**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

Friday, December 19, 2014

Ken W. Kloeber
Ken W. Kloeber Consulting Engineers
PO Box 140
Boston, NY 14025

TEL: (716) 864-0012

Project: 189-02
RE: Analytical Results Order No.: K1412101

Dear Ken W. Kloeber:

Life Science Laboratories, Inc. received 18 sample(s) on 12/10/2014 for the analyses presented in the following report. Sample results relate only to the samples as received by the laboratory.

Very truly yours,
Life Science Laboratories, Inc.

Anthony Crescenzi
Project Manager

## GC/MS Volatile Organics Case Narrative

| | |
|---|---|
| Client: | Ken W. Kloeber Consulting Engineers |
| Project/Order: | 189-02 |
| Methodology: | 8260C |

File Name: U:\Narratives\MSVoa\Kloebermsvnar.doc

**GC/MS Volatile Organics**

Acetone and methylene chloride are common volatile laboratory background contaminants. QA/QC guidelines allow concentrations 3X the PQL for these compounds and the reported concentrations may be variable and include values less than the PQL or up to 3x the PQL. The associated method blanks may show similar concentrations or may vary from samples depending on the source or timing of the contamination. For samples requiring dilutions the background concentrations of acetone and methylene chloride are multiplied by the dilution factor (as are all compounds) and thus the reported concentrations of the contaminants can appear to be much higher than undiluted samples.

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# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1412101-001A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W1-12082014*** |
| **W Order:** | K1412101 | **Collection Date:** | 12/08/14 16:00 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 12/10/14 10:00 |
| **Inst. ID:** | MS03_10 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-502.2 | **%Moisture:** | **BatchNo:** R27883 |
| **Revision:** | 12/16/14 15:40 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-J8476.D |
| **Col Type:** | TOTAL 2746.2 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260C/5030C** | | |
| (m+p)-Xylene | ND | | 20.0 | 4.00 | µg/L | 20 | 12/12/14 15:57 |
| 1,1,1,2-Tetrachloroethane | ND | | 10.0 | 3.20 | µg/L | 20 | 12/12/14 15:57 |
| 1,1,1-Trichloroethane | 918 | | 10.0 | 2.00 | µg/L | 20 | 12/12/14 15:57 |
| 1,1,2,2-Tetrachloroethane | ND | | 10.0 | 2.00 | µg/L | 20 | 12/12/14 15:57 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 3.00 | J | 10.0 | 2.00 | µg/L | 20 | 12/12/14 15:57 |
| 1,1,2-Trichloroethane | ND | | 10.0 | 3.20 | µg/L | 20 | 12/12/14 15:57 |
| 1,1-Dichloroethane | 1330 | | 10.0 | 2.00 | µg/L | 20 | 12/12/14 15:57 |
| 1,1-Dichloroethene | 11.0 | | 10.0 | 3.20 | µg/L | 20 | 12/12/14 15:57 |
| 1,2,3-Trichloropropane | ND | | 40.0 | 6.60 | µg/L | 20 | 12/12/14 15:57 |
| 1,2,4-Trichlorobenzene | ND | | 20.0 | 2.00 | µg/L | 20 | 12/12/14 15:57 |
| 1,2,4-Trimethylbenzene | ND | | 10.0 | 2.00 | µg/L | 20 | 12/12/14 15:57 |
| 1,2-Dibromo-3-chloropropane | ND | | 100 | 20.0 | µg/L | 20 | 12/12/14 15:57 |
| 1,2-Dibromoethane | ND | | 10.0 | 3.20 | µg/L | 20 | 12/12/14 15:57 |
| 1,2-Dichlorobenzene | ND | | 10.0 | 2.00 | µg/L | 20 | 12/12/14 15:57 |
| 1,2-Dichloroethane | ND | | 10.0 | 3.20 | µg/L | 20 | 12/12/14 15:57 |
| 1,2-Dichloropropane | ND | | 10.0 | 3.20 | µg/L | 20 | 12/12/14 15:57 |
| 1,3,5-Trimethylbenzene | ND | | 10.0 | 2.00 | µg/L | 20 | 12/12/14 15:57 |
| 1,3-Dichlorobenzene | ND | | 10.0 | 2.00 | µg/L | 20 | 12/12/14 15:57 |
| 1,4-Dichlorobenzene | ND | | 10.0 | 3.20 | µg/L | 20 | 12/12/14 15:57 |
| 2-Butanone | ND | | 200 | 20.0 | µg/L | 20 | 12/12/14 15:57 |
| 2-Chloroethylvinyl ether | ND | | 100 | 50.0 | µg/L | 20 | 12/12/14 15:57 |
| 2-Hexanone | ND | | 100 | 20.0 | µg/L | 20 | 12/12/14 15:57 |
| 4-Chlorotoluene | ND | | 10.0 | 2.00 | µg/L | 20 | 12/12/14 15:57 |
| 4-Methyl-2-pentanone | ND | | 100 | 20.0 | µg/L | 20 | 12/12/14 15:57 |
| Acetone | ND | | 200 | 20.0 | µg/L | 20 | 12/12/14 15:57 |
| Benzene | ND | | 10.0 | 2.00 | µg/L | 20 | 12/12/14 15:57 |
| Bromobenzene | ND | | 10.0 | 2.00 | µg/L | 20 | 12/12/14 15:57 |
| Bromochloromethane | ND | | 10.0 | 2.00 | µg/L | 20 | 12/12/14 15:57 |
| Bromodichloromethane | ND | | 10.0 | 2.00 | µg/L | 20 | 12/12/14 15:57 |
| Bromoform | ND | | 20.0 | 6.60 | µg/L | 20 | 12/12/14 15:57 |
| Bromomethane | ND | | 20.0 | 6.60 | µg/L | 20 | 12/12/14 15:57 |
| Carbon disulfide | ND | | 10.0 | 2.20 | µg/L | 20 | 12/12/14 15:57 |
| Carbon tetrachloride | ND | | 10.0 | 2.00 | µg/L | 20 | 12/12/14 15:57 |
| Chlorobenzene | ND | | 10.0 | 2.00 | µg/L | 20 | 12/12/14 15:57 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value may exceed the Acceptable Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 12/16/14 15:46 700746 **Project Supervisor:** Anthony Crescenzi

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East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1412101-001A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W1-12082014*** |
| **W Order:** | K1412101 | **Collection Date:** | 12/08/14 16:00 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 12/10/14 10:00 |
| **Inst. ID:** | MS03_10 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-502.2 | **%Moisture:** | **BatchNo:** R27883 |
| **Revision:** | 12/16/14 15:40 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-J8476.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260C/5030C** | | |
| Chloroethane | 14.4 | J | 20.0 | 6.60 | µg/L | 20 | 12/12/14 15:57 |
| Chloroform | ND | | 10.0 | 2.00 | µg/L | 20 | 12/12/14 15:57 |
| Chloromethane | ND | | 20.0 | 6.60 | µg/L | 20 | 12/12/14 15:57 |
| cis-1,2-Dichloroethene | 294 | | 10.0 | 2.00 | µg/L | 20 | 12/12/14 15:57 |
| cis-1,3-Dichloropropene | ND | | 10.0 | 3.20 | µg/L | 20 | 12/12/14 15:57 |
| Cyclohexane | ND | | 10.0 | 2.00 | µg/L | 20 | 12/12/14 15:57 |
| Dibromochloromethane | ND | | 10.0 | 2.00 | µg/L | 20 | 12/12/14 15:57 |
| Dibromomethane | ND | | 10.0 | 3.20 | µg/L | 20 | 12/12/14 15:57 |
| Dichlorodifluoromethane | ND | | 20.0 | 2.00 | µg/L | 20 | 12/12/14 15:57 |
| Ethylbenzene | ND | | 10.0 | 2.00 | µg/L | 20 | 12/12/14 15:57 |
| Hexachlorobutadiene | ND | | 20.0 | 2.00 | µg/L | 20 | 12/12/14 15:57 |
| Isopropylbenzene | ND | | 10.0 | 2.00 | µg/L | 20 | 12/12/14 15:57 |
| Methyl tert-butyl ether | ND | | 20.0 | 3.20 | µg/L | 20 | 12/12/14 15:57 |
| Methylene chloride | ND | | 40.0 | 3.20 | µg/L | 20 | 12/12/14 15:57 |
| n-Propylbenzene | ND | | 10.0 | 2.00 | µg/L | 20 | 12/12/14 15:57 |
| Naphthalene | ND | | 20.0 | 2.00 | µg/L | 20 | 12/12/14 15:57 |
| o-Xylene | ND | | 10.0 | 2.00 | µg/L | 20 | 12/12/14 15:57 |
| p-Isopropyltoluene | ND | | 10.0 | 3.20 | µg/L | 20 | 12/12/14 15:57 |
| sec-Butylbenzene | ND | | 10.0 | 3.20 | µg/L | 20 | 12/12/14 15:57 |
| Styrene | ND | | 10.0 | 2.00 | µg/L | 20 | 12/12/14 15:57 |
| Tetrachloroethene | 4.20 | J | 10.0 | 2.00 | µg/L | 20 | 12/12/14 15:57 |
| Toluene | 2.40 | J | 10.0 | 2.00 | µg/L | 20 | 12/12/14 15:57 |
| trans-1,2-Dichloroethene | 2.20 | J | 10.0 | 2.00 | µg/L | 20 | 12/12/14 15:57 |
| trans-1,3-Dichloropropene | ND | | 10.0 | 3.20 | µg/L | 20 | 12/12/14 15:57 |
| Trichloroethene | 23.0 | | 10.0 | 2.00 | µg/L | 20 | 12/12/14 15:57 |
| Trichlorofluoromethane | ND | | 20.0 | 2.00 | µg/L | 20 | 12/12/14 15:57 |
| Vinyl acetate | ND | | 40.0 | 20.0 | µg/L | 20 | 12/12/14 15:57 |
| Vinyl chloride | 144 | | 20.0 | 6.60 | µg/L | 20 | 12/12/14 15:57 |
| Xylenes (total) | ND | | 20.0 | 6.00 | µg/L | 20 | 12/12/14 15:57 |
| Surr: 1,2-Dichloroethane-d4 | 98 | | 75-130 | 3.20 | %REC | 20 | 12/12/14 15:57 |
| Surr: Toluene-d8 | 103 | | 75-125 | 2.00 | %REC | 20 | 12/12/14 15:57 |
| Surr: 4-Bromofluorobenzene | 78 | | 75-125 | 2.00 | %REC | 20 | 12/12/14 15:57 |

**Qualifiers:**

| | | | |
|---|---|---|---|
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| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

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East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1412101-002A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W2-12082014*** |
| **W Order:** | K1412101 | **Collection Date:** | 12/08/14 15:30 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 12/10/14 10:00 |
| **Inst. ID:** | MS03_10 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-502.2 | **%Moisture:** | **BatchNo:** R27882 |
| **Revision:** | 12/16/14 15:37 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-J8441.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260C/5030C** | | |
| (m+p)-Xylene | 3.94 | | 2.00 | 0.40 | µg/L | 2 | 12/11/14 16:00 |
| 1,1,1,2-Tetrachloroethane | ND | | 1.00 | 0.32 | µg/L | 2 | 12/11/14 16:00 |
| 1,1,1-Trichloroethane | 67.2 | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 16:00 |
| 1,1,2,2-Tetrachloroethane | ND | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 16:00 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 0.64 | J | 1.00 | 0.20 | µg/L | 2 | 12/11/14 16:00 |
| 1,1,2-Trichloroethane | ND | | 1.00 | 0.32 | µg/L | 2 | 12/11/14 16:00 |
| 1,1-Dichloroethane | 127 | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 16:00 |
| 1,1-Dichloroethene | 0.90 | J | 1.00 | 0.32 | µg/L | 2 | 12/11/14 16:00 |
| 1,2,3-Trichloropropane | ND | | 4.00 | 0.66 | µg/L | 2 | 12/11/14 16:00 |
| 1,2,4-Trichlorobenzene | ND | | 2.00 | 0.20 | µg/L | 2 | 12/11/14 16:00 |
| 1,2,4-Trimethylbenzene | 36.8 | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 16:00 |
| 1,2-Dibromo-3-chloropropane | ND | | 10.0 | 2.00 | µg/L | 2 | 12/11/14 16:00 |
| 1,2-Dibromoethane | ND | | 1.00 | 0.32 | µg/L | 2 | 12/11/14 16:00 |
| 1,2-Dichlorobenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 16:00 |
| 1,2-Dichloroethane | 3.54 | | 1.00 | 0.32 | µg/L | 2 | 12/11/14 16:00 |
| 1,2-Dichloropropane | ND | | 1.00 | 0.32 | µg/L | 2 | 12/11/14 16:00 |
| 1,3,5-Trimethylbenzene | 5.52 | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 16:00 |
| 1,3-Dichlorobenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 16:00 |
| 1,4-Dichlorobenzene | ND | | 1.00 | 0.32 | µg/L | 2 | 12/11/14 16:00 |
| 2-Butanone | 3.42 | J | 20.0 | 2.00 | µg/L | 2 | 12/11/14 16:00 |
| 2-Chloroethylvinyl ether | ND | | 10.0 | 5.00 | µg/L | 2 | 12/11/14 16:00 |
| 2-Hexanone | ND | | 10.0 | 2.00 | µg/L | 2 | 12/11/14 16:00 |
| 4-Chlorotoluene | ND | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 16:00 |
| 4-Methyl-2-pentanone | ND | | 10.0 | 2.00 | µg/L | 2 | 12/11/14 16:00 |
| Acetone | 4.46 | J | 20.0 | 2.00 | µg/L | 2 | 12/11/14 16:00 |
| Benzene | ND | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 16:00 |
| Bromobenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 16:00 |
| Bromochloromethane | ND | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 16:00 |
| Bromodichloromethane | ND | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 16:00 |
| Bromoform | ND | | 2.00 | 0.66 | µg/L | 2 | 12/11/14 16:00 |
| Bromomethane | ND | | 2.00 | 0.66 | µg/L | 2 | 12/11/14 16:00 |
| Carbon disulfide | 0.30 | J | 1.00 | 0.22 | µg/L | 2 | 12/11/14 16:00 |
| Carbon tetrachloride | ND | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 16:00 |
| Chlorobenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 16:00 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value may exceed the Acceptable Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 12/16/14 15:46 700731 **Project Supervisor:** Anthony Crescenzi

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East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1412101-002A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W2-12082014*** |
| **W Order:** | K1412101 | **Collection Date:** | 12/08/14 15:30 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 12/10/14 10:00 |
| **Inst. ID:** | MS03_10 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-502.2 | **%Moisture:** | **BatchNo:** R27882 |
| **Revision:** | 12/16/14 15:37 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-J8441.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260C/5030C** | | |
| Chloroethane | 3.36 | | 2.00 | 0.66 | µg/L | 2 | 12/11/14 16:00 |
| Chloroform | ND | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 16:00 |
| Chloromethane | ND | | 2.00 | 0.66 | µg/L | 2 | 12/11/14 16:00 |
| cis-1,2-Dichloroethene | 73.4 | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 16:00 |
| cis-1,3-Dichloropropene | ND | | 1.00 | 0.32 | µg/L | 2 | 12/11/14 16:00 |
| Cyclohexane | ND | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 16:00 |
| Dibromochloromethane | ND | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 16:00 |
| Dibromomethane | ND | | 1.00 | 0.32 | µg/L | 2 | 12/11/14 16:00 |
| Dichlorodifluoromethane | ND | | 2.00 | 0.20 | µg/L | 2 | 12/11/14 16:00 |
| Ethylbenzene | 1.44 | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 16:00 |
| Hexachlorobutadiene | ND | | 2.00 | 0.20 | µg/L | 2 | 12/11/14 16:00 |
| Isopropylbenzene | 1.02 | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 16:00 |
| Methyl tert-butyl ether | ND | | 2.00 | 0.32 | µg/L | 2 | 12/11/14 16:00 |
| Methylene chloride | 0.98 | J | 4.00 | 0.32 | µg/L | 2 | 12/11/14 16:00 |
| n-Propylbenzene | 3.70 | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 16:00 |
| Naphthalene | 2.04 | | 2.00 | 0.20 | µg/L | 2 | 12/11/14 16:00 |
| o-Xylene | 5.96 | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 16:00 |
| p-Isopropyltoluene | ND | | 1.00 | 0.32 | µg/L | 2 | 12/11/14 16:00 |
| sec-Butylbenzene | 2.20 | | 1.00 | 0.32 | µg/L | 2 | 12/11/14 16:00 |
| Styrene | ND | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 16:00 |
| Tetrachloroethene | 0.46 | J | 1.00 | 0.20 | µg/L | 2 | 12/11/14 16:00 |
| Toluene | 1.18 | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 16:00 |
| trans-1,2-Dichloroethene | 0.60 | J | 1.00 | 0.20 | µg/L | 2 | 12/11/14 16:00 |
| trans-1,3-Dichloropropene | ND | | 1.00 | 0.32 | µg/L | 2 | 12/11/14 16:00 |
| Trichloroethene | 5.74 | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 16:00 |
| Trichlorofluoromethane | ND | | 2.00 | 0.20 | µg/L | 2 | 12/11/14 16:00 |
| Vinyl acetate | ND | | 4.00 | 2.00 | µg/L | 2 | 12/11/14 16:00 |
| Vinyl chloride | 21.3 | | 2.00 | 0.66 | µg/L | 2 | 12/11/14 16:00 |
| Xylenes (total) | 9.90 | | 2.00 | 0.60 | µg/L | 2 | 12/11/14 16:00 |
| Surr: 1,2-Dichloroethane-d4 | 94 | | 75-130 | 0.32 | %REC | 2 | 12/11/14 16:00 |
| Surr: Toluene-d8 | 91 | | 75-125 | 0.20 | %REC | 2 | 12/11/14 16:00 |
| Surr: 4-Bromofluorobenzene | 98 | | 75-125 | 0.20 | %REC | 2 | 12/11/14 16:00 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value may exceed the Acceptable Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 12/16/14 15:46 700731 **Project Supervisor:** Anthony Crescenzi

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East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1412101-003A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W3-12082014*** |
| **W Order:** | K1412101 | **Collection Date:** | 12/08/14 14:50 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 12/10/14 10:00 |
| **Inst. ID:** | MS03_10 **Sample Size** 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-502.2 **%Moisture:** | **BatchNo:** | R27882 |
| **Revision:** | 12/16/14 15:37 **TestCode:** 8260W_CAL | **FileID:** | 1-SAMP-J8436.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260C/5030C** | | |
| (m+p)-Xylene | ND | | 10.0 | 2.00 | µg/L | 10 | 12/11/14 13:32 |
| 1,1,1,2-Tetrachloroethane | ND | | 5.00 | 1.60 | µg/L | 10 | 12/11/14 13:32 |
| 1,1,1-Trichloroethane | 49.7 | | 5.00 | 1.00 | µg/L | 10 | 12/11/14 13:32 |
| 1,1,2,2-Tetrachloroethane | ND | | 5.00 | 1.00 | µg/L | 10 | 12/11/14 13:32 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 5.00 | 1.00 | µg/L | 10 | 12/11/14 13:32 |
| 1,1,2-Trichloroethane | ND | | 5.00 | 1.60 | µg/L | 10 | 12/11/14 13:32 |
| 1,1-Dichloroethane | 99.6 | | 5.00 | 1.00 | µg/L | 10 | 12/11/14 13:32 |
| 1,1-Dichloroethene | ND | | 5.00 | 1.60 | µg/L | 10 | 12/11/14 13:32 |
| 1,2,3-Trichloropropane | ND | | 20.0 | 3.30 | µg/L | 10 | 12/11/14 13:32 |
| 1,2,4-Trichlorobenzene | ND | | 10.0 | 1.00 | µg/L | 10 | 12/11/14 13:32 |
| 1,2,4-Trimethylbenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 12/11/14 13:32 |
| 1,2-Dibromo-3-chloropropane | ND | | 50.0 | 10.0 | µg/L | 10 | 12/11/14 13:32 |
| 1,2-Dibromoethane | ND | | 5.00 | 1.60 | µg/L | 10 | 12/11/14 13:32 |
| 1,2-Dichlorobenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 12/11/14 13:32 |
| 1,2-Dichloroethane | ND | | 5.00 | 1.60 | µg/L | 10 | 12/11/14 13:32 |
| 1,2-Dichloropropane | ND | | 5.00 | 1.60 | µg/L | 10 | 12/11/14 13:32 |
| 1,3,5-Trimethylbenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 12/11/14 13:32 |
| 1,3-Dichlorobenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 12/11/14 13:32 |
| 1,4-Dichlorobenzene | ND | | 5.00 | 1.60 | µg/L | 10 | 12/11/14 13:32 |
| 2-Butanone | ND | | 100 | 10.0 | µg/L | 10 | 12/11/14 13:32 |
| 2-Chloroethylvinyl ether | ND | | 50.0 | 25.0 | µg/L | 10 | 12/11/14 13:32 |
| 2-Hexanone | ND | | 50.0 | 10.0 | µg/L | 10 | 12/11/14 13:32 |
| 4-Chlorotoluene | ND | | 5.00 | 1.00 | µg/L | 10 | 12/11/14 13:32 |
| 4-Methyl-2-pentanone | ND | | 50.0 | 10.0 | µg/L | 10 | 12/11/14 13:32 |
| Acetone | ND | | 100 | 10.0 | µg/L | 10 | 12/11/14 13:32 |
| Benzene | ND | | 5.00 | 1.00 | µg/L | 10 | 12/11/14 13:32 |
| Bromobenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 12/11/14 13:32 |
| Bromochloromethane | ND | | 5.00 | 1.00 | µg/L | 10 | 12/11/14 13:32 |
| Bromodichloromethane | ND | | 5.00 | 1.00 | µg/L | 10 | 12/11/14 13:32 |
| Bromoform | ND | | 10.0 | 3.30 | µg/L | 10 | 12/11/14 13:32 |
| Bromomethane | ND | | 10.0 | 3.30 | µg/L | 10 | 12/11/14 13:32 |
| Carbon disulfide | 1.50 | J | 5.00 | 1.10 | µg/L | 10 | 12/11/14 13:32 |
| Carbon tetrachloride | ND | | 5.00 | 1.00 | µg/L | 10 | 12/11/14 13:32 |
| Chlorobenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 12/11/14 13:32 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value may exceed the Acceptable Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

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5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1412101-003A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W3-12082014*** |
| **W Order:** | K1412101 | **Collection Date:** | 12/08/14 14:50 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 12/10/14 10:00 |
| **Inst. ID:** | MS03_10 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-502.2 | **%Moisture:** | **BatchNo:** R27882 |
| **Revision:** | 12/16/14 15:37 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-J8436.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260C/5030C** | | |
| Chloroethane | ND | | 10.0 | 3.30 | µg/L | 10 | 12/11/14 13:32 |
| Chloroform | ND | | 5.00 | 1.00 | µg/L | 10 | 12/11/14 13:32 |
| Chloromethane | ND | | 10.0 | 3.30 | µg/L | 10 | 12/11/14 13:32 |
| cis-1,2-Dichloroethene | 50.3 | | 5.00 | 1.00 | µg/L | 10 | 12/11/14 13:32 |
| cis-1,3-Dichloropropene | ND | | 5.00 | 1.60 | µg/L | 10 | 12/11/14 13:32 |
| Cyclohexane | ND | | 5.00 | 1.00 | µg/L | 10 | 12/11/14 13:32 |
| Dibromochloromethane | ND | | 5.00 | 1.00 | µg/L | 10 | 12/11/14 13:32 |
| Dibromomethane | ND | | 5.00 | 1.60 | µg/L | 10 | 12/11/14 13:32 |
| Dichlorodifluoromethane | ND | | 10.0 | 1.00 | µg/L | 10 | 12/11/14 13:32 |
| Ethylbenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 12/11/14 13:32 |
| Hexachlorobutadiene | ND | | 10.0 | 1.00 | µg/L | 10 | 12/11/14 13:32 |
| Isopropylbenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 12/11/14 13:32 |
| Methyl tert-butyl ether | ND | | 10.0 | 1.60 | µg/L | 10 | 12/11/14 13:32 |
| Methylene chloride | 3.50 | J | 20.0 | 1.60 | µg/L | 10 | 12/11/14 13:32 |
| n-Propylbenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 12/11/14 13:32 |
| Naphthalene | ND | | 10.0 | 1.00 | µg/L | 10 | 12/11/14 13:32 |
| o-Xylene | ND | | 5.00 | 1.00 | µg/L | 10 | 12/11/14 13:32 |
| p-Isopropyltoluene | ND | | 5.00 | 1.60 | µg/L | 10 | 12/11/14 13:32 |
| sec-Butylbenzene | ND | | 5.00 | 1.60 | µg/L | 10 | 12/11/14 13:32 |
| Styrene | ND | | 5.00 | 1.00 | µg/L | 10 | 12/11/14 13:32 |
| Tetrachloroethene | ND | | 5.00 | 1.00 | µg/L | 10 | 12/11/14 13:32 |
| Toluene | ND | | 5.00 | 1.00 | µg/L | 10 | 12/11/14 13:32 |
| trans-1,2-Dichloroethene | ND | | 5.00 | 1.00 | µg/L | 10 | 12/11/14 13:32 |
| trans-1,3-Dichloropropene | ND | | 5.00 | 1.60 | µg/L | 10 | 12/11/14 13:32 |
| Trichloroethene | 1.70 | J | 5.00 | 1.00 | µg/L | 10 | 12/11/14 13:32 |
| Trichlorofluoromethane | ND | | 10.0 | 1.00 | µg/L | 10 | 12/11/14 13:32 |
| Vinyl acetate | ND | | 20.0 | 10.0 | µg/L | 10 | 12/11/14 13:32 |
| Vinyl chloride | 16.8 | | 10.0 | 3.30 | µg/L | 10 | 12/11/14 13:32 |
| Xylenes (total) | ND | | 10.0 | 3.00 | µg/L | 10 | 12/11/14 13:32 |
| Surr: 1,2-Dichloroethane-d4 | 104 | | 75-130 | 1.60 | %REC | 10 | 12/11/14 13:32 |
| Surr: Toluene-d8 | 96 | | 75-125 | 1.00 | %REC | 10 | 12/11/14 13:32 |
| Surr: 4-Bromofluorobenzene | 83 | | 75-125 | 1.00 | %REC | 10 | 12/11/14 13:32 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value may exceed the Acceptable Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 12/16/14 15:46 700728 **Project Supervisor:** Anthony Crescenzi

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East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1412101-004A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W4-12082014*** ✓ |
| **W Order:** | K1412101 | **Collection Date:** | 12/08/14 16:20 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 12/10/14 10:00 |
| **Inst. ID:** | MS03_10 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-502.2 | **%Moisture:** | **BatchNo:** R27882 |
| **Revision:** | 12/17/14 8:17 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-J8442.D |
| **Col Type:** | TOTAL 21.29 ✓ | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260C/5030C** | | |
| (m+p)-Xylene | 0.93 | J | 1.00 | 0.20 | µg/L | 1 | 12/11/14 16:29 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 16:29 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 16:29 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 16:29 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 16:29 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 16:29 |
| 1,1-Dichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 16:29 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 16:29 |
| 1,2,3-Trichloropropane | ND | | 2.00 | 0.33 | µg/L | 1 | 12/11/14 16:29 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 0.10 | µg/L | 1 | 12/11/14 16:29 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 16:29 |
| 1,2-Dibromo-3-chloropropane | ND | | 5.00 | 1.00 | µg/L | 1 | 12/11/14 16:29 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 16:29 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 16:29 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 16:29 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 16:29 |
| 1,3,5-Trimethylbenzene | 0.11 | J | 0.50 | 0.10 | µg/L | 1 | 12/11/14 16:29 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 16:29 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 16:29 |
| 2-Butanone | ND | | 10.0 | 1.00 | µg/L | 1 | 12/11/14 16:29 |
| 2-Chloroethylvinyl ether | ND | | 5.00 | 2.50 | µg/L | 1 | 12/11/14 16:29 |
| 2-Hexanone | ND | | 5.00 | 1.00 | µg/L | 1 | 12/11/14 16:29 |
| 4-Chlorotoluene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 16:29 |
| 4-Methyl-2-pentanone | ND | | 5.00 | 1.00 | µg/L | 1 | 12/11/14 16:29 |
| Acetone | ND | | 10.0 | 1.00 | µg/L | 1 | 12/11/14 16:29 |
| Benzene | 14.7 | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 16:29 |
| Bromobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 16:29 |
| Bromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 16:29 |
| Bromodichloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 16:29 |
| Bromoform | ND | | 1.00 | 0.33 | µg/L | 1 | 12/11/14 16:29 |
| Bromomethane | ND | | 1.00 | 0.33 | µg/L | 1 | 12/11/14 16:29 |
| Carbon disulfide | ND | | 0.50 | 0.11 | µg/L | 1 | 12/11/14 16:29 |
| Carbon tetrachloride | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 16:29 |
| Chlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 16:29 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value may exceed the Acceptable Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

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East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | | | |
|---|---|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | | | **Lab ID:** | **K1412101-004A** |
| **Project:** | 189-02 | | | **Client Sample ID:** | ***189 - W4-12082014*** |
| **W Order:** | K1412101 | | | **Collection Date:** | 12/08/14 16:20 |
| **Matrix:** | GROUNDWATER | | | **Date Received:** | 12/10/14 10:00 |
| **Inst. ID:** | MS03_10 | **Sample Size** | 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-502.2 | **%Moisture:** | | **BatchNo:** | R27882 |
| **Revision:** | 12/17/14 8:17 | **TestCode:** | 8260W_CAL | **FileID:** | 1-SAMP-J8442.D |
| **Col Type:** | | | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260C/5030C** | | |
| Chloroethane | ND | | 1.00 | 0.33 | µg/L | 1 | 12/11/14 16:29 |
| Chloroform | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 16:29 |
| Chloromethane | ND | | 1.00 | 0.33 | µg/L | 1 | 12/11/14 16:29 |
| cis-1,2-Dichloroethene | 0.12 | J | 0.50 | 0.10 | µg/L | 1 | 12/11/14 16:29 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 16:29 |
| Cyclohexane | 1.99 | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 16:29 |
| Dibromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 16:29 |
| Dibromomethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 16:29 |
| Dichlorodifluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 12/11/14 16:29 |
| Ethylbenzene | 0.53 | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 16:29 |
| Hexachlorobutadiene | ND | | 1.00 | 0.10 | µg/L | 1 | 12/11/14 16:29 |
| Isopropylbenzene | 0.12 | J | 0.50 | 0.10 | µg/L | 1 | 12/11/14 16:29 |
| Methyl tert-butyl ether | ND | | 1.00 | 0.16 | µg/L | 1 | 12/11/14 16:29 |
| Methylene chloride | ND | | 2.00 | 0.16 | µg/L | 1 | 12/11/14 16:29 |
| n-Propylbenzene | 0.13 | J | 0.50 | 0.10 | µg/L | 1 | 12/11/14 16:29 |
| Naphthalene | 0.79 | J | 1.00 | 0.10 | µg/L | 1 | 12/11/14 16:29 |
| o-Xylene | 0.64 | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 16:29 |
| p-Isopropyltoluene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 16:29 |
| sec-Butylbenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 16:29 |
| Styrene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 16:29 |
| Tetrachloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 16:29 |
| Toluene | 1.23 | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 16:29 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 16:29 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 16:29 |
| Trichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 16:29 |
| Trichlorofluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 12/11/14 16:29 |
| Vinyl acetate | ND | | 2.00 | 1.00 | µg/L | 1 | 12/11/14 16:29 |
| Vinyl chloride | ND | | 1.00 | 0.33 | µg/L | 1 | 12/11/14 16:29 |
| Xylenes (total) | 1.57 | | 1.00 | 0.30 | µg/L | 1 | 12/11/14 16:29 |
| Surr: 1,2-Dichloroethane-d4 | 89 | | 75-130 | 0.16 | %REC | 1 | 12/11/14 16:29 |
| Surr: Toluene-d8 | 101 | | 75-125 | 0.10 | %REC | 1 | 12/11/14 16:29 |
| Surr: 4-Bromofluorobenzene | 91 | | 75-125 | 0.10 | %REC | 1 | 12/11/14 16:29 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value may exceed the Acceptable Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

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# Analytical Results

StateCertNo: 10248

| | | | | | |
|---|---|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | | | **Lab ID:** | **K1412101-005A** |
| **Project:** | 189-02 | | | **Client Sample ID:** | ***189 - W5-12042014*** |
| **W Order:** | K1412101 | | | **Collection Date:** | 12/04/14 16:30 |
| **Matrix:** | GROUNDWATER | | | **Date Received:** | 12/10/14 10:00 |
| **Inst. ID:** | MS03_10 | **Sample Size** | 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-502.2 | **%Moisture:** | | **BatchNo:** | R27882 |
| **Revision:** | 12/16/14 15:37 | **TestCode:** | 8260W_CAL | **FileID:** | 1-SAMP-J8437.D |
| **Col Type:** | TOTAL 1537 | | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260C/5030C** | | |
| (m+p)-Xylene | ND | | 50.0 | 10.0 | µg/L | 50 | 12/11/14 14:02 |
| 1,1,1,2-Tetrachloroethane | ND | | 25.0 | 8.00 | µg/L | 50 | 12/11/14 14:02 |
| 1,1,1-Trichloroethane | ND | | 25.0 | 5.00 | µg/L | 50 | 12/11/14 14:02 |
| 1,1,2,2-Tetrachloroethane | ND | | 25.0 | 5.00 | µg/L | 50 | 12/11/14 14:02 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 25.0 | 5.00 | µg/L | 50 | 12/11/14 14:02 |
| 1,1,2-Trichloroethane | ND | | 25.0 | 8.00 | µg/L | 50 | 12/11/14 14:02 |
| 1,1-Dichloroethane | 919 | | 25.0 | 5.00 | µg/L | 50 | 12/11/14 14:02 |
| 1,1-Dichloroethene | ND | | 25.0 | 8.00 | µg/L | 50 | 12/11/14 14:02 |
| 1,2,3-Trichloropropane | ND | | 100 | 16.5 | µg/L | 50 | 12/11/14 14:02 |
| 1,2,4-Trichlorobenzene | ND | | 50.0 | 5.00 | µg/L | 50 | 12/11/14 14:02 |
| 1,2,4-Trimethylbenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/11/14 14:02 |
| 1,2-Dibromo-3-chloropropane | ND | | 250 | 50.0 | µg/L | 50 | 12/11/14 14:02 |
| 1,2-Dibromoethane | ND | | 25.0 | 8.00 | µg/L | 50 | 12/11/14 14:02 |
| 1,2-Dichlorobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/11/14 14:02 |
| 1,2-Dichloroethane | ND | | 25.0 | 8.00 | µg/L | 50 | 12/11/14 14:02 |
| 1,2-Dichloropropane | ND | | 25.0 | 8.00 | µg/L | 50 | 12/11/14 14:02 |
| 1,3,5-Trimethylbenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/11/14 14:02 |
| 1,3-Dichlorobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/11/14 14:02 |
| 1,4-Dichlorobenzene | ND | | 25.0 | 8.00 | µg/L | 50 | 12/11/14 14:02 |
| 2-Butanone | ND | | 500 | 50.0 | µg/L | 50 | 12/11/14 14:02 |
| 2-Chloroethylvinyl ether | ND | | 250 | 125 | µg/L | 50 | 12/11/14 14:02 |
| 2-Hexanone | ND | | 250 | 50.0 | µg/L | 50 | 12/11/14 14:02 |
| 4-Chlorotoluene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/11/14 14:02 |
| 4-Methyl-2-pentanone | ND | | 250 | 50.0 | µg/L | 50 | 12/11/14 14:02 |
| Acetone | ND | | 500 | 50.0 | µg/L | 50 | 12/11/14 14:02 |
| Benzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/11/14 14:02 |
| Bromobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/11/14 14:02 |
| Bromochloromethane | ND | | 25.0 | 5.00 | µg/L | 50 | 12/11/14 14:02 |
| Bromodichloromethane | ND | | 25.0 | 5.00 | µg/L | 50 | 12/11/14 14:02 |
| Bromoform | ND | | 50.0 | 16.5 | µg/L | 50 | 12/11/14 14:02 |
| Bromomethane | ND | | 50.0 | 16.5 | µg/L | 50 | 12/11/14 14:02 |
| Carbon disulfide | ND | | 25.0 | 5.50 | µg/L | 50 | 12/11/14 14:02 |
| Carbon tetrachloride | ND | | 25.0 | 5.00 | µg/L | 50 | 12/11/14 14:02 |
| Chlorobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/11/14 14:02 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value may exceed the Acceptable Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 12/16/14 15:46 700729 **Project Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

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East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1412101-005A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W5-12042014*** |
| **W Order:** | K1412101 | **Collection Date:** | 12/04/14 16:30 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 12/10/14 10:00 |
| **Inst. ID:** | MS03_10 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-502.2 | **%Moisture:** | **BatchNo:** R27882 |
| **Revision:** | 12/16/14 15:37 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-J8437.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260C/5030C** | | |
| Chloroethane | ND | | 50.0 | 16.5 | µg/L | 50 | 12/11/14 14:02 |
| Chloroform | ND | | 25.0 | 5.00 | µg/L | 50 | 12/11/14 14:02 |
| Chloromethane | ND | | 50.0 | 16.5 | µg/L | 50 | 12/11/14 14:02 |
| cis-1,2-Dichloroethene | 81.5 | | 25.0 | 5.00 | µg/L | 50 | 12/11/14 14:02 |
| cis-1,3-Dichloropropene | ND | | 25.0 | 8.00 | µg/L | 50 | 12/11/14 14:02 |
| Cyclohexane | ND | | 25.0 | 5.00 | µg/L | 50 | 12/11/14 14:02 |
| Dibromochloromethane | ND | | 25.0 | 5.00 | µg/L | 50 | 12/11/14 14:02 |
| Dibromomethane | ND | | 25.0 | 8.00 | µg/L | 50 | 12/11/14 14:02 |
| Dichlorodifluoromethane | ND | | 50.0 | 5.00 | µg/L | 50 | 12/11/14 14:02 |
| Ethylbenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/11/14 14:02 |
| Hexachlorobutadiene | ND | | 50.0 | 5.00 | µg/L | 50 | 12/11/14 14:02 |
| Isopropylbenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/11/14 14:02 |
| Methyl tert-butyl ether | ND | | 50.0 | 8.00 | µg/L | 50 | 12/11/14 14:02 |
| Methylene chloride | 12.5 | J | 100 | 8.00 | µg/L | 50 | 12/11/14 14:02 |
| n-Propylbenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/11/14 14:02 |
| Naphthalene | ND | | 50.0 | 5.00 | µg/L | 50 | 12/11/14 14:02 |
| o-Xylene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/11/14 14:02 |
| p-Isopropyltoluene | ND | | 25.0 | 8.00 | µg/L | 50 | 12/11/14 14:02 |
| sec-Butylbenzene | ND | | 25.0 | 8.00 | µg/L | 50 | 12/11/14 14:02 |
| Styrene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/11/14 14:02 |
| Tetrachloroethene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/11/14 14:02 |
| Toluene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/11/14 14:02 |
| trans-1,2-Dichloroethene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/11/14 14:02 |
| trans-1,3-Dichloropropene | ND | | 25.0 | 8.00 | µg/L | 50 | 12/11/14 14:02 |
| Trichloroethene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/11/14 14:02 |
| Trichlorofluoromethane | ND | | 50.0 | 5.00 | µg/L | 50 | 12/11/14 14:02 |
| Vinyl acetate | ND | | 100 | 50.0 | µg/L | 50 | 12/11/14 14:02 |
| Vinyl chloride | 524 | | 50.0 | 16.5 | µg/L | 50 | 12/11/14 14:02 |
| Xylenes (total) | ND | | 50.0 | 15.0 | µg/L | 50 | 12/11/14 14:02 |
| Surr: 1,2-Dichloroethane-d4 | 104 | | 75-130 | 8.00 | %REC | 50 | 12/11/14 14:02 |
| Surr: Toluene-d8 | 96 | | 75-125 | 5.00 | %REC | 50 | 12/11/14 14:02 |
| Surr: 4-Bromofluorobenzene | 88 | | 75-125 | 5.00 | %REC | 50 | 12/11/14 14:02 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value may exceed the Acceptable Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 12/16/14 15:46 700729 **Project Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1412101-006A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W6-12042014*** |
| **W Order:** | K1412101 | **Collection Date:** | 12/04/14 14:00 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 12/10/14 10:00 |
| **Inst. ID:** | MS03_10 **Sample Size** 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-502.2 **%Moisture:** | **BatchNo:** | R27882 |
| **Revision:** | 12/16/14 15:37 **TestCode:** 8260W_CAL | **FileID:** | 1-SAMP-J8443.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260C/5030C** | | |
| (m+p)-Xylene | ND | | 1.00 | 0.20 | µg/L | 1 | 12/11/14 16:59 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 16:59 |
| 1,1,1-Trichloroethane | 3.85 | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 16:59 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 16:59 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 16:59 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 16:59 |
| 1,1-Dichloroethane | 25.0 | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 16:59 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 16:59 |
| 1,2,3-Trichloropropane | ND | | 2.00 | 0.33 | µg/L | 1 | 12/11/14 16:59 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 0.10 | µg/L | 1 | 12/11/14 16:59 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 16:59 |
| 1,2-Dibromo-3-chloropropane | ND | | 5.00 | 1.00 | µg/L | 1 | 12/11/14 16:59 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 16:59 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 16:59 |
| 1,2-Dichloroethane | 0.71 | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 16:59 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 16:59 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 16:59 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 16:59 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 16:59 |
| 2-Butanone | ND | | 10.0 | 1.00 | µg/L | 1 | 12/11/14 16:59 |
| 2-Chloroethylvinyl ether | ND | | 5.00 | 2.50 | µg/L | 1 | 12/11/14 16:59 |
| 2-Hexanone | ND | | 5.00 | 1.00 | µg/L | 1 | 12/11/14 16:59 |
| 4-Chlorotoluene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 16:59 |
| 4-Methyl-2-pentanone | ND | | 5.00 | 1.00 | µg/L | 1 | 12/11/14 16:59 |
| Acetone | ND | | 10.0 | 1.00 | µg/L | 1 | 12/11/14 16:59 |
| Benzene | 4.37 | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 16:59 |
| Bromobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 16:59 |
| Bromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 16:59 |
| Bromodichloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 16:59 |
| Bromoform | ND | | 1.00 | 0.33 | µg/L | 1 | 12/11/14 16:59 |
| Bromomethane | ND | | 1.00 | 0.33 | µg/L | 1 | 12/11/14 16:59 |
| Carbon disulfide | 0.11 J | | 0.50 | 0.11 | µg/L | 1 | 12/11/14 16:59 |
| Carbon tetrachloride | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 16:59 |
| Chlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 16:59 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value may exceed the Acceptable Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

