and/or a **Remedial Monitoring Report** is being submitted,* the response action(s) that is (are) the subject of this submittal (i) is (are) being implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal.

I am aware that significant penalties may result, including, but not limited to, possible fines and imprisonment, if I submit information which I know to be false, inaccurate or materially incomplete.

1. LSP#: 2196

2. First Name: JOHN C 3. Last Name: DROBINSKI

4. Telephone: 6176467800 5. Ext.: 6. Email: john.drobinski@erm.com

7. Signature: JOHN C DROBINSKI

8. Date: 5/20/2014 (mm/dd/yyyy)

9. LSP Stamp:


## D. PERSON UNDERTAKING RESPONSE ACTIONS:

1. Check all that apply: ☐ a. change in contact name ☐ b. change of address ☐ c. change in the person undertaking response actions

2. Name of Organization: RAYTHEON COMPANY

3. Contact First Name: LOUIS J 4. Last Name: BURKHARDT

5. Street: 880 TECHNOLOGY PARK DR MS T303 6. Title: EH&S MANAGER

7. City/Town: BILLERICA 8. State: MA 9. ZIP Code: 018210000

10. Telephone: 9784368238 11. Ext: 12. Email:

## E. RELATIONSHIP TO SITE OF PERSON UNDERTAKING RESPONSE ACTIONS:

☐ Check here to change relationship

☑ 1. RP or PRP ☐ a. Owner ☑ b. Operator ☐ c. Generator ☐ d. Transporter

☐ e. Other RP or PRP Specify:

☐ 2. Fiduciary, Secured Lender or Municipality with Exempt Status (as defined by M.G.L. c. 21E, s. 2)

☐ 3. Agency or Public Utility on a Right of Way (as defined by M.G.L. c. 21E, s. 5(j))

☐ 4. Any Other Person Undertaking Response Actions Specify Relationship:

## F. REQUIRED ATTACHMENT AND SUBMITTALS:

☐ 1. Check here if the Response Action(s) on which this opinion is based, if any, are (were) subject to any order(s), permit(s) and/or approval(s) issued by DEP or EPA. If the box is checked, you MUST attach a statement identifying the applicable provisions thereof.

☐ 2. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of the submittal of any Phase Reports to DEP.

- [ ] 3. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of the availability of a Phase III Remedial Action Plan.
- [ ] 4. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of the availability of a Phase IV Remedy Implementation Plan.
- [ ] 5. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of any field work involving the implementation of a Phase IV Remedial Action.
- [ ] 6. If submitting a Transfer of a Remedy Operation Status (as per 310 CMR 40.0893(5)), check here to certify that a statement detailing the compliance history for the person making this submittal (transferee) is attached.
- [ ] 7. If submitting a Modification of a Remedy Operation Status (as per 310 CMR 40.0893(5)), check here to certify that a statement detailing the compliance history for each new person making this submittal is attached.
- [ ] 8. Check here if any non-updatable information provided on this form is incorrect, e.g. Release Address/Location Aid. Send corrections to: BWSC.eDEP@state.ma.us.
- [x] 9. Check here to certify that the LSP Opinion containing the material facts, data, and other information is attached.

## G. CERTIFICATION OF PERSON UNDERTAKING RESPONSE ACTIONS:

1. I, LOUIS BURKHARDT, attest under the pains and penalties of perjury (i) that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this transmittal form, (ii) that, based on my inquiry of those individuals immediately responsible for obtaining the information, the material information contained in this submittal is, to the best of my knowledge and belief, true, accurate and complete, and (iii) that I am fully authorized to make this attestation on behalf of the entity legally responsible for this submittal. I/the person or entity on whose behalf this submittal is made am/is aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate, or incomplete information.

>*if Section B indicates that this is a* **Modification of a Remedy Operation Status (ROS),** I attest under the pains and penalties of perjury that I am fully authorized to act on behalf of all persons performing response actions under the ROS as stated in 310 CMR 40.0893(5)(d) to receive oral and written correspondence from MassDEP with respect to performance of response actions under the ROS, and to receive a statement of fee amount as per 4.03(3).

I understand that any material received by the Primary Representative from MassDEP shall be deemed received by all the persons performing response actions under the ROS, and I am aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate or incomplete information.

2. By: LOUIS BURKHARDT 3. Title: EH&S MANAGER

Signature

4. For: RAYTHEON COMPANY 5. Date: 5/19/2014

(Name of person or entity recorded in Section D) (mm/dd/yyyy)

- [ ] 6. Check here if the address of the person providing certification is different from address recorded in Section D.