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5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1412101-006A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W6-12042014*** ✓ |
| **W Order:** | K1412101 | **Collection Date:** | 12/04/14 14:00 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 12/10/14 10:00 |
| **Inst. ID:** | MS03_10 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-502.2 | **%Moisture:** | **BatchNo:** R27882 |
| **Revision:** | 12/16/14 15:37 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-J8443.D |
| **Col Type:** | TOTAL 55.41 ✓ | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260C/5030C** | | |
| Chloroethane | 0.37 | J | 1.00 | 0.33 | µg/L | 1 | 12/11/14 16:59 |
| Chloroform | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 16:59 |
| Chloromethane | ND | | 1.00 | 0.33 | µg/L | 1 | 12/11/14 16:59 |
| cis-1,2-Dichloroethene | 15.8 | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 16:59 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 16:59 |
| Cyclohexane | 0.68 | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 16:59 |
| Dibromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 16:59 |
| Dibromomethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 16:59 |
| Dichlorodifluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 12/11/14 16:59 |
| Ethylbenzene | 0.31 | J | 0.50 | 0.10 | µg/L | 1 | 12/11/14 16:59 |
| Hexachlorobutadiene | ND | | 1.00 | 0.10 | µg/L | 1 | 12/11/14 16:59 |
| Isopropylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 16:59 |
| Methyl tert-butyl ether | ND | | 1.00 | 0.16 | µg/L | 1 | 12/11/14 16:59 |
| Methylene chloride | 1.15 | J | 2.00 | 0.16 | µg/L | 1 | 12/11/14 16:59 |
| n-Propylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 16:59 |
| Naphthalene | ND | | 1.00 | 0.10 | µg/L | 1 | 12/11/14 16:59 |
| o-Xylene | 0.17 | J | 0.50 | 0.10 | µg/L | 1 | 12/11/14 16:59 |
| p-Isopropyltoluene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 16:59 |
| sec-Butylbenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 16:59 |
| Styrene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 16:59 |
| Tetrachloroethene | 0.16 | J | 0.50 | 0.10 | µg/L | 1 | 12/11/14 16:59 |
| Toluene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 16:59 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 16:59 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 16:59 |
| Trichloroethene | 0.19 | J | 0.50 | 0.10 | µg/L | 1 | 12/11/14 16:59 |
| Trichlorofluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 12/11/14 16:59 |
| Vinyl acetate | ND | | 2.00 | 1.00 | µg/L | 1 | 12/11/14 16:59 |
| Vinyl chloride | 2.54 | | 1.00 | 0.33 | µg/L | 1 | 12/11/14 16:59 |
| Xylenes (total) | ND | | 1.00 | 0.30 | µg/L | 1 | 12/11/14 16:59 |
| Surr: 1,2-Dichloroethane-d4 | 93 | | 75-130 | 0.16 | %REC | 1 | 12/11/14 16:59 |
| Surr: Toluene-d8 | 100 | | 75-125 | 0.10 | %REC | 1 | 12/11/14 16:59 |
| Surr: 4-Bromofluorobenzene | 95 | | 75-125 | 0.10 | %REC | 1 | 12/11/14 16:59 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value may exceed the Acceptable Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 12/16/14 15:46 700733 **Project Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1412101-007A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W7-12042014* |
| **W Order:** | K1412101 | **Collection Date:** | 12/04/14 15:40 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 12/10/14 10:00 |
| **Inst. ID:** | MS03_10 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-502.2 | **%Moisture:** | **BatchNo:** R27883 |
| **Revision:** | 12/16/14 15:40 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-J8480.D |
| **Col Type:** | TOTAL 195.5 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260C/5030C** | | |
| (m+p)-Xylene | ND | | 10.0 | 2.00 | µg/L | 10 | 12/12/14 17:54 |
| 1,1,1,2-Tetrachloroethane | ND | | 5.00 | 1.60 | µg/L | 10 | 12/12/14 17:54 |
| 1,1,1-Trichloroethane | ND | | 5.00 | 1.00 | µg/L | 10 | 12/12/14 17:54 |
| 1,1,2,2-Tetrachloroethane | ND | | 5.00 | 1.00 | µg/L | 10 | 12/12/14 17:54 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 1.90 | J | 5.00 | 1.00 | µg/L | 10 | 12/12/14 17:54 |
| 1,1,2-Trichloroethane | ND | | 5.00 | 1.60 | µg/L | 10 | 12/12/14 17:54 |
| 1,1-Dichloroethane | 165 | | 5.00 | 1.00 | µg/L | 10 | 12/12/14 17:54 |
| 1,1-Dichloroethene | ND | | 5.00 | 1.60 | µg/L | 10 | 12/12/14 17:54 |
| 1,2,3-Trichloropropane | ND | | 20.0 | 3.30 | µg/L | 10 | 12/12/14 17:54 |
| 1,2,4-Trichlorobenzene | ND | | 10.0 | 1.00 | µg/L | 10 | 12/12/14 17:54 |
| 1,2,4-Trimethylbenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 12/12/14 17:54 |
| 1,2-Dibromo-3-chloropropane | ND | | 50.0 | 10.0 | µg/L | 10 | 12/12/14 17:54 |
| 1,2-Dibromoethane | ND | | 5.00 | 1.60 | µg/L | 10 | 12/12/14 17:54 |
| 1,2-Dichlorobenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 12/12/14 17:54 |
| 1,2-Dichloroethane | 8.10 | | 5.00 | 1.60 | µg/L | 10 | 12/12/14 17:54 |
| 1,2-Dichloropropane | ND | | 5.00 | 1.60 | µg/L | 10 | 12/12/14 17:54 |
| 1,3,5-Trimethylbenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 12/12/14 17:54 |
| 1,3-Dichlorobenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 12/12/14 17:54 |
| 1,4-Dichlorobenzene | ND | | 5.00 | 1.60 | µg/L | 10 | 12/12/14 17:54 |
| 2-Butanone | ND | | 100 | 10.0 | µg/L | 10 | 12/12/14 17:54 |
| 2-Chloroethylvinyl ether | ND | | 50.0 | 25.0 | µg/L | 10 | 12/12/14 17:54 |
| 2-Hexanone | ND | | 50.0 | 10.0 | µg/L | 10 | 12/12/14 17:54 |
| 4-Chlorotoluene | ND | | 5.00 | 1.00 | µg/L | 10 | 12/12/14 17:54 |
| 4-Methyl-2-pentanone | ND | | 50.0 | 10.0 | µg/L | 10 | 12/12/14 17:54 |
| Acetone | ND | | 100 | 10.0 | µg/L | 10 | 12/12/14 17:54 |
| Benzene | ND | | 5.00 | 1.00 | µg/L | 10 | 12/12/14 17:54 |
| Bromobenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 12/12/14 17:54 |
| Bromochloromethane | ND | | 5.00 | 1.00 | µg/L | 10 | 12/12/14 17:54 |
| Bromodichloromethane | ND | | 5.00 | 1.00 | µg/L | 10 | 12/12/14 17:54 |
| Bromoform | ND | | 10.0 | 3.30 | µg/L | 10 | 12/12/14 17:54 |
| Bromomethane | ND | | 10.0 | 3.30 | µg/L | 10 | 12/12/14 17:54 |
| Carbon disulfide | ND | | 5.00 | 1.10 | µg/L | 10 | 12/12/14 17:54 |
| Carbon tetrachloride | ND | | 5.00 | 1.00 | µg/L | 10 | 12/12/14 17:54 |
| Chlorobenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 12/12/14 17:54 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value may exceed the Acceptable Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 12/16/14 15:46 700750 **Project Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1412101-007A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W7-12042014*** |
| **W Order:** | K1412101 | **Collection Date:** | 12/04/14 15:40 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 12/10/14 10:00 |
| **Inst. ID:** | MS03_10 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-502.2 | **%Moisture:** | **BatchNo:** R27883 |
| **Revision:** | 12/16/14 15:40 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-J8480.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260C/5030C** | | |
| Chloroethane | 6.40 | J | 10.0 | 3.30 | µg/L | 10 | 12/12/14 17:54 |
| Chloroform | ND | | 5.00 | 1.00 | µg/L | 10 | 12/12/14 17:54 |
| Chloromethane | ND | | 10.0 | 3.30 | µg/L | 10 | 12/12/14 17:54 |
| cis-1,2-Dichloroethene | 5.30 | | 5.00 | 1.00 | µg/L | 10 | 12/12/14 17:54 |
| cis-1,3-Dichloropropene | ND | | 5.00 | 1.60 | µg/L | 10 | 12/12/14 17:54 |
| Cyclohexane | ND | | 5.00 | 1.00 | µg/L | 10 | 12/12/14 17:54 |
| Dibromochloromethane | ND | | 5.00 | 1.00 | µg/L | 10 | 12/12/14 17:54 |
| Dibromomethane | ND | | 5.00 | 1.60 | µg/L | 10 | 12/12/14 17:54 |
| Dichlorodifluoromethane | ND | | 10.0 | 1.00 | µg/L | 10 | 12/12/14 17:54 |
| Ethylbenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 12/12/14 17:54 |
| Hexachlorobutadiene | ND | | 10.0 | 1.00 | µg/L | 10 | 12/12/14 17:54 |
| Isopropylbenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 12/12/14 17:54 |
| Methyl tert-butyl ether | ND | | 10.0 | 1.60 | µg/L | 10 | 12/12/14 17:54 |
| Methylene chloride | ND | | 20.0 | 1.60 | µg/L | 10 | 12/12/14 17:54 |
| n-Propylbenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 12/12/14 17:54 |
| Naphthalene | ND | | 10.0 | 1.00 | µg/L | 10 | 12/12/14 17:54 |
| o-Xylene | ND | | 5.00 | 1.00 | µg/L | 10 | 12/12/14 17:54 |
| p-Isopropyltoluene | ND | | 5.00 | 1.60 | µg/L | 10 | 12/12/14 17:54 |
| sec-Butylbenzene | ND | | 5.00 | 1.60 | µg/L | 10 | 12/12/14 17:54 |
| Styrene | ND | | 5.00 | 1.00 | µg/L | 10 | 12/12/14 17:54 |
| Tetrachloroethene | ND | | 5.00 | 1.00 | µg/L | 10 | 12/12/14 17:54 |
| Toluene | ND | | 5.00 | 1.00 | µg/L | 10 | 12/12/14 17:54 |
| trans-1,2-Dichloroethene | ND | | 5.00 | 1.00 | µg/L | 10 | 12/12/14 17:54 |
| trans-1,3-Dichloropropene | ND | | 5.00 | 1.60 | µg/L | 10 | 12/12/14 17:54 |
| Trichloroethene | 1.70 | J | 5.00 | 1.00 | µg/L | 10 | 12/12/14 17:54 |
| Trichlorofluoromethane | ND | | 10.0 | 1.00 | µg/L | 10 | 12/12/14 17:54 |
| Vinyl acetate | ND | | 20.0 | 10.0 | µg/L | 10 | 12/12/14 17:54 |
| Vinyl chloride | 7.10 | J | 10.0 | 3.30 | µg/L | 10 | 12/12/14 17:54 |
| Xylenes (total) | ND | | 10.0 | 3.00 | µg/L | 10 | 12/12/14 17:54 |
| Surr: 1,2-Dichloroethane-d4 | 100 | | 75-130 | 1.60 | %REC | 10 | 12/12/14 17:54 |
| Surr: Toluene-d8 | 102 | | 75-125 | 1.00 | %REC | 10 | 12/12/14 17:54 |
| Surr: 4-Bromofluorobenzene | 92 | | 75-125 | 1.00 | %REC | 10 | 12/12/14 17:54 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value may exceed the Acceptable Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 12/16/14 15:46 700750 **Project Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1412101-008A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W8-12042014* |
| **W Order:** | K1412101 | **Collection Date:** | 12/04/14 13:40 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 12/10/14 10:00 |
| **Inst. ID:** | MS03_10 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-502.2 | **%Moisture:** | **BatchNo:** R27882 |
| **Revision:** | 12/16/14 15:37 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-J8444.D |
| **Col Type:** | TOTAL 93.22 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260C/5030C** | | |
| (m+p)-Xylene | ND | | 2.00 | 0.40 | µg/L | 2 | 12/11/14 17:28 |
| 1,1,1,2-Tetrachloroethane | ND | | 1.00 | 0.32 | µg/L | 2 | 12/11/14 17:28 |
| 1,1,1-Trichloroethane | ND | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 17:28 |
| 1,1,2,2-Tetrachloroethane | ND | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 17:28 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 17:28 |
| 1,1,2-Trichloroethane | ND | | 1.00 | 0.32 | µg/L | 2 | 12/11/14 17:28 |
| 1,1-Dichloroethane | 44.4 | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 17:28 |
| 1,1-Dichloroethene | 0.60 | J | 1.00 | 0.32 | µg/L | 2 | 12/11/14 17:28 |
| 1,2,3-Trichloropropane | ND | | 4.00 | 0.66 | µg/L | 2 | 12/11/14 17:28 |
| 1,2,4-Trichlorobenzene | ND | | 2.00 | 0.20 | µg/L | 2 | 12/11/14 17:28 |
| 1,2,4-Trimethylbenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 17:28 |
| 1,2-Dibromo-3-chloropropane | ND | | 10.0 | 2.00 | µg/L | 2 | 12/11/14 17:28 |
| 1,2-Dibromoethane | ND | | 1.00 | 0.32 | µg/L | 2 | 12/11/14 17:28 |
| 1,2-Dichlorobenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 17:28 |
| 1,2-Dichloroethane | 0.78 | J | 1.00 | 0.32 | µg/L | 2 | 12/11/14 17:28 |
| 1,2-Dichloropropane | ND | | 1.00 | 0.32 | µg/L | 2 | 12/11/14 17:28 |
| 1,3,5-Trimethylbenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 17:28 |
| 1,3-Dichlorobenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 17:28 |
| 1,4-Dichlorobenzene | ND | | 1.00 | 0.32 | µg/L | 2 | 12/11/14 17:28 |
| 2-Butanone | ND | | 20.0 | 2.00 | µg/L | 2 | 12/11/14 17:28 |
| 2-Chloroethylvinyl ether | ND | | 10.0 | 5.00 | µg/L | 2 | 12/11/14 17:28 |
| 2-Hexanone | ND | | 10.0 | 2.00 | µg/L | 2 | 12/11/14 17:28 |
| 4-Chlorotoluene | ND | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 17:28 |
| 4-Methyl-2-pentanone | ND | | 10.0 | 2.00 | µg/L | 2 | 12/11/14 17:28 |
| Acetone | ND | | 20.0 | 2.00 | µg/L | 2 | 12/11/14 17:28 |
| Benzene | 1.90 | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 17:28 |
| Bromobenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 17:28 |
| Bromochloromethane | ND | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 17:28 |
| Bromodichloromethane | ND | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 17:28 |
| Bromoform | ND | | 2.00 | 0.66 | µg/L | 2 | 12/11/14 17:28 |
| Bromomethane | ND | | 2.00 | 0.66 | µg/L | 2 | 12/11/14 17:28 |
| Carbon disulfide | ND | | 1.00 | 0.22 | µg/L | 2 | 12/11/14 17:28 |
| Carbon tetrachloride | ND | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 17:28 |
| Chlorobenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 17:28 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value may exceed the Acceptable Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 12/16/14 15:46 700734 **Project Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1412101-008A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W8-12042014*** |
| **W Order:** | K1412101 | **Collection Date:** | 12/04/14 13:40 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 12/10/14 10:00 |
| **Inst. ID:** | MS03_10 **Sample Size** 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-502.2 **%Moisture:** | **BatchNo:** | R27882 |
| **Revision:** | 12/16/14 15:37 **TestCode:** 8260W_CAL | **FileID:** | 1-SAMP-J8444.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260C/5030C** | | |
| Chloroethane | ND | | 2.00 | 0.66 | µg/L | 2 | 12/11/14 17:28 |
| Chloroform | ND | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 17:28 |
| Chloromethane | 1.34 | J | 2.00 | 0.66 | µg/L | 2 | 12/11/14 17:28 |
| cis-1,2-Dichloroethene | 34.0 | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 17:28 |
| cis-1,3-Dichloropropene | ND | | 1.00 | 0.32 | µg/L | 2 | 12/11/14 17:28 |
| Cyclohexane | 2.02 | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 17:28 |
| Dibromochloromethane | ND | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 17:28 |
| Dibromomethane | ND | | 1.00 | 0.32 | µg/L | 2 | 12/11/14 17:28 |
| Dichlorodifluoromethane | ND | | 2.00 | 0.20 | µg/L | 2 | 12/11/14 17:28 |
| Ethylbenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 17:28 |
| Hexachlorobutadiene | ND | | 2.00 | 0.20 | µg/L | 2 | 12/11/14 17:28 |
| Isopropylbenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 17:28 |
| Methyl tert-butyl ether | ND | | 2.00 | 0.32 | µg/L | 2 | 12/11/14 17:28 |
| Methylene chloride | 0.94 | J | 4.00 | 0.32 | µg/L | 2 | 12/11/14 17:28 |
| n-Propylbenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 17:28 |
| Naphthalene | ND | | 2.00 | 0.20 | µg/L | 2 | 12/11/14 17:28 |
| o-Xylene | ND | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 17:28 |
| p-Isopropyltoluene | ND | | 1.00 | 0.32 | µg/L | 2 | 12/11/14 17:28 |
| sec-Butylbenzene | ND | | 1.00 | 0.32 | µg/L | 2 | 12/11/14 17:28 |
| Styrene | ND | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 17:28 |
| Tetrachloroethene | ND | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 17:28 |
| Toluene | ND | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 17:28 |
| trans-1,2-Dichloroethene | ND | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 17:28 |
| trans-1,3-Dichloropropene | ND | | 1.00 | 0.32 | µg/L | 2 | 12/11/14 17:28 |
| Trichloroethene | 0.28 | J | 1.00 | 0.20 | µg/L | 2 | 12/11/14 17:28 |
| Trichlorofluoromethane | ND | | 2.00 | 0.20 | µg/L | 2 | 12/11/14 17:28 |
| Vinyl acetate | ND | | 4.00 | 2.00 | µg/L | 2 | 12/11/14 17:28 |
| Vinyl chloride | 6.96 | | 2.00 | 0.66 | µg/L | 2 | 12/11/14 17:28 |
| Xylenes (total) | ND | | 2.00 | 0.60 | µg/L | 2 | 12/11/14 17:28 |
| Surr: 1,2-Dichloroethane-d4 | 93 | | 75-130 | 0.32 | %REC | 2 | 12/11/14 17:28 |
| Surr: Toluene-d8 | 105 | | 75-125 | 0.20 | %REC | 2 | 12/11/14 17:28 |
| Surr: 4-Bromofluorobenzene | 96 | | 75-125 | 0.20 | %REC | 2 | 12/11/14 17:28 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value may exceed the Acceptable Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 12/16/14 15:46 700734 **Project Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

**CLIENT** Ken W. Kloeber Consulting Engineers
**Project:** 189-02
**W Order:** K1412101
**Matrix:** GROUNDWATER
**Inst. ID:** MS03_10 **Sample Size** 10 mL
**ColumnID:** Rtx-502.2 **%Moisture:**
**Revision:** 12/17/14 8:17 **TestCode:** 8260W_CAL
**Col Type:** TOTAL 870.7

**Lab ID:** K1412101-009A
**Client Sample ID:** *189 - W9-12082014*
**Collection Date:** 12/08/14 14:30
**Date Received:** 12/10/14 10:00
**PrepDate:**
**BatchNo:** R27882
**FileID:** 1-SAMP-J8439.D

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260C/5030C** | | |
| (m+p)-Xylene | ND | | 10.0 | 2.00 | µg/L | 10 | 12/11/14 15:01 |
| 1,1,1,2-Tetrachloroethane | ND | | 5.00 | 1.60 | µg/L | 10 | 12/11/14 15:01 |
| 1,1,1-Trichloroethane | 77.7 | | 5.00 | 1.00 | µg/L | 10 | 12/11/14 15:01 |
| 1,1,2,2-Tetrachloroethane | ND | | 5.00 | 1.00 | µg/L | 10 | 12/11/14 15:01 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 3.90 | J | 5.00 | 1.00 | µg/L | 10 | 12/11/14 15:01 |
| 1,1,2-Trichloroethane | ND | | 5.00 | 1.60 | µg/L | 10 | 12/11/14 15:01 |
| 1,1-Dichloroethane | 228 | | 5.00 | 1.00 | µg/L | 10 | 12/11/14 15:01 |
| 1,1-Dichloroethene | 17.9 | | 5.00 | 1.60 | µg/L | 10 | 12/11/14 15:01 |
| 1,2,3-Trichloropropane | ND | | 20.0 | 3.30 | µg/L | 10 | 12/11/14 15:01 |
| 1,2,4-Trichlorobenzene | ND | | 10.0 | 1.00 | µg/L | 10 | 12/11/14 15:01 |
| 1,2,4-Trimethylbenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 12/11/14 15:01 |
| 1,2-Dibromo-3-chloropropane | ND | | 50.0 | 10.0 | µg/L | 10 | 12/11/14 15:01 |
| 1,2-Dibromoethane | ND | | 5.00 | 1.60 | µg/L | 10 | 12/11/14 15:01 |
| 1,2-Dichlorobenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 12/11/14 15:01 |
| 1,2-Dichloroethane | 3.30 | J | 5.00 | 1.60 | µg/L | 10 | 12/11/14 15:01 |
| 1,2-Dichloropropane | ND | | 5.00 | 1.60 | µg/L | 10 | 12/11/14 15:01 |
| 1,3,5-Trimethylbenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 12/11/14 15:01 |
| 1,3-Dichlorobenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 12/11/14 15:01 |
| 1,4-Dichlorobenzene | ND | | 5.00 | 1.60 | µg/L | 10 | 12/11/14 15:01 |
| 2-Butanone | ND | | 100 | 10.0 | µg/L | 10 | 12/11/14 15:01 |
| 2-Chloroethylvinyl ether | ND | | 50.0 | 25.0 | µg/L | 10 | 12/11/14 15:01 |
| 2-Hexanone | ND | | 50.0 | 10.0 | µg/L | 10 | 12/11/14 15:01 |
| 4-Chlorotoluene | ND | | 5.00 | 1.00 | µg/L | 10 | 12/11/14 15:01 |
| 4-Methyl-2-pentanone | ND | | 50.0 | 10.0 | µg/L | 10 | 12/11/14 15:01 |
| Acetone | ND | | 100 | 10.0 | µg/L | 10 | 12/11/14 15:01 |
| Benzene | ND | | 5.00 | 1.00 | µg/L | 10 | 12/11/14 15:01 |
| Bromobenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 12/11/14 15:01 |
| Bromochloromethane | ND | | 5.00 | 1.00 | µg/L | 10 | 12/11/14 15:01 |
| Bromodichloromethane | ND | | 5.00 | 1.00 | µg/L | 10 | 12/11/14 15:01 |
| Bromoform | ND | | 10.0 | 3.30 | µg/L | 10 | 12/11/14 15:01 |
| Bromomethane | ND | | 10.0 | 3.30 | µg/L | 10 | 12/11/14 15:01 |
| Carbon disulfide | ND | | 5.00 | 1.10 | µg/L | 10 | 12/11/14 15:01 |
| Carbon tetrachloride | ND | | 5.00 | 1.00 | µg/L | 10 | 12/11/14 15:01 |
| Chlorobenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 12/11/14 15:01 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value may exceed the Acceptable Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 12/17/14 8:19 700730 **Project Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | | | |
|---|---|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | | | **Lab ID:** | **K1412101-009A** |
| **Project:** | 189-02 | | | **Client Sample ID:** | ***189 - W9-12082014*** |
| **W Order:** | K1412101 | | | **Collection Date:** | 12/08/14 14:30 |
| **Matrix:** | GROUNDWATER | | | **Date Received:** | 12/10/14 10:00 |
| **Inst. ID:** | MS03_10 | **Sample Size** | 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-502.2 | **%Moisture:** | | **BatchNo:** | R27882 |
| **Revision:** | 12/17/14 8:17 | **TestCode:** | 8260W_CAL | **FileID:** | 1-SAMP-J8439.D |
| **Col Type:** | | | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260C/5030C** | | |
| Chloroethane | 7.20 | J | 10.0 | 3.30 | µg/L | 10 | 12/11/14 15:01 |
| Chloroform | ND | | 5.00 | 1.00 | µg/L | 10 | 12/11/14 15:01 |
| Chloromethane | ND | | 10.0 | 3.30 | µg/L | 10 | 12/11/14 15:01 |
| cis-1,2-Dichloroethene | 157 | | 5.00 | 1.00 | µg/L | 10 | 12/11/14 15:01 |
| cis-1,3-Dichloropropene | ND | | 5.00 | 1.60 | µg/L | 10 | 12/11/14 15:01 |
| Cyclohexane | ND | | 5.00 | 1.00 | µg/L | 10 | 12/11/14 15:01 |
| Dibromochloromethane | ND | | 5.00 | 1.00 | µg/L | 10 | 12/11/14 15:01 |
| Dibromomethane | ND | | 5.00 | 1.60 | µg/L | 10 | 12/11/14 15:01 |
| Dichlorodifluoromethane | ND | | 10.0 | 1.00 | µg/L | 10 | 12/11/14 15:01 |
| Ethylbenzene | 1.80 | J | 5.00 | 1.00 | µg/L | 10 | 12/11/14 15:01 |
| Hexachlorobutadiene | ND | | 10.0 | 1.00 | µg/L | 10 | 12/11/14 15:01 |
| Isopropylbenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 12/11/14 15:01 |
| Methyl tert-butyl ether | ND | | 10.0 | 1.60 | µg/L | 10 | 12/11/14 15:01 |
| Methylene chloride | 3.00 | J | 20.0 | 1.60 | µg/L | 10 | 12/11/14 15:01 |
| n-Propylbenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 12/11/14 15:01 |
| Naphthalene | ND | | 10.0 | 1.00 | µg/L | 10 | 12/11/14 15:01 |
| o-Xylene | ND | | 5.00 | 1.00 | µg/L | 10 | 12/11/14 15:01 |
| p-Isopropyltoluene | ND | | 5.00 | 1.60 | µg/L | 10 | 12/11/14 15:01 |
| sec-Butylbenzene | ND | | 5.00 | 1.60 | µg/L | 10 | 12/11/14 15:01 |
| Styrene | ND | | 5.00 | 1.00 | µg/L | 10 | 12/11/14 15:01 |
| Tetrachloroethene | 3.90 | J | 5.00 | 1.00 | µg/L | 10 | 12/11/14 15:01 |
| Toluene | ND | | 5.00 | 1.00 | µg/L | 10 | 12/11/14 15:01 |
| trans-1,2-Dichloroethene | 3.00 | J | 5.00 | 1.00 | µg/L | 10 | 12/11/14 15:01 |
| trans-1,3-Dichloropropene | ND | | 5.00 | 1.60 | µg/L | 10 | 12/11/14 15:01 |
| Trichloroethene | 189 | | 5.00 | 1.00 | µg/L | 10 | 12/11/14 15:01 |
| Trichlorofluoromethane | ND | | 10.0 | 1.00 | µg/L | 10 | 12/11/14 15:01 |
| Vinyl acetate | ND | | 20.0 | 10.0 | µg/L | 10 | 12/11/14 15:01 |
| Vinyl chloride | 166 | | 10.0 | 3.30 | µg/L | 10 | 12/11/14 15:01 |
| Xylenes (total) | ND | | 10.0 | 3.00 | µg/L | 10 | 12/11/14 15:01 |
| Surr: 1,2-Dichloroethane-d4 | 82 | | 75-130 | 1.60 | %REC | 10 | 12/11/14 15:01 |
| Surr: Toluene-d8 | 106 | | 75-125 | 1.00 | %REC | 10 | 12/11/14 15:01 |
| Surr: 4-Bromofluorobenzene | 101 | | 75-125 | 1.00 | %REC | 10 | 12/11/14 15:01 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value may exceed the Acceptable Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 12/17/14 8:19 700730 **Project Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1412101-010A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W10-12042014*** |
| **W Order:** | K1412101 | **Collection Date:** | 12/04/14 15:20 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 12/10/14 10:00 |
| **Inst. ID:** | MS03_10 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-502.2 | **%Moisture:** | **BatchNo:** R27882 |
| **Revision:** | 12/16/14 15:37 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-J8445.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260C/5030C** | | |
| (m+p)-Xylene | ND | | 1.00 | 0.20 | µg/L | 1 | 12/11/14 17:57 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 17:57 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 17:57 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 17:57 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 17:57 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 17:57 |
| 1,1-Dichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 17:57 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 17:57 |
| 1,2,3-Trichloropropane | ND | | 2.00 | 0.33 | µg/L | 1 | 12/11/14 17:57 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 0.10 | µg/L | 1 | 12/11/14 17:57 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 17:57 |
| 1,2-Dibromo-3-chloropropane | ND | | 5.00 | 1.00 | µg/L | 1 | 12/11/14 17:57 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 17:57 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 17:57 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 17:57 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 17:57 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 17:57 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 17:57 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 17:57 |
| 2-Butanone | ND | | 10.0 | 1.00 | µg/L | 1 | 12/11/14 17:57 |
| 2-Chloroethylvinyl ether | ND | | 5.00 | 2.50 | µg/L | 1 | 12/11/14 17:57 |
| 2-Hexanone | ND | | 5.00 | 1.00 | µg/L | 1 | 12/11/14 17:57 |
| 4-Chlorotoluene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 17:57 |
| 4-Methyl-2-pentanone | ND | | 5.00 | 1.00 | µg/L | 1 | 12/11/14 17:57 |
| Acetone | 5.21 | J | 10.0 | 1.00 | µg/L | 1 | 12/11/14 17:57 |
| Benzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 17:57 |
| Bromobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 17:57 |
| Bromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 17:57 |
| Bromodichloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 17:57 |
| Bromoform | ND | | 1.00 | 0.33 | µg/L | 1 | 12/11/14 17:57 |
| Bromomethane | ND | | 1.00 | 0.33 | µg/L | 1 | 12/11/14 17:57 |
| Carbon disulfide | ND | | 0.50 | 0.11 | µg/L | 1 | 12/11/14 17:57 |
| Carbon tetrachloride | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 17:57 |
| Chlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 17:57 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value may exceed the Acceptable Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

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East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1412101-010A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W10-12042014*** |
| **W Order:** | K1412101 | **Collection Date:** | 12/04/14 15:20 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 12/10/14 10:00 |
| **Inst. ID:** | MS03_10 **Sample Size** 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-502.2 **%Moisture:** | **BatchNo:** | R27882 |
| **Revision:** | 12/16/14 15:37 **TestCode:** 8260W_CAL | **FileID:** | 1-SAMP-J8445.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260C/5030C** | | |
| Chloroethane | ND | | 1.00 | 0.33 | µg/L | 1 | 12/11/14 17:57 |
| Chloroform | 0.58 | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 17:57 |
| Chloromethane | ND | | 1.00 | 0.33 | µg/L | 1 | 12/11/14 17:57 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 17:57 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 17:57 |
| Cyclohexane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 17:57 |
| Dibromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 17:57 |
| Dibromomethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 17:57 |
| Dichlorodifluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 12/11/14 17:57 |
| Ethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 17:57 |
| Hexachlorobutadiene | ND | | 1.00 | 0.10 | µg/L | 1 | 12/11/14 17:57 |
| Isopropylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 17:57 |
| Methyl tert-butyl ether | ND | | 1.00 | 0.16 | µg/L | 1 | 12/11/14 17:57 |
| Methylene chloride | ND | | 2.00 | 0.16 | µg/L | 1 | 12/11/14 17:57 |
| n-Propylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 17:57 |
| Naphthalene | ND | | 1.00 | 0.10 | µg/L | 1 | 12/11/14 17:57 |
| o-Xylene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 17:57 |
| p-Isopropyltoluene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 17:57 |
| sec-Butylbenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 17:57 |
| Styrene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 17:57 |
| Tetrachloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 17:57 |
| Toluene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 17:57 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 17:57 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 17:57 |
| Trichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 17:57 |
| Trichlorofluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 12/11/14 17:57 |
| Vinyl acetate | ND | | 2.00 | 1.00 | µg/L | 1 | 12/11/14 17:57 |
| Vinyl chloride | ND | | 1.00 | 0.33 | µg/L | 1 | 12/11/14 17:57 |
| Xylenes (total) | ND | | 1.00 | 0.30 | µg/L | 1 | 12/11/14 17:57 |
| Surr: 1,2-Dichloroethane-d4 | 98 | | 75-130 | 0.16 | %REC | 1 | 12/11/14 17:57 |
| Surr: Toluene-d8 | 100 | | 75-125 | 0.10 | %REC | 1 | 12/11/14 17:57 |
| Surr: 4-Bromofluorobenzene | 94 | | 75-125 | 0.10 | %REC | 1 | 12/11/14 17:57 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value may exceed the Acceptable Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

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East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1412101-011A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W11-12042014* |
| **W Order:** | K1412101 | **Collection Date:** | 12/04/14 14:30 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 12/10/14 10:00 |
| **Inst. ID:** | MS03_10 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-502.2 | **%Moisture:** | **BatchNo:** R27882 |
| **Revision:** | 12/16/14 15:37 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-J8446.D |
| **Col Type:** | TOTAL 0.59 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260C/5030C** | | |
| (m+p)-Xylene | ND | | 1.00 | 0.20 | µg/L | 1 | 12/11/14 18:27 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 18:27 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 18:27 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 18:27 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 18:27 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 18:27 |
| 1,1-Dichloroethane | 0.48 | J | 0.50 | 0.10 | µg/L | 1 | 12/11/14 18:27 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 18:27 |
| 1,2,3-Trichloropropane | ND | | 2.00 | 0.33 | µg/L | 1 | 12/11/14 18:27 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 0.10 | µg/L | 1 | 12/11/14 18:27 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 18:27 |
| 1,2-Dibromo-3-chloropropane | ND | | 5.00 | 1.00 | µg/L | 1 | 12/11/14 18:27 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 18:27 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 18:27 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 18:27 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 18:27 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 18:27 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 18:27 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 18:27 |
| 2-Butanone | ND | | 10.0 | 1.00 | µg/L | 1 | 12/11/14 18:27 |
| 2-Chloroethylvinyl ether | ND | | 5.00 | 2.50 | µg/L | 1 | 12/11/14 18:27 |
| 2-Hexanone | ND | | 5.00 | 1.00 | µg/L | 1 | 12/11/14 18:27 |
| 4-Chlorotoluene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 18:27 |
| 4-Methyl-2-pentanone | ND | | 5.00 | 1.00 | µg/L | 1 | 12/11/14 18:27 |
| Acetone | ND | | 10.0 | 1.00 | µg/L | 1 | 12/11/14 18:27 |
| Benzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 18:27 |
| Bromobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 18:27 |
| Bromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 18:27 |
| Bromodichloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 18:27 |
| Bromoform | ND | | 1.00 | 0.33 | µg/L | 1 | 12/11/14 18:27 |
| Bromomethane | ND | | 1.00 | 0.33 | µg/L | 1 | 12/11/14 18:27 |
| Carbon disulfide | ND | | 0.50 | 0.11 | µg/L | 1 | 12/11/14 18:27 |
| Carbon tetrachloride | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 18:27 |
| Chlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 18:27 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value may exceed the Acceptable Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 12/16/14 15:46 700736 **Project Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

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East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1412101-011A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W11-12042014*** |
| **W Order:** | K1412101 | **Collection Date:** | 12/04/14 14:30 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 12/10/14 10:00 |
| **Inst. ID:** | MS03_10 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-502.2 | **%Moisture:** | **BatchNo:** R27882 |
| **Revision:** | 12/16/14 15:37 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-J8446.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260C/5030C** | | |
| Chloroethane | ND | | 1.00 | 0.33 | µg/L | 1 | 12/11/14 18:27 |
| Chloroform | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 18:27 |
| Chloromethane | ND | | 1.00 | 0.33 | µg/L | 1 | 12/11/14 18:27 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 18:27 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 18:27 |
| Cyclohexane | 0.11 | J | 0.50 | 0.10 | µg/L | 1 | 12/11/14 18:27 |
| Dibromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 18:27 |
| Dibromomethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 18:27 |
| Dichlorodifluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 12/11/14 18:27 |
| Ethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 18:27 |
| Hexachlorobutadiene | ND | | 1.00 | 0.10 | µg/L | 1 | 12/11/14 18:27 |
| Isopropylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 18:27 |
| Methyl tert-butyl ether | ND | | 1.00 | 0.16 | µg/L | 1 | 12/11/14 18:27 |
| Methylene chloride | ND | | 2.00 | 0.16 | µg/L | 1 | 12/11/14 18:27 |
| n-Propylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 18:27 |
| Naphthalene | ND | | 1.00 | 0.10 | µg/L | 1 | 12/11/14 18:27 |
| o-Xylene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 18:27 |
| p-Isopropyltoluene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 18:27 |
| sec-Butylbenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 18:27 |
| Styrene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 18:27 |
| Tetrachloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 18:27 |
| Toluene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 18:27 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 18:27 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 18:27 |
| Trichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 18:27 |
| Trichlorofluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 12/11/14 18:27 |
| Vinyl acetate | ND | | 2.00 | 1.00 | µg/L | 1 | 12/11/14 18:27 |
| Vinyl chloride | ND | | 1.00 | 0.33 | µg/L | 1 | 12/11/14 18:27 |
| Xylenes (total) | ND | | 1.00 | 0.30 | µg/L | 1 | 12/11/14 18:27 |
| Surr: 1,2-Dichloroethane-d4 | 98 | | 75-130 | 0.16 | %REC | 1 | 12/11/14 18:27 |
| Surr: Toluene-d8 | 102 | | 75-125 | 0.10 | %REC | 1 | 12/11/14 18:27 |
| Surr: 4-Bromofluorobenzene | 95 | | 75-125 | 0.10 | %REC | 1 | 12/11/14 18:27 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value may exceed the Acceptable Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 12/16/14 15:46 700736 **Project Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

**CLIENT** Ken W. Kloeber Consulting Engineers
**Project:** 189-02
**W Order:** K1412101
**Matrix:** GROUNDWATER
**Inst. ID:** MS03_10 **Sample Size** 10 mL
**ColumnID:** Rtx-502.2 **%Moisture:**
**Revision:** 12/16/14 15:37 **TestCode:** 8260W_CAL
**Col Type:** TOTAL 225.48

**Lab ID:** K1412101-012A
**Client Sample ID:** *189 - W12-12042014*
**Collection Date:** 12/04/14 14:50
**Date Received:** 12/10/14 10:00
**PrepDate:**
**BatchNo:** R27882
**FileID:** 1-SAMP-J8447.D

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260C/5030C** | | |
| (m+p)-Xylene | ND | | 2.00 | 0.40 | µg/L | 2 | 12/11/14 18:56 |
| 1,1,1,2-Tetrachloroethane | ND | | 1.00 | 0.32 | µg/L | 2 | 12/11/14 18:56 |
| 1,1,1-Trichloroethane | ND | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 18:56 |
| 1,1,2,2-Tetrachloroethane | ND | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 18:56 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 18:56 |
| 1,1,2-Trichloroethane | ND | | 1.00 | 0.32 | µg/L | 2 | 12/11/14 18:56 |
| 1,1-Dichloroethane | 81.8 | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 18:56 |
| 1,1-Dichloroethene | 0.60 | J | 1.00 | 0.32 | µg/L | 2 | 12/11/14 18:56 |
| 1,2,3-Trichloropropane | ND | | 4.00 | 0.66 | µg/L | 2 | 12/11/14 18:56 |
| 1,2,4-Trichlorobenzene | ND | | 2.00 | 0.20 | µg/L | 2 | 12/11/14 18:56 |
| 1,2,4-Trimethylbenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 18:56 |
| 1,2-Dibromo-3-chloropropane | ND | | 10.0 | 2.00 | µg/L | 2 | 12/11/14 18:56 |
| 1,2-Dibromoethane | ND | | 1.00 | 0.32 | µg/L | 2 | 12/11/14 18:56 |
| 1,2-Dichlorobenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 18:56 |
| 1,2-Dichloroethane | 4.00 | | 1.00 | 0.32 | µg/L | 2 | 12/11/14 18:56 |
| 1,2-Dichloropropane | ND | | 1.00 | 0.32 | µg/L | 2 | 12/11/14 18:56 |
| 1,3,5-Trimethylbenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 18:56 |
| 1,3-Dichlorobenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 18:56 |
| 1,4-Dichlorobenzene | ND | | 1.00 | 0.32 | µg/L | 2 | 12/11/14 18:56 |
| 2-Butanone | ND | | 20.0 | 2.00 | µg/L | 2 | 12/11/14 18:56 |
| 2-Chloroethylvinyl ether | ND | | 10.0 | 5.00 | µg/L | 2 | 12/11/14 18:56 |
| 2-Hexanone | ND | | 10.0 | 2.00 | µg/L | 2 | 12/11/14 18:56 |
| 4-Chlorotoluene | ND | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 18:56 |
| 4-Methyl-2-pentanone | ND | | 10.0 | 2.00 | µg/L | 2 | 12/11/14 18:56 |
| Acetone | ND | | 20.0 | 2.00 | µg/L | 2 | 12/11/14 18:56 |
| Benzene | ND | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 18:56 |
| Bromobenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 18:56 |
| Bromochloromethane | ND | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 18:56 |
| Bromodichloromethane | ND | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 18:56 |
| Bromoform | ND | | 2.00 | 0.66 | µg/L | 2 | 12/11/14 18:56 |
| Bromomethane | ND | | 2.00 | 0.66 | µg/L | 2 | 12/11/14 18:56 |
| Carbon disulfide | ND | | 1.00 | 0.22 | µg/L | 2 | 12/11/14 18:56 |
| Carbon tetrachloride | ND | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 18:56 |
| Chlorobenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 18:56 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value may exceed the Acceptable Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 12/16/14 15:46 700737 **Project Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1412101-012A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W12-12042014*** |
| **W Order:** | K1412101 | **Collection Date:** | 12/04/14 14:50 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 12/10/14 10:00 |
| **Inst. ID:** | MS03_10 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-502.2 | **%Moisture:** | **BatchNo:** R27882 |
| **Revision:** | 12/16/14 15:37 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-J8447.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260C/5030C** | | |
| Chloroethane | 9.48 | | 2.00 | 0.66 | µg/L | 2 | 12/11/14 18:56 |
| Chloroform | ND | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 18:56 |
| Chloromethane | ND | | 2.00 | 0.66 | µg/L | 2 | 12/11/14 18:56 |
| cis-1,2-Dichloroethene | 18.9 | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 18:56 |
| cis-1,3-Dichloropropene | ND | | 1.00 | 0.32 | µg/L | 2 | 12/11/14 18:56 |
| Cyclohexane | 0.36 | J | 1.00 | 0.20 | µg/L | 2 | 12/11/14 18:56 |
| Dibromochloromethane | ND | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 18:56 |
| Dibromomethane | ND | | 1.00 | 0.32 | µg/L | 2 | 12/11/14 18:56 |
| Dichlorodifluoromethane | ND | | 2.00 | 0.20 | µg/L | 2 | 12/11/14 18:56 |
| Ethylbenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 18:56 |
| Hexachlorobutadiene | ND | | 2.00 | 0.20 | µg/L | 2 | 12/11/14 18:56 |
| Isopropylbenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 18:56 |
| Methyl tert-butyl ether | ND | | 2.00 | 0.32 | µg/L | 2 | 12/11/14 18:56 |
| Methylene chloride | 1.34 | J | 4.00 | 0.32 | µg/L | 2 | 12/11/14 18:56 |
| n-Propylbenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 18:56 |
| Naphthalene | ND | | 2.00 | 0.20 | µg/L | 2 | 12/11/14 18:56 |
| o-Xylene | ND | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 18:56 |
| p-Isopropyltoluene | ND | | 1.00 | 0.32 | µg/L | 2 | 12/11/14 18:56 |
| sec-Butylbenzene | ND | | 1.00 | 0.32 | µg/L | 2 | 12/11/14 18:56 |
| Styrene | ND | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 18:56 |
| Tetrachloroethene | ND | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 18:56 |
| Toluene | ND | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 18:56 |
| trans-1,2-Dichloroethene | ND | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 18:56 |
| trans-1,3-Dichloropropene | ND | | 1.00 | 0.32 | µg/L | 2 | 12/11/14 18:56 |
| Trichloroethene | ND | | 1.00 | 0.20 | µg/L | 2 | 12/11/14 18:56 |
| Trichlorofluoromethane | ND | | 2.00 | 0.20 | µg/L | 2 | 12/11/14 18:56 |
| Vinyl acetate | ND | | 4.00 | 2.00 | µg/L | 2 | 12/11/14 18:56 |
| Vinyl chloride | 109 | | 2.00 | 0.66 | µg/L | 2 | 12/11/14 18:56 |
| Xylenes (total) | ND | | 2.00 | 0.60 | µg/L | 2 | 12/11/14 18:56 |
| Surr: 1,2-Dichloroethane-d4 | 95 | | 75-130 | 0.32 | %REC | 2 | 12/11/14 18:56 |
| Surr: Toluene-d8 | 104 | | 75-125 | 0.20 | %REC | 2 | 12/11/14 18:56 |
| Surr: 4-Bromofluorobenzene | 96 | | 75-125 | 0.20 | %REC | 2 | 12/11/14 18:56 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value may exceed the Acceptable Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 12/16/14 15:46 700737 **Project Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1412101-013A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W13-12042014*** |
| **W Order:** | K1412101 | **Collection Date:** | 12/04/14 15:00 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 12/10/14 10:00 |
| **Inst. ID:** | MS03_10 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-502.2 | **%Moisture:** | **BatchNo:** R27882 |
| **Revision:** | 12/16/14 15:37 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-J8448.D |
| **Col Type:** | TOTAL 0.51 | MW-11? MISLABELED IN FIELD | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260C/5030C** | | |
| (m+p)-Xylene | ND | | 1.00 | 0.20 | µg/L | 1 | 12/11/14 19:26 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 19:26 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 19:26 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 19:26 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 19:26 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 19:26 |
| 1,1-Dichloroethane | 0.16 | J | 0.50 | 0.10 | µg/L | 1 | 12/11/14 19:26 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 19:26 |
| 1,2,3-Trichloropropane | ND | | 2.00 | 0.33 | µg/L | 1 | 12/11/14 19:26 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 0.10 | µg/L | 1 | 12/11/14 19:26 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 19:26 |
| 1,2-Dibromo-3-chloropropane | ND | | 5.00 | 1.00 | µg/L | 1 | 12/11/14 19:26 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 19:26 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 19:26 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 19:26 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 19:26 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 19:26 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 19:26 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 19:26 |
| 2-Butanone | ND | | 10.0 | 1.00 | µg/L | 1 | 12/11/14 19:26 |
| 2-Chloroethylvinyl ether | ND | | 5.00 | 2.50 | µg/L | 1 | 12/11/14 19:26 |
| 2-Hexanone | ND | | 5.00 | 1.00 | µg/L | 1 | 12/11/14 19:26 |
| 4-Chlorotoluene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 19:26 |
| 4-Methyl-2-pentanone | ND | | 5.00 | 1.00 | µg/L | 1 | 12/11/14 19:26 |
| Acetone | ND | | 10.0 | 1.00 | µg/L | 1 | 12/11/14 19:26 |
| Benzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 19:26 |
| Bromobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 19:26 |
| Bromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 19:26 |
| Bromodichloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 19:26 |
| Bromoform | ND | | 1.00 | 0.33 | µg/L | 1 | 12/11/14 19:26 |
| Bromomethane | ND | | 1.00 | 0.33 | µg/L | 1 | 12/11/14 19:26 |
| Carbon disulfide | ND | | 0.50 | 0.11 | µg/L | 1 | 12/11/14 19:26 |
| Carbon tetrachloride | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 19:26 |
| Chlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 19:26 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value may exceed the Acceptable Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 12/16/14 15:46 700738 **Project Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1412101-013A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W13-12042014*** |
| **W Order:** | K1412101 | **Collection Date:** | 12/04/14 15:00 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 12/10/14 10:00 |
| **Inst. ID:** | MS03_10 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-502.2 | **%Moisture:** | **BatchNo:** R27882 |
| **Revision:** | 12/16/14 15:37 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-J8448.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260C/5030C** | | |
| Chloroethane | ND | | 1.00 | 0.33 | µg/L | 1 | 12/11/14 19:26 |
| Chloroform | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 19:26 |
| Chloromethane | ND | | 1.00 | 0.33 | µg/L | 1 | 12/11/14 19:26 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 19:26 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 19:26 |
| Cyclohexane | 0.35 | J | 0.50 | 0.10 | µg/L | 1 | 12/11/14 19:26 |
| Dibromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 19:26 |
| Dibromomethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 19:26 |
| Dichlorodifluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 12/11/14 19:26 |
| Ethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 19:26 |
| Hexachlorobutadiene | ND | | 1.00 | 0.10 | µg/L | 1 | 12/11/14 19:26 |
| Isopropylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 19:26 |
| Methyl tert-butyl ether | ND | | 1.00 | 0.16 | µg/L | 1 | 12/11/14 19:26 |
| Methylene chloride | ND | | 2.00 | 0.16 | µg/L | 1 | 12/11/14 19:26 |
| n-Propylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 19:26 |
| Naphthalene | ND | | 1.00 | 0.10 | µg/L | 1 | 12/11/14 19:26 |
| o-Xylene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 19:26 |
| p-Isopropyltoluene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 19:26 |
| sec-Butylbenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 19:26 |
| Styrene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 19:26 |
| Tetrachloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 19:26 |
| Toluene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 19:26 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 19:26 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 19:26 |
| Trichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 19:26 |
| Trichlorofluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 12/11/14 19:26 |
| Vinyl acetate | ND | | 2.00 | 1.00 | µg/L | 1 | 12/11/14 19:26 |
| Vinyl chloride | ND | | 1.00 | 0.33 | µg/L | 1 | 12/11/14 19:26 |
| Xylenes (total) | ND | | 1.00 | 0.30 | µg/L | 1 | 12/11/14 19:26 |
| Surr: 1,2-Dichloroethane-d4 | 96 | | 75-130 | 0.16 | %REC | 1 | 12/11/14 19:26 |
| Surr: Toluene-d8 | 101 | | 75-125 | 0.10 | %REC | 1 | 12/11/14 19:26 |
| Surr: 4-Bromofluorobenzene | 99 | | 75-125 | 0.10 | %REC | 1 | 12/11/14 19:26 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value may exceed the Acceptable Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 12/16/14 15:46 700738 **Project Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | | | |
|---|---|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | | | **Lab ID:** | **K1412101-014A** |
| **Project:** | 189-02 | | | **Client Sample ID:** | ***189 - W14-12042014*** |
| **W Order:** | K1412101 | | | **Collection Date:** | 12/04/14 15:30 |
| **Matrix:** | GROUNDWATER | | | **Date Received:** | 12/10/14 10:00 |
| **Inst. ID:** | MS03_10 | **Sample Size** | 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-502.2 | **%Moisture:** | | **BatchNo:** | R27883 |
| **Revision:** | 12/16/14 15:40 | **TestCode:** | 8260W_CAL | **FileID:** | 1-SAMP-J8477.D |
| **Col Type:** | | | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260C/5030C** | | |
| (m+p)-Xylene | 11.0 | J | 50.0 | 10.0 | µg/L | 50 | 12/12/14 16:26 |
| 1,1,1,2-Tetrachloroethane | ND | | 25.0 | 8.00 | µg/L | 50 | 12/12/14 16:26 |
| 1,1,1-Trichloroethane | 3500 | | 25.0 | 5.00 | µg/L | 50 | 12/12/14 16:26 |
| 1,1,2,2-Tetrachloroethane | ND | | 25.0 | 5.00 | µg/L | 50 | 12/12/14 16:26 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 1220 | | 25.0 | 5.00 | µg/L | 50 | 12/12/14 16:26 |
| 1,1,2-Trichloroethane | ND | | 25.0 | 8.00 | µg/L | 50 | 12/12/14 16:26 |
| 1,1-Dichloroethane | 2670 | | 25.0 | 5.00 | µg/L | 50 | 12/12/14 16:26 |
| 1,1-Dichloroethene | 59.0 | | 25.0 | 8.00 | µg/L | 50 | 12/12/14 16:26 |
| 1,2,3-Trichloropropane | ND | | 100 | 16.5 | µg/L | 50 | 12/12/14 16:26 |
| 1,2,4-Trichlorobenzene | ND | | 50.0 | 5.00 | µg/L | 50 | 12/12/14 16:26 |
| 1,2,4-Trimethylbenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/12/14 16:26 |
| 1,2-Dibromo-3-chloropropane | ND | | 250 | 50.0 | µg/L | 50 | 12/12/14 16:26 |
| 1,2-Dibromoethane | ND | | 25.0 | 8.00 | µg/L | 50 | 12/12/14 16:26 |
| 1,2-Dichlorobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/12/14 16:26 |
| 1,2-Dichloroethane | ND | | 25.0 | 8.00 | µg/L | 50 | 12/12/14 16:26 |
| 1,2-Dichloropropane | ND | | 25.0 | 8.00 | µg/L | 50 | 12/12/14 16:26 |
| 1,3,5-Trimethylbenzene | 5.50 | J | 25.0 | 5.00 | µg/L | 50 | 12/12/14 16:26 |
| 1,3-Dichlorobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/12/14 16:26 |
| 1,4-Dichlorobenzene | ND | | 25.0 | 8.00 | µg/L | 50 | 12/12/14 16:26 |
| 2-Butanone | ND | | 500 | 50.0 | µg/L | 50 | 12/12/14 16:26 |
| 2-Chloroethylvinyl ether | ND | | 250 | 125 | µg/L | 50 | 12/12/14 16:26 |
| 2-Hexanone | ND | | 250 | 50.0 | µg/L | 50 | 12/12/14 16:26 |
| 4-Chlorotoluene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/12/14 16:26 |
| 4-Methyl-2-pentanone | ND | | 250 | 50.0 | µg/L | 50 | 12/12/14 16:26 |
| Acetone | ND | | 500 | 50.0 | µg/L | 50 | 12/12/14 16:26 |
| Benzene | 26.5 | | 25.0 | 5.00 | µg/L | 50 | 12/12/14 16:26 |
| Bromobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/12/14 16:26 |
| Bromochloromethane | ND | | 25.0 | 5.00 | µg/L | 50 | 12/12/14 16:26 |
| Bromodichloromethane | ND | | 25.0 | 5.00 | µg/L | 50 | 12/12/14 16:26 |
| Bromoform | ND | | 50.0 | 16.5 | µg/L | 50 | 12/12/14 16:26 |
| Bromomethane | ND | | 50.0 | 16.5 | µg/L | 50 | 12/12/14 16:26 |
| Carbon disulfide | ND | | 25.0 | 5.50 | µg/L | 50 | 12/12/14 16:26 |
| Carbon tetrachloride | ND | | 25.0 | 5.00 | µg/L | 50 | 12/12/14 16:26 |
| Chlorobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/12/14 16:26 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value may exceed the Acceptable Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

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East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1412101-014A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W14-12042014*** |
| **W Order:** | K1412101 | **Collection Date:** | 12/04/14 15:30 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 12/10/14 10:00 |
| **Inst. ID:** | MS03_10 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-502.2 | **%Moisture:** | **BatchNo:** R27883 |
| **Revision:** | 12/16/14 15:40 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-J8477.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260C/5030C** | | |
| Chloroethane | ND | | 50.0 | 16.5 | µg/L | 50 | 12/12/14 16:26 |
| Chloroform | ND | | 25.0 | 5.00 | µg/L | 50 | 12/12/14 16:26 |
| Chloromethane | 36.0 | J | 50.0 | 16.5 | µg/L | 50 | 12/12/14 16:26 |
| cis-1,2-Dichloroethene | 134 | | 25.0 | 5.00 | µg/L | 50 | 12/12/14 16:26 |
| cis-1,3-Dichloropropene | ND | | 25.0 | 8.00 | µg/L | 50 | 12/12/14 16:26 |
| Cyclohexane | 118 | | 25.0 | 5.00 | µg/L | 50 | 12/12/14 16:26 |
| Dibromochloromethane | ND | | 25.0 | 5.00 | µg/L | 50 | 12/12/14 16:26 |
| Dibromomethane | ND | | 25.0 | 8.00 | µg/L | 50 | 12/12/14 16:26 |
| Dichlorodifluoromethane | ND | | 50.0 | 5.00 | µg/L | 50 | 12/12/14 16:26 |
| Ethylbenzene | 8.50 | J | 25.0 | 5.00 | µg/L | 50 | 12/12/14 16:26 |
| Hexachlorobutadiene | ND | | 50.0 | 5.00 | µg/L | 50 | 12/12/14 16:26 |
| Isopropylbenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/12/14 16:26 |
| Methyl tert-butyl ether | ND | | 50.0 | 8.00 | µg/L | 50 | 12/12/14 16:26 |
| Methylene chloride | ND | | 100 | 8.00 | µg/L | 50 | 12/12/14 16:26 |
| n-Propylbenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/12/14 16:26 |
| Naphthalene | ND | | 50.0 | 5.00 | µg/L | 50 | 12/12/14 16:26 |
| o-Xylene | 11.5 | J | 25.0 | 5.00 | µg/L | 50 | 12/12/14 16:26 |
| p-Isopropyltoluene | ND | | 25.0 | 8.00 | µg/L | 50 | 12/12/14 16:26 |
| sec-Butylbenzene | ND | | 25.0 | 8.00 | µg/L | 50 | 12/12/14 16:26 |
| Styrene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/12/14 16:26 |
| Tetrachloroethene | 132 | | 25.0 | 5.00 | µg/L | 50 | 12/12/14 16:26 |
| Toluene | 21.0 | J | 25.0 | 5.00 | µg/L | 50 | 12/12/14 16:26 |
| trans-1,2-Dichloroethene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/12/14 16:26 |
| trans-1,3-Dichloropropene | ND | | 25.0 | 8.00 | µg/L | 50 | 12/12/14 16:26 |
| Trichloroethene | 17.0 | J | 25.0 | 5.00 | µg/L | 50 | 12/12/14 16:26 |
| Trichlorofluoromethane | ND | | 50.0 | 5.00 | µg/L | 50 | 12/12/14 16:26 |
| Vinyl acetate | ND | | 100 | 50.0 | µg/L | 50 | 12/12/14 16:26 |
| Vinyl chloride | 35.5 | J | 50.0 | 16.5 | µg/L | 50 | 12/12/14 16:26 |
| Xylenes (total) | 22.5 | J | 50.0 | 15.0 | µg/L | 50 | 12/12/14 16:26 |
| Surr: 1,2-Dichloroethane-d4 | 95 | | 75-130 | 8.00 | %REC | 50 | 12/12/14 16:26 |
| Surr: Toluene-d8 | 105 | | 75-125 | 5.00 | %REC | 50 | 12/12/14 16:26 |
| Surr: 4-Bromofluorobenzene | 92 | | 75-125 | 5.00 | %REC | 50 | 12/12/14 16:26 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value may exceed the Acceptable Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 12/16/14 15:46 700747 **Project Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1412101-015A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - BDUP-12082014*** |
| **W Order:** | K1412101 | **Collection Date:** | 12/08/14 12:00 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 12/10/14 10:00 |
| **Inst. ID:** | MS03_10 **Sample Size** 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-502.2 **%Moisture:** | **BatchNo:** | R27884 |
| **Revision:** | 12/16/14 15:44 **TestCode:** 8260W_CAL | **FileID:** | 1-SAMP-J8530.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260C/5030C** | | |
| (m+p)-Xylene | ND | | 5.00 | 1.00 | µg/L | 5 | 12/15/14 13:43 |
| 1,1,1,2-Tetrachloroethane | ND | | 2.50 | 0.80 | µg/L | 5 | 12/15/14 13:43 |
| 1,1,1-Trichloroethane | 40.7 | | 2.50 | 0.50 | µg/L | 5 | 12/15/14 13:43 |
| 1,1,2,2-Tetrachloroethane | ND | | 2.50 | 0.50 | µg/L | 5 | 12/15/14 13:43 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 0.55 | J | 2.50 | 0.50 | µg/L | 5 | 12/15/14 13:43 |
| 1,1,2-Trichloroethane | ND | | 2.50 | 0.80 | µg/L | 5 | 12/15/14 13:43 |
| 1,1-Dichloroethane | 65.0 | | 2.50 | 0.50 | µg/L | 5 | 12/15/14 13:43 |
| 1,1-Dichloroethene | ND | | 2.50 | 0.80 | µg/L | 5 | 12/15/14 13:43 |
| 1,2,3-Trichloropropane | ND | | 10.0 | 1.65 | µg/L | 5 | 12/15/14 13:43 |
| 1,2,4-Trichlorobenzene | ND | | 5.00 | 0.50 | µg/L | 5 | 12/15/14 13:43 |
| 1,2,4-Trimethylbenzene | 5.20 | | 2.50 | 0.50 | µg/L | 5 | 12/15/14 13:43 |
| 1,2-Dibromo-3-chloropropane | ND | | 25.0 | 5.00 | µg/L | 5 | 12/15/14 13:43 |
| 1,2-Dibromoethane | ND | | 2.50 | 0.80 | µg/L | 5 | 12/15/14 13:43 |
| 1,2-Dichlorobenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 12/15/14 13:43 |
| 1,2-Dichloroethane | 2.10 | J | 2.50 | 0.80 | µg/L | 5 | 12/15/14 13:43 |
| 1,2-Dichloropropane | ND | | 2.50 | 0.80 | µg/L | 5 | 12/15/14 13:43 |
| 1,3,5-Trimethylbenzene | 0.80 | J | 2.50 | 0.50 | µg/L | 5 | 12/15/14 13:43 |
| 1,3-Dichlorobenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 12/15/14 13:43 |
| 1,4-Dichlorobenzene | ND | | 2.50 | 0.80 | µg/L | 5 | 12/15/14 13:43 |
| 2-Butanone | ND | | 50.0 | 5.00 | µg/L | 5 | 12/15/14 13:43 |
| 2-Chloroethylvinyl ether | ND | | 25.0 | 12.5 | µg/L | 5 | 12/15/14 13:43 |
| 2-Hexanone | ND | | 25.0 | 5.00 | µg/L | 5 | 12/15/14 13:43 |
| 4-Chlorotoluene | ND | | 2.50 | 0.50 | µg/L | 5 | 12/15/14 13:43 |
| 4-Methyl-2-pentanone | ND | | 25.0 | 5.00 | µg/L | 5 | 12/15/14 13:43 |
| Acetone | ND | | 50.0 | 5.00 | µg/L | 5 | 12/15/14 13:43 |
| Benzene | ND | | 2.50 | 0.50 | µg/L | 5 | 12/15/14 13:43 |
| Bromobenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 12/15/14 13:43 |
| Bromochloromethane | ND | | 2.50 | 0.50 | µg/L | 5 | 12/15/14 13:43 |
| Bromodichloromethane | ND | | 2.50 | 0.50 | µg/L | 5 | 12/15/14 13:43 |
| Bromoform | ND | | 5.00 | 1.65 | µg/L | 5 | 12/15/14 13:43 |
| Bromomethane | ND | | 5.00 | 1.65 | µg/L | 5 | 12/15/14 13:43 |
| Carbon disulfide | ND | | 2.50 | 0.55 | µg/L | 5 | 12/15/14 13:43 |
| Carbon tetrachloride | ND | | 2.50 | 0.50 | µg/L | 5 | 12/15/14 13:43 |
| Chlorobenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 12/15/14 13:43 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value may exceed the Acceptable Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 12/17/14 10:14 700802 **Project Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1412101-015A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - BDUP-12082014*** |
| **W Order:** | K1412101 | **Collection Date:** | 12/08/14 12:00 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 12/10/14 10:00 |
| **Inst. ID:** | MS03_10 **Sample Size** 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-502.2 **%Moisture:** | **BatchNo:** | R27884 |
| **Revision:** | 12/16/14 15:44 **TestCode:** 8260W_CAL | **FileID:** | 1-SAMP-J8530.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260C/5030C** | | |
| Chloroethane | 1.65 | J | 5.00 | 1.65 | µg/L | 5 | 12/15/14 13:43 |
| Chloroform | ND | | 2.50 | 0.50 | µg/L | 5 | 12/15/14 13:43 |
| Chloromethane | ND | | 5.00 | 1.65 | µg/L | 5 | 12/15/14 13:43 |
| cis-1,2-Dichloroethene | 38.7 | | 2.50 | 0.50 | µg/L | 5 | 12/15/14 13:43 |
| cis-1,3-Dichloropropene | ND | | 2.50 | 0.80 | µg/L | 5 | 12/15/14 13:43 |
| Cyclohexane | ND | | 2.50 | 0.50 | µg/L | 5 | 12/15/14 13:43 |
| Dibromochloromethane | ND | | 2.50 | 0.50 | µg/L | 5 | 12/15/14 13:43 |
| Dibromomethane | ND | | 2.50 | 0.80 | µg/L | 5 | 12/15/14 13:43 |
| Dichlorodifluoromethane | ND | | 5.00 | 0.50 | µg/L | 5 | 12/15/14 13:43 |
| Ethylbenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 12/15/14 13:43 |
| Hexachlorobutadiene | ND | | 5.00 | 0.50 | µg/L | 5 | 12/15/14 13:43 |
| Isopropylbenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 12/15/14 13:43 |
| Methyl tert-butyl ether | ND | | 5.00 | 0.80 | µg/L | 5 | 12/15/14 13:43 |
| Methylene chloride | ND | | 10.0 | 0.80 | µg/L | 5 | 12/15/14 13:43 |
| n-Propylbenzene | 0.90 | J | 2.50 | 0.50 | µg/L | 5 | 12/15/14 13:43 |
| Naphthalene | ND | | 5.00 | 0.50 | µg/L | 5 | 12/15/14 13:43 |
| o-Xylene | 1.15 | J | 2.50 | 0.50 | µg/L | 5 | 12/15/14 13:43 |
| p-Isopropyltoluene | ND | | 2.50 | 0.80 | µg/L | 5 | 12/15/14 13:43 |
| sec-Butylbenzene | ND | | 2.50 | 0.80 | µg/L | 5 | 12/15/14 13:43 |
| Styrene | ND | | 2.50 | 0.50 | µg/L | 5 | 12/15/14 13:43 |
| Tetrachloroethene | ND | | 2.50 | 0.50 | µg/L | 5 | 12/15/14 13:43 |
| Toluene | 0.70 | J | 2.50 | 0.50 | µg/L | 5 | 12/15/14 13:43 |
| trans-1,2-Dichloroethene | ND | | 2.50 | 0.50 | µg/L | 5 | 12/15/14 13:43 |
| trans-1,3-Dichloropropene | ND | | 2.50 | 0.80 | µg/L | 5 | 12/15/14 13:43 |
| Trichloroethene | 3.20 | | 2.50 | 0.50 | µg/L | 5 | 12/15/14 13:43 |
| Trichlorofluoromethane | ND | | 5.00 | 0.50 | µg/L | 5 | 12/15/14 13:43 |
| Vinyl acetate | ND | | 10.0 | 5.00 | µg/L | 5 | 12/15/14 13:43 |
| Vinyl chloride | 15.0 | | 5.00 | 1.65 | µg/L | 5 | 12/15/14 13:43 |
| Xylenes (total) | ND | | 5.00 | 1.50 | µg/L | 5 | 12/15/14 13:43 |
| Surr: 1,2-Dichloroethane-d4 | 97 | | 75-130 | 0.80 | %REC | 5 | 12/15/14 13:43 |
| Surr: Toluene-d8 | 98 | | 75-125 | 0.50 | %REC | 5 | 12/15/14 13:43 |
| Surr: 4-Bromofluorobenzene | 86 | | 75-125 | 0.50 | %REC | 5 | 12/15/14 13:43 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value may exceed the Acceptable Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 12/17/14 10:06 700802 **Project Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | | | |
|---|---|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | | | **Lab ID:** | **K1412101-016A** |
| **Project:** | 189-02 | | | **Client Sample ID:** | ***189 -TBL-12012014*** |
| **W Order:** | K1412101 | | | **Collection Date:** | 12/01/14 0:00 |
| **Matrix:** | TRIP BLANK | | | **Date Received:** | 12/10/14 10:00 |
| **Inst. ID:** | MS03_10 | **Sample Size** | 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-502.2 | **%Moisture:** | | **BatchNo:** | R27883 |
| **Revision:** | 12/16/14 15:40 | **TestCode:** | 8260W_CAL | **FileID:** | 1-SAMP-J8481.D |
| **Col Type:** | | | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260C/5030C** | | |
| (m+p)-Xylene | ND | | 1.00 | 0.20 | µg/L | 1 | 12/12/14 18:24 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/12/14 18:24 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/12/14 18:24 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/12/14 18:24 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/12/14 18:24 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/12/14 18:24 |
| 1,1-Dichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/12/14 18:24 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/12/14 18:24 |
| 1,2,3-Trichloropropane | ND | | 2.00 | 0.33 | µg/L | 1 | 12/12/14 18:24 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 0.10 | µg/L | 1 | 12/12/14 18:24 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/12/14 18:24 |
| 1,2-Dibromo-3-chloropropane | ND | | 5.00 | 1.00 | µg/L | 1 | 12/12/14 18:24 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/12/14 18:24 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/12/14 18:24 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/12/14 18:24 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/12/14 18:24 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/12/14 18:24 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/12/14 18:24 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/12/14 18:24 |
| 2-Butanone | ND | | 10.0 | 1.00 | µg/L | 1 | 12/12/14 18:24 |
| 2-Chloroethylvinyl ether | ND | | 5.00 | 2.50 | µg/L | 1 | 12/12/14 18:24 |
| 2-Hexanone | ND | | 5.00 | 1.00 | µg/L | 1 | 12/12/14 18:24 |
| 4-Chlorotoluene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/12/14 18:24 |
| 4-Methyl-2-pentanone | ND | | 5.00 | 1.00 | µg/L | 1 | 12/12/14 18:24 |
| Acetone | ND | | 10.0 | 1.00 | µg/L | 1 | 12/12/14 18:24 |
| Benzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/12/14 18:24 |
| Bromobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/12/14 18:24 |
| Bromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/12/14 18:24 |
| Bromodichloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/12/14 18:24 |
| Bromoform | ND | | 1.00 | 0.33 | µg/L | 1 | 12/12/14 18:24 |
| Bromomethane | ND | | 1.00 | 0.33 | µg/L | 1 | 12/12/14 18:24 |
| Carbon disulfide | ND | | 0.50 | 0.11 | µg/L | 1 | 12/12/14 18:24 |
| Carbon tetrachloride | ND | | 0.50 | 0.10 | µg/L | 1 | 12/12/14 18:24 |
| Chlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/12/14 18:24 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value may exceed the Acceptable Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

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East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1412101-016A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 -TBL-12012014*** |
| **W Order:** | K1412101 | **Collection Date:** | 12/01/14 0:00 |
| **Matrix:** | TRIP BLANK | **Date Received:** | 12/10/14 10:00 |
| **Inst. ID:** | MS03_10 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-502.2 | **%Moisture:** | **BatchNo:** R27883 |
| **Revision:** | 12/16/14 15:40 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-J8481.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260C/5030C** | | |
| Chloroethane | ND | | 1.00 | 0.33 | µg/L | 1 | 12/12/14 18:24 |
| Chloroform | ND | | 0.50 | 0.10 | µg/L | 1 | 12/12/14 18:24 |
| Chloromethane | ND | | 1.00 | 0.33 | µg/L | 1 | 12/12/14 18:24 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/12/14 18:24 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/12/14 18:24 |
| Cyclohexane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/12/14 18:24 |
| Dibromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/12/14 18:24 |
| Dibromomethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/12/14 18:24 |
| Dichlorodifluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 12/12/14 18:24 |
| Ethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/12/14 18:24 |
| Hexachlorobutadiene | ND | | 1.00 | 0.10 | µg/L | 1 | 12/12/14 18:24 |
| Isopropylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/12/14 18:24 |
| Methyl tert-butyl ether | ND | | 1.00 | 0.16 | µg/L | 1 | 12/12/14 18:24 |
| Methylene chloride | ND | | 2.00 | 0.16 | µg/L | 1 | 12/12/14 18:24 |
| n-Propylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/12/14 18:24 |
| Naphthalene | ND | | 1.00 | 0.10 | µg/L | 1 | 12/12/14 18:24 |
| o-Xylene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/12/14 18:24 |
| p-Isopropyltoluene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/12/14 18:24 |
| sec-Butylbenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/12/14 18:24 |
| Styrene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/12/14 18:24 |
| Tetrachloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/12/14 18:24 |
| Toluene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/12/14 18:24 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/12/14 18:24 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/12/14 18:24 |
| Trichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/12/14 18:24 |
| Trichlorofluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 12/12/14 18:24 |
| Vinyl acetate | ND | | 2.00 | 1.00 | µg/L | 1 | 12/12/14 18:24 |
| Vinyl chloride | ND | | 1.00 | 0.33 | µg/L | 1 | 12/12/14 18:24 |
| Xylenes (total) | ND | | 1.00 | 0.30 | µg/L | 1 | 12/12/14 18:24 |
| Surr: 1,2-Dichloroethane-d4 | 85 | | 75-130 | 0.16 | %REC | 1 | 12/12/14 18:24 |
| Surr: Toluene-d8 | 104 | | 75-125 | 0.10 | %REC | 1 | 12/12/14 18:24 |
| Surr: 4-Bromofluorobenzene | 91 | | 75-125 | 0.10 | %REC | 1 | 12/12/14 18:24 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value may exceed the Acceptable Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 12/17/14 10:06 700751 **Project Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | | | |
|---|---|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | | | **Lab ID:** | **K1412101-017A** |
| **Project:** | 189-02 | | | **Client Sample ID:** | ***189 - FBL-12082014*** |
| **W Order:** | K1412101 | | | **Collection Date:** | 12/08/14 18:00 |
| **Matrix:** | WATER Q | | | **Date Received:** | 12/10/14 10:00 |
| **Inst. ID:** | MS03_10 | **Sample Size** | 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-502.2 | **%Moisture:** | | **BatchNo:** | R27882 |
| **Revision:** | 12/17/14 8:17 | **TestCode:** | 8260W_CAL | **FileID:** | 1-SAMP-J8453.D |
| **Col Type:** | | | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260C/5030C** | | |
| (m+p)-Xylene | ND | | 1.00 | 0.20 | µg/L | 1 | 12/11/14 21:53 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 21:53 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 21:53 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 21:53 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 21:53 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 21:53 |
| 1,1-Dichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 21:53 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 21:53 |
| 1,2,3-Trichloropropane | ND | | 2.00 | 0.33 | µg/L | 1 | 12/11/14 21:53 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 0.10 | µg/L | 1 | 12/11/14 21:53 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 21:53 |
| 1,2-Dibromo-3-chloropropane | ND | | 5.00 | 1.00 | µg/L | 1 | 12/11/14 21:53 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 21:53 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 21:53 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 21:53 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 21:53 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 21:53 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 21:53 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 21:53 |
| 2-Butanone | 1.70 | J | 10.0 | 1.00 | µg/L | 1 | 12/11/14 21:53 |
| 2-Chloroethylvinyl ether | ND | | 5.00 | 2.50 | µg/L | 1 | 12/11/14 21:53 |
| 2-Hexanone | ND | | 5.00 | 1.00 | µg/L | 1 | 12/11/14 21:53 |
| 4-Chlorotoluene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 21:53 |
| 4-Methyl-2-pentanone | ND | | 5.00 | 1.00 | µg/L | 1 | 12/11/14 21:53 |
| Acetone | 1.93 | J | 10.0 | 1.00 | µg/L | 1 | 12/11/14 21:53 |
| Benzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 21:53 |
| Bromobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 21:53 |
| Bromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 21:53 |
| Bromodichloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 21:53 |
| Bromoform | ND | | 1.00 | 0.33 | µg/L | 1 | 12/11/14 21:53 |
| Bromomethane | ND | | 1.00 | 0.33 | µg/L | 1 | 12/11/14 21:53 |
| Carbon disulfide | ND | | 0.50 | 0.11 | µg/L | 1 | 12/11/14 21:53 |
| Carbon tetrachloride | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 21:53 |
| Chlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 21:53 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value may exceed the Acceptable Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

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East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | | | |
|---|---|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | | | **Lab ID:** | **K1412101-017A** |
| **Project:** | 189-02 | | | **Client Sample ID:** | ***189 - FBL-12082014*** |
| **W Order:** | K1412101 | | | **Collection Date:** | 12/08/14 18:00 |
| **Matrix:** | WATER Q | | | **Date Received:** | 12/10/14 10:00 |
| **Inst. ID:** | MS03_10 | **Sample Size** | 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-502.2 | **%Moisture:** | | **BatchNo:** | R27882 |
| **Revision:** | 12/17/14 8:17 | **TestCode:** | 8260W_CAL | **FileID:** | 1-SAMP-J8453.D |
| **Col Type:** | | | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260C/5030C** | | |
| Chloroethane | ND | | 1.00 | 0.33 | µg/L | 1 | 12/11/14 21:53 |
| Chloroform | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 21:53 |
| Chloromethane | ND | | 1.00 | 0.33 | µg/L | 1 | 12/11/14 21:53 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 21:53 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 21:53 |
| Cyclohexane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 21:53 |
| Dibromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 21:53 |
| Dibromomethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 21:53 |
| Dichlorodifluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 12/11/14 21:53 |
| Ethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 21:53 |
| Hexachlorobutadiene | ND | | 1.00 | 0.10 | µg/L | 1 | 12/11/14 21:53 |
| Isopropylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 21:53 |
| Methyl tert-butyl ether | ND | | 1.00 | 0.16 | µg/L | 1 | 12/11/14 21:53 |
| Methylene chloride | ND | | 2.00 | 0.16 | µg/L | 1 | 12/11/14 21:53 |
| n-Propylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 21:53 |
| Naphthalene | ND | | 1.00 | 0.10 | µg/L | 1 | 12/11/14 21:53 |
| o-Xylene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 21:53 |
| p-Isopropyltoluene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 21:53 |
| sec-Butylbenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 21:53 |
| Styrene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 21:53 |
| Tetrachloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 21:53 |
| Toluene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 21:53 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 21:53 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/11/14 21:53 |
| Trichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/11/14 21:53 |
| Trichlorofluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 12/11/14 21:53 |
| Vinyl acetate | ND | | 2.00 | 1.00 | µg/L | 1 | 12/11/14 21:53 |
| Vinyl chloride | ND | | 1.00 | 0.33 | µg/L | 1 | 12/11/14 21:53 |
| Xylenes (total) | ND | | 1.00 | 0.30 | µg/L | 1 | 12/11/14 21:53 |
| Surr: 1,2-Dichloroethane-d4 | 100 | | 75-130 | 0.16 | %REC | 1 | 12/11/14 21:53 |
| Surr: Toluene-d8 | 96 | | 75-125 | 0.10 | %REC | 1 | 12/11/14 21:53 |
| Surr: 4-Bromofluorobenzene | 92 | | 75-125 | 0.10 | %REC | 1 | 12/11/14 21:53 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value may exceed the Acceptable Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

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# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT:** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1412101-018ADL** |
| **Project:** | 189-02 | **Client Sample ID:** | *189-W5[illegible]-12042014* |
| **W Order:** | K1412101 | **Collection Date:** | 12/04/14 16:30 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 12/10/14 10:00 |
| **Inst. ID:** | MS03 10 | **Sample Size:** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-502.2 | **%Moisture:** | **BatchNo:** R27883 |
| **Revision:** | 12/17/14 10:04 | **TestCode:** 8260W CAL | **FileID:** 1-DL-J8479.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260C/5030C** | | |
| (m+p)-Xylene | ND | | 5.00 | 1.00 | µg/L | 5 | 12/12/14 17:25 |
| 1,1,1,2-Tetrachloroethane | ND | | 2.50 | 0.80 | µg/L | 5 | 12/12/14 17:25 |
| 1,1,1-Trichloroethane | ND | | 2.50 | 0.50 | µg/L | 5 | 12/12/14 17:25 |
| 1,1,2,2-Tetrachloroethane | ND | | 2.50 | 0.50 | µg/L | 5 | 12/12/14 17:25 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 2.50 | 0.50 | µg/L | 5 | 12/12/14 17:25 |
| 1,1,2-Trichloroethane | ND | | 2.50 | 0.80 | µg/L | 5 | 12/12/14 17:25 |
| 1,1-Dichloroethane | 98.4 | | 2.50 | 0.50 | µg/L | 5 | 12/12/14 17:25 |
| 1,1-Dichloroethene | ND | | 2.50 | 0.80 | µg/L | 5 | 12/12/14 17:25 |
| 1,2,3-Trichloropropane | ND | | 10.0 | 1.65 | µg/L | 5 | 12/12/14 17:25 |
| 1,2,4-Trichlorobenzene | ND | | 5.00 | 0.50 | µg/L | 5 | 12/12/14 17:25 |
| 1,2,4-Trimethylbenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 12/12/14 17:25 |
| 1,2-Dibromo-3-chloropropane | ND | | 25.0 | 5.00 | µg/L | 5 | 12/12/14 17:25 |
| 1,2-Dibromoethane | ND | | 2.50 | 0.80 | µg/L | 5 | 12/12/14 17:25 |
| 1,2-Dichlorobenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 12/12/14 17:25 |
| 1,2-Dichloroethane | 2.20 | J | 2.50 | 0.80 | µg/L | 5 | 12/12/14 17:25 |
| 1,2-Dichloropropane | ND | | 2.50 | 0.80 | µg/L | 5 | 12/12/14 17:25 |
| 1,3,5-Trimethylbenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 12/12/14 17:25 |
| 1,3-Dichlorobenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 12/12/14 17:25 |
| 1,4-Dichlorobenzene | ND | | 2.50 | 0.80 | µg/L | 5 | 12/12/14 17:25 |
| 2-Butanone | ND | | 50.0 | 5.00 | µg/L | 5 | 12/12/14 17:25 |
| 2-Chloroethylvinyl ether | ND | | 25.0 | 12.5 | µg/L | 5 | 12/12/14 17:25 |
| 2-Hexanone | ND | | 25.0 | 5.00 | µg/L | 5 | 12/12/14 17:25 |
| 4-Chlorotoluene | ND | | 2.50 | 0.50 | µg/L | 5 | 12/12/14 17:25 |
| 4-Methyl-2-pentanone | ND | | 25.0 | 5.00 | µg/L | 5 | 12/12/14 17:25 |
| Acetone | ND | | 50.0 | 5.00 | µg/L | 5 | 12/12/14 17:25 |
| Benzene | ND | | 2 50 | 0.50 | µg/L | 5 | 12/12/14 17:25 |
| Bromobenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 12/12/14 17:25 |
| Bromochloromethane | ND | | 2.50 | 0.50 | µg/L | 5 | 12/12/14 17:25 |
| Bromodichloromethane | ND | | 2.50 | 0.50 | µg/L | 5 | 12/12/14 17:25 |
| Bromoform | ND | | 5.00 | 1.65 | µg/L | 5 | 12/12/14 17:25 |
| Bromomethane | ND | | 5.00 | 1.65 | µg/L | 5 | 12/12/14 17:25 |
| Carbon disulfide | ND | | 2.50 | 0.55 | µg/L | 5 | 12/12/14 17:25 |
| Carbon tetrachloride | ND | | 2.50 | 0.50 | µg/L | 5 | 12/12/14 17:25 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value may exceed the Acceptable Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

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East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT:** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1412101-018ADL** |
| **Project:** | 189-02 | **Client Sample ID:** | *189-W5B-12042014* |
| **W Order:** | K1412101 | **Collection Date:** | 12/04/14 16:30 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 12/10/14 10:00 |
| **Inst. ID:** | MS03 10 | **Sample Size:** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-502.2 | **%Moisture:** | **BatchNo:** R27883 |
| **Revision:** | 12/17/14 10:04 | **TestCode:** 8260W CAL | **FileID:** 1-DL-J8479.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260C/5030C** | | |
| Chlorobenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 12/12/14 17:25 |
| Chloroethane | 5.35 | | 5.00 | 1.65 | µg/L | 5 | 12/12/14 17:25 |
| Chloroform | ND | | 2.50 | 0.50 | µg/L | 5 | 12/12/14 17:25 |
| Chloromethane | ND | | 5.00 | 1.65 | µg/L | 5 | 12/12/14 17:25 |
| cis-1,2-Dichloroethene | 17.7 | | 2.50 | 0.50 | µg/L | 5 | 12/12/14 17:25 |
| cis-1,3-Dichloropropene | ND | | 2.50 | 0.80 | µg/L | 5 | 12/12/14 17:25 |
| Cyclohexane | 1.45 | J | 2.50 | 0.50 | µg/L | 5 | 12/12/14 17:25 |
| Dibromochloromethane | ND | | 2.50 | 0.50 | µg/L | 5 | 12/12/14 17:25 |
| Dibromomethane | ND | | 2.50 | 0.80 | µg/L | 5 | 12/12/14 17:25 |
| Dichlorodifluoromethane | ND | | 5.00 | 0.50 | µg/L | 5 | 12/12/14 17:25 |
| Ethylbenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 12/12/14 17:25 |
| Hexachlorobutadiene | ND | | 5.00 | 0.50 | µg/L | 5 | 12/12/14 17:25 |
| Isopropylbenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 12/12/14 17:25 |
| Methyl tert-butyl ether | ND | | 5.00 | 0.80 | µg/L | 5 | 12/12/14 17:25 |
| Methylene chloride | ND | | 10.0 | 0.80 | µg/L | 5 | 12/12/14 17:25 |
| n-Propylbenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 12/12/14 17:25 |
| Naphthalene | ND | | 5.00 | 0.50 | µg/L | 5 | 12/12/14 17:25 |
| o-Xylene | ND | | 2.50 | 0.50 | µg/L | 5 | 12/12/14 17:25 |
| p-Isopropyltoluene | ND | | 2.50 | 0.80 | µg/L | 5 | 12/12/14 17:25 |
| sec-Butylbenzene | ND | | 2.50 | 0.80 | µg/L | 5 | 12/12/14 17:25 |
| Styrene | ND | | 2.50 | 0.50 | µg/L | 5 | 12/12/14 17:25 |
| Tetrachloroethene | ND | | 2.50 | 0.50 | µg/L | 5 | 12/12/14 17:25 |
| Toluene | ND | | 2.50 | 0.50 | µg/L | 5 | 12/12/14 17:25 |
| trans-1,2-Dichloroethene | ND | | 2.50 | 0.50 | µg/L | 5 | 12/12/14 17:25 |
| trans-1,3-Dichloropropene | ND | | 2.50 | 0.80 | µg/L | 5 | 12/12/14 17:25 |
| Trichloroethene | ND | | 2.50 | 0.50 | µg/L | 5 | 12/12/14 17:25 |
| Trichlorofluoromethane | ND | | 5.00 | 0.50 | µg/L | 5 | 12/12/14 17:25 |
| Vinyl acetate | ND | | 10.0 | 5.00 | µg/L | 5 | 12/12/14 17:25 |
| Vinyl chloride | 99.8 | | 5.00 | 1.65 | µg/L | 5 | 12/12/14 17:25 |
| Xylenes (total) | ND | | 5.00 | 1.50 | µg/L | 5 | 12/12/14 17:25 |
| Surr: 1,2-Dichloroethane-d4 | 97 | | 75-130 | 0.80 | %REC | 5 | 12/12/14 17:25 |
| Surr: Toluene-d8 | 103 | | 75-125 | 0.50 | %REC | 5 | 12/12/14 17:25 |
| Surr: 4-Bromofluorobenzene | 93 | | 75-125 | 0.50 | %REC | 5 | 12/12/14 17:25 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value may exceed the Acceptable Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 12/19/14 14:57 700749 **Project Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