7. Street:

8. City/Town: 9. State: 10. ZIP Code:

11. Telephone: 12. Ext.: 13. Email:

**YOU ARE SUBJECT TO AN ANNUAL COMPLIANCE ASSURANCE FEE OF UP TO $10,000 PER BILLABLE YEAR FOR THIS DISPOSAL SITE. YOU MUST LEGIBLY COMPLETE ALL RELEVANT SECTIONS OF THIS FORM OR DEP MAY RETURN THE DOCUMENT AS INCOMPLETE. IF YOU SUBMIT AN INCOMPLETE FORM, YOU MAY BE PENALIZED FOR MISSING A REQUIRED DEADLINE.**

Date Stamp (DEP USE ONLY:)

**Received by DEP on 5/20/2014 1:00:12 PM**

**Massachusetts Department of Environmental Protection**
*Bureau of Waste Site Cleanup*
**CRA REMEDIAL MONITORING REPORT**
Pursuant to 310 CMR 40.0800 (SUBPART H)

BWSC108-A

Release Tracking Number
3 13302

Remedial System or Monitoring Program: 1 of: 2

## A. DESCRIPTION OF ACTIVE OPERATION AND MAINTENANCE ACTIVITY:

1. Type of Active Operation and Maintenance Activity: (check all that apply)

- [x] a. Active Remedial System: (check all that apply)
  - [ ] i. NAPL Recovery
  - [ ] ii. Soil Vapor Extraction/Bioventing
  - [ ] iii. Vapor-phase Carbon Adsorption
  - [x] iv. Groundwater Recovery
  - [ ] v. Dual/Multi-phase Extraction
  - [ ] vi. Aqueous-phase Carbon Adsorption
  - [ ] vii. Air Stripping
  - [ ] viii. Sparging/Biosparging
  - [ ] ix. Cat/Thermal Oxidation
  - [ ] x. Other Describe:
- [ ] b. Active Exposure Pathway Elimination Measure

  Active Exposure Pathway Mitigation System to address (check one): [ ] i. Indoor Air [ ] ii. Drinking Water
- [x] c. Application of Remedial Additives: (check all that apply)
  - [ ] i. To the Subsurface
  - [x] ii. To Groundwater (Injection)
  - [ ] iii. To the Surface
- [ ] d. Active Remedial Monitoring Program Without the Application of Remedial Additives: (check all that apply; Sections C, D and E are not required; attach supporting information, data, maps and/or sketches needed by checking Section G5)
  - [ ] i. Reactive Wall
  - [ ] ii. Natural Attenuation
  - [ ] iii. Other Describe:

2. Mode of Operation: (check one)

- [x] a. Continuous
- [ ] b. Intermittent
- [ ] c. Pulsed
- [ ] d. One-time Event Only
- [ ] e. Other:

3. System Effluent/Discharge: (check all that apply)

- [ ] a. Sanitary Sewer/POTW
- [x] b. Groundwater Re-infiltration/Re-injection: (check one)
  - [ ] i. Downgradient
  - [x] ii. Upgradient
- [ ] c. Vapor-phase Discharge to Ambient Air: (check one)
  - [ ] i. Off-gas Controls
  - [ ] ii. No Off-gas Controls
- [ ] d. Drinking Water Supply
- [ ] e. Surface Water (including Storm Drains)
- [ ] f. Other Describe:

## B. MONITORING FREQUENCY:

1. Reporting period that is the subject of this submittal: From: 10/21/2013 (mm/dd/yyyy) To: 04/30/2014 (mm/dd/yyyy)

2. Number of monitoring events during the reporting period: (check one)

- [ ] a. System Startup: (if applicable)
  - [ ] i. Days 1, 3, 6, and then weekly thereafter, for the first month.

☐ ii. Other Describe:

☑ b. Post-system Startup (after first month) or Monitoring Program:

☐ i. Monthly

☑ ii. Quarterly

☐ iii. Annually

☐ iv. Other Describe:

☐ 3. Check here to certify that the number of required monitoring events were conducted during the reporting period.