**5854 Butternut Drive**

**East Syracuse, NY 13057** **(315) 445-1900**


## ANALYTICAL QC SUMMARY REPORT

**Method:** SW8260C/5030C

**Work Order:** K1412101

**CLIENT:** Ken W. Kloeber Consulting Engineers

**Project:** 189-02

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Sample ID: **MB-27882** | SampType: **MBLK** | TestCode: **8260W_CAL** | Units: **µg/L** | Prep Date: | | RunNo: | **27882** | | |
| Client ID: **ZZZZZ** | Batch ID: **R27882** | Method: **SW8260C/503** | | Analysis Date: | **12/11/2014** | SeqNo: | **700726** | | |
| Instrument: **MS03_10** | ColumnID: **Rtx-502.2** | | | | | | | | |

| Analyte | QC Sample Result | PQL | SPK Added | Parent Sample Result | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (m+p)-Xylene | ND | 1.00 | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 0.500 | | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 0.500 | | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 0.500 | | | | | | | | | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | 0.500 | | | | | | | | | |
| 1,1,2-Trichloroethane | ND | 0.500 | | | | | | | | | |
| 1,1-Dichloroethane | ND | 0.500 | | | | | | | | | |
| 1,1-Dichloroethene | ND | 0.500 | | | | | | | | | |
| 1,2,3-Trichloropropane | ND | 2.00 | | | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 1.00 | | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 0.500 | | | | | | | | | |
| 1,2-Dibromo-3-chloropropane | ND | 5.00 | | | | | | | | | |
| 1,2-Dibromoethane | ND | 0.500 | | | | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.500 | | | | | | | | | |
| 1,2-Dichloroethane | ND | 0.500 | | | | | | | | | |
| 1,2-Dichloropropane | ND | 0.500 | | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 0.500 | | | | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.500 | | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.500 | | | | | | | | | |
| 2-Butanone | ND | 10.0 | | | | | | | | | |
| 2-Chloroethylvinyl ether | ND | 5.00 | | | | | | | | | |
| 2-Hexanone | ND | 5.00 | | | | | | | | | |
| 4-Chlorotoluene | ND | 0.500 | | | | | | | | | |
| 4-Methyl-2-pentanone | ND | 5.00 | | | | | | | | | |
| Acetone | ND | 10.0 | | | | | | | | | |
| Benzene | ND | 0.500 | | | | | | | | | |
| Bromobenzene | ND | 0.500 | | | | | | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value exceeds the instrument calibration range | J | Analyte detected below the PQL |
| ND | Not Detected at the Practical Quantitation Limit (PQL) | R | RPD exceeds accepted precision limit | S | Spike Recovery outside accepted recovery limits |
| U | Not Detected at the MDC or RL | | | | |

**Date:** *16-Dec-14*

# Life Science Laboratories, Inc.

**5854 Butternut Drive**
**East Syracuse, NY 13057 (315) 445-1900**


## ANALYTICAL QC SUMMARY REPORT

**Method:** SW8260C/5030C
**Work Order:** K1412101
**Project:** 189-02

**CLIENT:** Ken W. Kloeber Consulting Engineers

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | **MB-27882** | SampType: | **MBLK** | TestCode: | **8260W_CAL** | Units: | **µg/L** | Prep Date: | | RunNo: | **27882** |
| Client ID: | **ZZZZZ** | Batch ID: | **R27882** | Method: | **SW8260C/503** | | | Analysis Date: | **12/11/2014** | SeqNo: | **700726** |
| Instrument: | **MS03_10** | ColumnID: | **Rtx-502.2** | | | | | | | | |

| Analyte | QC Sample Result | PQL | SPK Added | Parent Sample Result | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromochloromethane | ND | 0.500 | | | | | | | | | |
| Bromodichloromethane | ND | 0.500 | | | | | | | | | |
| Bromoform | ND | 1.00 | | | | | | | | | |
| Bromomethane | ND | 1.00 | | | | | | | | | |
| Carbon disulfide | ND | 0.500 | | | | | | | | | |
| Carbon tetrachloride | ND | 0.500 | | | | | | | | | |
| Chlorobenzene | ND | 0.500 | | | | | | | | | |
| Chloroethane | ND | 1.00 | | | | | | | | | |
| Chloroform | ND | 0.500 | | | | | | | | | |
| Chloromethane | ND | 1.00 | | | | | | | | | |
| cis-1,2-Dichloroethene | ND | 0.500 | | | | | | | | | |
| cis-1,3-Dichloropropene | ND | 0.500 | | | | | | | | | |
| Cyclohexane | ND | 0.500 | | | | | | | | | |
| Dibromochloromethane | ND | 0.500 | | | | | | | | | |
| Dibromomethane | ND | 0.500 | | | | | | | | | |
| Dichlorodifluoromethane | ND | 1.00 | | | | | | | | | |
| Ethylbenzene | ND | 0.500 | | | | | | | | | |
| Hexachlorobutadiene | ND | 1.00 | | | | | | | | | |
| Isopropylbenzene | ND | 0.500 | | | | | | | | | |
| Methyl tert-butyl ether | ND | 1.00 | | | | | | | | | |
| Methylene chloride | ND | 2.00 | | | | | | | | | |
| n-Propylbenzene | ND | 0.500 | | | | | | | | | |
| Naphthalene | ND | 1.00 | | | | | | | | | |
| o-Xylene | ND | 0.500 | | | | | | | | | |
| p-Isopropyltoluene | ND | 0.500 | | | | | | | | | |
| sec-Butylbenzene | ND | 0.500 | | | | | | | | | |
| Styrene | ND | 0.500 | | | | | | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value exceeds the instrument calibration range | J | Analyte detected below the PQL |
| ND | Not Detected at the Practical Quantitation Limit (PQL) | R | RPD exceeds accepted precision limit | S | Spike Recovery outside accepted recovery limits |
| U | Not Detected at the MDC or RL | | | | |

**Date:** *16-Dec-14*

# Life Science Laboratories, Inc.

**5854 Butternut Drive**

**East Syracuse, NY 13057** **(315) 445-1900**


# ANALYTICAL QC SUMMARY REPORT

**Method:** SW8260C/5030C

**Work Order:** K1412101

**CLIENT:** Ken W. Kloeber Consulting Engineers

**Project:** 189-02

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | **MB-27882** | SampType: | **MBLK** | TestCode: | **8260W_CAL** | Units: | **µg/L** | Prep Date: | | RunNo: | **27882** |
| Client ID: | **ZZZZZ** | Batch ID: | **R27882** | Method: | **SW8260C/503** | | | Analysis Date: | **12/11/2014** | SeqNo: | **700726** |
| Instrument: | **MS03_10** | ColumnID: | **Rtx-502.2** | | | | | | | | |

| Analyte | QC Sample Result | PQL | SPK Added | Parent Sample Result | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | ND | 0.500 | | | | | | | | | |
| Toluene | ND | 0.500 | | | | | | | | | |
| trans-1,2-Dichloroethene | ND | 0.500 | | | | | | | | | |
| trans-1,3-Dichloropropene | ND | 0.500 | | | | | | | | | |
| Trichloroethene | ND | 0.500 | | | | | | | | | |
| Trichlorofluoromethane | ND | 1.00 | | | | | | | | | |
| Vinyl acetate | ND | 2.00 | | | | | | | | | |
| Vinyl chloride | ND | 1.00 | | | | | | | | | |
| Xylenes (total) | ND | 1.00 | | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 10.1 | 0.100 | 10 | 0 | 101 | 75 | 130 | | | | |
| Surr: Toluene-d8 | 9.82 | 0.100 | 10 | 0 | 98 | 75 | 125 | | | | |
| Surr: 4-Bromofluorobenzene | 9.08 | 0.100 | 10 | 0 | 91 | 75 | 125 | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value exceeds the instrument calibration range | J | Analyte detected below the PQL |
| ND | Not Detected at the Practical Quantitation Limit (PQL) | R | RPD exceeds accepted precision limit | S | Spike Recovery outside accepted recovery limits |
| U | Not Detected at the MDC or RL | | | | |

**Date:** *16-Dec-14*

# Life Science Laboratories, Inc.

**5854 Butternut Drive**

**East Syracuse, NY 13057** **(315) 445-1900**


## ANALYTICAL QC SUMMARY REPORT

**Method:** SW8260C/5030C

**Work Order:** K1412101

**CLIENT:** Ken W. Kloeber Consulting Engineers

**Project:** 189-02

Sample ID: **MB-27883** SampType: **MBLK** TestCode: **8260W_CAL** Units: **µg/L** Prep Date: RunNo: **27883**

Client ID: **ZZZZZ** Batch ID: **R27883** Method: **SW8260C/503** Analysis Date: **12/12/2014** SeqNo: **700744**

Instrument: **MS03_10** ColumnID: **Rtx-502.2**

| Analyte | QC Sample Result | PQL | SPK Added | Parent Sample Result | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (m+p)-Xylene | ND | 1.00 | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 0.500 | | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 0.500 | | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 0.500 | | | | | | | | | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | 0.500 | | | | | | | | | |
| 1,1,2-Trichloroethane | ND | 0.500 | | | | | | | | | |
| 1,1-Dichloroethane | ND | 0.500 | | | | | | | | | |
| 1,1-Dichloroethene | ND | 0.500 | | | | | | | | | |
| 1,2,3-Trichloropropane | ND | 2.00 | | | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 1.00 | | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 0.500 | | | | | | | | | |
| 1,2-Dibromo-3-chloropropane | ND | 5.00 | | | | | | | | | |
| 1,2-Dibromoethane | ND | 0.500 | | | | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.500 | | | | | | | | | |
| 1,2-Dichloroethane | ND | 0.500 | | | | | | | | | |
| 1,2-Dichloropropane | ND | 0.500 | | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 0.500 | | | | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.500 | | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.500 | | | | | | | | | |
| 2-Butanone | ND | 10.0 | | | | | | | | | |
| 2-Chloroethylvinyl ether | ND | 5.00 | | | | | | | | | |
| 2-Hexanone | ND | 5.00 | | | | | | | | | |
| 4-Chlorotoluene | ND | 0.500 | | | | | | | | | |
| 4-Methyl-2-pentanone | ND | 5.00 | | | | | | | | | |
| Acetone | ND | 10.0 | | | | | | | | | |
| Benzene | ND | 0.500 | | | | | | | | | |
| Bromobenzene | ND | 0.500 | | | | | | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value exceeds the instrument calibration range | J | Analyte detected below the PQL |
| ND | Not Detected at the Practical Quantitation Limit (PQL) | R | RPD exceeds accepted precision limit | S | Spike Recovery outside accepted recovery limits |
| U | Not Detected at the MDC or RL | | | | |

**Date:** *16-Dec-14*

# Life Science Laboratories, Inc.

**5854 Butternut Drive**

**East Syracuse, NY 13057** **(315) 445-1900**


## ANALYTICAL QC SUMMARY REPORT

**Method:** SW8260C/5030C

**Work Order:** K1412101

**CLIENT:** Ken W. Kloeber Consulting Engineers

**Project:** 189-02

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Sample ID: **MB-27883** | SampType: **MBLK** | TestCode: **8260W_CAL** | Units: **µg/L** | Prep Date: | | RunNo: | **27883** | | |
| Client ID: **ZZZZZ** | Batch ID: **R27883** | Method: **SW8260C/503** | | Analysis Date: | **12/12/2014** | SeqNo: | **700744** | | |
| Instrument: **MS03_10** | ColumnID: **Rtx-502.2** | | | | | | | | |

| Analyte | QC Sample Result | PQL | SPK Added | Parent Sample Result | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromochloromethane | ND | 0.500 | | | | | | | | | |
| Bromodichloromethane | ND | 0.500 | | | | | | | | | |
| Bromoform | ND | 1.00 | | | | | | | | | |
| Bromomethane | ND | 1.00 | | | | | | | | | |
| Carbon disulfide | ND | 0.500 | | | | | | | | | |
| Carbon tetrachloride | ND | 0.500 | | | | | | | | | |
| Chlorobenzene | ND | 0.500 | | | | | | | | | |
| Chloroethane | ND | 1.00 | | | | | | | | | |
| Chloroform | ND | 0.500 | | | | | | | | | |
| Chloromethane | ND | 1.00 | | | | | | | | | |
| cis-1,2-Dichloroethene | ND | 0.500 | | | | | | | | | |
| cis-1,3-Dichloropropene | ND | 0.500 | | | | | | | | | |
| Cyclohexane | ND | 0.500 | | | | | | | | | |
| Dibromochloromethane | ND | 0.500 | | | | | | | | | |
| Dibromomethane | ND | 0.500 | | | | | | | | | |
| Dichlorodifluoromethane | ND | 1.00 | | | | | | | | | |
| Ethylbenzene | ND | 0.500 | | | | | | | | | |
| Hexachlorobutadiene | ND | 1.00 | | | | | | | | | |
| Isopropylbenzene | ND | 0.500 | | | | | | | | | |
| Methyl tert-butyl ether | ND | 1.00 | | | | | | | | | |
| Methylene chloride | ND | 2.00 | | | | | | | | | |
| n-Propylbenzene | ND | 0.500 | | | | | | | | | |
| Naphthalene | ND | 1.00 | | | | | | | | | |
| o-Xylene | ND | 0.500 | | | | | | | | | |
| p-Isopropyltoluene | ND | 0.500 | | | | | | | | | |
| sec-Butylbenzene | ND | 0.500 | | | | | | | | | |
| Styrene | ND | 0.500 | | | | | | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value exceeds the instrument calibration range | J | Analyte detected below the PQL |
| ND | Not Detected at the Practical Quantitation Limit (PQL) | R | RPD exceeds accepted precision limit | S | Spike Recovery outside accepted recovery limits |
| U | Not Detected at the MDC or RL | | | | |

**Date:** *16-Dec-14*

# Life Science Laboratories, Inc.

**5854 Butternut Drive**

**East Syracuse, NY 13057 (315) 445-1900**


## ANALYTICAL QC SUMMARY REPORT

**Method:** SW8260C/5030C

**Work Order:** K1412101

**CLIENT:** Ken W. Kloeber Consulting Engineers

**Project:** 189-02

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Sample ID: **MB-27883** | SampType: **MBLK** | TestCode: **8260W_CAL** | Units: **µg/L** | Prep Date: | | RunNo: | **27883** | | |
| Client ID: **ZZZZZ** | Batch ID: **R27883** | Method: **SW8260C/503** | | Analysis Date: | **12/12/2014** | SeqNo: | **700744** | | |
| Instrument: **MS03_10** | ColumnID: **Rtx-502.2** | | | | | | | | |

| Analyte | QC Sample Result | PQL | SPK Added | Parent Sample Result | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | ND | 0.500 | | | | | | | | | |
| Toluene | ND | 0.500 | | | | | | | | | |
| trans-1,2-Dichloroethene | ND | 0.500 | | | | | | | | | |
| trans-1,3-Dichloropropene | ND | 0.500 | | | | | | | | | |
| Trichloroethene | ND | 0.500 | | | | | | | | | |
| Trichlorofluoromethane | ND | 1.00 | | | | | | | | | |
| Vinyl acetate | ND | 2.00 | | | | | | | | | |
| Vinyl chloride | ND | 1.00 | | | | | | | | | |
| Xylenes (total) | ND | 1.00 | | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.19 | 0.100 | 10 | 0 | 92 | 75 | 130 | | | | |
| Surr: Toluene-d8 | 10.5 | 0.100 | 10 | 0 | 105 | 75 | 125 | | | | |
| Surr: 4-Bromofluorobenzene | 9.28 | 0.100 | 10 | 0 | 93 | 75 | 125 | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value exceeds the instrument calibration range | J | Analyte detected below the PQL |
| ND | Not Detected at the Practical Quantitation Limit (PQL) | R | RPD exceeds accepted precision limit | S | Spike Recovery outside accepted recovery limits |
| U | Not Detected at the MDC or RL | | | | |

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**East Syracuse, NY 13057 (315) 445-1900**


## ANALYTICAL QC SUMMARY REPORT

**Method:** SW8260C/5030C

**Work Order:** K1412101

**CLIENT:** Ken W. Kloeber Consulting Engineers

**Project:** 189-02

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Sample ID: **MB-27884** | SampType: **MBLK** | TestCode: **8260W_CAL** | Units: **µg/L** | Prep Date: | | RunNo: | **27884** | | |
| Client ID: **ZZZZZ** | Batch ID: **R27884** | Method: **SW8260C/503** | | Analysis Date: | **12/15/2014** | SeqNo: | **700801** | | |
| Instrument: **MS03_10** | ColumnID: **Rtx-502.2** | | | | | | | | |

| Analyte | QC Sample Result | PQL | SPK Added | Parent Sample Result | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (m+p)-Xylene | ND | 1.00 | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 0.500 | | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 0.500 | | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 0.500 | | | | | | | | | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | 0.500 | | | | | | | | | |
| 1,1,2-Trichloroethane | ND | 0.500 | | | | | | | | | |
| 1,1-Dichloroethane | ND | 0.500 | | | | | | | | | |
| 1,1-Dichloroethene | ND | 0.500 | | | | | | | | | |
| 1,2,3-Trichloropropane | ND | 2.00 | | | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 1.00 | | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 0.500 | | | | | | | | | |
| 1,2-Dibromo-3-chloropropane | ND | 5.00 | | | | | | | | | |
| 1,2-Dibromoethane | ND | 0.500 | | | | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.500 | | | | | | | | | |
| 1,2-Dichloroethane | ND | 0.500 | | | | | | | | | |
| 1,2-Dichloropropane | ND | 0.500 | | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 0.500 | | | | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.500 | | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.500 | | | | | | | | | |
| 2-Butanone | ND | 10.0 | | | | | | | | | |
| 2-Chloroethylvinyl ether | ND | 5.00 | | | | | | | | | |
| 2-Hexanone | ND | 5.00 | | | | | | | | | |
| 4-Chlorotoluene | ND | 0.500 | | | | | | | | | |
| 4-Methyl-2-pentanone | ND | 5.00 | | | | | | | | | |
| Acetone | ND | 10.0 | | | | | | | | | |
| Benzene | ND | 0.500 | | | | | | | | | |
| Bromobenzene | ND | 0.500 | | | | | | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value exceeds the instrument calibration range | J | Analyte detected below the PQL |
| ND | Not Detected at the Practical Quantitation Limit (PQL) | R | RPD exceeds accepted precision limit | S | Spike Recovery outside accepted recovery limits |
| U | Not Detected at the MDC or RL | | | | |

**Date:** *16-Dec-14*

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## ANALYTICAL QC SUMMARY REPORT

**Method:** SW8260C/5030C

**Work Order:** K1412101

**CLIENT:** Ken W. Kloeber Consulting Engineers

**Project:** 189-02

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | **MB-27884** | SampType: | **MBLK** | TestCode: | **8260W_CAL** | Units: | **µg/L** | Prep Date: | RunNo: **27884** |
| Client ID: | **ZZZZZ** | Batch ID: | **R27884** | Method: | **SW8260C/503** | | | Analysis Date: **12/15/2014** | SeqNo: **700801** |
| Instrument: | **MS03_10** | ColumnID: | **Rtx-502.2** | | | | | | |

| Analyte | QC Sample Result | PQL | SPK Added | Parent Sample Result | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromochloromethane | ND | 0.500 | | | | | | | | | |
| Bromodichloromethane | ND | 0.500 | | | | | | | | | |
| Bromoform | ND | 1.00 | | | | | | | | | |
| Bromomethane | ND | 1.00 | | | | | | | | | |
| Carbon disulfide | ND | 0.500 | | | | | | | | | |
| Carbon tetrachloride | ND | 0.500 | | | | | | | | | |
| Chlorobenzene | ND | 0.500 | | | | | | | | | |
| Chloroethane | ND | 1.00 | | | | | | | | | |
| Chloroform | ND | 0.500 | | | | | | | | | |
| Chloromethane | ND | 1.00 | | | | | | | | | |
| cis-1,2-Dichloroethene | ND | 0.500 | | | | | | | | | |
| cis-1,3-Dichloropropene | ND | 0.500 | | | | | | | | | |
| Cyclohexane | ND | 0.500 | | | | | | | | | |
| Dibromochloromethane | ND | 0.500 | | | | | | | | | |
| Dibromomethane | ND | 0.500 | | | | | | | | | |
| Dichlorodifluoromethane | ND | 1.00 | | | | | | | | | |
| Ethylbenzene | ND | 0.500 | | | | | | | | | |
| Hexachlorobutadiene | ND | 1.00 | | | | | | | | | |
| Isopropylbenzene | ND | 0.500 | | | | | | | | | |
| Methyl tert-butyl ether | ND | 1.00 | | | | | | | | | |
| Methylene chloride | ND | 2.00 | | | | | | | | | |
| n-Propylbenzene | ND | 0.500 | | | | | | | | | |
| Naphthalene | ND | 1.00 | | | | | | | | | |
| o-Xylene | ND | 0.500 | | | | | | | | | |
| p-Isopropyltoluene | ND | 0.500 | | | | | | | | | |
| sec-Butylbenzene | ND | 0.500 | | | | | | | | | |
| Styrene | ND | 0.500 | | | | | | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value exceeds the instrument calibration range | J | Analyte detected below the PQL |
| ND | Not Detected at the Practical Quantitation Limit (PQL) | R | RPD exceeds accepted precision limit | S | Spike Recovery outside accepted recovery limits |
| U | Not Detected at the MDC or RL | | | | |

**Date:** *16-Dec-14*

# Life Science Laboratories, Inc.

**5854 Butternut Drive**
**East Syracuse, NY 13057** **(315) 445-1900**


## ANALYTICAL QC SUMMARY REPORT

**Method:** SW8260C/5030C
**Work Order:** K1412101
**Project:** 189-02

**CLIENT:** Ken W. Kloeber Consulting Engineers

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Sample ID: **MB-27884** | SampType: **MBLK** | TestCode: **8260W_CAL** | Units: **µg/L** | Prep Date: | | RunNo: **27884** | | | |
| Client ID: **ZZZZZ** | Batch ID: **R27884** | Method: **SW8260C/503** | | Analysis Date: **12/15/2014** | | SeqNo: **700801** | | | |
| Instrument: **MS03_10** | ColumnID: **Rtx-502.2** | | | | | | | | |

| Analyte | QC Sample Result | PQL | SPK Added | Parent Sample Result | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | ND | 0.500 | | | | | | | | | |
| Toluene | ND | 0.500 | | | | | | | | | |
| trans-1,2-Dichloroethene | ND | 0.500 | | | | | | | | | |
| trans-1,3-Dichloropropene | ND | 0.500 | | | | | | | | | |
| Trichloroethene | ND | 0.500 | | | | | | | | | |
| Trichlorofluoromethane | ND | 1.00 | | | | | | | | | |
| Vinyl acetate | ND | 2.00 | | | | | | | | | |
| Vinyl chloride | ND | 1.00 | | | | | | | | | |
| Xylenes (total) | ND | 1.00 | | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.71 | 0.100 | 10 | 0 | 97 | 75 | 130 | | | | |
| Surr: Toluene-d8 | 10.2 | 0.100 | 10 | 0 | 102 | 75 | 125 | | | | |
| Surr: 4-Bromofluorobenzene | 9.29 | 0.100 | 10 | 0 | 93 | 75 | 125 | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value exceeds the instrument calibration range | J | Analyte detected below the PQL |
| ND | Not Detected at the Practical Quantitation Limit (PQL) | R | RPD exceeds accepted precision limit | S | Spike Recovery outside accepted recovery limits |
| U | Not Detected at the MDC or RL | | | | |

**Date:** *16-Dec-14*

K1412101

# Ken W. Kloeber Consulting Engineers

## Environmental Sample Chain of Custody

(716) 864-0012 tel
(775) 860-3804 fax
KloeberEng @ aol.com
PO Box140 Boston NY 14025

KWKCE Project **189-02**

Sampled by initials:

Wx: **See Field Sheets**

☒ Analysis Requested

Instructions / Remarks: Report all results (e.g. Js); Report all data qualifiers; Email PDF of report.

| for Lab use: | KWKCE Sample ID | Date | Time | Type | Matrix | # of containers | (1) 8260 | (2) | (3) | (4) | (5) | (6) | (7) | TAT | Instructions / Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 001 | 189-W1- 12082014 | 12/8 | 1600 | G | GW | 2 | x | | | | | | | STD | Email EQuIS EDD |
| 002 | 189-W2- 12082014 | 12/8 | 1530 | G | GW | 2 | x | | | | | | | STD | |
| 003 | 189-W3- 12082014 | 12/8 | 1450 | G | GW | 2 | x | | | | | | | STD | 1 of 2 |
| 004 | 189-W4- 12082014 | 12/8 | 1620 | G | GW | 2 | x | | | | | | | STD | |
| 005 | 189-W5- 12042014 | 12/4 | 1630 | G | GW | 1 | x | | | | | | | STD | |
| 006 | 189-W6- 12042014 | 12/4 | 1400 | G | GW | 2 | x | | | | | | | STD | |
| 007 | 189-W7- 12042014 | 12/4 | 1540 | G | GW | 2 | x | | | | | | | STD | |
| 008 | 189-W8- 12042014 | 12/4 | 1340 | G | GW | 2 | x | | | | | | | STD | |
| 009 | 189-W9- 12082014 | 12/8 | 1430 | G | GW | 2 | x | | | | | | | STD | |
| 010 | 189-W10- 12042014 | 12/4 | 1520 | G | GW | 2 | x | | | | | | | STD | |
| 011 | 189-W11- 12042014 | 12/4 | 1430 | G | GW | 2 | x | | | | | | | STD | |
| 012 | 189-W12- 12042014 | 12/4 | 1450 | G | GW | 2 | x | | | | | | | STD | |
| 013 | 189-W13- 12042014 | 12/4 | 1500 | G | GW | 2 | x | | | | | | | STD | |
| 014 | 189-W14- 12042014 | 12/4 | 1530 | G | GW | 2 | x | | | | | | | STD | |
| 015 | 189-BDUP- 12082014 | 12/8 | 1200 | G | GW | 1 | x | | | | | | | STD | |
| 016 | 189-TBL- 12012014 | 12/1 | -- | G | DI | 2 | x | | | | | | | STD | Email EQuIS EDD |
| 017 | 189-FBL- 12082014 | 12/8 | 1800 | G | DI | 2 | x | | | | | | | STD | ** Use expanded 8260 list |

| Sampler signature | Transported via: | Picked up / dropped off at |
|---|---|---|
| K. Kloeber | FedEx Ground | McKinley Pkwy |

| Relinquished by signature | Date | Time | Received by signature |
|---|---|---|---|
| Ken Kloeber | 12/9 | 16:29 | |
| Relinquished by signature | Date | Time | Received by signature |
| | | | |
| Relinquished by signature | Date | Time | Received at Lab by signature |
| | 12-10-14 | 10:00 | |

| Analysis Requested / Method | Container Type | Size | Preservative |
|---|---|---|---|
| (1) EPA 8260 ** | VOA | 2 x 40 | HCl pH <2, Ice |
| (2) | | | |
| (3) | | | |
| (4) | | | |
| (5) | | | |
| (6) | | | |
| (7) | | | |

for Lab use: 3.8°C via Fed Ex

Samples Received Office

K1412101

# Ken W. Kloeber Consulting Engineers

# Environmental Sample Chain of Custody

(716) 864-0012 tel
(775) 860-3804 fax
KloeberEng @ aol.com
PO Box140 Boston NY 14025

KWKCE Project **189-02**

Sampled by initials: KWK

Wx: CLR 35°F

| for Lab use: | KWKCE Sample ID | Date | Time | Type | Matrix | # of containers | Analysis Requested (1) 8260 | (2) | (3) | (4) | (5) | (6) | (7) | TAT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 018 | 189-W5B- 12042014 | 12/4 | 1630 | G | GW | 1 | x | | | | | | | STD |

Instructions / Remarks:
Report all results (e.g. Js);
Report all data qualifiers;
Keep limits as low as possible.
Email PDF of report.
Email EQuIS EDD

2 of 2

**** Use expanded 8260 list

| Sampler signature | Transported via: | Picked up / dropped off at |
|---|---|---|
| Kay Kloeber | FedEx Ground | UPS |

| Relinquished by signature | Date | Time | Received by signature |
|---|---|---|---|
| Kay Kloeber | 12/9 | 1123 | |
| Relinquished by signature | Date | Time | Received by signature |
| | | | |
| Relinquished by signature | Date | Time | Received at Lab by signature |
| | 12-10-14 | 10:00 | |

| Analysis Requested / Method | Container Type | Size | Preservative |
|---|---|---|---|
| (1) EPA 8260 **** | VOA | 2 x 40 | HCl pH <2, Ice |
| (2) | | | |
| (3) | | | |
| (4) | | | |
| (5) | | | |
| (6) | | | |
| (7) | | | |

for Lab use: 3.8°C via Fed Ex Samples Received On Ice

# Life Science Laboratories, Inc.

## Sample Receipt Checklist

Client Name: **KLOEBERENG** Date and Time Received: **12/10/2014 10:00:00 AM**

Work Order Number: **K1412101** Received by: gis

Checklist completed by: GS 12-10-14 Reviewed by: AC 12-10-14

Initials | Date | Initials | Date

Delivery Method: FedEx

| | | | |
|---|---|---|---|
| Shipping container/cooler in good condition? | Yes ☑ | No ☐ | Not Present ☐ |
| Custody seals intact on shipping container/cooler? | Yes ☐ | No ☐ | Not Present ☑ |
| Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Applicable ☑ |
| Chain of custody present? | Yes ☑ | No ☐ | |
| Chain of custody signed when relinquished and received? | Yes ☑ | No ☐ | |
| Chain of custody agrees with sample labels? | Yes ☑ | No ☐ | |
| Samples in proper container/bottle? | Yes ☑ | No ☐ | |
| Sample containers intact? | Yes ☑ | No ☐ | |
| Sufficient sample volume for indicated test? | Yes ☑ | No ☐ | |
| All samples received within holding time? | Yes ☑ | No ☐ | |
| Container/Temp Blank temperature in compliance? | Yes ☑ | No ☐ | |
| Water - VOA vials have zero headspace? | Yes ☑ | No ☐ | No VOA vials submitted ☐ |
| Water - pH acceptable upon receipt? | Yes ☐ | No ☐ | Not Applicable ☑ |

Comments:

Corrective Action:

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

Friday, August 01, 2014

Ken W. Kloeber
Ken W. Kloeber Consulting Engineers
PO Box 140
Boston, NY 14025

TEL: (716) 864-0012

Project: 189-02
RE: Analytical Results Order No.: K1407301

Dear Ken W. Kloeber:

Life Science Laboratories, Inc. received 18 sample(s) on 7/25/2014 for the analyses presented in the following report. Sample results relate only to the samples as received by the laboratory.

Very truly yours,
Life Science Laboratories, Inc.

Anthony Crescenzi
Project Manager

## GC/MS Volatile Organics Case Narrative

| | |
|---|---|
| Client: | Ken W. Kloeber Consulting Engineers |
| Project/Order: | 189-02 |
| Methodology: | 8260C |

File Name: U:\Narratives\MSVoa\Kloebermsvnar.doc

**GC/MS Volatile Organics**

Acetone and methylene chloride are common volatile laboratory background contaminants. QA/QC guidelines allow concentrations 3X the PQL for these compounds and the reported concentrations may be variable and include values less than the PQL or up to 3x the PQL. The associated method blanks may show similar concentrations or may vary from samples depending on the source or timing of the contamination. For samples requiring dilutions the background concentrations of acetone and methylene chloride are multiplied by the dilution factor (as are all compounds) and thus the reported concentrations of the contaminants can appear to be much higher than undiluted samples.

# Life Science Laboratories, Inc.

**5854 Butternut Drive**

**East Syracuse, NY 13057** **(315) 445-1900**


# ANALYTICAL QC SUMMARY REPORT

**Method:** SW8260C/5030C

**Work Order:** K1407301

**CLIENT:** Ken W. Kloeber Consulting Engineers

**Project:** 189-02

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | **MB-27384** | SampType: | **MBLK** | TestCode: | **8260W_CAL** | Units: | **µg/L** | Prep Date: | RunNo: **27384** |
| Client ID: | **ZZZZZ** | Batch ID: | **R27384** | Method: | **SW8260C/503** | | | Analysis Date: **7/29/2014** | SeqNo: **685894** |
| Instrument: | **MSK_75** | ColumnID: | **Rtx-VMS** | | | | | | |

| Analyte | QC Sample Result | PQL | SPK Added | Parent Sample Result | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (m+p)-Xylene | ND | 1.00 | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 0.500 | | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 0.500 | | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 0.500 | | | | | | | | | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | 0.500 | | | | | | | | | |
| 1,1,2-Trichloroethane | ND | 0.500 | | | | | | | | | |
| 1,1-Dichloroethane | ND | 0.500 | | | | | | | | | |
| 1,1-Dichloroethene | ND | 0.500 | | | | | | | | | |
| 1,2,3-Trichloropropane | ND | 2.00 | | | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 1.00 | | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 0.500 | | | | | | | | | |
| 1,2-Dibromo-3-chloropropane | ND | 5.00 | | | | | | | | | |
| 1,2-Dibromoethane | ND | 0.500 | | | | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.500 | | | | | | | | | |
| 1,2-Dichloroethane | ND | 0.500 | | | | | | | | | |
| 1,2-Dichloropropane | ND | 0.500 | | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 0.500 | | | | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.500 | | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.500 | | | | | | | | | |
| 2-Butanone | ND | 10.0 | | | | | | | | | |
| 2-Chloroethylvinyl ether | ND | 5.00 | | | | | | | | | |
| 2-Hexanone | ND | 5.00 | | | | | | | | | |
| 4-Chlorotoluene | ND | 0.500 | | | | | | | | | |
| 4-Methyl-2-pentanone | ND | 5.00 | | | | | | | | | |
| Acetone | ND | 10.0 | | | | | | | | | |
| Benzene | ND | 0.500 | | | | | | | | | |
| Bromobenzene | ND | 0.500 | | | | | | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value exceeds the instrument calibration range | J | Analyte detected below the PQL |
| ND | Not Detected at the Practical Quantitation Limit (PQL) | R | RPD exceeds accepted precision limit | S | Spike Recovery outside accepted recovery limits |
| U | Not Detected at the MDC or RL | | | | |

**Date:** *31-Jul-14*

# Life Science Laboratories, Inc.

**5854 Butternut Drive**

**East Syracuse, NY 13057** **(315) 445-1900**


## ANALYTICAL QC SUMMARY REPORT

**Method:** SW8260C/5030C
**Work Order:** K1407301
**Project:** 189-02

**CLIENT:** Ken W. Kloeber Consulting Engineers

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | **MB-27384** | SampType: | **MBLK** | TestCode: | **8260W_CAL** | Units: | **µg/L** | Prep Date: | RunNo: **27384** |
| Client ID: | **ZZZZZ** | Batch ID: | **R27384** | Method: | **SW8260C/503** | | | Analysis Date: **7/29/2014** | SeqNo: **685894** |
| Instrument: | **MSK_75** | ColumnID: | **Rtx-VMS** | | | | | | |

| Analyte | QC Sample Result | PQL | SPK Added | Parent Sample Result | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromochloromethane | ND | 0.500 | | | | | | | | | |
| Bromodichloromethane | ND | 0.500 | | | | | | | | | |
| Bromoform | ND | 1.00 | | | | | | | | | |
| Bromomethane | ND | 1.00 | | | | | | | | | |
| Carbon disulfide | ND | 0.500 | | | | | | | | | |
| Carbon tetrachloride | ND | 0.500 | | | | | | | | | |
| Chlorobenzene | ND | 0.500 | | | | | | | | | |
| Chloroethane | ND | 1.00 | | | | | | | | | |
| Chloroform | ND | 0.500 | | | | | | | | | |
| Chloromethane | ND | 1.00 | | | | | | | | | |
| cis-1,2-Dichloroethene | ND | 0.500 | | | | | | | | | |
| cis-1,3-Dichloropropene | ND | 0.500 | | | | | | | | | |
| Cyclohexane | ND | 0.500 | | | | | | | | | |
| Dibromochloromethane | ND | 0.500 | | | | | | | | | |
| Dibromomethane | ND | 0.500 | | | | | | | | | |
| Dichlorodifluoromethane | ND | 1.00 | | | | | | | | | |
| Ethylbenzene | ND | 0.500 | | | | | | | | | |
| Hexachlorobutadiene | ND | 1.00 | | | | | | | | | |
| Isopropylbenzene | ND | 0.500 | | | | | | | | | |
| Methyl tert-butyl ether | ND | 1.00 | | | | | | | | | |
| Methylene chloride | ND | 2.00 | | | | | | | | | |
| n-Propylbenzene | ND | 0.500 | | | | | | | | | |
| Naphthalene | ND | 1.00 | | | | | | | | | |
| o-Xylene | ND | 0.500 | | | | | | | | | |
| p-Isopropyltoluene | ND | 0.500 | | | | | | | | | |
| sec-Butylbenzene | ND | 0.500 | | | | | | | | | |
| Styrene | ND | 0.500 | | | | | | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value exceeds the instrument calibration range | J | Analyte detected below the PQL |
| ND | Not Detected at the Practical Quantitation Limit (PQL) | R | RPD exceeds accepted precision limit | S | Spike Recovery outside accepted recovery limits |
| U | Not Detected at the MDC or RL | | | | |

**Date:** *31-Jul-14*

# Life Science Laboratories, Inc.

**5854 Butternut Drive**

**East Syracuse, NY 13057** **(315) 445-1900**


## ANALYTICAL QC SUMMARY REPORT

**Method:** SW8260C/5030C
**Work Order:** K1407301
**Project:** 189-02

**CLIENT:** Ken W. Kloeber Consulting Engineers

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Sample ID: **MB-27384** | SampType: **MBLK** | TestCode: **8260W_CAL** | Units: **µg/L** | Prep Date: | | RunNo: **27384** | | | |
| Client ID: **ZZZZZ** | Batch ID: **R27384** | Method: **SW8260C/503** | | Analysis Date: **7/29/2014** | | SeqNo: **685894** | | | |
| Instrument: **MSK_75** | ColumnID: **Rtx-VMS** | | | | | | | | |

| Analyte | QC Sample Result | PQL | SPK Added | Parent Sample Result | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | ND | 0.500 | | | | | | | | | |
| Toluene | ND | 0.500 | | | | | | | | | |
| trans-1,2-Dichloroethene | ND | 0.500 | | | | | | | | | |
| trans-1,3-Dichloropropene | ND | 0.500 | | | | | | | | | |
| Trichloroethene | ND | 0.500 | | | | | | | | | |
| Trichlorofluoromethane | ND | 1.00 | | | | | | | | | |
| Vinyl acetate | ND | 2.00 | | | | | | | | | |
| Vinyl chloride | ND | 1.00 | | | | | | | | | |
| Xylenes (total) | ND | 1.00 | | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.30 | 0.100 | 10 | 0 | 93 | 75 | 130 | | | | |
| Surr: Toluene-d8 | 10.1 | 0.100 | 10 | 0 | 101 | 75 | 125 | | | | |
| Surr: 4-Bromofluorobenzene | 10.1 | 0.100 | 10 | 0 | 101 | 75 | 125 | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value exceeds the instrument calibration range | J | Analyte detected below the PQL |
| ND | Not Detected at the Practical Quantitation Limit (PQL) | R | RPD exceeds accepted precision limit | S | Spike Recovery outside accepted recovery limits |
| U | Not Detected at the MDC or RL | | | | |