**C. EFFLUENT/DISCHARGE REGULATION:** (check one to indicate how the effluent/discharge limits were established)

☐ 1. NPDES: (check one) ☐ a. Remediation General Permit ☐ b. Individual Permit

☐ c. Emergency Exclusion Effective Date of Permit: (mm/dd/yyyy)

☑ 2. MCP Performance Standard MCP Citations(s): 310 CMR 40.0045(4)

☐ 3. DEP Approval Letter Date of Letter: (mm/dd/yyyy)

☐ 4. Other Describe:

**D. WASTEWATER TREATMENT PLANT OPERATOR:** (check one)

☐ 1. Required due to Remedial Wastewater Treatment Plant in place for more than 30 days.

a. Name: b. Grade:

c. License No: d. License Exp. Date: (mm/dd/yyyy)

☐ 2. Not Required

☑ 3. Not Applicable

**E. STATUS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM DURING REPORTING PERIOD:** (check all that apply)

☑ 1. The Active Remedial System was functional one or more days during the Reporting Period.

a. Days System was Fully Functional: 191 b. GW Recovered (gals): 1,603,482

c. NAPL Recovered (gals):

d. GW Discharged (gals): 1,603,482 e. Avg. Soil Gas Recovery Rate (scfm):

f. Avg. Sparging Rate (scfm):

☑ 2. Remedial Additives: (check all that apply)

☐ a. No Remedial Additives applied during the Reporting Period.

☑ b. Enhanced Bioremediation Additives applied: (total quantity applied at the site for the current reporting period)

☐ i. Nitrogen/Phosphorus:

| Name of Additive | Date | Quantity | Units |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

☐ ii. Peroxides:

| Name of Additive | Date | Quantity | Units |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

☐ iii. Microorganisms:

| Name of Additive | Date | Quantity | Units |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

☑ iv. Other:

| Name of Additive | Date | Quantity | Units |
|---|---|---|---|
| BIO CULTURE (NJ-14) | 12/07/2013 | 425 | LBS |
| | | | |
| | | | |

☐ c. Chemical oxidation/reduction additives applied: (total quantity applied at the site for the current reporting period)

☐ i. Permanganates:

| Name of Additive | Date | Quantity | Units |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

☐ ii. Peroxides:

| Name of Additive | Date | Quantity | Units |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

☐ iii. Persulfates:

| Name of Additive | Date | Quantity | Units |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

☐ iv. Other:

| Name of Additive | Date | Quantity | Units |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

☐ d. Other additives applied: (total quantity applied at the site for the current reporting period)

| Name of Additive | Date | Quantity | Units |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

| Name of Additive | Date | Quantity | Units |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

☐ e. Check here if any additional Remedial Additives were applied. Attach list of additional additives and include Name of Additive, Date Applied, Quantity Applied and Units (in gals. or lbs.)

**F. SHUTDOWNS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM:** (check all that apply)

☐ 1. The Active Remedial System had unscheduled shutdowns on one or more occasions during the Reporting Period.

a. Number of Unscheduled Shutdowns: b. Total Number of Days of Unscheduled Shutdowns:

c. Reason(s) for Unscheduled Shutdowns:

☐ 2. The Active Remedial System had scheduled shutdowns on one or more occasions during the Reporting Period.

a. Number of Scheduled Shutdowns: b. Total Number of Days of Scheduled Shutdowns:

c. Reason(s) for Scheduled Shutdowns:

☐ 3. The Active Remedial System or Active Remedial Monitoring Program was permanently shutdown/discontinued during the Reporting Period.

a. Date of Final System or Monitoring Program Shutdown:

(mm/dd/yyyy)

☐ b. No Further Effluent Discharges.

☐ c. No Further Application of Remedial Additives planned; sufficient monitoring completed to demonstrate compliance with 310 CMR 40.0046.

☐ d. No Further Submittals Planned.

☐ e. Other: Describe:

**G. SUMMARY STATEMENTS:** (check all that apply for the current reporting period)

☑ 1. All Active Remedial System checks and effluent analyses required by the approved plan and/or permit were performed when applicable.

☑ 2. There were no significant problems or prolonged (>25% of reporting period) unscheduled shutdowns of the Active Remedial System.

☑ 3. The Active Remedial System or Active Remedial Monitoring Program operated in conformance with the MCP, and all applicable approval conditions and/or permits.

4. Indicate any Operational Problems or Notes:

☐ 5. Check here if additional/supporting Information, data, maps, and/or sketches are attached to the form.