**Date:** *31-Jul-14*

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1407301-001A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W1* |
| **W Order:** | K1407301 | **Collection Date:** | 07/24/14 10:00 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 07/25/14 9:50 |
| **Inst. ID:** | MSK_75 **Sample Size** 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS **%Moisture:** | **BatchNo:** | R27384 |
| **Revision:** | 07/31/14 15:19 **TestCode:** 8260W_CAL | **FileID:** | 1-SAMP-K5807.D |
| **Col Type:** | TOTAL nd ✓ | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| VOLATILE ORGANIC COMPOUNDS BY GC/MS | | | | | SW8260C/5030C | | |
| (m+p)-Xylene | ND | | 2.00 | 0.40 | µg/L | 2 | 07/29/14 19:01 |
| 1,1,1,2-Tetrachloroethane | ND | | 1.00 | 0.32 | µg/L | 2 | 07/29/14 19:01 |
| 1,1,1-Trichloroethane | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 19:01 |
| 1,1,2,2-Tetrachloroethane | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 19:01 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 19:01 |
| 1,1,2-Trichloroethane | ND | | 1.00 | 0.32 | µg/L | 2 | 07/29/14 19:01 |
| 1,1-Dichloroethane | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 19:01 |
| 1,1-Dichloroethene | ND | | 1.00 | 0.32 | µg/L | 2 | 07/29/14 19:01 |
| 1,2,3-Trichloropropane | ND | | 4.00 | 0.66 | µg/L | 2 | 07/29/14 19:01 |
| 1,2,4-Trichlorobenzene | ND | | 2.00 | 0.20 | µg/L | 2 | 07/29/14 19:01 |
| 1,2,4-Trimethylbenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 19:01 |
| 1,2-Dibromo-3-chloropropane | ND | | 10.0 | 2.00 | µg/L | 2 | 07/29/14 19:01 |
| 1,2-Dibromoethane | ND | | 1.00 | 0.32 | µg/L | 2 | 07/29/14 19:01 |
| 1,2-Dichlorobenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 19:01 |
| 1,2-Dichloroethane | ND | | 1.00 | 0.32 | µg/L | 2 | 07/29/14 19:01 |
| 1,2-Dichloropropane | ND | | 1.00 | 0.32 | µg/L | 2 | 07/29/14 19:01 |
| 1,3,5-Trimethylbenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 19:01 |
| 1,3-Dichlorobenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 19:01 |
| 1,4-Dichlorobenzene | ND | | 1.00 | 0.32 | µg/L | 2 | 07/29/14 19:01 |
| 2-Butanone | ND | | 20.0 | 2.00 | µg/L | 2 | 07/29/14 19:01 |
| 2-Chloroethylvinyl ether | ND | | 10.0 | 5.00 | µg/L | 2 | 07/29/14 19:01 |
| 2-Hexanone | ND | | 10.0 | 2.00 | µg/L | 2 | 07/29/14 19:01 |
| 4-Chlorotoluene | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 19:01 |
| 4-Methyl-2-pentanone | ND | | 10.0 | 2.00 | µg/L | 2 | 07/29/14 19:01 |
| Acetone | ND | | 20.0 | 2.00 | µg/L | 2 | 07/29/14 19:01 |
| Benzene | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 19:01 |
| Bromobenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 19:01 |
| Bromochloromethane | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 19:01 |
| Bromodichloromethane | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 19:01 |
| Bromoform | ND | | 2.00 | 0.66 | µg/L | 2 | 07/29/14 19:01 |
| Bromomethane | ND | | 2.00 | 0.66 | µg/L | 2 | 07/29/14 19:01 |
| Carbon disulfide | ND | | 1.00 | 0.22 | µg/L | 2 | 07/29/14 19:01 |
| Carbon tetrachloride | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 19:01 |
| Chlorobenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 19:01 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 08/01/14 6:17 685909 **Project Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | | | |
|---|---|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | | | **Lab ID:** | **K1407301-001A** |
| **Project:** | 189-02 | | | **Client Sample ID:** | ***189 - W1*** |
| **W Order:** | K1407301 | | | **Collection Date:** | 07/24/14 10:00 |
| **Matrix:** | GROUNDWATER | | | **Date Received:** | 07/25/14 9:50 |
| **Inst. ID:** | MSK_75 | **Sample Size** | 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | | **BatchNo:** | R27384 |
| **Revision:** | 07/31/14 15:19 | **TestCode:** | 8260W_CAL | **FileID:** | 1-SAMP-K5807.D |
| **Col Type:** | | | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260C/5030C** | | |
| Chloroethane | ND | | 2.00 | 0.66 | µg/L | 2 | 07/29/14 19:01 |
| Chloroform | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 19:01 |
| Chloromethane | ND | | 2.00 | 0.66 | µg/L | 2 | 07/29/14 19:01 |
| cis-1,2-Dichloroethene | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 19:01 |
| cis-1,3-Dichloropropene | ND | | 1.00 | 0.32 | µg/L | 2 | 07/29/14 19:01 |
| Cyclohexane | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 19:01 |
| Dibromochloromethane | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 19:01 |
| Dibromomethane | ND | | 1.00 | 0.32 | µg/L | 2 | 07/29/14 19:01 |
| Dichlorodifluoromethane | ND | | 2.00 | 0.20 | µg/L | 2 | 07/29/14 19:01 |
| Ethylbenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 19:01 |
| Hexachlorobutadiene | ND | | 2.00 | 0.20 | µg/L | 2 | 07/29/14 19:01 |
| Isopropylbenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 19:01 |
| Methyl tert-butyl ether | ND | | 2.00 | 0.32 | µg/L | 2 | 07/29/14 19:01 |
| Methylene chloride | ND | | 4.00 | 0.32 | µg/L | 2 | 07/29/14 19:01 |
| n-Propylbenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 19:01 |
| Naphthalene | ND | | 2.00 | 0.20 | µg/L | 2 | 07/29/14 19:01 |
| o-Xylene | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 19:01 |
| p-Isopropyltoluene | ND | | 1.00 | 0.32 | µg/L | 2 | 07/29/14 19:01 |
| sec-Butylbenzene | ND | | 1.00 | 0.32 | µg/L | 2 | 07/29/14 19:01 |
| Styrene | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 19:01 |
| Tetrachloroethene | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 19:01 |
| Toluene | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 19:01 |
| trans-1,2-Dichloroethene | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 19:01 |
| trans-1,3-Dichloropropene | ND | | 1.00 | 0.32 | µg/L | 2 | 07/29/14 19:01 |
| Trichloroethene | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 19:01 |
| Trichlorofluoromethane | ND | | 2.00 | 0.20 | µg/L | 2 | 07/29/14 19:01 |
| Vinyl acetate | ND | | 4.00 | 2.00 | µg/L | 2 | 07/29/14 19:01 |
| Vinyl chloride | ND | | 2.00 | 0.66 | µg/L | 2 | 07/29/14 19:01 |
| Xylenes (total) | ND | | 2.00 | 0.60 | µg/L | 2 | 07/29/14 19:01 |
| Surr: 1,2-Dichloroethane-d4 | 102 | | 75-130 | 0.32 | %REC | 2 | 07/29/14 19:01 |
| Surr: Toluene-d8 | 98 | | 75-125 | 0.20 | %REC | 2 | 07/29/14 19:01 |
| Surr: 4-Bromofluorobenzene | 101 | | 75-125 | 0.20 | %REC | 2 | 07/29/14 19:01 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 08/01/14 6:17 685909 **Project Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1407301-002A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W2* ✓ |
| **W Order:** | K1407301 | **Collection Date:** | 07/23/14 13:30 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 07/25/14 9:50 |
| **Inst. ID:** | MSK_75 **Sample Size** 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS **%Moisture:** | **BatchNo:** | R27384 |
| **Revision:** | 07/31/14 15:19 **TestCode:** 8260W_CAL | **FileID:** | 1-SAMP-K5808.D |
| **Col Type:** | TOTAL 186.2 ✓ | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260C/5030C** | | |
| (m+p)-Xylene | ND | | 5.00 | 1.00 | µg/L | 5 | 07/29/14 19:33 |
| 1,1,1,2-Tetrachloroethane | ND | | 2.50 | 0.80 | µg/L | 5 | 07/29/14 19:33 |
| 1,1,1-Trichloroethane | 49.9 | | 2.50 | 0.50 | µg/L | 5 | 07/29/14 19:33 |
| 1,1,2,2-Tetrachloroethane | ND | | 2.50 | 0.50 | µg/L | 5 | 07/29/14 19:33 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 8.20 | | 2.50 | 0.50 | µg/L | 5 | 07/29/14 19:33 |
| 1,1,2-Trichloroethane | ND | | 2.50 | 0.80 | µg/L | 5 | 07/29/14 19:33 |
| 1,1-Dichloroethane | 26.2 | | 2.50 | 0.50 | µg/L | 5 | 07/29/14 19:33 |
| 1,1-Dichloroethene | 1.00 | J | 2.50 | 0.80 | µg/L | 5 | 07/29/14 19:33 |
| 1,2,3-Trichloropropane | ND | | 10.0 | 1.65 | µg/L | 5 | 07/29/14 19:33 |
| 1,2,4-Trichlorobenzene | ND | | 5.00 | 0.50 | µg/L | 5 | 07/29/14 19:33 |
| 1,2,4-Trimethylbenzene | 4.65 | | 2.50 | 0.50 | µg/L | 5 | 07/29/14 19:33 |
| 1,2-Dibromo-3-chloropropane | ND | | 25.0 | 5.00 | µg/L | 5 | 07/29/14 19:33 |
| 1,2-Dibromoethane | ND | | 2.50 | 0.80 | µg/L | 5 | 07/29/14 19:33 |
| 1,2-Dichlorobenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 07/29/14 19:33 |
| 1,2-Dichloroethane | ND | | 2.50 | 0.80 | µg/L | 5 | 07/29/14 19:33 |
| 1,2-Dichloropropane | ND | | 2.50 | 0.80 | µg/L | 5 | 07/29/14 19:33 |
| 1,3,5-Trimethylbenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 07/29/14 19:33 |
| 1,3-Dichlorobenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 07/29/14 19:33 |
| 1,4-Dichlorobenzene | ND | | 2.50 | 0.80 | µg/L | 5 | 07/29/14 19:33 |
| 2-Butanone | 24.4 | J | 50.0 | 5.00 | µg/L | 5 | 07/29/14 19:33 |
| 2-Chloroethylvinyl ether | ND | | 25.0 | 12.5 | µg/L | 5 | 07/29/14 19:33 |
| 2-Hexanone | ND | | 25.0 | 5.00 | µg/L | 5 | 07/29/14 19:33 |
| 4-Chlorotoluene | ND | | 2.50 | 0.50 | µg/L | 5 | 07/29/14 19:33 |
| 4-Methyl-2-pentanone | ND | | 25.0 | 5.00 | µg/L | 5 | 07/29/14 19:33 |
| Acetone | 28.0 | J | 50.0 | 5.00 | µg/L | 5 | 07/29/14 19:33 |
| Benzene | ND | | 2.50 | 0.50 | µg/L | 5 | 07/29/14 19:33 |
| Bromobenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 07/29/14 19:33 |
| Bromochloromethane | ND | | 2.50 | 0.50 | µg/L | 5 | 07/29/14 19:33 |
| Bromodichloromethane | ND | | 2.50 | 0.50 | µg/L | 5 | 07/29/14 19:33 |
| Bromoform | ND | | 5.00 | 1.65 | µg/L | 5 | 07/29/14 19:33 |
| Bromomethane | ND | | 5.00 | 1.65 | µg/L | 5 | 07/29/14 19:33 |
| Carbon disulfide | 1.40 | J | 2.50 | 0.55 | µg/L | 5 | 07/29/14 19:33 |
| Carbon tetrachloride | ND | | 2.50 | 0.50 | µg/L | 5 | 07/29/14 19:33 |
| Chlorobenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 07/29/14 19:33 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 08/01/14 6:17 685910 **Project Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1407301-002A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W2*** |
| **W Order:** | K1407301 | **Collection Date:** | 07/23/14 13:30 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 07/25/14 9:50 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R27384 |
| **Revision:** | 07/31/14 15:19 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K5808.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| VOLATILE ORGANIC COMPOUNDS BY GC/MS | | | | | SW8260C/5030C | | |
| Chloroethane | 3.65 | J | 5.00 | 1.65 | µg/L | 5 | 07/29/14 19:33 |
| Chloroform | ND | | 2.50 | 0.50 | µg/L | 5 | 07/29/14 19:33 |
| Chloromethane | ND | | 5.00 | 1.65 | µg/L | 5 | 07/29/14 19:33 |
| cis-1,2-Dichloroethene | 7.20 | | 2.50 | 0.50 | µg/L | 5 | 07/29/14 19:33 |
| cis-1,3-Dichloropropene | ND | | 2.50 | 0.80 | µg/L | 5 | 07/29/14 19:33 |
| Cyclohexane | ND | | 2.50 | 0.50 | µg/L | 5 | 07/29/14 19:33 |
| Dibromochloromethane | ND | | 2.50 | 0.50 | µg/L | 5 | 07/29/14 19:33 |
| Dibromomethane | ND | | 2.50 | 0.80 | µg/L | 5 | 07/29/14 19:33 |
| Dichlorodifluoromethane | ND | | 5.00 | 0.50 | µg/L | 5 | 07/29/14 19:33 |
| Ethylbenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 07/29/14 19:33 |
| Hexachlorobutadiene | ND | | 5.00 | 0.50 | µg/L | 5 | 07/29/14 19:33 |
| Isopropylbenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 07/29/14 19:33 |
| Methyl tert-butyl ether | ND | | 5.00 | 0.80 | µg/L | 5 | 07/29/14 19:33 |
| Methylene chloride | ND | | 10.0 | 0.80 | µg/L | 5 | 07/29/14 19:33 |
| n-Propylbenzene | 0.70 | J | 2.50 | 0.50 | µg/L | 5 | 07/29/14 19:33 |
| Naphthalene | ND | | 5.00 | 0.50 | µg/L | 5 | 07/29/14 19:33 |
| o-Xylene | 0.55 | J | 2.50 | 0.50 | µg/L | 5 | 07/29/14 19:33 |
| p-Isopropyltoluene | ND | | 2.50 | 0.80 | µg/L | 5 | 07/29/14 19:33 |
| sec-Butylbenzene | 0.85 | J | 2.50 | 0.80 | µg/L | 5 | 07/29/14 19:33 |
| Styrene | ND | | 2.50 | 0.50 | µg/L | 5 | 07/29/14 19:33 |
| Tetrachloroethene | ND | | 2.50 | 0.50 | µg/L | 5 | 07/29/14 19:33 |
| Toluene | 0.50 | J | 2.50 | 0.50 | µg/L | 5 | 07/29/14 19:33 |
| trans-1,2-Dichloroethene | ND | | 2.50 | 0.50 | µg/L | 5 | 07/29/14 19:33 |
| trans-1,3-Dichloropropene | ND | | 2.50 | 0.80 | µg/L | 5 | 07/29/14 19:33 |
| Trichloroethene | 1.90 | J | 2.50 | 0.50 | µg/L | 5 | 07/29/14 19:33 |
| Trichlorofluoromethane | ND | | 5.00 | 0.50 | µg/L | 5 | 07/29/14 19:33 |
| Vinyl acetate | ND | | 10.0 | 5.00 | µg/L | 5 | 07/29/14 19:33 |
| Vinyl chloride | 27.1 | | 5.00 | 1.65 | µg/L | 5 | 07/29/14 19:33 |
| Xylenes (total) | ND | | 5.00 | 1.50 | µg/L | 5 | 07/29/14 19:33 |
| Surr: 1,2-Dichloroethane-d4 | 113 | | 75-130 | 0.80 | %REC | 5 | 07/29/14 19:33 |
| Surr: Toluene-d8 | 95 | | 75-125 | 0.50 | %REC | 5 | 07/29/14 19:33 |
| Surr: 4-Bromofluorobenzene | 102 | | 75-125 | 0.50 | %REC | 5 | 07/29/14 19:33 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 08/01/14 6:17 685910 **Project Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1407301-003A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W3* |
| **W Order:** | K1407301 | **Collection Date:** | 07/23/14 13:45 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 07/25/14 9:50 |
| **Inst. ID:** | MSK_75 **Sample Size** 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS **%Moisture:** | **BatchNo:** | R27384 |
| **Revision:** | 07/31/14 15:19 **TestCode:** 8260W_CAL | **FileID:** | 1-SAMP-K5793.D |
| **Col Type:** | TOTAL 454.5 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260C/5030C** | | |
| (m+p)-Xylene | ND | | 10.0 | 2.00 | µg/L | 10 | 07/29/14 11:29 |
| 1,1,1,2-Tetrachloroethane | ND | | 5.00 | 1.60 | µg/L | 10 | 07/29/14 11:29 |
| 1,1,1-Trichloroethane | 164 | | 5.00 | 1.00 | µg/L | 10 | 07/29/14 11:29 |
| 1,1,2,2-Tetrachloroethane | ND | | 5.00 | 1.00 | µg/L | 10 | 07/29/14 11:29 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 4.00 | J | 5.00 | 1.00 | µg/L | 10 | 07/29/14 11:29 |
| 1,1,2-Trichloroethane | ND | | 5.00 | 1.60 | µg/L | 10 | 07/29/14 11:29 |
| 1,1-Dichloroethane | 196 | | 5.00 | 1.00 | µg/L | 10 | 07/29/14 11:29 |
| 1,1-Dichloroethene | ND | | 5.00 | 1.60 | µg/L | 10 | 07/29/14 11:29 |
| 1,2,3-Trichloropropane | ND | | 20.0 | 3.30 | µg/L | 10 | 07/29/14 11:29 |
| 1,2,4-Trichlorobenzene | ND | | 10.0 | 1.00 | µg/L | 10 | 07/29/14 11:29 |
| 1,2,4-Trimethylbenzene | 13.5 | | 5.00 | 1.00 | µg/L | 10 | 07/29/14 11:29 |
| 1,2-Dibromo-3-chloropropane | ND | | 50.0 | 10.0 | µg/L | 10 | 07/29/14 11:29 |
| 1,2-Dibromoethane | ND | | 5.00 | 1.60 | µg/L | 10 | 07/29/14 11:29 |
| 1,2-Dichlorobenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 07/29/14 11:29 |
| 1,2-Dichloroethane | ND | | 5.00 | 1.60 | µg/L | 10 | 07/29/14 11:29 |
| 1,2-Dichloropropane | ND | | 5.00 | 1.60 | µg/L | 10 | 07/29/14 11:29 |
| 1,3,5-Trimethylbenzene | 2.10 | J | 5.00 | 1.00 | µg/L | 10 | 07/29/14 11:29 |
| 1,3-Dichlorobenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 07/29/14 11:29 |
| 1,4-Dichlorobenzene | ND | | 5.00 | 1.60 | µg/L | 10 | 07/29/14 11:29 |
| 2-Butanone | ND | | 100 | 10.0 | µg/L | 10 | 07/29/14 11:29 |
| 2-Chloroethylvinyl ether | ND | | 50.0 | 25.0 | µg/L | 10 | 07/29/14 11:29 |
| 2-Hexanone | ND | | 50.0 | 10.0 | µg/L | 10 | 07/29/14 11:29 |
| 4-Chlorotoluene | ND | | 5.00 | 1.00 | µg/L | 10 | 07/29/14 11:29 |
| 4-Methyl-2-pentanone | ND | | 50.0 | 10.0 | µg/L | 10 | 07/29/14 11:29 |
| Acetone | ND | | 100 | 10.0 | µg/L | 10 | 07/29/14 11:29 |
| Benzene | ND | | 5.00 | 1.00 | µg/L | 10 | 07/29/14 11:29 |
| Bromobenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 07/29/14 11:29 |
| Bromochloromethane | ND | | 5.00 | 1.00 | µg/L | 10 | 07/29/14 11:29 |
| Bromodichloromethane | ND | | 5.00 | 1.00 | µg/L | 10 | 07/29/14 11:29 |
| Bromoform | ND | | 10.0 | 3.30 | µg/L | 10 | 07/29/14 11:29 |
| Bromomethane | ND | | 10.0 | 3.30 | µg/L | 10 | 07/29/14 11:29 |
| Carbon disulfide | ND | | 5.00 | 1.10 | µg/L | 10 | 07/29/14 11:29 |
| Carbon tetrachloride | ND | | 5.00 | 1.00 | µg/L | 10 | 07/29/14 11:29 |
| Chlorobenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 07/29/14 11:29 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 08/01/14 6:17 685895 **Project Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1407301-003A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W3* |
| **W Order:** | K1407301 | **Collection Date:** | 07/23/14 13:45 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 07/25/14 9:50 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R27384 |
| **Revision:** | 07/31/14 15:19 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K5793.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260C/5030C** | | |
| Chloroethane | ND | | 10.0 | 3.30 | µg/L | 10 | 07/29/14 11:29 |
| Chloroform | ND | | 5.00 | 1.00 | µg/L | 10 | 07/29/14 11:29 |
| Chloromethane | ND | | 10.0 | 3.30 | µg/L | 10 | 07/29/14 11:29 |
| cis-1,2-Dichloroethene | 46.5 | | 5.00 | 1.00 | µg/L | 10 | 07/29/14 11:29 |
| cis-1,3-Dichloropropene | ND | | 5.00 | 1.60 | µg/L | 10 | 07/29/14 11:29 |
| Cyclohexane | ND | | 5.00 | 1.00 | µg/L | 10 | 07/29/14 11:29 |
| Dibromochloromethane | ND | | 5.00 | 1.00 | µg/L | 10 | 07/29/14 11:29 |
| Dibromomethane | ND | | 5.00 | 1.60 | µg/L | 10 | 07/29/14 11:29 |
| Dichlorodifluoromethane | ND | | 10.0 | 1.00 | µg/L | 10 | 07/29/14 11:29 |
| Ethylbenzene | 1.10 | J | 5.00 | 1.00 | µg/L | 10 | 07/29/14 11:29 |
| Hexachlorobutadiene | ND | | 10.0 | 1.00 | µg/L | 10 | 07/29/14 11:29 |
| Isopropylbenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 07/29/14 11:29 |
| Methyl tert-butyl ether | ND | | 10.0 | 1.60 | µg/L | 10 | 07/29/14 11:29 |
| Methylene chloride | 9.70 | J | 20.0 | 1.60 | µg/L | 10 | 07/29/14 11:29 |
| n-Propylbenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 07/29/14 11:29 |
| Naphthalene | ND | | 10.0 | 1.00 | µg/L | 10 | 07/29/14 11:29 |
| o-Xylene | 1.50 | J | 5.00 | 1.00 | µg/L | 10 | 07/29/14 11:29 |
| p-Isopropyltoluene | ND | | 5.00 | 1.60 | µg/L | 10 | 07/29/14 11:29 |
| sec-Butylbenzene | ND | | 5.00 | 1.60 | µg/L | 10 | 07/29/14 11:29 |
| Styrene | ND | | 5.00 | 1.00 | µg/L | 10 | 07/29/14 11:29 |
| Tetrachloroethene | ND | | 5.00 | 1.00 | µg/L | 10 | 07/29/14 11:29 |
| Toluene | 1.60 | J | 5.00 | 1.00 | µg/L | 10 | 07/29/14 11:29 |
| trans-1,2-Dichloroethene | 1.00 | J | 5.00 | 1.00 | µg/L | 10 | 07/29/14 11:29 |
| trans-1,3-Dichloropropene | ND | | 5.00 | 1.60 | µg/L | 10 | 07/29/14 11:29 |
| Trichloroethene | 3.20 | J | 5.00 | 1.00 | µg/L | 10 | 07/29/14 11:29 |
| Trichlorofluoromethane | ND | | 10.0 | 1.00 | µg/L | 10 | 07/29/14 11:29 |
| Vinyl acetate | ND | | 20.0 | 10.0 | µg/L | 10 | 07/29/14 11:29 |
| Vinyl chloride | 10.3 | | 10.0 | 3.30 | µg/L | 10 | 07/29/14 11:29 |
| Xylenes (total) | ND | | 10.0 | 3.00 | µg/L | 10 | 07/29/14 11:29 |
| Surr: 1,2-Dichloroethane-d4 | 95 | | 75-130 | 1.60 | %REC | 10 | 07/29/14 11:29 |
| Surr: Toluene-d8 | 99 | | 75-125 | 1.00 | %REC | 10 | 07/29/14 11:29 |
| Surr: 4-Bromofluorobenzene | 102 | | 75-125 | 1.00 | %REC | 10 | 07/29/14 11:29 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 08/01/14 6:17 685895 **Project Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1407301-004A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W4* |
| **W Order:** | K1407301 | **Collection Date:** | 07/24/14 9:45 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 07/25/14 9:50 |
| **Inst. ID:** | MSK_75 **Sample Size** 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS **%Moisture:** | **BatchNo:** | R27384 |
| **Revision:** | 07/31/14 15:19 **TestCode:** 8260W_CAL | **FileID:** | 1-SAMP-K5794.D |
| **Col Type:** | TOTAL 54.04 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| VOLATILE ORGANIC COMPOUNDS BY GC/MS | | | | | SW8260C/5030C | | |
| (m+p)-Xylene | 1.21 | | 1.00 | 0.20 | µg/L | 1 | 07/29/14 12:01 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 12:01 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 12:01 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 12:01 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 12:01 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 12:01 |
| 1,1-Dichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 12:01 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 12:01 |
| 1,2,3-Trichloropropane | ND | | 2.00 | 0.33 | µg/L | 1 | 07/29/14 12:01 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 0.10 | µg/L | 1 | 07/29/14 12:01 |
| 1,2,4-Trimethylbenzene | 1.57 | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 12:01 |
| 1,2-Dibromo-3-chloropropane | ND | | 5.00 | 1.00 | µg/L | 1 | 07/29/14 12:01 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 12:01 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 12:01 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 12:01 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 12:01 |
| 1,3,5-Trimethylbenzene | 0.32 | J | 0.50 | 0.10 | µg/L | 1 | 07/29/14 12:01 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 12:01 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 12:01 |
| 2-Butanone | 2.99 | J | 10.0 | 1.00 | µg/L | 1 | 07/29/14 12:01 |
| 2-Chloroethylvinyl ether | ND | | 5.00 | 2.50 | µg/L | 1 | 07/29/14 12:01 |
| 2-Hexanone | ND | | 5.00 | 1.00 | µg/L | 1 | 07/29/14 12:01 |
| 4-Chlorotoluene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 12:01 |
| 4-Methyl-2-pentanone | ND | | 5.00 | 1.00 | µg/L | 1 | 07/29/14 12:01 |
| Acetone | 24.7 | | 10.0 | 1.00 | µg/L | 1 | 07/29/14 12:01 |
| Benzene | 16.4 | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 12:01 |
| Bromobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 12:01 |
| Bromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 12:01 |
| Bromodichloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 12:01 |
| Bromoform | ND | | 1.00 | 0.33 | µg/L | 1 | 07/29/14 12:01 |
| Bromomethane | ND | | 1.00 | 0.33 | µg/L | 1 | 07/29/14 12:01 |
| Carbon disulfide | ND | | 0.50 | 0.11 | µg/L | 1 | 07/29/14 12:01 |
| Carbon tetrachloride | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 12:01 |
| Chlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 12:01 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 08/01/14 6:17 685897 **Project Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1407301-004A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W4* |
| **W Order:** | K1407301 | **Collection Date:** | 07/24/14 9:45 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 07/25/14 9:50 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R27384 |
| **Revision:** | 07/31/14 15:19 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K5794.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260C/5030C** | | |
| Chloroethane | ND | | 1.00 | 0.33 | µg/L | 1 | 07/29/14 12:01 |
| Chloroform | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 12:01 |
| Chloromethane | ND | | 1.00 | 0.33 | µg/L | 1 | 07/29/14 12:01 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 12:01 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 12:01 |
| Cyclohexane | 3.41 | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 12:01 |
| Dibromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 12:01 |
| Dibromomethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 12:01 |
| Dichlorodifluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 07/29/14 12:01 |
| Ethylbenzene | 1.27 | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 12:01 |
| Hexachlorobutadiene | ND | | 1.00 | 0.10 | µg/L | 1 | 07/29/14 12:01 |
| Isopropylbenzene | 0.18 | J | 0.50 | 0.10 | µg/L | 1 | 07/29/14 12:01 |
| Methyl tert-butyl ether | ND | | 1.00 | 0.16 | µg/L | 1 | 07/29/14 12:01 |
| Methylene chloride | ND | | 2.00 | 0.16 | µg/L | 1 | 07/29/14 12:01 |
| n-Propylbenzene | 0.19 | J | 0.50 | 0.10 | µg/L | 1 | 07/29/14 12:01 |
| Naphthalene | ND | | 1.00 | 0.10 | µg/L | 1 | 07/29/14 12:01 |
| o-Xylene | 0.46 | J | 0.50 | 0.10 | µg/L | 1 | 07/29/14 12:01 |
| p-Isopropyltoluene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 12:01 |
| sec-Butylbenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 12:01 |
| Styrene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 12:01 |
| Tetrachloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 12:01 |
| Toluene | 1.34 | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 12:01 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 12:01 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 12:01 |
| Trichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 12:01 |
| Trichlorofluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 07/29/14 12:01 |
| Vinyl acetate | ND | | 2.00 | 1.00 | µg/L | 1 | 07/29/14 12:01 |
| Vinyl chloride | ND | | 1.00 | 0.33 | µg/L | 1 | 07/29/14 12:01 |
| Xylenes (total) | 1.67 | | 1.00 | 0.30 | µg/L | 1 | 07/29/14 12:01 |
| Surr: 1,2-Dichloroethane-d4 | 94 | | 75-130 | 0.16 | %REC | 1 | 07/29/14 12:01 |
| Surr: Toluene-d8 | 99 | | 75-125 | 0.10 | %REC | 1 | 07/29/14 12:01 |
| Surr: 4-Bromofluorobenzene | 100 | | 75-125 | 0.10 | %REC | 1 | 07/29/14 12:01 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 08/01/14 6:17 685897 **Project Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

**CLIENT** Ken W. Kloeber Consulting Engineers
**Project:** 189-02
**W Order:** K1407301
**Matrix:** GROUNDWATER
**Inst. ID:** MSK_75 **Sample Size** 10 mL
**ColumnID:** Rtx-VMS **%Moisture:**
**Revision:** 07/31/14 15:19 **TestCode:** 8260W_CAL
**Col Type:** TOTAL 1264.5

**Lab ID:** K1407301-005A
**Client Sample ID:** *189 - W5*
**Collection Date:** 07/24/14 10:30
**Date Received:** 07/25/14 9:50
**PrepDate:**
**BatchNo:** R27384
**FileID:** 1-SAMP-K5795.D

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| VOLATILE ORGANIC COMPOUNDS BY GC/MS | | | | | SW8260C/5030C | | |
| (m+p)-Xylene | ND | | 50.0 | 10.0 | µg/L | 50 | 07/29/14 12:33 |
| 1,1,1,2-Tetrachloroethane | ND | | 25.0 | 8.00 | µg/L | 50 | 07/29/14 12:33 |
| 1,1,1-Trichloroethane | ND | | 25.0 | 5.00 | µg/L | 50 | 07/29/14 12:33 |
| 1,1,2,2-Tetrachloroethane | ND | | 25.0 | 5.00 | µg/L | 50 | 07/29/14 12:33 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 25.0 | 5.00 | µg/L | 50 | 07/29/14 12:33 |
| 1,1,2-Trichloroethane | ND | | 25.0 | 8.00 | µg/L | 50 | 07/29/14 12:33 |
| 1,1-Dichloroethane | 758 | | 25.0 | 5.00 | µg/L | 50 | 07/29/14 12:33 |
| 1,1-Dichloroethene | ND | | 25.0 | 8.00 | µg/L | 50 | 07/29/14 12:33 |
| 1,2,3-Trichloropropane | ND | | 100 | 16.5 | µg/L | 50 | 07/29/14 12:33 |
| 1,2,4-Trichlorobenzene | ND | | 50.0 | 5.00 | µg/L | 50 | 07/29/14 12:33 |
| 1,2,4-Trimethylbenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 07/29/14 12:33 |
| 1,2-Dibromo-3-chloropropane | ND | | 250 | 50.0 | µg/L | 50 | 07/29/14 12:33 |
| 1,2-Dibromoethane | ND | | 25.0 | 8.00 | µg/L | 50 | 07/29/14 12:33 |
| 1,2-Dichlorobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 07/29/14 12:33 |
| 1,2-Dichloroethane | 9.00 | J | 25.0 | 8.00 | µg/L | 50 | 07/29/14 12:33 |
| 1,2-Dichloropropane | ND | | 25.0 | 8.00 | µg/L | 50 | 07/29/14 12:33 |
| 1,3,5-Trimethylbenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 07/29/14 12:33 |
| 1,3-Dichlorobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 07/29/14 12:33 |
| 1,4-Dichlorobenzene | ND | | 25.0 | 8.00 | µg/L | 50 | 07/29/14 12:33 |
| 2-Butanone | ND | | 500 | 50.0 | µg/L | 50 | 07/29/14 12:33 |
| 2-Chloroethylvinyl ether | ND | | 250 | 125 | µg/L | 50 | 07/29/14 12:33 |
| 2-Hexanone | ND | | 250 | 50.0 | µg/L | 50 | 07/29/14 12:33 |
| 4-Chlorotoluene | ND | | 25.0 | 5.00 | µg/L | 50 | 07/29/14 12:33 |
| 4-Methyl-2-pentanone | ND | | 250 | 50.0 | µg/L | 50 | 07/29/14 12:33 |
| Acetone | ND | | 500 | 50.0 | µg/L | 50 | 07/29/14 12:33 |
| Benzene | ND | | 25.0 | 5.00 | µg/L | 50 | 07/29/14 12:33 |
| Bromobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 07/29/14 12:33 |
| Bromochloromethane | ND | | 25.0 | 5.00 | µg/L | 50 | 07/29/14 12:33 |
| Bromodichloromethane | ND | | 25.0 | 5.00 | µg/L | 50 | 07/29/14 12:33 |
| Bromoform | ND | | 50.0 | 16.5 | µg/L | 50 | 07/29/14 12:33 |
| Bromomethane | ND | | 50.0 | 16.5 | µg/L | 50 | 07/29/14 12:33 |
| Carbon disulfide | ND | | 25.0 | 5.50 | µg/L | 50 | 07/29/14 12:33 |
| Carbon tetrachloride | ND | | 25.0 | 5.00 | µg/L | 50 | 07/29/14 12:33 |
| Chlorobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 07/29/14 12:33 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 08/01/14 6:17 685898 **Project Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | | | |
|---|---|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | | | **Lab ID:** | K1407301-005A |
| **Project:** | 189-02 | | | **Client Sample ID:** | *189 - W5* |
| **W Order:** | K1407301 | | | **Collection Date:** | 07/24/14 10:30 |
| **Matrix:** | GROUNDWATER | | | **Date Received:** | 07/25/14 9:50 |
| **Inst. ID:** | MSK_75 | **Sample Size** | 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | | **BatchNo:** | R27384 |
| **Revision:** | 07/31/14 15:19 | **TestCode:** | 8260W_CAL | **FileID:** | 1-SAMP-K5795.D |
| **Col Type:** | | | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| VOLATILE ORGANIC COMPOUNDS BY GC/MS | | | | | SW8260C/5030C | | |
| Chloroethane | 37.0 | J | 50.0 | 16.5 | µg/L | 50 | 07/29/14 12:33 |
| Chloroform | ND | | 25.0 | 5.00 | µg/L | 50 | 07/29/14 12:33 |
| Chloromethane | ND | | 50.0 | 16.5 | µg/L | 50 | 07/29/14 12:33 |
| cis-1,2-Dichloroethene | 114 | | 25.0 | 5.00 | µg/L | 50 | 07/29/14 12:33 |
| cis-1,3-Dichloropropene | ND | | 25.0 | 8.00 | µg/L | 50 | 07/29/14 12:33 |
| Cyclohexane | 5.00 | J | 25.0 | 5.00 | µg/L | 50 | 07/29/14 12:33 |
| Dibromochloromethane | ND | | 25.0 | 5.00 | µg/L | 50 | 07/29/14 12:33 |
| Dibromomethane | ND | | 25.0 | 8.00 | µg/L | 50 | 07/29/14 12:33 |
| Dichlorodifluoromethane | ND | | 50.0 | 5.00 | µg/L | 50 | 07/29/14 12:33 |
| Ethylbenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 07/29/14 12:33 |
| Hexachlorobutadiene | ND | | 50.0 | 5.00 | µg/L | 50 | 07/29/14 12:33 |
| Isopropylbenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 07/29/14 12:33 |
| Methyl tert-butyl ether | ND | | 50.0 | 8.00 | µg/L | 50 | 07/29/14 12:33 |
| Methylene chloride | 81.5 | J | 100 | 8.00 | µg/L | 50 | 07/29/14 12:33 |
| n-Propylbenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 07/29/14 12:33 |
| Naphthalene | ND | | 50.0 | 5.00 | µg/L | 50 | 07/29/14 12:33 |
| o-Xylene | ND | | 25.0 | 5.00 | µg/L | 50 | 07/29/14 12:33 |
| p-Isopropyltoluene | ND | | 25.0 | 8.00 | µg/L | 50 | 07/29/14 12:33 |
| sec-Butylbenzene | ND | | 25.0 | 8.00 | µg/L | 50 | 07/29/14 12:33 |
| Styrene | ND | | 25.0 | 5.00 | µg/L | 50 | 07/29/14 12:33 |
| Tetrachloroethene | ND | | 25.0 | 5.00 | µg/L | 50 | 07/29/14 12:33 |
| Toluene | ND | | 25.0 | 5.00 | µg/L | 50 | 07/29/14 12:33 |
| trans-1,2-Dichloroethene | ND | | 25.0 | 5.00 | µg/L | 50 | 07/29/14 12:33 |
| trans-1,3-Dichloropropene | ND | | 25.0 | 8.00 | µg/L | 50 | 07/29/14 12:33 |
| Trichloroethene | ND | | 25.0 | 5.00 | µg/L | 50 | 07/29/14 12:33 |
| Trichlorofluoromethane | ND | | 50.0 | 5.00 | µg/L | 50 | 07/29/14 12:33 |
| Vinyl acetate | ND | | 100 | 50.0 | µg/L | 50 | 07/29/14 12:33 |
| Vinyl chloride | 374 | | 50.0 | 16.5 | µg/L | 50 | 07/29/14 12:33 |
| Xylenes (total) | ND | | 50.0 | 15.0 | µg/L | 50 | 07/29/14 12:33 |
| Surr: 1,2-Dichloroethane-d4 | 105 | | 75-130 | 8.00 | %REC | 50 | 07/29/14 12:33 |
| Surr: Toluene-d8 | 101 | | 75-125 | 5.00 | %REC | 50 | 07/29/14 12:33 |
| Surr: 4-Bromofluorobenzene | 102 | | 75-125 | 5.00 | %REC | 50 | 07/29/14 12:33 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 08/01/14 6:17 685898 **Project Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1407301-006A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W6* |
| **W Order:** | K1407301 | **Collection Date:** | 07/24/14 9:00 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 07/25/14 9:50 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R27384 |
| **Revision:** | 07/31/14 15:19 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K5796.D |
| **Col Type:** | TOTAL 75.94 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | SW8260C/5030C | | |
| (m+p)-Xylene | ND | | 2.00 | 0.40 | µg/L | 2 | 07/29/14 13:06 |
| 1,1,1,2-Tetrachloroethane | ND | | 1.00 | 0.32 | µg/L | 2 | 07/29/14 13:06 |
| 1,1,1-Trichloroethane | 18.7 | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 13:06 |
| 1,1,2,2-Tetrachloroethane | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 13:06 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 0.90 | J | 1.00 | 0.20 | µg/L | 2 | 07/29/14 13:06 |
| 1,1,2-Trichloroethane | ND | | 1.00 | 0.32 | µg/L | 2 | 07/29/14 13:06 |
| 1,1-Dichloroethane | 38.2 | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 13:06 |
| 1,1-Dichloroethene | ND | | 1.00 | 0.32 | µg/L | 2 | 07/29/14 13:06 |
| 1,2,3-Trichloropropane | ND | | 4.00 | 0.66 | µg/L | 2 | 07/29/14 13:06 |
| 1,2,4-Trichlorobenzene | ND | | 2.00 | 0.20 | µg/L | 2 | 07/29/14 13:06 |
| 1,2,4-Trimethylbenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 13:06 |
| 1,2-Dibromo-3-chloropropane | ND | | 10.0 | 2.00 | µg/L | 2 | 07/29/14 13:06 |
| 1,2-Dibromoethane | ND | | 1.00 | 0.32 | µg/L | 2 | 07/29/14 13:06 |
| 1,2-Dichlorobenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 13:06 |
| 1,2-Dichloroethane | ND | | 1.00 | 0.32 | µg/L | 2 | 07/29/14 13:06 |
| 1,2-Dichloropropane | ND | | 1.00 | 0.32 | µg/L | 2 | 07/29/14 13:06 |
| 1,3,5-Trimethylbenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 13:06 |
| 1,3-Dichlorobenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 13:06 |
| 1,4-Dichlorobenzene | ND | | 1.00 | 0.32 | µg/L | 2 | 07/29/14 13:06 |
| 2-Butanone | ND | | 20.0 | 2.00 | µg/L | 2 | 07/29/14 13:06 |
| 2-Chloroethylvinyl ether | ND | | 10.0 | 5.00 | µg/L | 2 | 07/29/14 13:06 |
| 2-Hexanone | ND | | 10.0 | 2.00 | µg/L | 2 | 07/29/14 13:06 |
| 4-Chlorotoluene | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 13:06 |
| 4-Methyl-2-pentanone | ND | | 10.0 | 2.00 | µg/L | 2 | 07/29/14 13:06 |
| Acetone | ND | | 20.0 | 2.00 | µg/L | 2 | 07/29/14 13:06 |
| Benzene | 1.16 | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 13:06 |
| Bromobenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 13:06 |
| Bromochloromethane | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 13:06 |
| Bromodichloromethane | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 13:06 |
| Bromoform | ND | | 2.00 | 0.66 | µg/L | 2 | 07/29/14 13:06 |
| Bromomethane | ND | | 2.00 | 0.66 | µg/L | 2 | 07/29/14 13:06 |
| Carbon disulfide | ND | | 1.00 | 0.22 | µg/L | 2 | 07/29/14 13:06 |
| Carbon tetrachloride | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 13:06 |
| Chlorobenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 13:06 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 08/01/14 6:17 685899 **Project Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1407301-006A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W6* |
| **W Order:** | K1407301 | **Collection Date:** | 07/24/14 9:00 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 07/25/14 9:50 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R27384 |
| **Revision:** | 07/31/14 15:19 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K5796.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| VOLATILE ORGANIC COMPOUNDS BY GC/MS | | | | | SW8260C/5030C | | |
| Chloroethane | ND | | 2.00 | 0.66 | µg/L | 2 | 07/29/14 13:06 |
| Chloroform | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 13:06 |
| Chloromethane | ND | | 2.00 | 0.66 | µg/L | 2 | 07/29/14 13:06 |
| cis-1,2-Dichloroethene | 11.8 | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 13:06 |
| cis-1,3-Dichloropropene | ND | | 1.00 | 0.32 | µg/L | 2 | 07/29/14 13:06 |
| Cyclohexane | 0.94 | J | 1.00 | 0.20 | µg/L | 2 | 07/29/14 13:06 |
| Dibromochloromethane | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 13:06 |
| Dibromomethane | ND | | 1.00 | 0.32 | µg/L | 2 | 07/29/14 13:06 |
| Dichlorodifluoromethane | ND | | 2.00 | 0.20 | µg/L | 2 | 07/29/14 13:06 |
| Ethylbenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 13:06 |
| Hexachlorobutadiene | ND | | 2.00 | 0.20 | µg/L | 2 | 07/29/14 13:06 |
| Isopropylbenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 13:06 |
| Methyl tert-butyl ether | ND | | 2.00 | 0.32 | µg/L | 2 | 07/29/14 13:06 |
| Methylene chloride | 3.34 | J | 4.00 | 0.32 | µg/L | 2 | 07/29/14 13:06 |
| n-Propylbenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 13:06 |
| Naphthalene | ND | | 2.00 | 0.20 | µg/L | 2 | 07/29/14 13:06 |
| o-Xylene | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 13:06 |
| p-Isopropyltoluene | ND | | 1.00 | 0.32 | µg/L | 2 | 07/29/14 13:06 |
| sec-Butylbenzene | ND | | 1.00 | 0.32 | µg/L | 2 | 07/29/14 13:06 |
| Styrene | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 13:06 |
| Tetrachloroethene | 0.48 | J | 1.00 | 0.20 | µg/L | 2 | 07/29/14 13:06 |
| Toluene | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 13:06 |
| trans-1,2-Dichloroethene | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 13:06 |
| trans-1,3-Dichloropropene | ND | | 1.00 | 0.32 | µg/L | 2 | 07/29/14 13:06 |
| Trichloroethene | 0.42 | J | 1.00 | 0.20 | µg/L | 2 | 07/29/14 13:06 |
| Trichlorofluoromethane | ND | | 2.00 | 0.20 | µg/L | 2 | 07/29/14 13:06 |
| Vinyl acetate | ND | | 4.00 | 2.00 | µg/L | 2 | 07/29/14 13:06 |
| Vinyl chloride | ND | | 2.00 | 0.66 | µg/L | 2 | 07/29/14 13:06 |
| Xylenes (total) | ND | | 2.00 | 0.60 | µg/L | 2 | 07/29/14 13:06 |
| Surr: 1,2-Dichloroethane-d4 | 105 | | 75-130 | 0.32 | %REC | 2 | 07/29/14 13:06 |
| Surr: Toluene-d8 | 100 | | 75-125 | 0.20 | %REC | 2 | 07/29/14 13:06 |
| Surr: 4-Bromofluorobenzene | 101 | | 75-125 | 0.20 | %REC | 2 | 07/29/14 13:06 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 08/01/14 6:17 685899 **Project Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1407301-007A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W7* |
| **W Order:** | K1407301 | **Collection Date:** | 07/24/14 8:30 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 07/25/14 9:50 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R27384 |
| **Revision:** | 07/31/14 15:19 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K5809.D |
| **Col Type:** | TOTAL 571 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | SW8260C/5030C | | |
| (m+p)-Xylene | ND | | 20.0 | 4.00 | µg/L | 20 | 07/29/14 20:05 |
| 1,1,1,2-Tetrachloroethane | ND | | 10.0 | 3.20 | µg/L | 20 | 07/29/14 20:05 |
| 1,1,1-Trichloroethane | ND | | 10.0 | 2.00 | µg/L | 20 | 07/29/14 20:05 |
| 1,1,2,2-Tetrachloroethane | ND | | 10.0 | 2.00 | µg/L | 20 | 07/29/14 20:05 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 10.0 | 2.00 | µg/L | 20 | 07/29/14 20:05 |
| 1,1,2-Trichloroethane | ND | | 10.0 | 3.20 | µg/L | 20 | 07/29/14 20:05 |
| 1,1-Dichloroethane | 472 | | 10.0 | 2.00 | µg/L | 20 | 07/29/14 20:05 |
| 1,1-Dichloroethene | ND | | 10.0 | 3.20 | µg/L | 20 | 07/29/14 20:05 |
| 1,2,3-Trichloropropane | ND | | 40.0 | 6.60 | µg/L | 20 | 07/29/14 20:05 |
| 1,2,4-Trichlorobenzene | ND | | 20.0 | 2.00 | µg/L | 20 | 07/29/14 20:05 |
| 1,2,4-Trimethylbenzene | ND | | 10.0 | 2.00 | µg/L | 20 | 07/29/14 20:05 |
| 1,2-Dibromo-3-chloropropane | ND | | 100 | 20.0 | µg/L | 20 | 07/29/14 20:05 |
| 1,2-Dibromoethane | ND | | 10.0 | 3.20 | µg/L | 20 | 07/29/14 20:05 |
| 1,2-Dichlorobenzene | ND | | 10.0 | 2.00 | µg/L | 20 | 07/29/14 20:05 |
| 1,2-Dichloroethane | 24.0 | | 10.0 | 3.20 | µg/L | 20 | 07/29/14 20:05 |
| 1,2-Dichloropropane | ND | | 10.0 | 3.20 | µg/L | 20 | 07/29/14 20:05 |
| 1,3,5-Trimethylbenzene | ND | | 10.0 | 2.00 | µg/L | 20 | 07/29/14 20:05 |
| 1,3-Dichlorobenzene | ND | | 10.0 | 2.00 | µg/L | 20 | 07/29/14 20:05 |
| 1,4-Dichlorobenzene | ND | | 10.0 | 3.20 | µg/L | 20 | 07/29/14 20:05 |
| 2-Butanone | ND | | 200 | 20.0 | µg/L | 20 | 07/29/14 20:05 |
| 2-Chloroethylvinyl ether | ND | | 100 | 50.0 | µg/L | 20 | 07/29/14 20:05 |
| 2-Hexanone | ND | | 100 | 20.0 | µg/L | 20 | 07/29/14 20:05 |
| 4-Chlorotoluene | ND | | 10.0 | 2.00 | µg/L | 20 | 07/29/14 20:05 |
| 4-Methyl-2-pentanone | ND | | 100 | 20.0 | µg/L | 20 | 07/29/14 20:05 |
| Acetone | ND | | 200 | 20.0 | µg/L | 20 | 07/29/14 20:05 |
| Benzene | ND | | 10.0 | 2.00 | µg/L | 20 | 07/29/14 20:05 |
| Bromobenzene | ND | | 10.0 | 2.00 | µg/L | 20 | 07/29/14 20:05 |
| Bromochloromethane | ND | | 10.0 | 2.00 | µg/L | 20 | 07/29/14 20:05 |
| Bromodichloromethane | ND | | 10.0 | 2.00 | µg/L | 20 | 07/29/14 20:05 |
| Bromoform | ND | | 20.0 | 6.60 | µg/L | 20 | 07/29/14 20:05 |
| Bromomethane | ND | | 20.0 | 6.60 | µg/L | 20 | 07/29/14 20:05 |
| Carbon disulfide | ND | | 10.0 | 2.20 | µg/L | 20 | 07/29/14 20:05 |
| Carbon tetrachloride | ND | | 10.0 | 2.00 | µg/L | 20 | 07/29/14 20:05 |
| Chlorobenzene | ND | | 10.0 | 2.00 | µg/L | 20 | 07/29/14 20:05 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 08/01/14 6:17 685911 **Project Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1407301-007A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W7* |
| **W Order:** | K1407301 | **Collection Date:** | 07/24/14 8:30 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 07/25/14 9:50 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R27384 |
| **Revision:** | 07/31/14 15:19 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K5809.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260C/5030C** | | |
| Chloroethane | 15.0 | J | 20.0 | 6.60 | µg/L | 20 | 07/29/14 20:05 |
| Chloroform | ND | | 10.0 | 2.00 | µg/L | 20 | 07/29/14 20:05 |
| Chloromethane | ND | | 20.0 | 6.60 | µg/L | 20 | 07/29/14 20:05 |
| cis-1,2-Dichloroethene | 23.0 | | 10.0 | 2.00 | µg/L | 20 | 07/29/14 20:05 |
| cis-1,3-Dichloropropene | ND | | 10.0 | 3.20 | µg/L | 20 | 07/29/14 20:05 |
| Cyclohexane | ND | | 10.0 | 2.00 | µg/L | 20 | 07/29/14 20:05 |
| Dibromochloromethane | ND | | 10.0 | 2.00 | µg/L | 20 | 07/29/14 20:05 |
| Dibromomethane | ND | | 10.0 | 3.20 | µg/L | 20 | 07/29/14 20:05 |
| Dichlorodifluoromethane | ND | | 20.0 | 2.00 | µg/L | 20 | 07/29/14 20:05 |
| Ethylbenzene | ND | | 10.0 | 2.00 | µg/L | 20 | 07/29/14 20:05 |
| Hexachlorobutadiene | ND | | 20.0 | 2.00 | µg/L | 20 | 07/29/14 20:05 |
| Isopropylbenzene | ND | | 10.0 | 2.00 | µg/L | 20 | 07/29/14 20:05 |
| Methyl tert-butyl ether | ND | | 20.0 | 3.20 | µg/L | 20 | 07/29/14 20:05 |
| Methylene chloride | ND | | 40.0 | 3.20 | µg/L | 20 | 07/29/14 20:05 |
| n-Propylbenzene | ND | | 10.0 | 2.00 | µg/L | 20 | 07/29/14 20:05 |
| Naphthalene | ND | | 20.0 | 2.00 | µg/L | 20 | 07/29/14 20:05 |
| o-Xylene | ND | | 10.0 | 2.00 | µg/L | 20 | 07/29/14 20:05 |
| p-Isopropyltoluene | ND | | 10.0 | 3.20 | µg/L | 20 | 07/29/14 20:05 |
| sec-Butylbenzene | ND | | 10.0 | 3.20 | µg/L | 20 | 07/29/14 20:05 |
| Styrene | ND | | 10.0 | 2.00 | µg/L | 20 | 07/29/14 20:05 |
| Tetrachloroethene | ND | | 10.0 | 2.00 | µg/L | 20 | 07/29/14 20:05 |
| Toluene | ND | | 10.0 | 2.00 | µg/L | 20 | 07/29/14 20:05 |
| trans-1,2-Dichloroethene | ND | | 10.0 | 2.00 | µg/L | 20 | 07/29/14 20:05 |
| trans-1,3-Dichloropropene | ND | | 10.0 | 3.20 | µg/L | 20 | 07/29/14 20:05 |
| Trichloroethene | 14.8 | | 10.0 | 2.00 | µg/L | 20 | 07/29/14 20:05 |
| Trichlorofluoromethane | ND | | 20.0 | 2.00 | µg/L | 20 | 07/29/14 20:05 |
| Vinyl acetate | ND | | 40.0 | 20.0 | µg/L | 20 | 07/29/14 20:05 |
| Vinyl chloride | 22.2 | | 20.0 | 6.60 | µg/L | 20 | 07/29/14 20:05 |
| Xylenes (total) | ND | | 20.0 | 6.00 | µg/L | 20 | 07/29/14 20:05 |
| Surr: 1,2-Dichloroethane-d4 | 99 | | 75-130 | 3.20 | %REC | 20 | 07/29/14 20:05 |
| Surr: Toluene-d8 | 101 | | 75-125 | 2.00 | %REC | 20 | 07/29/14 20:05 |
| Surr: 4-Bromofluorobenzene | 99 | | 75-125 | 2.00 | %REC | 20 | 07/29/14 20:05 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 08/01/14 6:17 685911 **Project Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1407301-008A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W8* |
| **W Order:** | K1407301 | **Collection Date:** | 07/24/14 10:15 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 07/25/14 9:50 |
| **Inst. ID:** | MSK_75 **Sample Size** 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS **%Moisture:** | **BatchNo:** | R27384 |
| **Revision:** | 07/31/14 15:19 **TestCode:** 8260W_CAL | **FileID:** | 1-SAMP-K5798.D |
| **Col Type:** | TOTAL 129.52 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| VOLATILE ORGANIC COMPOUNDS BY GC/MS | | | | | SW8260C/5030C | | |
| (m+p)-Xylene | ND | | 2.00 | 0.40 | µg/L | 2 | 07/29/14 14:10 |
| 1,1,1,2-Tetrachloroethane | ND | | 1.00 | 0.32 | µg/L | 2 | 07/29/14 14:10 |
| 1,1,1-Trichloroethane | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 14:10 |
| 1,1,2,2-Tetrachloroethane | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 14:10 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 14:10 |
| 1,1,2-Trichloroethane | ND | | 1.00 | 0.32 | µg/L | 2 | 07/29/14 14:10 |
| 1,1-Dichloroethane | 50.9 | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 14:10 |
| 1,1-Dichloroethene | 1.28 | | 1.00 | 0.32 | µg/L | 2 | 07/29/14 14:10 |
| 1,2,3-Trichloropropane | ND | | 4.00 | 0.66 | µg/L | 2 | 07/29/14 14:10 |
| 1,2,4-Trichlorobenzene | ND | | 2.00 | 0.20 | µg/L | 2 | 07/29/14 14:10 |
| 1,2,4-Trimethylbenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 14:10 |
| 1,2-Dibromo-3-chloropropane | ND | | 10.0 | 2.00 | µg/L | 2 | 07/29/14 14:10 |
| 1,2-Dibromoethane | ND | | 1.00 | 0.32 | µg/L | 2 | 07/29/14 14:10 |
| 1,2-Dichlorobenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 14:10 |
| 1,2-Dichloroethane | 1.02 | | 1.00 | 0.32 | µg/L | 2 | 07/29/14 14:10 |
| 1,2-Dichloropropane | ND | | 1.00 | 0.32 | µg/L | 2 | 07/29/14 14:10 |
| 1,3,5-Trimethylbenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 14:10 |
| 1,3-Dichlorobenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 14:10 |
| 1,4-Dichlorobenzene | ND | | 1.00 | 0.32 | µg/L | 2 | 07/29/14 14:10 |
| 2-Butanone | ND | | 20.0 | 2.00 | µg/L | 2 | 07/29/14 14:10 |
| 2-Chloroethylvinyl ether | ND | | 10.0 | 5.00 | µg/L | 2 | 07/29/14 14:10 |
| 2-Hexanone | ND | | 10.0 | 2.00 | µg/L | 2 | 07/29/14 14:10 |
| 4-Chlorotoluene | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 14:10 |
| 4-Methyl-2-pentanone | ND | | 10.0 | 2.00 | µg/L | 2 | 07/29/14 14:10 |
| Acetone | ND | | 20.0 | 2.00 | µg/L | 2 | 07/29/14 14:10 |
| Benzene | 0.96 | J | 1.00 | 0.20 | µg/L | 2 | 07/29/14 14:10 |
| Bromobenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 14:10 |
| Bromochloromethane | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 14:10 |
| Bromodichloromethane | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 14:10 |
| Bromoform | ND | | 2.00 | 0.66 | µg/L | 2 | 07/29/14 14:10 |
| Bromomethane | ND | | 2.00 | 0.66 | µg/L | 2 | 07/29/14 14:10 |
| Carbon disulfide | ND | | 1.00 | 0.22 | µg/L | 2 | 07/29/14 14:10 |
| Carbon tetrachloride | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 14:10 |
| Chlorobenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 14:10 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 08/01/14 6:17 685900 **Project Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1407301-008A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W8* |
| **W Order:** | K1407301 | **Collection Date:** | 07/24/14 10:15 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 07/25/14 9:50 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R27384 |
| **Revision:** | 07/31/14 15:19 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K5798.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| VOLATILE ORGANIC COMPOUNDS BY GC/MS | | | | | SW8260C/5030C | | |
| Chloroethane | ND | | 2.00 | 0.66 | µg/L | 2 | 07/29/14 14:10 |
| Chloroform | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 14:10 |
| Chloromethane | ND | | 2.00 | 0.66 | µg/L | 2 | 07/29/14 14:10 |
| cis-1,2-Dichloroethene | 51.5 | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 14:10 |
| cis-1,3-Dichloropropene | ND | | 1.00 | 0.32 | µg/L | 2 | 07/29/14 14:10 |
| Cyclohexane | 2.54 | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 14:10 |
| Dibromochloromethane | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 14:10 |
| Dibromomethane | ND | | 1.00 | 0.32 | µg/L | 2 | 07/29/14 14:10 |
| Dichlorodifluoromethane | ND | | 2.00 | 0.20 | µg/L | 2 | 07/29/14 14:10 |
| Ethylbenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 14:10 |
| Hexachlorobutadiene | ND | | 2.00 | 0.20 | µg/L | 2 | 07/29/14 14:10 |
| Isopropylbenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 14:10 |
| Methyl tert-butyl ether | ND | | 2.00 | 0.32 | µg/L | 2 | 07/29/14 14:10 |
| Methylene chloride | 2.88 | J | 4.00 | 0.32 | µg/L | 2 | 07/29/14 14:10 |
| n-Propylbenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 14:10 |
| Naphthalene | ND | | 2.00 | 0.20 | µg/L | 2 | 07/29/14 14:10 |
| o-Xylene | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 14:10 |
| p-Isopropyltoluene | ND | | 1.00 | 0.32 | µg/L | 2 | 07/29/14 14:10 |
| sec-Butylbenzene | ND | | 1.00 | 0.32 | µg/L | 2 | 07/29/14 14:10 |
| Styrene | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 14:10 |
| Tetrachloroethene | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 14:10 |
| Toluene | ND | | 1.00 | 0.20 | µg/L | 2 | 07/29/14 14:10 |
| trans-1,2-Dichloroethene | 0.38 | J | 1.00 | 0.20 | µg/L | 2 | 07/29/14 14:10 |
| trans-1,3-Dichloropropene | ND | | 1.00 | 0.32 | µg/L | 2 | 07/29/14 14:10 |
| Trichloroethene | 0.66 | J | 1.00 | 0.20 | µg/L | 2 | 07/29/14 14:10 |
| Trichlorofluoromethane | ND | | 2.00 | 0.20 | µg/L | 2 | 07/29/14 14:10 |
| Vinyl acetate | ND | | 4.00 | 2.00 | µg/L | 2 | 07/29/14 14:10 |
| Vinyl chloride | 17.5 | | 2.00 | 0.66 | µg/L | 2 | 07/29/14 14:10 |
| Xylenes (total) | ND | | 2.00 | 0.60 | µg/L | 2 | 07/29/14 14:10 |
| Surr: 1,2-Dichloroethane-d4 | 105 | | 75-130 | 0.32 | %REC | 2 | 07/29/14 14:10 |
| Surr: Toluene-d8 | 101 | | 75-125 | 0.20 | %REC | 2 | 07/29/14 14:10 |
| Surr: 4-Bromofluorobenzene | 101 | | 75-125 | 0.20 | %REC | 2 | 07/29/14 14:10 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 08/01/14 6:17 685900 **Project Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1407301-009A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W10* |
| **W Order:** | K1407301 | **Collection Date:** | 07/24/14 8:40 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 07/25/14 9:50 |
| **Inst. ID:** | MSK_75 **Sample Size** 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS **%Moisture:** | **BatchNo:** | R27384 |
| **Revision:** | 07/31/14 15:19 **TestCode:** 8260W_CAL | **FileID:** | 1-SAMP-K5799.D |
| **Col Type:** | TOTAL 6.21 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| VOLATILE ORGANIC COMPOUNDS BY GC/MS | | | | | SW8260C/5030C | | |
| (m+p)-Xylene | ND | | 1.00 | 0.20 | µg/L | 1 | 07/29/14 14:42 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 14:42 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 14:42 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 14:42 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 14:42 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 14:42 |
| 1,1-Dichloroethane | 0.16 | J | 0.50 | 0.10 | µg/L | 1 | 07/29/14 14:42 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 14:42 |
| 1,2,3-Trichloropropane | ND | | 2.00 | 0.33 | µg/L | 1 | 07/29/14 14:42 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 0.10 | µg/L | 1 | 07/29/14 14:42 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 14:42 |
| 1,2-Dibromo-3-chloropropane | ND | | 5.00 | 1.00 | µg/L | 1 | 07/29/14 14:42 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 14:42 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 14:42 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 14:42 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 14:42 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 14:42 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 14:42 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 14:42 |
| 2-Butanone | ND | | 10.0 | 1.00 | µg/L | 1 | 07/29/14 14:42 |
| 2-Chloroethylvinyl ether | ND | | 5.00 | 2.50 | µg/L | 1 | 07/29/14 14:42 |
| 2-Hexanone | ND | | 5.00 | 1.00 | µg/L | 1 | 07/29/14 14:42 |
| 4-Chlorotoluene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 14:42 |
| 4-Methyl-2-pentanone | ND | | 5.00 | 1.00 | µg/L | 1 | 07/29/14 14:42 |
| Acetone | 5.05 | J | 10.0 | 1.00 | µg/L | 1 | 07/29/14 14:42 |
| Benzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 14:42 |
| Bromobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 14:42 |
| Bromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 14:42 |
| Bromodichloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 14:42 |
| Bromoform | ND | | 1.00 | 0.33 | µg/L | 1 | 07/29/14 14:42 |
| Bromomethane | ND | | 1.00 | 0.33 | µg/L | 1 | 07/29/14 14:42 |
| Carbon disulfide | ND | | 0.50 | 0.11 | µg/L | 1 | 07/29/14 14:42 |
| Carbon tetrachloride | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 14:42 |
| Chlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 14:42 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 08/01/14 6:17 685901 **Project Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1407301-009A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W10*** |
| **W Order:** | K1407301 | **Collection Date:** | 07/24/14 8:40 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 07/25/14 9:50 |
| **Inst. ID:** | MSK_75 **Sample Size** 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS **%Moisture:** | **BatchNo:** | R27384 |
| **Revision:** | 07/31/14 15:19 **TestCode:** 8260W_CAL | **FileID:** | 1-SAMP-K5799.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260C/5030C** | | |
| Chloroethane | ND | | 1.00 | 0.33 | µg/L | 1 | 07/29/14 14:42 |
| Chloroform | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 14:42 |
| Chloromethane | ND | | 1.00 | 0.33 | µg/L | 1 | 07/29/14 14:42 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 14:42 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 14:42 |
| Cyclohexane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 14:42 |
| Dibromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 14:42 |
| Dibromomethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 14:42 |
| Dichlorodifluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 07/29/14 14:42 |
| Ethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 14:42 |
| Hexachlorobutadiene | ND | | 1.00 | 0.10 | µg/L | 1 | 07/29/14 14:42 |
| Isopropylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 14:42 |
| Methyl tert-butyl ether | ND | | 1.00 | 0.16 | µg/L | 1 | 07/29/14 14:42 |
| Methylene chloride | ND | | 2.00 | 0.16 | µg/L | 1 | 07/29/14 14:42 |
| n-Propylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 14:42 |
| Naphthalene | ND | | 1.00 | 0.10 | µg/L | 1 | 07/29/14 14:42 |
| o-Xylene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 14:42 |
| p-Isopropyltoluene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 14:42 |
| sec-Butylbenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 14:42 |
| Styrene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 14:42 |
| Tetrachloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 14:42 |
| Toluene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 14:42 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 14:42 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 14:42 |
| Trichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 14:42 |
| Trichlorofluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 07/29/14 14:42 |
| Vinyl acetate | ND | | 2.00 | 1.00 | µg/L | 1 | 07/29/14 14:42 |
| Vinyl chloride | ND | | 1.00 | 0.33 | µg/L | 1 | 07/29/14 14:42 |
| Xylenes (total) | ND | | 1.00 | 0.30 | µg/L | 1 | 07/29/14 14:42 |
| Surr: 1,2-Dichloroethane-d4 | 97 | | 75-130 | 0.16 | %REC | 1 | 07/29/14 14:42 |
| Surr: Toluene-d8 | 100 | | 75-125 | 0.10 | %REC | 1 | 07/29/14 14:42 |
| Surr: 4-Bromofluorobenzene | 101 | | 75-125 | 0.10 | %REC | 1 | 07/29/14 14:42 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

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East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1407301-010A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W11* |
| **W Order:** | K1407301 | **Collection Date:** | 07/24/14 9:15 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 07/25/14 9:50 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R27384 |
| **Revision:** | 07/31/14 15:19 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K5800.D |
| **Col Type:** | TOTAL 0.79 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| VOLATILE ORGANIC COMPOUNDS BY GC/MS | | | | | SW8260C/5030C | | |
| (m+p)-Xylene | ND | | 1.00 | 0.20 | µg/L | 1 | 07/29/14 15:15 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 15:15 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 15:15 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 15:15 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 15:15 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 15:15 |
| 1,1-Dichloroethane | 0.54 | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 15:15 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 15:15 |
| 1,2,3-Trichloropropane | ND | | 2.00 | 0.33 | µg/L | 1 | 07/29/14 15:15 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 0.10 | µg/L | 1 | 07/29/14 15:15 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 15:15 |
| 1,2-Dibromo-3-chloropropane | ND | | 5.00 | 1.00 | µg/L | 1 | 07/29/14 15:15 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 15:15 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 15:15 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 15:15 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 15:15 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 15:15 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 15:15 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 15:15 |
| 2-Butanone | ND | | 10.0 | 1.00 | µg/L | 1 | 07/29/14 15:15 |
| 2-Chloroethylvinyl ether | ND | | 5.00 | 2.50 | µg/L | 1 | 07/29/14 15:15 |
| 2-Hexanone | ND | | 5.00 | 1.00 | µg/L | 1 | 07/29/14 15:15 |
| 4-Chlorotoluene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 15:15 |
| 4-Methyl-2-pentanone | ND | | 5.00 | 1.00 | µg/L | 1 | 07/29/14 15:15 |
| Acetone | ND | | 10.0 | 1.00 | µg/L | 1 | 07/29/14 15:15 |
| Benzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 15:15 |
| Bromobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 15:15 |
| Bromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 15:15 |
| Bromodichloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 15:15 |
| Bromoform | ND | | 1.00 | 0.33 | µg/L | 1 | 07/29/14 15:15 |
| Bromomethane | ND | | 1.00 | 0.33 | µg/L | 1 | 07/29/14 15:15 |
| Carbon disulfide | ND | | 0.50 | 0.11 | µg/L | 1 | 07/29/14 15:15 |
| Carbon tetrachloride | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 15:15 |
| Chlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 15:15 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | | | |
|---|---|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | | | **Lab ID:** | **K1407301-010A** |
| **Project:** | 189-02 | | | **Client Sample ID:** | ***189 - W11*** |
| **W Order:** | K1407301 | | | **Collection Date:** | 07/24/14 9:15 |
| **Matrix:** | GROUNDWATER | | | **Date Received:** | 07/25/14 9:50 |
| **Inst. ID:** | MSK_75 | **Sample Size** | 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | | **BatchNo:** | R27384 |
| **Revision:** | 07/31/14 15:19 | **TestCode:** | 8260W_CAL | **FileID:** | 1-SAMP-K5800.D |
| **Col Type:** | | | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| VOLATILE ORGANIC COMPOUNDS BY GC/MS | | | | | SW8260C/5030C | | |
| Chloroethane | ND | | 1.00 | 0.33 | µg/L | 1 | 07/29/14 15:15 |
| Chloroform | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 15:15 |
| Chloromethane | ND | | 1.00 | 0.33 | µg/L | 1 | 07/29/14 15:15 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 15:15 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 15:15 |
| Cyclohexane | 0.25 | J | 0.50 | 0.10 | µg/L | 1 | 07/29/14 15:15 |
| Dibromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 15:15 |
| Dibromomethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 15:15 |
| Dichlorodifluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 07/29/14 15:15 |
| Ethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 15:15 |
| Hexachlorobutadiene | ND | | 1.00 | 0.10 | µg/L | 1 | 07/29/14 15:15 |
| Isopropylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 15:15 |
| Methyl tert-butyl ether | ND | | 1.00 | 0.16 | µg/L | 1 | 07/29/14 15:15 |
| Methylene chloride | ND | | 2.00 | 0.16 | µg/L | 1 | 07/29/14 15:15 |
| n-Propylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 15:15 |
| Naphthalene | ND | | 1.00 | 0.10 | µg/L | 1 | 07/29/14 15:15 |
| o-Xylene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 15:15 |
| p-Isopropyltoluene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 15:15 |
| sec-Butylbenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 15:15 |
| Styrene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 15:15 |
| Tetrachloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 15:15 |
| Toluene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 15:15 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 15:15 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 15:15 |
| Trichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 15:15 |
| Trichlorofluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 07/29/14 15:15 |
| Vinyl acetate | ND | | 2.00 | 1.00 | µg/L | 1 | 07/29/14 15:15 |
| Vinyl chloride | ND | | 1.00 | 0.33 | µg/L | 1 | 07/29/14 15:15 |
| Xylenes (total) | ND | | 1.00 | 0.30 | µg/L | 1 | 07/29/14 15:15 |
| Surr: 1,2-Dichloroethane-d4 | 96 | | 75-130 | 0.16 | %REC | 1 | 07/29/14 15:15 |
| Surr: Toluene-d8 | 99 | | 75-125 | 0.10 | %REC | 1 | 07/29/14 15:15 |
| Surr: 4-Bromofluorobenzene | 104 | | 75-125 | 0.10 | %REC | 1 | 07/29/14 15:15 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 08/01/14 6:17 685902 **Project Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

**CLIENT** Ken W. Kloeber Consulting Engineers
**Project:** 189-02
**W Order:** K1407301
**Matrix:** GROUNDWATER
**Inst. ID:** MSK_75 **Sample Size** 10 mL
**ColumnID:** Rtx-VMS **%Moisture:**
**Revision:** 07/31/14 15:19 **TestCode:** 8260W_CAL
**Col Type:** TOTAL 63.9

**Lab ID:** K1407301-011A
**Client Sample ID:** *189 - W12*
**Collection Date:** 07/24/14 9:30
**Date Received:** 07/25/14 9:50
**PrepDate:**
**BatchNo:** R27384
**FileID:** 1-SAMP-K5801.D