**Massachusetts Department of Environmental Protection**
*Bureau of Waste Site Cleanup*
**CRA REMEDIAL MONITORING REPORT**
Pursuant to 310 CMR 40.0800 (SUBPART H)

BWSC108-A

Release Tracking Number
3 13302

Remedial System or Monitoring Program: 2 of: 2

## A. DESCRIPTION OF ACTIVE OPERATION AND MAINTENANCE ACTIVITY:

1. Type of Active Operation and Maintenance Activity: (check all that apply)

☐ a. Active Remedial System: (check all that apply)

☐ i. NAPL Recovery ☐ ii. Soil Vapor Extraction/Bioventing ☐ iii. Vapor-phase Carbon Adsorption
☐ iv. Groundwater Recovery ☐ v. Dual/Multi-phase Extraction ☐ vi. Aqueous-phase Carbon Adsorption
☐ vii. Air Stripping ☐ viii. Sparging/Biosparging ☐ ix. Cat/Thermal Oxidation
☐ x. Other Describe:

☐ b. Active Exposure Pathway Elimination Measure

Active Exposure Pathway Mitigation System to address (check one): ☐ i. Indoor Air ☐ ii. Drinking Water

☑ c. Application of Remedial Additives: (check all that apply)

☐ i. To the Subsurface ☑ ii. To Groundwater (Injection) ☐ iii. To the Surface

☐ d. Active Remedial Monitoring Program Without the Application of Remedial Additives: (check all that apply; Sections C, D and E are not required; attach supporting information, data, maps and/or sketches needed by checking Section G5)

☐ i. Reactive Wall ☐ ii. Natural Attenuation ☐ iii. Other Describe:

2. Mode of Operation: (check one)

☐ a. Continuous ☑ b. Intermittent ☐ c. Pulsed ☐ d. One-time Event Only ☐ e. Other:

3. System Effluent/Discharge: (check all that apply)

☐ a. Sanitary Sewer/POTW

☐ b. Groundwater Re-infiltration/Re-injection: (check one) ☐ i. Downgradient ☐ ii. Upgradient

☐ c. Vapor-phase Discharge to Ambient Air: (check one) ☐ i. Off-gas Controls ☐ ii. No Off-gas Controls

☐ d. Drinking Water Supply

☐ e. Surface Water (including Storm Drains)

☑ f. Other Describe: NO EFFLUENT

## B. MONITORING FREQUENCY:

1. Reporting period that is the subject of this submittal: From: 11/01/2013 (mm/dd/yyyy) To: 04/25/2014 (mm/dd/yyyy)

2. Number of monitoring events during the reporting period: (check one)

☐ a. System Startup: (if applicable)

☐ i. Days 1, 3, 6, and then weekly thereafter, for the first month.

☐ ii. Other Describe:

☑ b. Post-system Startup (after first month) or Monitoring Program:

☐ i. Monthly

☐ ii. Quarterly

☐ iii. Annually

☑ iv. Other Describe: SEMI-ANNUAL

☑ 3. Check here to certify that the number of required monitoring events were conducted during the reporting period.

**C. EFFLUENT/DISCHARGE REGULATION:** (check one to indicate how the effluent/discharge limits were established)

☐ 1. NPDES: (check one) ☐ a. Remediation General Permit ☐ b. Individual Permit

☐ c. Emergency Exclusion Effective Date of Permit: (mm/dd/yyyy)

☐ 2. MCP Performance Standard MCP Citations(s):

☐ 3. DEP Approval Letter Date of Letter: (mm/dd/yyyy)

☑ 4. Other Describe: NO EFFLUENT

**D. WASTEWATER TREATMENT PLANT OPERATOR:** (check one)

☐ 1. Required due to Remedial Wastewater Treatment Plant in place for more than 30 days.

a. Name: b. Grade:

c. License No: d. License Exp. Date: (mm/dd/yyyy)

☐ 2. Not Required

☑ 3. Not Applicable

**E. STATUS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM DURING REPORTING PERIOD:** (check all that apply)

☐ 1. The Active Remedial System was functional one or more days during the Reporting Period.

a. Days System was Fully Functional: b. GW Recovered (gals):

c. NAPL Recovered (gals):

d. GW Discharged (gals): e. Avg. Soil Gas Recovery Rate (scfm):

f. Avg. Sparging Rate (scfm):

☑ 2. Remedial Additives: (check all that apply)

☑ a. No Remedial Additives applied during the Reporting Period.

☐ b. Enhanced Bioremediation Additives applied: (total quantity applied at the site for the current reporting period)

☐ d. Nitrogen/Phosphorus:

| Name of Additive | Date | Quantity | Units |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

☐ ii. Peroxides:

| Name of Additive | Date | Quantity | Units |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

☐ iii. Microorganisms:

| Name of Additive | Date | Quantity | Units |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

☐ iv. Other:

| Name of Additive | Date | Quantity | Units |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

☐ c. Chemical oxidation/reduction additives applied: (total quantity applied at the site for the current reporting period)

☐ i. Permanganates:

| Name of Additive | Date | Quantity | Units |
|---|---|---|---|

☐ ii. Peroxides:

| Name of Additive | Date | Quantity | Units |
|---|---|---|---|