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| VOLATILE ORGANIC COMPOUNDS BY GC/MS | | | | | SW8260C/5030C | | |
| (m+p)-Xylene | ND | | 5.00 | 1.00 | µg/L | 5 | 07/29/14 15:47 |
| 1,1,1,2-Tetrachloroethane | ND | | 2.50 | 0.80 | µg/L | 5 | 07/29/14 15:47 |
| 1,1,1-Trichloroethane | ND | | 2.50 | 0.50 | µg/L | 5 | 07/29/14 15:47 |
| 1,1,2,2-Tetrachloroethane | ND | | 2.50 | 0.50 | µg/L | 5 | 07/29/14 15:47 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 2.50 | 0.50 | µg/L | 5 | 07/29/14 15:47 |
| 1,1,2-Trichloroethane | ND | | 2.50 | 0.80 | µg/L | 5 | 07/29/14 15:47 |
| 1,1-Dichloroethane | 24.2 | | 2.50 | 0.50 | µg/L | 5 | 07/29/14 15:47 |
| 1,1-Dichloroethene | ND | | 2.50 | 0.80 | µg/L | 5 | 07/29/14 15:47 |
| 1,2,3-Trichloropropane | ND | | 10.0 | 1.65 | µg/L | 5 | 07/29/14 15:47 |
| 1,2,4-Trichlorobenzene | ND | | 5.00 | 0.50 | µg/L | 5 | 07/29/14 15:47 |
| 1,2,4-Trimethylbenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 07/29/14 15:47 |
| 1,2-Dibromo-3-chloropropane | ND | | 25.0 | 5.00 | µg/L | 5 | 07/29/14 15:47 |
| 1,2-Dibromoethane | ND | | 2.50 | 0.80 | µg/L | 5 | 07/29/14 15:47 |
| 1,2-Dichlorobenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 07/29/14 15:47 |
| 1,2-Dichloroethane | 1.70 | J | 2.50 | 0.80 | µg/L | 5 | 07/29/14 15:47 |
| 1,2-Dichloropropane | ND | | 2.50 | 0.80 | µg/L | 5 | 07/29/14 15:47 |
| 1,3,5-Trimethylbenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 07/29/14 15:47 |
| 1,3-Dichlorobenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 07/29/14 15:47 |
| 1,4-Dichlorobenzene | ND | | 2.50 | 0.80 | µg/L | 5 | 07/29/14 15:47 |
| 2-Butanone | ND | | 50.0 | 5.00 | µg/L | 5 | 07/29/14 15:47 |
| 2-Chloroethylvinyl ether | ND | | 25.0 | 12.5 | µg/L | 5 | 07/29/14 15:47 |
| 2-Hexanone | ND | | 25.0 | 5.00 | µg/L | 5 | 07/29/14 15:47 |
| 4-Chlorotoluene | ND | | 2.50 | 0.50 | µg/L | 5 | 07/29/14 15:47 |
| 4-Methyl-2-pentanone | ND | | 25.0 | 5.00 | µg/L | 5 | 07/29/14 15:47 |
| Acetone | ND | | 50.0 | 5.00 | µg/L | 5 | 07/29/14 15:47 |
| Benzene | ND | | 2.50 | 0.50 | µg/L | 5 | 07/29/14 15:47 |
| Bromobenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 07/29/14 15:47 |
| Bromochloromethane | ND | | 2.50 | 0.50 | µg/L | 5 | 07/29/14 15:47 |
| Bromodichloromethane | ND | | 2.50 | 0.50 | µg/L | 5 | 07/29/14 15:47 |
| Bromoform | ND | | 5.00 | 1.65 | µg/L | 5 | 07/29/14 15:47 |
| Bromomethane | ND | | 5.00 | 1.65 | µg/L | 5 | 07/29/14 15:47 |
| Carbon disulfide | ND | | 2.50 | 0.55 | µg/L | 5 | 07/29/14 15:47 |
| Carbon tetrachloride | ND | | 2.50 | 0.50 | µg/L | 5 | 07/29/14 15:47 |
| Chlorobenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 07/29/14 15:47 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 08/01/14 6:17 685903 **Project Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1407301-011A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W12* |
| **W Order:** | K1407301 | **Collection Date:** | 07/24/14 9:30 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 07/25/14 9:50 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R27384 |
| **Revision:** | 07/31/14 15:19 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K5801.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| VOLATILE ORGANIC COMPOUNDS BY GC/MS | | | | | SW8260C/5030C | | |
| Chloroethane | 8.60 | | 5.00 | 1.65 | µg/L | 5 | 07/29/14 15:47 |
| Chloroform | ND | | 2.50 | 0.50 | µg/L | 5 | 07/29/14 15:47 |
| Chloromethane | ND | | 5.00 | 1.65 | µg/L | 5 | 07/29/14 15:47 |
| cis-1,2-Dichloroethene | 2.05 | J | 2.50 | 0.50 | µg/L | 5 | 07/29/14 15:47 |
| cis-1,3-Dichloropropene | ND | | 2.50 | 0.80 | µg/L | 5 | 07/29/14 15:47 |
| Cyclohexane | 0.75 | J | 2.50 | 0.50 | µg/L | 5 | 07/29/14 15:47 |
| Dibromochloromethane | ND | | 2.50 | 0.50 | µg/L | 5 | 07/29/14 15:47 |
| Dibromomethane | ND | | 2.50 | 0.80 | µg/L | 5 | 07/29/14 15:47 |
| Dichlorodifluoromethane | ND | | 5.00 | 0.50 | µg/L | 5 | 07/29/14 15:47 |
| Ethylbenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 07/29/14 15:47 |
| Hexachlorobutadiene | ND | | 5.00 | 0.50 | µg/L | 5 | 07/29/14 15:47 |
| Isopropylbenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 07/29/14 15:47 |
| Methyl tert-butyl ether | ND | | 5.00 | 0.80 | µg/L | 5 | 07/29/14 15:47 |
| Methylene chloride | ND | | 10.0 | 0.80 | µg/L | 5 | 07/29/14 15:47 |
| n-Propylbenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 07/29/14 15:47 |
| Naphthalene | ND | | 5.00 | 0.50 | µg/L | 5 | 07/29/14 15:47 |
| o-Xylene | ND | | 2.50 | 0.50 | µg/L | 5 | 07/29/14 15:47 |
| p-Isopropyltoluene | ND | | 2.50 | 0.80 | µg/L | 5 | 07/29/14 15:47 |
| sec-Butylbenzene | ND | | 2.50 | 0.80 | µg/L | 5 | 07/29/14 15:47 |
| Styrene | ND | | 2.50 | 0.50 | µg/L | 5 | 07/29/14 15:47 |
| Tetrachloroethene | ND | | 2.50 | 0.50 | µg/L | 5 | 07/29/14 15:47 |
| Toluene | ND | | 2.50 | 0.50 | µg/L | 5 | 07/29/14 15:47 |
| trans-1,2-Dichloroethene | ND | | 2.50 | 0.50 | µg/L | 5 | 07/29/14 15:47 |
| trans-1,3-Dichloropropene | ND | | 2.50 | 0.80 | µg/L | 5 | 07/29/14 15:47 |
| Trichloroethene | ND | | 2.50 | 0.50 | µg/L | 5 | 07/29/14 15:47 |
| Trichlorofluoromethane | ND | | 5.00 | 0.50 | µg/L | 5 | 07/29/14 15:47 |
| Vinyl acetate | ND | | 10.0 | 5.00 | µg/L | 5 | 07/29/14 15:47 |
| Vinyl chloride | 26.4 | | 5.00 | 1.65 | µg/L | 5 | 07/29/14 15:47 |
| Xylenes (total) | ND | | 5.00 | 1.50 | µg/L | 5 | 07/29/14 15:47 |
| Surr: 1,2-Dichloroethane-d4 | 104 | | 75-130 | 0.80 | %REC | 5 | 07/29/14 15:47 |
| Surr: Toluene-d8 | 102 | | 75-125 | 0.50 | %REC | 5 | 07/29/14 15:47 |
| Surr: 4-Bromofluorobenzene | 100 | | 75-125 | 0.50 | %REC | 5 | 07/29/14 15:47 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 08/01/14 6:17 685903 **Project Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1407301-012A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W13* |
| **W Order:** | K1407301 | **Collection Date:** | 07/24/14 8:45 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 07/25/14 9:50 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R27384 |
| **Revision:** | 07/31/14 15:19 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K5802.D |
| **Col Type:** | TOTAL 0.48 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260C/5030C** | | |
| (m+p)-Xylene | ND | | 1.00 | 0.20 | µg/L | 1 | 07/29/14 16:19 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 16:19 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 16:19 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 16:19 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 16:19 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 16:19 |
| 1,1-Dichloroethane | 0.20 | J | 0.50 | 0.10 | µg/L | 1 | 07/29/14 16:19 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 16:19 |
| 1,2,3-Trichloropropane | ND | | 2.00 | 0.33 | µg/L | 1 | 07/29/14 16:19 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 0.10 | µg/L | 1 | 07/29/14 16:19 |
| 1,2,4-Trimethylbenzene | 0.13 | J | 0.50 | 0.10 | µg/L | 1 | 07/29/14 16:19 |
| 1,2-Dibromo-3-chloropropane | ND | | 5.00 | 1.00 | µg/L | 1 | 07/29/14 16:19 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 16:19 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 16:19 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 16:19 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 16:19 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 16:19 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 16:19 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 16:19 |
| 2-Butanone | ND | | 10.0 | 1.00 | µg/L | 1 | 07/29/14 16:19 |
| 2-Chloroethylvinyl ether | ND | | 5.00 | 2.50 | µg/L | 1 | 07/29/14 16:19 |
| 2-Hexanone | ND | | 5.00 | 1.00 | µg/L | 1 | 07/29/14 16:19 |
| 4-Chlorotoluene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 16:19 |
| 4-Methyl-2-pentanone | ND | | 5.00 | 1.00 | µg/L | 1 | 07/29/14 16:19 |
| Acetone | ND | | 10.0 | 1.00 | µg/L | 1 | 07/29/14 16:19 |
| Benzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 16:19 |
| Bromobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 16:19 |
| Bromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 16:19 |
| Bromodichloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 16:19 |
| Bromoform | ND | | 1.00 | 0.33 | µg/L | 1 | 07/29/14 16:19 |
| Bromomethane | ND | | 1.00 | 0.33 | µg/L | 1 | 07/29/14 16:19 |
| Carbon disulfide | ND | | 0.50 | 0.11 | µg/L | 1 | 07/29/14 16:19 |
| Carbon tetrachloride | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 16:19 |
| Chlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 16:19 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 08/01/14 6:17 685904 **Project Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1407301-012A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W13*** |
| **W Order:** | K1407301 | **Collection Date:** | 07/24/14 8:45 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 07/25/14 9:50 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R27384 |
| **Revision:** | 07/31/14 15:19 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K5802.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| VOLATILE ORGANIC COMPOUNDS BY GC/MS | | | | | SW8260C/5030C | | |
| Chloroethane | ND | | 1.00 | 0.33 | µg/L | 1 | 07/29/14 16:19 |
| Chloroform | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 16:19 |
| Chloromethane | ND | | 1.00 | 0.33 | µg/L | 1 | 07/29/14 16:19 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 16:19 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 16:19 |
| Cyclohexane | 0.15 | J | 0.50 | 0.10 | µg/L | 1 | 07/29/14 16:19 |
| Dibromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 16:19 |
| Dibromomethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 16:19 |
| Dichlorodifluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 07/29/14 16:19 |
| Ethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 16:19 |
| Hexachlorobutadiene | ND | | 1.00 | 0.10 | µg/L | 1 | 07/29/14 16:19 |
| Isopropylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 16:19 |
| Methyl tert-butyl ether | ND | | 1.00 | 0.16 | µg/L | 1 | 07/29/14 16:19 |
| Methylene chloride | ND | | 2.00 | 0.16 | µg/L | 1 | 07/29/14 16:19 |
| n-Propylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 16:19 |
| Naphthalene | ND | | 1.00 | 0.10 | µg/L | 1 | 07/29/14 16:19 |
| o-Xylene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 16:19 |
| p-Isopropyltoluene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 16:19 |
| sec-Butylbenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 16:19 |
| Styrene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 16:19 |
| Tetrachloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 16:19 |
| Toluene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 16:19 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 16:19 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 16:19 |
| Trichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 16:19 |
| Trichlorofluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 07/29/14 16:19 |
| Vinyl acetate | ND | | 2.00 | 1.00 | µg/L | 1 | 07/29/14 16:19 |
| Vinyl chloride | ND | | 1.00 | 0.33 | µg/L | 1 | 07/29/14 16:19 |
| Xylenes (total) | ND | | 1.00 | 0.30 | µg/L | 1 | 07/29/14 16:19 |
| Surr: 1,2-Dichloroethane-d4 | 105 | | 75-130 | 0.16 | %REC | 1 | 07/29/14 16:19 |
| Surr: Toluene-d8 | 97 | | 75-125 | 0.10 | %REC | 1 | 07/29/14 16:19 |
| Surr: 4-Bromofluorobenzene | 102 | | 75-125 | 0.10 | %REC | 1 | 07/29/14 16:19 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 08/01/14 6:17 685904 **Project Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1407301-013A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W14* |
| **W Order:** | K1407301 | **Collection Date:** | 07/24/14 8:20 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 07/25/14 9:50 |
| **Inst. ID:** | MSK_75 **Sample Size** 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS **%Moisture:** | **BatchNo:** | R27384 |
| **Revision:** | 07/31/14 15:19 **TestCode:** 8260W_CAL | **FileID:** | 1-SAMP-K5804.D |
| **Col Type:** | TOTAL 60.7 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| VOLATILE ORGANIC COMPOUNDS BY GC/MS | | | | | SW8260C/5030C | | |
| (m+p)-Xylene | 0.53 | J | 1.00 | 0.20 | µg/L | 1 | 07/29/14 17:24 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 17:24 |
| 1,1,1-Trichloroethane | 15.7 | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 17:24 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 17:24 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 12.5 | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 17:24 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 17:24 |
| 1,1-Dichloroethane | 23.8 | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 17:24 |
| 1,1-Dichloroethene | 0.72 | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 17:24 |
| 1,2,3-Trichloropropane | ND | | 2.00 | 0.33 | µg/L | 1 | 07/29/14 17:24 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 0.10 | µg/L | 1 | 07/29/14 17:24 |
| 1,2,4-Trimethylbenzene | 0.85 | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 17:24 |
| 1,2-Dibromo-3-chloropropane | ND | | 5.00 | 1.00 | µg/L | 1 | 07/29/14 17:24 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 17:24 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 17:24 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 17:24 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 17:24 |
| 1,3,5-Trimethylbenzene | 0.26 | J | 0.50 | 0.10 | µg/L | 1 | 07/29/14 17:24 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 17:24 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 17:24 |
| 2-Butanone | ND | | 10.0 | 1.00 | µg/L | 1 | 07/29/14 17:24 |
| 2-Chloroethylvinyl ether | ND | | 5.00 | 2.50 | µg/L | 1 | 07/29/14 17:24 |
| 2-Hexanone | ND | | 5.00 | 1.00 | µg/L | 1 | 07/29/14 17:24 |
| 4-Chlorotoluene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 17:24 |
| 4-Methyl-2-pentanone | ND | | 5.00 | 1.00 | µg/L | 1 | 07/29/14 17:24 |
| Acetone | ND | | 10.0 | 1.00 | µg/L | 1 | 07/29/14 17:24 |
| Benzene | 0.64 | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 17:24 |
| Bromobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 17:24 |
| Bromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 17:24 |
| Bromodichloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 17:24 |
| Bromoform | ND | | 1.00 | 0.33 | µg/L | 1 | 07/29/14 17:24 |
| Bromomethane | ND | | 1.00 | 0.33 | µg/L | 1 | 07/29/14 17:24 |
| Carbon disulfide | ND | | 0.50 | 0.11 | µg/L | 1 | 07/29/14 17:24 |
| Carbon tetrachloride | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 17:24 |
| Chlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 17:24 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 08/01/14 6:17 685906 **Project Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1407301-013A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W14*** |
| **W Order:** | K1407301 | **Collection Date:** | 07/24/14 8:20 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 07/25/14 9:50 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R27384 |
| **Revision:** | 07/31/14 15:19 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K5804.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| VOLATILE ORGANIC COMPOUNDS BY GC/MS | | | | | SW8260C/5030C | | |
| Chloroethane | ND | | 1.00 | 0.33 | µg/L | 1 | 07/29/14 17:24 |
| Chloroform | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 17:24 |
| Chloromethane | ND | | 1.00 | 0.33 | µg/L | 1 | 07/29/14 17:24 |
| cis-1,2-Dichloroethene | 0.89 | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 17:24 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 17:24 |
| Cyclohexane | 2.54 | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 17:24 |
| Dibromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 17:24 |
| Dibromomethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 17:24 |
| Dichlorodifluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 07/29/14 17:24 |
| Ethylbenzene | 0.28 J | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 17:24 |
| Hexachlorobutadiene | ND | | 1.00 | 0.10 | µg/L | 1 | 07/29/14 17:24 |
| Isopropylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 17:24 |
| Methyl tert-butyl ether | ND | | 1.00 | 0.16 | µg/L | 1 | 07/29/14 17:24 |
| Methylene chloride | ND | | 2.00 | 0.16 | µg/L | 1 | 07/29/14 17:24 |
| n-Propylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 17:24 |
| Naphthalene | ND | | 1.00 | 0.10 | µg/L | 1 | 07/29/14 17:24 |
| o-Xylene | 0.50 | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 17:24 |
| p-Isopropyltoluene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 17:24 |
| sec-Butylbenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 17:24 |
| Styrene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 17:24 |
| Tetrachloroethene | 0.95 | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 17:24 |
| Toluene | 0.36 J | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 17:24 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 17:24 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 17:24 |
| Trichloroethene | 0.18 J | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 17:24 |
| Trichlorofluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 07/29/14 17:24 |
| Vinyl acetate | ND | | 2.00 | 1.00 | µg/L | 1 | 07/29/14 17:24 |
| Vinyl chloride | ND | | 1.00 | 0.33 | µg/L | 1 | 07/29/14 17:24 |
| Xylenes (total) | 1.03 | | 1.00 | 0.30 | µg/L | 1 | 07/29/14 17:24 |
| Surr: 1,2-Dichloroethane-d4 | 101 | | 75-130 | 0.16 | %REC | 1 | 07/29/14 17:24 |
| Surr: Toluene-d8 | 98 | | 75-125 | 0.10 | %REC | 1 | 07/29/14 17:24 |
| Surr: 4-Bromofluorobenzene | 101 | | 75-125 | 0.10 | %REC | 1 | 07/29/14 17:24 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 08/01/14 6:17 685906 **Project Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1407301-014A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - B*** |
| **W Order:** | K1407301 | **Collection Date:** | 07/24/14 11:00 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 07/25/14 9:50 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R27384 |
| **Revision:** | 07/31/14 15:19 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K5805.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260C/5030C** | | |
| (m+p)-Xylene | ND | | 1.00 | 0.20 | µg/L | 1 | 07/29/14 17:56 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 17:56 |
| 1,1,1-Trichloroethane | 18.8 | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 17:56 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 17:56 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 0.95 | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 17:56 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 17:56 |
| 1,1-Dichloroethane | 37.4 | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 17:56 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 17:56 |
| 1,2,3-Trichloropropane | ND | | 2.00 | 0.33 | µg/L | 1 | 07/29/14 17:56 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 0.10 | µg/L | 1 | 07/29/14 17:56 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 17:56 |
| 1,2-Dibromo-3-chloropropane | ND | | 5.00 | 1.00 | µg/L | 1 | 07/29/14 17:56 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 17:56 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 17:56 |
| 1,2-Dichloroethane | 0.27 | J | 0.50 | 0.16 | µg/L | 1 | 07/29/14 17:56 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 17:56 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 17:56 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 17:56 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 17:56 |
| 2-Butanone | ND | | 10.0 | 1.00 | µg/L | 1 | 07/29/14 17:56 |
| 2-Chloroethylvinyl ether | ND | | 5.00 | 2.50 | µg/L | 1 | 07/29/14 17:56 |
| 2-Hexanone | ND | | 5.00 | 1.00 | µg/L | 1 | 07/29/14 17:56 |
| 4-Chlorotoluene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 17:56 |
| 4-Methyl-2-pentanone | ND | | 5.00 | 1.00 | µg/L | 1 | 07/29/14 17:56 |
| Acetone | ND | | 10.0 | 1.00 | µg/L | 1 | 07/29/14 17:56 |
| Benzene | 1.28 | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 17:56 |
| Bromobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 17:56 |
| Bromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 17:56 |
| Bromodichloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 17:56 |
| Bromoform | ND | | 1.00 | 0.33 | µg/L | 1 | 07/29/14 17:56 |
| Bromomethane | ND | | 1.00 | 0.33 | µg/L | 1 | 07/29/14 17:56 |
| Carbon disulfide | ND | | 0.50 | 0.11 | µg/L | 1 | 07/29/14 17:56 |
| Carbon tetrachloride | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 17:56 |
| Chlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 17:56 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1407301-014A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - B* |
| **W Order:** | K1407301 | **Collection Date:** | 07/24/14 11:00 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 07/25/14 9:50 |
| **Inst. ID:** | MSK_75 **Sample Size** 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS **%Moisture:** | **BatchNo:** | R27384 |
| **Revision:** | 07/31/14 15:19 **TestCode:** 8260W_CAL | **FileID:** | 1-SAMP-K5805.D |
| **Col Type:** | TOTAL 122.94 MW-14 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260C/5030C** | | |
| Chloroethane | ND | | 1.00 | 0.33 | µg/L | 1 | 07/29/14 17:56 |
| Chloroform | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 17:56 |
| Chloromethane | ND | | 1.00 | 0.33 | µg/L | 1 | 07/29/14 17:56 |
| cis-1,2-Dichloroethene | 12.0 | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 17:56 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 17:56 |
| Cyclohexane | 1.01 | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 17:56 |
| Dibromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 17:56 |
| Dibromomethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 17:56 |
| Dichlorodifluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 07/29/14 17:56 |
| Ethylbenzene | 0.19 | J | 0.50 | 0.10 | µg/L | 1 | 07/29/14 17:56 |
| Hexachlorobutadiene | ND | | 1.00 | 0.10 | µg/L | 1 | 07/29/14 17:56 |
| Isopropylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 17:56 |
| Methyl tert-butyl ether | ND | | 1.00 | 0.16 | µg/L | 1 | 07/29/14 17:56 |
| Methylene chloride | ND | | 2.00 | 0.16 | µg/L | 1 | 07/29/14 17:56 |
| n-Propylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 17:56 |
| Naphthalene | ND | | 1.00 | 0.10 | µg/L | 1 | 07/29/14 17:56 |
| o-Xylene | 0.13 | J | 0.50 | 0.10 | µg/L | 1 | 07/29/14 17:56 |
| p-Isopropyltoluene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 17:56 |
| sec-Butylbenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 17:56 |
| Styrene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 17:56 |
| Tetrachloroethene | 0.47 | J | 0.50 | 0.10 | µg/L | 1 | 07/29/14 17:56 |
| Toluene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 17:56 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 17:56 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 17:56 |
| Trichloroethene | 0.44 | J | 0.50 | 0.10 | µg/L | 1 | 07/29/14 17:56 |
| Trichlorofluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 07/29/14 17:56 |
| Vinyl acetate | ND | | 2.00 | 1.00 | µg/L | 1 | 07/29/14 17:56 |
| Vinyl chloride | 0.50 | J | 1.00 | 0.33 | µg/L | 1 | 07/29/14 17:56 |
| Xylenes (total) | ND | | 1.00 | 0.30 | µg/L | 1 | 07/29/14 17:56 |
| Surr: 1,2-Dichloroethane-d4 | 97 | | 75-130 | 0.16 | %REC | 1 | 07/29/14 17:56 |
| Surr: Toluene-d8 | 97 | | 75-125 | 0.10 | %REC | 1 | 07/29/14 17:56 |
| Surr: 4-Bromofluorobenzene | 101 | | 75-125 | 0.10 | %REC | 1 | 07/29/14 17:56 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 08/01/14 6:17 685907 **Project Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1407301-015A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 -Trip*** |
| **W Order:** | K1407301 | **Collection Date:** | 07/23/14 0:00 |
| **Matrix:** | TRIP BLANK | **Date Received:** | 07/25/14 9:50 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R27384 |
| **Revision:** | 07/31/14 15:19 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K5811.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| VOLATILE ORGANIC COMPOUNDS BY GC/MS | | | | | SW8260C/5030C | | |
| (m+p)-Xylene | ND | | 1.00 | 0.20 | µg/L | 1 | 07/29/14 21:10 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 21:10 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 21:10 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 21:10 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 21:10 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 21:10 |
| 1,1-Dichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 21:10 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 21:10 |
| 1,2,3-Trichloropropane | ND | | 2.00 | 0.33 | µg/L | 1 | 07/29/14 21:10 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 0.10 | µg/L | 1 | 07/29/14 21:10 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 21:10 |
| 1,2-Dibromo-3-chloropropane | ND | | 5.00 | 1.00 | µg/L | 1 | 07/29/14 21:10 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 21:10 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 21:10 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 21:10 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 21:10 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 21:10 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 21:10 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 21:10 |
| 2-Butanone | ND | | 10.0 | 1.00 | µg/L | 1 | 07/29/14 21:10 |
| 2-Chloroethylvinyl ether | ND | | 5.00 | 2.50 | µg/L | 1 | 07/29/14 21:10 |
| 2-Hexanone | ND | | 5.00 | 1.00 | µg/L | 1 | 07/29/14 21:10 |
| 4-Chlorotoluene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 21:10 |
| 4-Methyl-2-pentanone | ND | | 5.00 | 1.00 | µg/L | 1 | 07/29/14 21:10 |
| Acetone | ND | | 10.0 | 1.00 | µg/L | 1 | 07/29/14 21:10 |
| Benzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 21:10 |
| Bromobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 21:10 |
| Bromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 21:10 |
| Bromodichloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 21:10 |
| Bromoform | ND | | 1.00 | 0.33 | µg/L | 1 | 07/29/14 21:10 |
| Bromomethane | ND | | 1.00 | 0.33 | µg/L | 1 | 07/29/14 21:10 |
| Carbon disulfide | ND | | 0.50 | 0.11 | µg/L | 1 | 07/29/14 21:10 |
| Carbon tetrachloride | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 21:10 |
| Chlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 21:10 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | | | |
|---|---|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | | | **Lab ID:** | **K1407301-015A** |
| **Project:** | 189-02 | | | **Client Sample ID:** | ***189 -Trip*** |
| **W Order:** | K1407301 | | | **Collection Date:** | 07/23/14 0:00 |
| **Matrix:** | TRIP BLANK | | | **Date Received:** | 07/25/14 9:50 |
| **Inst. ID:** | MSK_75 | **Sample Size** | 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | | **BatchNo:** | R27384 |
| **Revision:** | 07/31/14 15:19 | **TestCode:** | 8260W_CAL | **FileID:** | 1-SAMP-K5811.D |
| **Col Type:** | | | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260C/5030C** | | |
| Chloroethane | ND | | 1.00 | 0.33 | µg/L | 1 | 07/29/14 21:10 |
| Chloroform | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 21:10 |
| Chloromethane | ND | | 1.00 | 0.33 | µg/L | 1 | 07/29/14 21:10 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 21:10 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 21:10 |
| Cyclohexane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 21:10 |
| Dibromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 21:10 |
| Dibromomethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 21:10 |
| Dichlorodifluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 07/29/14 21:10 |
| Ethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 21:10 |
| Hexachlorobutadiene | ND | | 1.00 | 0.10 | µg/L | 1 | 07/29/14 21:10 |
| Isopropylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 21:10 |
| Methyl tert-butyl ether | ND | | 1.00 | 0.16 | µg/L | 1 | 07/29/14 21:10 |
| Methylene chloride | ND | | 2.00 | 0.16 | µg/L | 1 | 07/29/14 21:10 |
| n-Propylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 21:10 |
| Naphthalene | ND | | 1.00 | 0.10 | µg/L | 1 | 07/29/14 21:10 |
| o-Xylene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 21:10 |
| p-Isopropyltoluene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 21:10 |
| sec-Butylbenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 21:10 |
| Styrene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 21:10 |
| Tetrachloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 21:10 |
| Toluene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 21:10 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 21:10 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 21:10 |
| Trichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 21:10 |
| Trichlorofluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 07/29/14 21:10 |
| Vinyl acetate | ND | | 2.00 | 1.00 | µg/L | 1 | 07/29/14 21:10 |
| Vinyl chloride | ND | | 1.00 | 0.33 | µg/L | 1 | 07/29/14 21:10 |
| Xylenes (total) | ND | | 1.00 | 0.30 | µg/L | 1 | 07/29/14 21:10 |
| Surr: 1,2-Dichloroethane-d4 | 96 | | 75-130 | 0.16 | %REC | 1 | 07/29/14 21:10 |
| Surr: Toluene-d8 | 99 | | 75-125 | 0.10 | %REC | 1 | 07/29/14 21:10 |
| Surr: 4-Bromofluorobenzene | 101 | | 75-125 | 0.10 | %REC | 1 | 07/29/14 21:10 |

| | | | | | |
|---|---|---|---|---|---|
| **Qualifiers:** | * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| | E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| | J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| | P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 08/01/14 6:17 685913 **Project Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900
StateCertNo: 10248

# Analytical Results

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1407301-016A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - Field* |
| **W Order:** | K1407301 | **Collection Date:** | 07/23/14 14:45 |
| **Matrix:** | WATER Q | **Date Received:** | 07/25/14 9:50 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R27384 |
| **Revision:** | 07/31/14 15:19 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K5810.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| VOLATILE ORGANIC COMPOUNDS BY GC/MS | | | | | SW8260C/5030C | | |
| (m+p)-Xylene | ND | | 1.00 | 0.20 | µg/L | 1 | 07/29/14 20:38 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 20:38 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 20:38 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 20:38 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 20:38 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 20:38 |
| 1,1-Dichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 20:38 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 20:38 |
| 1,2,3-Trichloropropane | ND | | 2.00 | 0.33 | µg/L | 1 | 07/29/14 20:38 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 0.10 | µg/L | 1 | 07/29/14 20:38 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 20:38 |
| 1,2-Dibromo-3-chloropropane | ND | | 5.00 | 1.00 | µg/L | 1 | 07/29/14 20:38 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 20:38 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 20:38 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 20:38 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 20:38 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 20:38 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 20:38 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 20:38 |
| 2-Butanone | ND | | 10.0 | 1.00 | µg/L | 1 | 07/29/14 20:38 |
| 2-Chloroethylvinyl ether | ND | | 5.00 | 2.50 | µg/L | 1 | 07/29/14 20:38 |
| 2-Hexanone | ND | | 5.00 | 1.00 | µg/L | 1 | 07/29/14 20:38 |
| 4-Chlorotoluene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 20:38 |
| 4-Methyl-2-pentanone | ND | | 5.00 | 1.00 | µg/L | 1 | 07/29/14 20:38 |
| Acetone | 1.27 | J | 10.0 | 1.00 | µg/L | 1 | 07/29/14 20:38 |
| Benzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 20:38 |
| Bromobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 20:38 |
| Bromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 20:38 |
| Bromodichloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 20:38 |
| Bromoform | ND | | 1.00 | 0.33 | µg/L | 1 | 07/29/14 20:38 |
| Bromomethane | ND | | 1.00 | 0.33 | µg/L | 1 | 07/29/14 20:38 |
| Carbon disulfide | ND | | 0.50 | 0.11 | µg/L | 1 | 07/29/14 20:38 |
| Carbon tetrachloride | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 20:38 |
| Chlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 20:38 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

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East Syracuse, NY 13057 (315) 445-1900
StateCertNo: 10248

# Analytical Results

| | | | | | |
|---|---|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | | | **Lab ID:** | **K1407301-016A** |
| **Project:** | 189-02 | | | **Client Sample ID:** | ***189 - Field*** |
| **W Order:** | K1407301 | | | **Collection Date:** | 07/23/14 14:45 |
| **Matrix:** | WATER Q | | | **Date Received:** | 07/25/14 9:50 |
| **Inst. ID:** | MSK_75 | **Sample Size** | 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | | **BatchNo:** | R27384 |
| **Revision:** | 07/31/14 15:19 | **TestCode:** | 8260W_CAL | **FileID:** | 1-SAMP-K5810.D |
| **Col Type:** | | | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260C/5030C** | | |
| Chloroethane | ND | | 1.00 | 0.33 | µg/L | 1 | 07/29/14 20:38 |
| Chloroform | 25.6 | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 20:38 |
| Chloromethane | ND | | 1.00 | 0.33 | µg/L | 1 | 07/29/14 20:38 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 20:38 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 20:38 |
| Cyclohexane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 20:38 |
| Dibromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 20:38 |
| Dibromomethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 20:38 |
| Dichlorodifluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 07/29/14 20:38 |
| Ethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 20:38 |
| Hexachlorobutadiene | ND | | 1.00 | 0.10 | µg/L | 1 | 07/29/14 20:38 |
| Isopropylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 20:38 |
| Methyl tert-butyl ether | ND | | 1.00 | 0.16 | µg/L | 1 | 07/29/14 20:38 |
| Methylene chloride | 1.02 | J | 2.00 | 0.16 | µg/L | 1 | 07/29/14 20:38 |
| n-Propylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 20:38 |
| Naphthalene | ND | | 1.00 | 0.10 | µg/L | 1 | 07/29/14 20:38 |
| o-Xylene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 20:38 |
| p-Isopropyltoluene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 20:38 |
| sec-Butylbenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 20:38 |
| Styrene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 20:38 |
| Tetrachloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 20:38 |
| Toluene | 1.44 | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 20:38 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 20:38 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 20:38 |
| Trichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 20:38 |
| Trichlorofluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 07/29/14 20:38 |
| Vinyl acetate | ND | | 2.00 | 1.00 | µg/L | 1 | 07/29/14 20:38 |
| Vinyl chloride | ND | | 1.00 | 0.33 | µg/L | 1 | 07/29/14 20:38 |
| Xylenes (total) | ND | | 1.00 | 0.30 | µg/L | 1 | 07/29/14 20:38 |
| Surr: 1,2-Dichloroethane-d4 | 105 | | 75-130 | 0.16 | %REC | 1 | 07/29/14 20:38 |
| Surr: Toluene-d8 | 98 | | 75-125 | 0.10 | %REC | 1 | 07/29/14 20:38 |
| Surr: 4-Bromofluorobenzene | 101 | | 75-125 | 0.10 | %REC | 1 | 07/29/14 20:38 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

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East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | | | |
|---|---|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | | | **Lab ID:** | **K1407301-017A** |
| **Project:** | 189-02 | | | **Client Sample ID:** | ***189-CARB*** |
| **W Order:** | K1407301 | | | **Collection Date:** | 07/23/14 14:30 |
| **Matrix:** | GROUNDWATER | | | **Date Received:** | 07/25/14 9:50 |
| **Inst. ID:** | MSK_75 | **Sample Size** | 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | | **BatchNo:** | R27384 |
| **Revision:** | 07/31/14 15:19 | **TestCode:** | 8260W_CAL | **FileID:** | 1-SAMP-K5806.D |
| **Col Type:** | | | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| VOLATILE ORGANIC COMPOUNDS BY GC/MS | | | | | SW8260C/5030C | | |
| (m+p)-Xylene | ND | | 1.00 | 0.20 | µg/L | 1 | 07/29/14 18:29 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 18:29 |
| 1,1,1-Trichloroethane | 9.98 | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 18:29 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 18:29 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 18:29 |
| 1,1,2-Trichloroethane | 0.18 | J | 0.50 | 0.16 | µg/L | 1 | 07/29/14 18:29 |
| 1,1-Dichloroethane | 61.1 | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 18:29 |
| 1,1-Dichloroethene | 0.60 | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 18:29 |
| 1,2,3-Trichloropropane | ND | | 2.00 | 0.33 | µg/L | 1 | 07/29/14 18:29 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 0.10 | µg/L | 1 | 07/29/14 18:29 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 18:29 |
| 1,2-Dibromo-3-chloropropane | ND | | 5.00 | 1.00 | µg/L | 1 | 07/29/14 18:29 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 18:29 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 18:29 |
| 1,2-Dichloroethane | 1.52 | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 18:29 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 18:29 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 18:29 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 18:29 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 18:29 |
| 2-Butanone | ND | | 10.0 | 1.00 | µg/L | 1 | 07/29/14 18:29 |
| 2-Chloroethylvinyl ether | ND | | 5.00 | 2.50 | µg/L | 1 | 07/29/14 18:29 |
| 2-Hexanone | ND | | 5.00 | 1.00 | µg/L | 1 | 07/29/14 18:29 |
| 4-Chlorotoluene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 18:29 |
| 4-Methyl-2-pentanone | ND | | 5.00 | 1.00 | µg/L | 1 | 07/29/14 18:29 |
| Acetone | ND | | 10.0 | 1.00 | µg/L | 1 | 07/29/14 18:29 |
| Benzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 18:29 |
| Bromobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 18:29 |
| Bromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 18:29 |
| Bromodichloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 18:29 |
| Bromoform | ND | | 1.00 | 0.33 | µg/L | 1 | 07/29/14 18:29 |
| Bromomethane | ND | | 1.00 | 0.33 | µg/L | 1 | 07/29/14 18:29 |
| Carbon disulfide | ND | | 0.50 | 0.11 | µg/L | 1 | 07/29/14 18:29 |
| Carbon tetrachloride | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 18:29 |
| Chlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 18:29 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

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East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1407301-017A |
| **Project:** | 189-02 | **Client Sample ID:** | *189-CARB* |
| **W Order:** | K1407301 | **Collection Date:** | 07/23/14 14:30 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 07/25/14 9:50 |
| **Inst. ID:** | MSK_75 **Sample Size** 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS **%Moisture:** | **BatchNo:** | R27384 |
| **Revision:** | 07/31/14 15:19 **TestCode:** 8260W_CAL | **FileID:** | 1-SAMP-K5806.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| VOLATILE ORGANIC COMPOUNDS BY GC/MS | | | | | SW8260C/5030C | | |
| Chloroethane | 0.97 | J | 1.00 | 0.33 | µg/L | 1 | 07/29/14 18:29 |
| Chloroform | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 18:29 |
| Chloromethane | ND | | 1.00 | 0.33 | µg/L | 1 | 07/29/14 18:29 |
| cis-1,2-Dichloroethene | 49.0 | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 18:29 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 18:29 |
| Cyclohexane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 18:29 |
| Dibromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 18:29 |
| Dibromomethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 18:29 |
| Dichlorodifluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 07/29/14 18:29 |
| Ethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 18:29 |
| Hexachlorobutadiene | ND | | 1.00 | 0.10 | µg/L | 1 | 07/29/14 18:29 |
| Isopropylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 18:29 |
| Methyl tert-butyl ether | ND | | 1.00 | 0.16 | µg/L | 1 | 07/29/14 18:29 |
| Methylene chloride | ND | | 2.00 | 0.16 | µg/L | 1 | 07/29/14 18:29 |
| n-Propylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 18:29 |
| Naphthalene | ND | | 1.00 | 0.10 | µg/L | 1 | 07/29/14 18:29 |
| o-Xylene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 18:29 |
| p-Isopropyltoluene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 18:29 |
| sec-Butylbenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 18:29 |
| Styrene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 18:29 |
| Tetrachloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 18:29 |
| Toluene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 18:29 |
| trans-1,2-Dichloroethene | 0.34 | J | 0.50 | 0.10 | µg/L | 1 | 07/29/14 18:29 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/29/14 18:29 |
| Trichloroethene | 7.95 | | 0.50 | 0.10 | µg/L | 1 | 07/29/14 18:29 |
| Trichlorofluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 07/29/14 18:29 |
| Vinyl acetate | ND | | 2.00 | 1.00 | µg/L | 1 | 07/29/14 18:29 |
| Vinyl chloride | 2.93 | | 1.00 | 0.33 | µg/L | 1 | 07/29/14 18:29 |
| Xylenes (total) | ND | | 1.00 | 0.30 | µg/L | 1 | 07/29/14 18:29 |
| Surr: 1,2-Dichloroethane-d4 | 98 | | 75-130 | 0.16 | %REC | 1 | 07/29/14 18:29 |
| Surr: Toluene-d8 | 97 | | 75-125 | 0.10 | %REC | 1 | 07/29/14 18:29 |
| Surr: 4-Bromofluorobenzene | 99 | | 75-125 | 0.10 | %REC | 1 | 07/29/14 18:29 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 08/01/14 6:17 685908 **Project Supervisor:** Anthony Crescenzi

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East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1407301-018A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189-W9*** |
| **W Order:** | K1407301 | **Collection Date:** | 07/23/14 14:00 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 07/25/14 9:50 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R27384 |
| **Revision:** | 07/31/14 15:19 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K5803.D |
| **Col Type:** | TOTAL 2202.8 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| VOLATILE ORGANIC COMPOUNDS BY GC/MS | | | | | SW8260C/5030C | | |
| (m+p)-Xylene | 2.10 | J | 10.0 | 2.00 | µg/L | 10 | 07/29/14 16:52 |
| 1,1,1,2-Tetrachloroethane | ND | | 5.00 | 1.60 | µg/L | 10 | 07/29/14 16:52 |
| 1,1,1-Trichloroethane | 170 | | 5.00 | 1.00 | µg/L | 10 | 07/29/14 16:52 |
| 1,1,2,2-Tetrachloroethane | ND | | 5.00 | 1.00 | µg/L | 10 | 07/29/14 16:52 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 8.10 | | 5.00 | 1.00 | µg/L | 10 | 07/29/14 16:52 |
| 1,1,2-Trichloroethane | 1.80 | J | 5.00 | 1.60 | µg/L | 10 | 07/29/14 16:52 |
| 1,1-Dichloroethane | 833 | | 5.00 | 1.00 | µg/L | 10 | 07/29/14 16:52 |
| 1,1-Dichloroethene | 41.8 | | 5.00 | 1.60 | µg/L | 10 | 07/29/14 16:52 |
| 1,2,3-Trichloropropane | ND | | 20.0 | 3.30 | µg/L | 10 | 07/29/14 16:52 |
| 1,2,4-Trichlorobenzene | ND | | 10.0 | 1.00 | µg/L | 10 | 07/29/14 16:52 |
| 1,2,4-Trimethylbenzene | 2.00 | J | 5.00 | 1.00 | µg/L | 10 | 07/29/14 16:52 |
| 1,2-Dibromo-3-chloropropane | ND | | 50.0 | 10.0 | µg/L | 10 | 07/29/14 16:52 |
| 1,2-Dibromoethane | ND | | 5.00 | 1.60 | µg/L | 10 | 07/29/14 16:52 |
| 1,2-Dichlorobenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 07/29/14 16:52 |
| 1,2-Dichloroethane | 6.60 | | 5.00 | 1.60 | µg/L | 10 | 07/29/14 16:52 |
| 1,2-Dichloropropane | ND | | 5.00 | 1.60 | µg/L | 10 | 07/29/14 16:52 |
| 1,3,5-Trimethylbenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 07/29/14 16:52 |
| 1,3-Dichlorobenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 07/29/14 16:52 |
| 1,4-Dichlorobenzene | ND | | 5.00 | 1.60 | µg/L | 10 | 07/29/14 16:52 |
| 2-Butanone | ND | | 100 | 10.0 | µg/L | 10 | 07/29/14 16:52 |
| 2-Chloroethylvinyl ether | ND | | 50.0 | 25.0 | µg/L | 10 | 07/29/14 16:52 |
| 2-Hexanone | ND | | 50.0 | 10.0 | µg/L | 10 | 07/29/14 16:52 |
| 4-Chlorotoluene | ND | | 5.00 | 1.00 | µg/L | 10 | 07/29/14 16:52 |
| 4-Methyl-2-pentanone | ND | | 50.0 | 10.0 | µg/L | 10 | 07/29/14 16:52 |
| Acetone | ND | | 100 | 10.0 | µg/L | 10 | 07/29/14 16:52 |
| Benzene | ND | | 5.00 | 1.00 | µg/L | 10 | 07/29/14 16:52 |
| Bromobenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 07/29/14 16:52 |
| Bromochloromethane | ND | | 5.00 | 1.00 | µg/L | 10 | 07/29/14 16:52 |
| Bromodichloromethane | ND | | 5.00 | 1.00 | µg/L | 10 | 07/29/14 16:52 |
| Bromoform | ND | | 10.0 | 3.30 | µg/L | 10 | 07/29/14 16:52 |
| Bromomethane | ND | | 10.0 | 3.30 | µg/L | 10 | 07/29/14 16:52 |
| Carbon disulfide | ND | | 5.00 | 1.10 | µg/L | 10 | 07/29/14 16:52 |
| Carbon tetrachloride | ND | | 5.00 | 1.00 | µg/L | 10 | 07/29/14 16:52 |
| Chlorobenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 07/29/14 16:52 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 08/01/14 6:17 685905 **Project Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1407301-018A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189-W9*** |
| **W Order:** | K1407301 | **Collection Date:** | 07/23/14 14:00 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 07/25/14 9:50 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R27384 |
| **Revision:** | 07/31/14 15:19 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K5803.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| VOLATILE ORGANIC COMPOUNDS BY GC/MS | | | | | SW8260C/5030C | | |
| Chloroethane | 20.1 | | 10.0 | 3.30 | µg/L | 10 | 07/29/14 16:52 |
| Chloroform | ND | | 5.00 | 1.00 | µg/L | 10 | 07/29/14 16:52 |
| Chloromethane | ND | | 10.0 | 3.30 | µg/L | 10 | 07/29/14 16:52 |
| cis-1,2-Dichloroethene | 606 | | 5.00 | 1.00 | µg/L | 10 | 07/29/14 16:52 |
| cis-1,3-Dichloropropene | ND | | 5.00 | 1.60 | µg/L | 10 | 07/29/14 16:52 |
| Cyclohexane | ND | | 5.00 | 1.00 | µg/L | 10 | 07/29/14 16:52 |
| Dibromochloromethane | ND | | 5.00 | 1.00 | µg/L | 10 | 07/29/14 16:52 |
| Dibromomethane | ND | | 5.00 | 1.60 | µg/L | 10 | 07/29/14 16:52 |
| Dichlorodifluoromethane | ND | | 10.0 | 1.00 | µg/L | 10 | 07/29/14 16:52 |
| Ethylbenzene | 5.20 | | 5.00 | 1.00 | µg/L | 10 | 07/29/14 16:52 |
| Hexachlorobutadiene | ND | | 10.0 | 1.00 | µg/L | 10 | 07/29/14 16:52 |
| Isopropylbenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 07/29/14 16:52 |
| Methyl tert-butyl ether | ND | | 10.0 | 1.60 | µg/L | 10 | 07/29/14 16:52 |
| Methylene chloride | ND | | 20.0 | 1.60 | µg/L | 10 | 07/29/14 16:52 |
| n-Propylbenzene | 1.00 | J | 5.00 | 1.00 | µg/L | 10 | 07/29/14 16:52 |
| Naphthalene | ND | | 10.0 | 1.00 | µg/L | 10 | 07/29/14 16:52 |
| o-Xylene | 1.20 | J | 5.00 | 1.00 | µg/L | 10 | 07/29/14 16:52 |
| p-Isopropyltoluene | ND | | 5.00 | 1.60 | µg/L | 10 | 07/29/14 16:52 |
| sec-Butylbenzene | ND | | 5.00 | 1.60 | µg/L | 10 | 07/29/14 16:52 |
| Styrene | ND | | 5.00 | 1.00 | µg/L | 10 | 07/29/14 16:52 |
| Tetrachloroethene | ND | | 5.00 | 1.00 | µg/L | 10 | 07/29/14 16:52 |
| Toluene | 1.80 | J | 5.00 | 1.00 | µg/L | 10 | 07/29/14 16:52 |
| trans-1,2-Dichloroethene | 9.10 | | 5.00 | 1.00 | µg/L | 10 | 07/29/14 16:52 |
| trans-1,3-Dichloropropene | ND | | 5.00 | 1.60 | µg/L | 10 | 07/29/14 16:52 |
| Trichloroethene | 223 | | 5.00 | 1.00 | µg/L | 10 | 07/29/14 16:52 |
| Trichlorofluoromethane | ND | | 10.0 | 1.00 | µg/L | 10 | 07/29/14 16:52 |
| Vinyl acetate | ND | | 20.0 | 10.0 | µg/L | 10 | 07/29/14 16:52 |
| Vinyl chloride | 270 | | 10.0 | 3.30 | µg/L | 10 | 07/29/14 16:52 |
| Xylenes (total) | 3.30 | J | 10.0 | 3.00 | µg/L | 10 | 07/29/14 16:52 |
| Surr: 1,2-Dichloroethane-d4 | 98 | | 75-130 | 1.60 | %REC | 10 | 07/29/14 16:52 |
| Surr: Toluene-d8 | 97 | | 75-125 | 1.00 | %REC | 10 | 07/29/14 16:52 |
| Surr: 4-Bromofluorobenzene | 104 | | 75-125 | 1.00 | %REC | 10 | 07/29/14 16:52 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 08/01/14 6:17 685905 **Project Supervisor:** Anthony Crescenzi

K1407301

1/2

# Ken W. Kloeber Consulting Engineers

(716) 864-0012 tel
(775) 860-3804 fax
KloeberEng @ aol.com
PO Box 140 Boston NY 14025

## Environmental Sample Chain of Custody

KWKCE Project: 189-02

Sampled by initials: DT

Wx:

☒ Analysis Requested

Instructions / Remarks: Report all results (e.g. Js); Report all data qualifiers; Keep limits as low as possible. Email PDF of report.

| for Lab use | KWKCE Sample ID | Date | Time | Type | Matrix | # of containers | VOCs (1) | (2) | (3) | (4) | (5) | (6) | (7) | TAT | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 001 | 189 - W1 | 7.24.14 | 1000 | G | GW | 2 | x | | | | | | | STD | Email EQuIS EDD |
| 002 | 189 - W2 | 7.23.14 | 1330 | G | GW | 2 | x | | | | | | | STD | |
| 003 | 189 - W3 | 7.23.14 | 1345 | G | GW | 2 | x | | | | | | | STD | |
| 004 | 189 - W4 | 7.24.14 | 0945 | G | GW | 2 | x | | | | | | | STD | |
| 005 | 189 - W5 | 7.24.14 | 1030 | G | GW | 2 | x | | | | | | | STD | |
| 006 | 189 - W6 | 7.24.14 | 0900 | G | GW | 2 | x | | | | | | | STD | |
| 007 | 189 - W7 | 7.24.14 | 0830 | G | GW | 2 | x | | | | | | | STD | |
| 008 | 189 - W8 | 7.24.14 | 1015 | G | GW | 2 | x | | | | | | | STD | |
| 009 | 189 - W10 | 7.24.14 | 0840 | G | GW | 2 | x | | | | | | | STD | |
| 010 | 189 - W11 | 7.24.14 | 0915 | G | GW | 2 | x | | | | | | | STD | |
| 011 | 189 - W12 | 7.24.14 | 0930 | G | GW | 2 | x | | | | | | | STD | |
| 012 | 189 - W13 | 7.24.14 | 0845 | G | GW | 2 | x | | | | | | | STD | |
| 013 | 189 - W 14 | 7.24.14 | 0820 | G | GW | 2 | x | | | | | | | STD | |
| 014 | 189 - B | 7.24.14 | 1100 | G | GW | 2 | x | | | | | | | STD | |
| 015 | 189- TRIP | 7.17.14 | | G | GW | 2 | x | | | | | | | STD | |
| 016 | 189 - FIELD | 7.23.14 | 1445 | G | GW | 2 | x | | | | | | | STD | |
| 017 | 189 - CARB | 07.23.14 | 1430 | G | GW | 2 | x | | | | | | | STD | **** Use expanded 8260 list |

| Sampler signature | Transported via: | Picked up / dropped off at | Analysis Requested / Method | Container Type | Size | Preservative |
|---|---|---|---|---|---|---|
| | FedEx Ground | FEDEX | (1) EPA 8260 **** | VOA | 40 | HCl pH <2, Ice |
| Relinquished by signature | Date: 7.24.14 Time: 11:15AM | Received by signature | (2) | | | |
| | | | (3) | | | |
| Relinquished by signature | Date: | Time: | Received by signature | (4) | | | |
| | | | | (5) | | | |
| Relinquished by signature | Date: 7.25.14 | Time: 09:50 | Received at Lab by signature | (6) | | |
| | | | | (7) | | |

for Lab use: 6.0 °C on Ice via Fed Ex

K1407301

2/2

# Ken W. Kloeber Consulting Engineers

(716) 864-0012 tel
(775) 860-3804 fax
KloeberEng @ aol.com
PO Box 140 Boston NY 14025

## Environmental Sample Chain of Custody

KWKCE Project: 189-02

Sampled by initials: DT

Wx:

Analysis Requested

Instructions / Remarks: Report all results (e.g. Js); Report all data qualifiers; Keep limits as low as possible. Email PDF of report.

| for Lab use | KWKCE Sample ID | Date | Time | Type | Matrix | # of containers | (1) VOCs | (2) | (3) | (4) | (5) | (6) | (7) | TAT | Instructions / Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 018 | 189 - W9 | 7.23.14 | 1400 | G | GW | 2 | x | | | | | | | STD | Email EQuIS EDD |
| | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | **** Use expanded 8260 list |

| Sampler signature | Transported via: | Picked up / dropped off at |
|---|---|---|
| | FedEx Ground | FEDEX |
| Relinquished by signature | Date: 7.24.14 Time: 11:15AM | Received by signature |
| Relinquished by signature | Date: | Time: Received by signature |
| Relinquished by signature | Date: 7.25.14 Time: 09:50 | Received at Lab by signature |

| Analysis Requested / Method | Container Type | Size | Preservative |
|---|---|---|---|
| (1) EPA 8260 **** | VOA | 40 | HCl pH <2, Ice |
| (2) | | | |
| (3) | | | |
| (4) | | | |
| (5) | | | |
| (6) | | | |
| (7) | | | |

for Lab use: 6.0°C on Ice via FedEx

# Life Science Laboratories, Inc.

## Sample Receipt Checklist

Client Name: KLOEBERENG

Date and Time Received: 7/25/2014 9:50:00 AM

Work Order Number: K1407301

Received by: gis

Checklist completed by: GS (Initials) 7-25-14 (Date)

Reviewed by: MC (Initials) 7-25-14 (Date)

Delivery Method: FedEx

| | | | |
|---|---|---|---|
| Shipping container/cooler in good condition? | Yes ☑ | No ☐ | Not Present ☐ |
| Custody seals intact on shipping container/cooler? | Yes ☐ | No ☐ | Not Present ☑ |
| Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Applicable ☑ |
| Chain of custody present? | Yes ☑ | No ☐ | |
| Chain of custody signed when relinquished and received? | Yes ☑ | No ☐ | |
| Chain of custody agrees with sample labels? | Yes ☑ | No ☐ | |
| Samples in proper container/bottle? | Yes ☑ | No ☐ | |
| Sample containers intact? | Yes ☑ | No ☐ | |
| Sufficient sample volume for indicated test? | Yes ☑ | No ☐ | |
| All samples received within holding time? | Yes ☑ | No ☐ | |
| Container/Temp Blank temperature in compliance? | Yes ☑ | No ☐ | |
| Water - VOA vials have zero headspace? | Yes ☑ | No ☐ | No VOA vials submitted ☐ |
| Water - pH acceptable upon receipt? | Yes ☐ | No ☐ | Not Applicable ☑ |

Comments:

Corrective Action:

**Life Science Laboratories, Inc.**
**5854 Butternut Drive**
**East Syracuse, NY 13057** **(315) 445-1900**

Friday, April 12, 2013

Ken W. Kloeber
Ken W. Kloeber Consulting Engineers
PO Box 140
Boston, NY 14025

TEL: (716) 864-0012

Project: 189-02
RE: Analytical Results Order No.: K1304104

Dear Ken W. Kloeber:

Life Science Laboratories, Inc. received 16 sample(s) on 4/10/2013 for the analyses presented in the following report. Sample results relate only to the samples as received by the laboratory.

Very truly yours,
Life Science Laboratories, Inc.

Anthony Crescenzi
Project Manager

K1304104

# Ken W. Kloeber Consulting Engineers

(716) 864-0012 tel
(775) 860-3804 fax
KloeberEng@aol.com
PO Box 140 • Boston NY 14025

KWKCE Proj no. 189-02
Sampled by initials: KK
PO no.

For Lab use

## Environmental Sample Chain-of-Custody

[X] Analysis Requested

| | KWKCE Sample ID or Location | Date | Time | Type | Matrix | No. of containers | (1) 8260B | (2) | (3) | (4) | (5) | (6) | TAT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 001 | 189-W1 | 4/8 | 1825 | G C | GW | 2 | X | | | | | | 10 |
| 002 | 189-W2 | 4/8 | 1815 | G C | | | | | | | | | |
| 003 | 189-W3 | 4/8 | 1800 | G C | | | | | | | | | |
| 004 | 189-W4 | 4/5 | 1720 | G C | | | | | | | | | |
| 005 | 189-W5 * | | 1520 | G C | | 1 | | | | | | | |
| 006 | 189-W6 | | 1750 | G C | | | | | | | | | |
| 007 | 189-W7 | | 1330 | G C | | | | | | | | | |
| 008 | 189-W8 | | 1350 | G C | | | | | | | | | |
| 009 | 189-W9 | 4/8 | 1720 | G C | | | | | | | | | |
| 010 | 189-W10 | 4/5 | 1650 | G C | | | | | | | | | |
| 011 | 189-W11 | | 1700 | G C | | | | | | | | | |
| 012 | 189-W12 | | 1715 | G C | | | | | | | | | |
| 013 | 189-W13 | | 1640 | G C | | | | | | | | | |
| 014 | 189-W14 | | 1730 | G C | | | | | | | | | |
| 015 | 189-BL | | 1200 | G C | | | | | | | | | |
| | | | | G C | | | | | | | | | |
| 016 | 189-TRIP | | | X C | | | | | | | | | |

Remarks / Instructions

KEEP LIMITS AS LOW AS POSSIBLE.; REPORT ALL RESULTS AND QC VALUES (QS, JS, ETC.) AND ALL DATA & QC QUALIFIERS.

EMAIL REPORT & INVOICE; FOLLOW UP W/ EQUIS EDD.

** EXPANDED 8260 VOC LIST

| Signature of person sampling | Courier | Picked-up or dropped-off location |
|---|---|---|
| K Kloeber | FEDEX GC | West Seneca |

| Relinquished-by signature | Date | Time | Received-by signature |
|---|---|---|---|
| Ken Kloeber | 4/9/13 | 1520 | |
| Relinquished-by signature | Date | Time | Received-by signature |
| | | | |
| Relinquished-by signature | Date | Time | Received at Lab by signature |
| | 4-10-13 | 08:00 | |

| Analysis requested above / Test Method | Sample Container(s) Type | Size | Preservative(s) |
|---|---|---|---|
| (1) EPA 8260 B ** | VOA | 4oz | HCL/4° |
| (2) | | | |
| (3) | | | |
| (4) | | | |
| (5) | | | |
| (6) | | | |

Lab use 6.0 °C via Fed EX * 1 vial had a cracked cap "W-5" / remains in good condition. JS 4-10-13

## Life Science Laboratories, Inc.

### Sample Receipt Checklist

Client Name: **KLOEBERENG** Date and Time Received: **4/10/2013 8:00:00 AM**

Work Order Number: **K1304104** Received by: gis

Checklist completed by: GS (Initials) 4-10-13 (Date) Reviewed by: AC (Initials) 4-10-13 (Date)

Delivery Method: FedEx

| | | | |
|---|---|---|---|
| Shipping container/cooler in good condition? | Yes ☑ | No ☐ | Not Present ☐ |
| Custody seals intact on shipping container/cooler? | Yes ☐ | No ☐ | Not Present ☑ |
| Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Applicable ☑ |
| Chain of custody present? | Yes ☑ | No ☐ | |
| Chain of custody signed when relinquished and received? | Yes ☑ | No ☐ | |
| Chain of custody agrees with sample labels? | Yes ☑ | No ☐ | |
| Samples in proper container/bottle? | Yes ☑ | No ☐ | |
| Sample containers intact? | Yes ☐ | No ☑ | |
| Sufficient sample volume for indicated test? | Yes ☑ | No ☐ | |
| All samples received within holding time? | Yes ☑ | No ☐ | |
| Container/Temp Blank temperature in compliance? | Yes ☑ | No ☐ | |
| Water - VOA vials have zero headspace? | Yes ☑ | No ☐ | No VOA vials submitted ☐ |
| Water - pH acceptable upon receipt? | Yes ☐ | No ☐ | Not Applicable ☑ |

Comments:

One "W-5" vial had a broken cap and headspace. One remains in good condition.

Corrective Action:

## GC/MS Volatile Organics Case Narrative

| | |
|---|---|
| Client: | Ken W. Kloeber Consulting Engineers |
| Project/Order: | 189 |
| Methodology: | 8260B |

File Name: U:\Narratives\MSVoa\Kloebermsvnar.doc

**GC/MS Volatile Organics**

Acetone and methylene chloride are common volatile laboratory background contaminants. QA/QC guidelines allow concentrations 3X the PQL for these compounds and the reported concentrations may be variable and include values less than the PQL or up to 3x the PQL. The associated method blanks may show similar concentrations or may vary from samples depending on the source or timing of the contamination. For samples requiring dilutions the background concentrations of acetone and methylene chloride are multiplied by the dilution factor (as are all compounds) and thus the reported concentrations of the contaminants can appear to be much higher than undiluted samples.

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1304104-001A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W1* |
| **W Order:** | K1304104 | **Collection Date:** | 04/08/13 18:25 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 04/10/13 8:00 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R25517 |
| **Revision:** | 04/12/13 9:50 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K2306.D |
| **Col Type:** | TOTAL 559 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| VOLATILE ORGANIC COMPOUNDS BY GC/MS | | | | | SW8260B | | |
| (m+p)-Xylene | ND | | 10.0 | 2.00 | µg/L | 10 | 04/11/13 11:28 |
| 1,1,1,2-Tetrachloroethane | ND | | 5.00 | 1.60 | µg/L | 10 | 04/11/13 11:28 |
| 1,1,1-Trichloroethane | 106 | | 5.00 | 1.00 | µg/L | 10 | 04/11/13 11:28 |
| 1,1,2,2-Tetrachloroethane | ND | | 5.00 | 1.00 | µg/L | 10 | 04/11/13 11:28 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 2.00 J | | 5.00 | 1.00 | µg/L | 10 | 04/11/13 11:28 |
| 1,1,2-Trichloroethane | ND | | 5.00 | 1.60 | µg/L | 10 | 04/11/13 11:28 |
| 1,1-Dichloroethane | 311 | | 5.00 | 1.00 | µg/L | 10 | 04/11/13 11:28 |
| 1,1-Dichloroethene | 2.00 J | | 5.00 | 1.60 | µg/L | 10 | 04/11/13 11:28 |
| 1,2,3-Trichloropropane | ND | | 20.0 | 3.30 | µg/L | 10 | 04/11/13 11:28 |
| 1,2,4-Trichlorobenzene | ND | | 10.0 | 1.00 | µg/L | 10 | 04/11/13 11:28 |
| 1,2,4-Trimethylbenzene | 5.70 | | 5.00 | 1.00 | µg/L | 10 | 04/11/13 11:28 |
| 1,2-Dibromo-3-chloropropane | ND | | 50.0 | 10.0 | µg/L | 10 | 04/11/13 11:28 |
| 1,2-Dibromoethane | ND | | 5.00 | 1.60 | µg/L | 10 | 04/11/13 11:28 |
| 1,2-Dichlorobenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 04/11/13 11:28 |
| 1,2-Dichloroethane | ND | | 5.00 | 1.60 | µg/L | 10 | 04/11/13 11:28 |
| 1,2-Dichloropropane | ND | | 5.00 | 1.60 | µg/L | 10 | 04/11/13 11:28 |
| 1,3,5-Trimethylbenzene | 1.90 J | | 5.00 | 1.00 | µg/L | 10 | 04/11/13 11:28 |
| 1,3-Dichlorobenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 04/11/13 11:28 |
| 1,4-Dichlorobenzene | ND | | 5.00 | 1.60 | µg/L | 10 | 04/11/13 11:28 |
| 2-Butanone | 14.7 J | | 100 | 10.0 | µg/L | 10 | 04/11/13 11:28 |
| 2-Chloroethylvinyl ether | ND | | 50.0 | 25.0 | µg/L | 10 | 04/11/13 11:28 |
| 2-Hexanone | ND | | 50.0 | 10.0 | µg/L | 10 | 04/11/13 11:28 |
| 4-Chlorotoluene | ND | | 5.00 | 1.00 | µg/L | 10 | 04/11/13 11:28 |
| 4-Methyl-2-pentanone | ND | | 50.0 | 10.0 | µg/L | 10 | 04/11/13 11:28 |
| Acetone | 12.8 J | | 100 | 10.0 | µg/L | 10 | 04/11/13 11:28 |
| Benzene | ND | | 5.00 | 1.00 | µg/L | 10 | 04/11/13 11:28 |
| Bromobenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 04/11/13 11:28 |
| Bromochloromethane | ND | | 5.00 | 1.00 | µg/L | 10 | 04/11/13 11:28 |
| Bromodichloromethane | ND | | 5.00 | 1.00 | µg/L | 10 | 04/11/13 11:28 |
| Bromoform | ND | | 10.0 | 3.30 | µg/L | 10 | 04/11/13 11:28 |
| Bromomethane | ND | | 10.0 | 3.30 | µg/L | 10 | 04/11/13 11:28 |
| Carbon disulfide | ND | | 5.00 | 1.10 | µg/L | 10 | 04/11/13 11:28 |
| Carbon tetrachloride | ND | | 5.00 | 1.00 | µg/L | 10 | 04/11/13 11:28 |
| Chlorobenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 04/11/13 11:28 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1304104-001A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W1*** |
| **W Order:** | K1304104 | **Collection Date:** | 04/08/13 18:25 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 04/10/13 8:00 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R25517 |
| **Revision:** | 04/12/13 9:50 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K2306.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| VOLATILE ORGANIC COMPOUNDS BY GC/MS | | | | | SW8260B | | |
| Chloroethane | 9.70 | J | 10.0 | 3.30 | µg/L | 10 | 04/11/13 11:28 |
| Chloroform | ND | | 5.00 | 1.00 | µg/L | 10 | 04/11/13 11:28 |
| Chloromethane | ND | | 10.0 | 3.30 | µg/L | 10 | 04/11/13 11:28 |
| cis-1,2-Dichloroethene | 38.9 | | 5.00 | 1.00 | µg/L | 10 | 04/11/13 11:28 |
| cis-1,3-Dichloropropene | ND | | 5.00 | 1.60 | µg/L | 10 | 04/11/13 11:28 |
| Cyclohexane | 1.10 | J | 5.00 | 1.00 | µg/L | 10 | 04/11/13 11:28 |
| Dibromochloromethane | ND | | 5.00 | 1.00 | µg/L | 10 | 04/11/13 11:28 |
| Dibromomethane | ND | | 5.00 | 1.60 | µg/L | 10 | 04/11/13 11:28 |
| Dichlorodifluoromethane | ND | | 10.0 | 1.00 | µg/L | 10 | 04/11/13 11:28 |
| Ethylbenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 04/11/13 11:28 |
| Hexachlorobutadiene | ND | | 10.0 | 1.00 | µg/L | 10 | 04/11/13 11:28 |
| Isopropylbenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 04/11/13 11:28 |
| Methyl tert-butyl ether | ND | | 10.0 | 1.60 | µg/L | 10 | 04/11/13 11:28 |
| Methylene chloride | 2.90 | J | 20.0 | 1.60 | µg/L | 10 | 04/11/13 11:28 |
| n-Propylbenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 04/11/13 11:28 |
| Naphthalene | ND | | 10.0 | 1.00 | µg/L | 10 | 04/11/13 11:28 |
| o-Xylene | 1.20 | J | 5.00 | 1.00 | µg/L | 10 | 04/11/13 11:28 |
| p-Isopropyltoluene | ND | | 5.00 | 1.60 | µg/L | 10 | 04/11/13 11:28 |
| sec-Butylbenzene | ND | | 5.00 | 1.60 | µg/L | 10 | 04/11/13 11:28 |
| Styrene | ND | | 5.00 | 1.00 | µg/L | 10 | 04/11/13 11:28 |
| Tetrachloroethene | ND | | 5.00 | 1.00 | µg/L | 10 | 04/11/13 11:28 |
| Toluene | 1.20 | J | 5.00 | 1.00 | µg/L | 10 | 04/11/13 11:28 |
| trans-1,2-Dichloroethene | ND | | 5.00 | 1.00 | µg/L | 10 | 04/11/13 11:28 |
| trans-1,3-Dichloropropene | ND | | 5.00 | 1.60 | µg/L | 10 | 04/11/13 11:28 |
| Trichloroethene | 3.20 | J | 5.00 | 1.00 | µg/L | 10 | 04/11/13 11:28 |
| Trichlorofluoromethane | ND | | 10.0 | 1.00 | µg/L | 10 | 04/11/13 11:28 |
| Vinyl acetate | ND | | 20.0 | 10.0 | µg/L | 10 | 04/11/13 11:28 |
| Vinyl chloride | 44.7 | | 10.0 | 3.30 | µg/L | 10 | 04/11/13 11:28 |
| Xylenes (total) | ND | | 10.0 | 3.00 | µg/L | 10 | 04/11/13 11:28 |
| Surr: 1,2-Dichloroethane-d4 | 106 | | 75-130 | 1.60 | %REC | 10 | 04/11/13 11:28 |
| Surr: Toluene-d8 | 93 | | 75-125 | 1.00 | %REC | 10 | 04/11/13 11:28 |
| Surr: 4-Bromofluorobenzene | 114 | | 75-125 | 1.00 | %REC | 10 | 04/11/13 11:28 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 04/12/13 9:51 637399 **Project Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1304104-002A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W2* |
| **W Order:** | K1304104 | **Collection Date:** | 04/08/13 18:15 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 04/10/13 8:00 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R25517 |
| **Revision:** | 04/12/13 9:50 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K2307.D |
| **Col Type:** | TOTAL 3046 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 50.0 | 10.0 | µg/L | 50 | 04/11/13 11:59 |
| 1,1,1,2-Tetrachloroethane | ND | | 25.0 | 8.00 | µg/L | 50 | 04/11/13 11:59 |
| 1,1,1-Trichloroethane | 784 | | 25.0 | 5.00 | µg/L | 50 | 04/11/13 11:59 |
| 1,1,2,2-Tetrachloroethane | ND | | 25.0 | 5.00 | µg/L | 50 | 04/11/13 11:59 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 9.00 | J | 25.0 | 5.00 | µg/L | 50 | 04/11/13 11:59 |
| 1,1,2-Trichloroethane | ND | | 25.0 | 8.00 | µg/L | 50 | 04/11/13 11:59 |
| 1,1-Dichloroethane | 1170 | | 25.0 | 5.00 | µg/L | 50 | 04/11/13 11:59 |
| 1,1-Dichloroethene | 18.0 | J | 25.0 | 8.00 | µg/L | 50 | 04/11/13 11:59 |
| 1,2,3-Trichloropropane | ND | | 100 | 16.5 | µg/L | 50 | 04/11/13 11:59 |
| 1,2,4-Trichlorobenzene | ND | | 50.0 | 5.00 | µg/L | 50 | 04/11/13 11:59 |
| 1,2,4-Trimethylbenzene | 33.5 | | 25.0 | 5.00 | µg/L | 50 | 04/11/13 11:59 |
| 1,2-Dibromo-3-chloropropane | ND | | 250 | 50.0 | µg/L | 50 | 04/11/13 11:59 |
| 1,2-Dibromoethane | ND | | 25.0 | 8.00 | µg/L | 50 | 04/11/13 11:59 |
| 1,2-Dichlorobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 04/11/13 11:59 |
| 1,2-Dichloroethane | ND | | 25.0 | 8.00 | µg/L | 50 | 04/11/13 11:59 |
| 1,2-Dichloropropane | ND | | 25.0 | 8.00 | µg/L | 50 | 04/11/13 11:59 |
| 1,3,5-Trimethylbenzene | 6.50 | J | 25.0 | 5.00 | µg/L | 50 | 04/11/13 11:59 |
| 1,3-Dichlorobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 04/11/13 11:59 |
| 1,4-Dichlorobenzene | ND | | 25.0 | 8.00 | µg/L | 50 | 04/11/13 11:59 |
| 2-Butanone | ND | | 500 | 50.0 | µg/L | 50 | 04/11/13 11:59 |
| 2-Chloroethylvinyl ether | ND | | 250 | 125 | µg/L | 50 | 04/11/13 11:59 |
| 2-Hexanone | ND | | 250 | 50.0 | µg/L | 50 | 04/11/13 11:59 |
| 4-Chlorotoluene | ND | | 25.0 | 5.00 | µg/L | 50 | 04/11/13 11:59 |
| 4-Methyl-2-pentanone | ND | | 250 | 50.0 | µg/L | 50 | 04/11/13 11:59 |
| Acetone | ND | | 500 | 50.0 | µg/L | 50 | 04/11/13 11:59 |
| Benzene | ND | | 25.0 | 5.00 | µg/L | 50 | 04/11/13 11:59 |
| Bromobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 04/11/13 11:59 |
| Bromochloromethane | ND | | 25.0 | 5.00 | µg/L | 50 | 04/11/13 11:59 |
| Bromodichloromethane | ND | | 25.0 | 5.00 | µg/L | 50 | 04/11/13 11:59 |
| Bromoform | ND | | 50.0 | 16.5 | µg/L | 50 | 04/11/13 11:59 |
| Bromomethane | ND | | 50.0 | 16.5 | µg/L | 50 | 04/11/13 11:59 |
| Carbon disulfide | ND | | 25.0 | 5.50 | µg/L | 50 | 04/11/13 11:59 |
| Carbon tetrachloride | ND | | 25.0 | 5.00 | µg/L | 50 | 04/11/13 11:59 |
| Chlorobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 04/11/13 11:59 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1304104-002A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W2*** |
| **W Order:** | K1304104 | **Collection Date:** | 04/08/13 18:15 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 04/10/13 8:00 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R25517 |
| **Revision:** | 04/12/13 9:50 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K2307.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | 32.0 | J | 50.0 | 16.5 | µg/L | 50 | 04/11/13 11:59 |
| Chloroform | ND | | 25.0 | 5.00 | µg/L | 50 | 04/11/13 11:59 |
| Chloromethane | ND | | 50.0 | 16.5 | µg/L | 50 | 04/11/13 11:59 |
| cis-1,2-Dichloroethene | 783 | | 25.0 | 5.00 | µg/L | 50 | 04/11/13 11:59 |
| cis-1,3-Dichloropropene | ND | | 25.0 | 8.00 | µg/L | 50 | 04/11/13 11:59 |
| Cyclohexane | ND | | 25.0 | 5.00 | µg/L | 50 | 04/11/13 11:59 |
| Dibromochloromethane | ND | | 25.0 | 5.00 | µg/L | 50 | 04/11/13 11:59 |
| Dibromomethane | ND | | 25.0 | 8.00 | µg/L | 50 | 04/11/13 11:59 |
| Dichlorodifluoromethane | ND | | 50.0 | 5.00 | µg/L | 50 | 04/11/13 11:59 |
| Ethylbenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 04/11/13 11:59 |
| Hexachlorobutadiene | ND | | 50.0 | 5.00 | µg/L | 50 | 04/11/13 11:59 |
| Isopropylbenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 04/11/13 11:59 |
| Methyl tert-butyl ether | ND | | 50.0 | 8.00 | µg/L | 50 | 04/11/13 11:59 |
| Methylene chloride | 14.0 | J | 100 | 8.00 | µg/L | 50 | 04/11/13 11:59 |
| n-Propylbenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 04/11/13 11:59 |
| Naphthalene | ND | | 50.0 | 5.00 | µg/L | 50 | 04/11/13 11:59 |
| o-Xylene | 5.50 | J | 25.0 | 5.00 | µg/L | 50 | 04/11/13 11:59 |
| p-Isopropyltoluene | ND | | 25.0 | 8.00 | µg/L | 50 | 04/11/13 11:59 |
| sec-Butylbenzene | ND | | 25.0 | 8.00 | µg/L | 50 | 04/11/13 11:59 |
| Styrene | ND | | 25.0 | 5.00 | µg/L | 50 | 04/11/13 11:59 |
| Tetrachloroethene | ND | | 25.0 | 5.00 | µg/L | 50 | 04/11/13 11:59 |
| Toluene | 9.50 | J | 25.0 | 5.00 | µg/L | 50 | 04/11/13 11:59 |
| trans-1,2-Dichloroethene | ND | | 25.0 | 5.00 | µg/L | 50 | 04/11/13 11:59 |
| trans-1,3-Dichloropropene | ND | | 25.0 | 8.00 | µg/L | 50 | 04/11/13 11:59 |
| Trichloroethene | 14.0 | J | 25.0 | 5.00 | µg/L | 50 | 04/11/13 11:59 |
| Trichlorofluoromethane | ND | | 50.0 | 5.00 | µg/L | 50 | 04/11/13 11:59 |
| Vinyl acetate | ND | | 100 | 50.0 | µg/L | 50 | 04/11/13 11:59 |
| Vinyl chloride | 167 | | 50.0 | 16.5 | µg/L | 50 | 04/11/13 11:59 |
| Xylenes (total) | ND | | 50.0 | 15.0 | µg/L | 50 | 04/11/13 11:59 |
| Surr: 1,2-Dichloroethane-d4 | 107 | | 75-130 | 8.00 | %REC | 50 | 04/11/13 11:59 |
| Surr: Toluene-d8 | 94 | | 75-125 | 5.00 | %REC | 50 | 04/11/13 11:59 |
| Surr: 4-Bromofluorobenzene | 115 | | 75-125 | 5.00 | %REC | 50 | 04/11/13 11:59 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 04/12/13 9:51 637400 **Project Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1304104-003A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W3* |
| **W Order:** | K1304104 | **Collection Date:** | 04/08/13 18:00 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 04/10/13 8:00 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R25517 |
| **Revision:** | 04/12/13 9:50 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K2308.D |
| **Col Type:** | TOTAL 925.2 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| VOLATILE ORGANIC COMPOUNDS BY GC/MS | | | | | SW8260B | | |
| (m+p)-Xylene | 3.20 | J | 10.0 | 2.00 | µg/L | 10 | 04/11/13 12:30 |
| 1,1,1,2-Tetrachloroethane | ND | | 5.00 | 1.60 | µg/L | 10 | 04/11/13 12:30 |
| 1,1,1-Trichloroethane | 160 | | 5.00 | 1.00 | µg/L | 10 | 04/11/13 12:30 |
| 1,1,2,2-Tetrachloroethane | ND | | 5.00 | 1.00 | µg/L | 10 | 04/11/13 12:30 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 7.80 | | 5.00 | 1.00 | µg/L | 10 | 04/11/13 12:30 |
| 1,1,2-Trichloroethane | ND | | 5.00 | 1.60 | µg/L | 10 | 04/11/13 12:30 |
| 1,1-Dichloroethane | 312 | | 5.00 | 1.00 | µg/L | 10 | 04/11/13 12:30 |
| 1,1-Dichloroethene | 9.70 | | 5.00 | 1.60 | µg/L | 10 | 04/11/13 12:30 |
| 1,2,3-Trichloropropane | ND | | 20.0 | 3.30 | µg/L | 10 | 04/11/13 12:30 |
| 1,2,4-Trichlorobenzene | ND | | 10.0 | 1.00 | µg/L | 10 | 04/11/13 12:30 |
| 1,2,4-Trimethylbenzene | 29.0 | | 5.00 | 1.00 | µg/L | 10 | 04/11/13 12:30 |
| 1,2-Dibromo-3-chloropropane | ND | | 50.0 | 10.0 | µg/L | 10 | 04/11/13 12:30 |
| 1,2-Dibromoethane | ND | | 5.00 | 1.60 | µg/L | 10 | 04/11/13 12:30 |
| 1,2-Dichlorobenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 04/11/13 12:30 |
| 1,2-Dichloroethane | 8.10 | | 5.00 | 1.60 | µg/L | 10 | 04/11/13 12:30 |
| 1,2-Dichloropropane | ND | | 5.00 | 1.60 | µg/L | 10 | 04/11/13 12:30 |
| 1,3,5-Trimethylbenzene | 2.70 | J | 5.00 | 1.00 | µg/L | 10 | 04/11/13 12:30 |
| 1,3-Dichlorobenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 04/11/13 12:30 |
| 1,4-Dichlorobenzene | ND | | 5.00 | 1.60 | µg/L | 10 | 04/11/13 12:30 |
| 2-Butanone | ND | | 100 | 10.0 | µg/L | 10 | 04/11/13 12:30 |
| 2-Chloroethylvinyl ether | ND | | 50.0 | 25.0 | µg/L | 10 | 04/11/13 12:30 |
| 2-Hexanone | ND | | 50.0 | 10.0 | µg/L | 10 | 04/11/13 12:30 |
| 4-Chlorotoluene | ND | | 5.00 | 1.00 | µg/L | 10 | 04/11/13 12:30 |
| 4-Methyl-2-pentanone | ND | | 50.0 | 10.0 | µg/L | 10 | 04/11/13 12:30 |
| Acetone | ND | | 100 | 10.0 | µg/L | 10 | 04/11/13 12:30 |
| Benzene | ND | | 5.00 | 1.00 | µg/L | 10 | 04/11/13 12:30 |
| Bromobenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 04/11/13 12:30 |
| Bromochloromethane | ND | | 5.00 | 1.00 | µg/L | 10 | 04/11/13 12:30 |
| Bromodichloromethane | ND | | 5.00 | 1.00 | µg/L | 10 | 04/11/13 12:30 |
| Bromoform | ND | | 10.0 | 3.30 | µg/L | 10 | 04/11/13 12:30 |
| Bromomethane | ND | | 10.0 | 3.30 | µg/L | 10 | 04/11/13 12:30 |
| Carbon disulfide | ND | | 5.00 | 1.10 | µg/L | 10 | 04/11/13 12:30 |
| Carbon tetrachloride | ND | | 5.00 | 1.00 | µg/L | 10 | 04/11/13 12:30 |
| Chlorobenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 04/11/13 12:30 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 04/12/13 9:51 637401 **Project Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1304104-003A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W3*** |
| **W Order:** | K1304104 | **Collection Date:** | 04/08/13 18:00 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 04/10/13 8:00 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R25517 |
| **Revision:** | 04/12/13 9:50 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K2308.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| VOLATILE ORGANIC COMPOUNDS BY GC/MS | | | | | SW8260B | | |
| Chloroethane | 21.2 | | 10.0 | 3.30 | µg/L | 10 | 04/11/13 12:30 |
| Chloroform | ND | | 5.00 | 1.00 | µg/L | 10 | 04/11/13 12:30 |
| Chloromethane | ND | | 10.0 | 3.30 | µg/L | 10 | 04/11/13 12:30 |
| cis-1,2-Dichloroethene | 236 | | 5.00 | 1.00 | µg/L | 10 | 04/11/13 12:30 |
| cis-1,3-Dichloropropene | ND | | 5.00 | 1.60 | µg/L | 10 | 04/11/13 12:30 |
| Cyclohexane | ND | | 5.00 | 1.00 | µg/L | 10 | 04/11/13 12:30 |
| Dibromochloromethane | ND | | 5.00 | 1.00 | µg/L | 10 | 04/11/13 12:30 |
| Dibromomethane | ND | | 5.00 | 1.60 | µg/L | 10 | 04/11/13 12:30 |
| Dichlorodifluoromethane | ND | | 10.0 | 1.00 | µg/L | 10 | 04/11/13 12:30 |
| Ethylbenzene | 2.00 | J | 5.00 | 1.00 | µg/L | 10 | 04/11/13 12:30 |
| Hexachlorobutadiene | ND | | 10.0 | 1.00 | µg/L | 10 | 04/11/13 12:30 |
| Isopropylbenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 04/11/13 12:30 |
| Methyl tert-butyl ether | ND | | 10.0 | 1.60 | µg/L | 10 | 04/11/13 12:30 |
| Methylene chloride | 2.90 | J | 20.0 | 1.60 | µg/L | 10 | 04/11/13 12:30 |
| n-Propylbenzene | 2.10 | J | 5.00 | 1.00 | µg/L | 10 | 04/11/13 12:30 |
| Naphthalene | ND | | 10.0 | 1.00 | µg/L | 10 | 04/11/13 12:30 |
| o-Xylene | 4.40 | J | 5.00 | 1.00 | µg/L | 10 | 04/11/13 12:30 |
| p-Isopropyltoluene | ND | | 5.00 | 1.60 | µg/L | 10 | 04/11/13 12:30 |
| sec-Butylbenzene | 1.60 | J | 5.00 | 1.60 | µg/L | 10 | 04/11/13 12:30 |
| Styrene | ND | | 5.00 | 1.00 | µg/L | 10 | 04/11/13 12:30 |
| Tetrachloroethene | 3.90 | J | 5.00 | 1.00 | µg/L | 10 | 04/11/13 12:30 |
| Toluene | 3.80 | J | 5.00 | 1.00 | µg/L | 10 | 04/11/13 12:30 |
| trans-1,2-Dichloroethene | 1.40 | J | 5.00 | 1.00 | µg/L | 10 | 04/11/13 12:30 |
| trans-1,3-Dichloropropene | ND | | 5.00 | 1.60 | µg/L | 10 | 04/11/13 12:30 |
| Trichloroethene | 10.4 | | 5.00 | 1.00 | µg/L | 10 | 04/11/13 12:30 |
| Trichlorofluoromethane | ND | | 10.0 | 1.00 | µg/L | 10 | 04/11/13 12:30 |
| Vinyl acetate | ND | | 20.0 | 10.0 | µg/L | 10 | 04/11/13 12:30 |
| Vinyl chloride | 103 | | 10.0 | 3.30 | µg/L | 10 | 04/11/13 12:30 |
| Xylenes (total) | 7.60 | J | 10.0 | 3.00 | µg/L | 10 | 04/11/13 12:30 |
| Surr: 1,2-Dichloroethane-d4 | 111 | | 75-130 | 1.60 | %REC | 10 | 04/11/13 12:30 |
| Surr: Toluene-d8 | 94 | | 75-125 | 1.00 | %REC | 10 | 04/11/13 12:30 |
| Surr: 4-Bromofluorobenzene | 115 | | 75-125 | 1.00 | %REC | 10 | 04/11/13 12:30 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 04/12/13 9:51 637401 **Project Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1304104-004A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W4* |
| **W Order:** | K1304104 | **Collection Date:** | 04/05/13 17:20 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 04/10/13 8:00 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R25516 |
| **Revision:** | 04/12/13 9:44 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K2277.D |
| **Col Type:** | TOTAL 26.61 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | 0.46 | J | 1.00 | 0.20 | µg/L | 1 | 04/10/13 18:45 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 18:45 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 18:45 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 18:45 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 18:45 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 18:45 |
| 1,1-Dichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 18:45 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 18:45 |
| 1,2,3-Trichloropropane | ND | | 2.00 | 0.33 | µg/L | 1 | 04/10/13 18:45 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 0.10 | µg/L | 1 | 04/10/13 18:45 |
| 1,2,4-Trimethylbenzene | 1.07 | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 18:45 |
| 1,2-Dibromo-3-chloropropane | ND | | 5.00 | 1.00 | µg/L | 1 | 04/10/13 18:45 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 18:45 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 18:45 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 18:45 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 18:45 |
| 1,3,5-Trimethylbenzene | 0.19 | J | 0.50 | 0.10 | µg/L | 1 | 04/10/13 18:45 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 18:45 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 18:45 |
| 2-Butanone | ND | | 10.0 | 1.00 | µg/L | 1 | 04/10/13 18:45 |
| 2-Chloroethylvinyl ether | ND | | 5.00 | 2.50 | µg/L | 1 | 04/10/13 18:45 |
| 2-Hexanone | ND | | 5.00 | 1.00 | µg/L | 1 | 04/10/13 18:45 |
| 4-Chlorotoluene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 18:45 |
| 4-Methyl-2-pentanone | ND | | 5.00 | 1.00 | µg/L | 1 | 04/10/13 18:45 |
| Acetone | 23.1 | | 10.0 | 1.00 | µg/L | 1 | 04/10/13 18:45 |
| Benzene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 18:45 |
| Bromobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 18:45 |
| Bromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 18:45 |
| Bromodichloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 18:45 |
| Bromoform | ND | | 1.00 | 0.33 | µg/L | 1 | 04/10/13 18:45 |
| Bromomethane | ND | | 1.00 | 0.33 | µg/L | 1 | 04/10/13 18:45 |
| Carbon disulfide | ND | | 0.50 | 0.11 | µg/L | 1 | 04/10/13 18:45 |
| Carbon tetrachloride | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 18:45 |
| Chlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 18:45 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 04/12/13 9:51 637388 **Project Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | | | |
|---|---|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | | | **Lab ID:** | **K1304104-004A** |
| **Project:** | 189-02 | | | **Client Sample ID:** | ***189 - W4*** |
| **W Order:** | K1304104 | | | **Collection Date:** | 04/05/13 17:20 |
| **Matrix:** | GROUNDWATER | | | **Date Received:** | 04/10/13 8:00 |
| **Inst. ID:** | MSK_75 | **Sample Size** | 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | | **BatchNo:** | R25516 |
| **Revision:** | 04/12/13 9:44 | **TestCode:** | 8260W_CAL | **FileID:** | 1-SAMP-K2277.D |
| **Col Type:** | | | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | ND | | 1.00 | 0.33 | µg/L | 1 | 04/10/13 18:45 |
| Chloroform | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 18:45 |
| Chloromethane | ND | | 1.00 | 0.33 | µg/L | 1 | 04/10/13 18:45 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 18:45 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 18:45 |
| Cyclohexane | 1.46 | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 18:45 |
| Dibromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 18:45 |
| Dibromomethane | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 18:45 |
| Dichlorodifluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 04/10/13 18:45 |
| Ethylbenzene | 0.19 | J | 0.50 | 0.10 | µg/L | 1 | 04/10/13 18:45 |
| Hexachlorobutadiene | ND | | 1.00 | 0.10 | µg/L | 1 | 04/10/13 18:45 |
| Isopropylbenzene | 0.14 | J | 0.50 | 0.10 | µg/L | 1 | 04/10/13 18:45 |
| Methyl tert-butyl ether | ND | | 1.00 | 0.16 | µg/L | 1 | 04/10/13 18:45 |
| Methylene chloride | ND | | 2.00 | 0.16 | µg/L | 1 | 04/10/13 18:45 |
| n-Propylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 18:45 |
| Naphthalene | ND | | 1.00 | 0.10 | µg/L | 1 | 04/10/13 18:45 |
| o-Xylene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 18:45 |
| p-Isopropyltoluene | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 18:45 |
| sec-Butylbenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 18:45 |
| Styrene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 18:45 |
| Tetrachloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 18:45 |
| Toluene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 18:45 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 18:45 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 18:45 |
| Trichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 18:45 |
| Trichlorofluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 04/10/13 18:45 |
| Vinyl acetate | ND | | 2.00 | 1.00 | µg/L | 1 | 04/10/13 18:45 |
| Vinyl chloride | ND | | 1.00 | 0.33 | µg/L | 1 | 04/10/13 18:45 |
| Xylenes (total) | 0.46 | J | 1.00 | 0.30 | µg/L | 1 | 04/10/13 18:45 |
| Surr: 1,2-Dichloroethane-d4 | 106 | | 75-130 | 0.16 | %REC | 1 | 04/10/13 18:45 |
| Surr: Toluene-d8 | 94 | | 75-125 | 0.10 | %REC | 1 | 04/10/13 18:45 |
| Surr: 4-Bromofluorobenzene | 114 | | 75-125 | 0.10 | %REC | 1 | 04/10/13 18:45 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 04/12/13 9:51 637388 **Project Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1304104-005A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W5* |
| **W Order:** | K1304104 | **Collection Date:** | 04/05/13 15:20 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 04/10/13 8:00 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R25516 |
| **Revision:** | 04/12/13 9:44 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K2270.D |
| **Col Type:** | TOTAL 2154 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 50.0 | 10.0 | µg/L | 50 | 04/10/13 15:08 |
| 1,1,1,2-Tetrachloroethane | ND | | 25.0 | 8.00 | µg/L | 50 | 04/10/13 15:08 |
| 1,1,1-Trichloroethane | ND | | 25.0 | 5.00 | µg/L | 50 | 04/10/13 15:08 |
| 1,1,2,2-Tetrachloroethane | ND | | 25.0 | 5.00 | µg/L | 50 | 04/10/13 15:08 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 25.0 | 5.00 | µg/L | 50 | 04/10/13 15:08 |
| 1,1,2-Trichloroethane | ND | | 25.0 | 8.00 | µg/L | 50 | 04/10/13 15:08 |
| 1,1-Dichloroethane | 1170 | | 25.0 | 5.00 | µg/L | 50 | 04/10/13 15:08 |
| 1,1-Dichloroethene | 22.0 | J | 25.0 | 8.00 | µg/L | 50 | 04/10/13 15:08 |
| 1,2,3-Trichloropropane | ND | | 100 | 16.5 | µg/L | 50 | 04/10/13 15:08 |
| 1,2,4-Trichlorobenzene | ND | | 50.0 | 5.00 | µg/L | 50 | 04/10/13 15:08 |
| 1,2,4-Trimethylbenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 04/10/13 15:08 |
| 1,2-Dibromo-3-chloropropane | ND | | 250 | 50.0 | µg/L | 50 | 04/10/13 15:08 |
| 1,2-Dibromoethane | ND | | 25.0 | 8.00 | µg/L | 50 | 04/10/13 15:08 |
| 1,2-Dichlorobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 04/10/13 15:08 |
| 1,2-Dichloroethane | 13.0 | J | 25.0 | 8.00 | µg/L | 50 | 04/10/13 15:08 |
| 1,2-Dichloropropane | ND | | 25.0 | 8.00 | µg/L | 50 | 04/10/13 15:08 |
| 1,3,5-Trimethylbenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 04/10/13 15:08 |
| 1,3-Dichlorobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 04/10/13 15:08 |
| 1,4-Dichlorobenzene | ND | | 25.0 | 8.00 | µg/L | 50 | 04/10/13 15:08 |
| 2-Butanone | ND | | 500 | 50.0 | µg/L | 50 | 04/10/13 15:08 |
| 2-Chloroethylvinyl ether | ND | | 250 | 125 | µg/L | 50 | 04/10/13 15:08 |
| 2-Hexanone | ND | | 250 | 50.0 | µg/L | 50 | 04/10/13 15:08 |
| 4-Chlorotoluene | ND | | 25.0 | 5.00 | µg/L | 50 | 04/10/13 15:08 |
| 4-Methyl-2-pentanone | ND | | 250 | 50.0 | µg/L | 50 | 04/10/13 15:08 |
| Acetone | ND | | 500 | 50.0 | µg/L | 50 | 04/10/13 15:08 |
| Benzene | ND | | 25.0 | 5.00 | µg/L | 50 | 04/10/13 15:08 |
| Bromobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 04/10/13 15:08 |
| Bromochloromethane | ND | | 25.0 | 5.00 | µg/L | 50 | 04/10/13 15:08 |
| Bromodichloromethane | ND | | 25.0 | 5.00 | µg/L | 50 | 04/10/13 15:08 |
| Bromoform | ND | | 50.0 | 16.5 | µg/L | 50 | 04/10/13 15:08 |
| Bromomethane | ND | | 50.0 | 16.5 | µg/L | 50 | 04/10/13 15:08 |
| Carbon disulfide | ND | | 25.0 | 5.50 | µg/L | 50 | 04/10/13 15:08 |
| Carbon tetrachloride | ND | | 25.0 | 5.00 | µg/L | 50 | 04/10/13 15:08 |
| Chlorobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 04/10/13 15:08 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

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5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1304104-005A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W5*** |
| **W Order:** | K1304104 | **Collection Date:** | 04/05/13 15:20 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 04/10/13 8:00 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R25516 |
| **Revision:** | 04/12/13 9:44 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K2270.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | 24.0 | J | 50.0 | 16.5 | µg/L | 50 | 04/10/13 15:08 |
| Chloroform | ND | | 25.0 | 5.00 | µg/L | 50 | 04/10/13 15:08 |
| Chloromethane | ND | | 50.0 | 16.5 | µg/L | 50 | 04/10/13 15:08 |
| cis-1,2-Dichloroethene | 281 | | 25.0 | 5.00 | µg/L | 50 | 04/10/13 15:08 |
| cis-1,3-Dichloropropene | ND | | 25.0 | 8.00 | µg/L | 50 | 04/10/13 15:08 |
| Cyclohexane | 7.50 | J | 25.0 | 5.00 | µg/L | 50 | 04/10/13 15:08 |
| Dibromochloromethane | ND | | 25.0 | 5.00 | µg/L | 50 | 04/10/13 15:08 |
| Dibromomethane | ND | | 25.0 | 8.00 | µg/L | 50 | 04/10/13 15:08 |
| Dichlorodifluoromethane | ND | | 50.0 | 5.00 | µg/L | 50 | 04/10/13 15:08 |
| Ethylbenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 04/10/13 15:08 |
| Hexachlorobutadiene | ND | | 50.0 | 5.00 | µg/L | 50 | 04/10/13 15:08 |
| Isopropylbenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 04/10/13 15:08 |
| Methyl tert-butyl ether | ND | | 50.0 | 8.00 | µg/L | 50 | 04/10/13 15:08 |
| Methylene chloride | 12.5 | J | 100 | 8.00 | µg/L | 50 | 04/10/13 15:08 |
| n-Propylbenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 04/10/13 15:08 |
| Naphthalene | ND | | 50.0 | 5.00 | µg/L | 50 | 04/10/13 15:08 |
| o-Xylene | ND | | 25.0 | 5.00 | µg/L | 50 | 04/10/13 15:08 |
| p-Isopropyltoluene | ND | | 25.0 | 8.00 | µg/L | 50 | 04/10/13 15:08 |
| sec-Butylbenzene | ND | | 25.0 | 8.00 | µg/L | 50 | 04/10/13 15:08 |
| Styrene | ND | | 25.0 | 5.00 | µg/L | 50 | 04/10/13 15:08 |
| Tetrachloroethene | ND | | 25.0 | 5.00 | µg/L | 50 | 04/10/13 15:08 |
| Toluene | ND | | 25.0 | 5.00 | µg/L | 50 | 04/10/13 15:08 |
| trans-1,2-Dichloroethene | 6.00 | J | 25.0 | 5.00 | µg/L | 50 | 04/10/13 15:08 |
| trans-1,3-Dichloropropene | ND | | 25.0 | 8.00 | µg/L | 50 | 04/10/13 15:08 |
| Trichloroethene | 28.0 | | 25.0 | 5.00 | µg/L | 50 | 04/10/13 15:08 |
| Trichlorofluoromethane | ND | | 50.0 | 5.00 | µg/L | 50 | 04/10/13 15:08 |
| Vinyl acetate | ND | | 100 | 50.0 | µg/L | 50 | 04/10/13 15:08 |
| Vinyl chloride | 590 | | 50.0 | 16.5 | µg/L | 50 | 04/10/13 15:08 |
| Xylenes (total) | ND | | 50.0 | 15.0 | µg/L | 50 | 04/10/13 15:08 |
| Surr: 1,2-Dichloroethane-d4 | 103 | | 75-130 | 8.00 | %REC | 50 | 04/10/13 15:08 |
| Surr: Toluene-d8 | 95 | | 75-125 | 5.00 | %REC | 50 | 04/10/13 15:08 |
| Surr: 4-Bromofluorobenzene | 115 | | 75-125 | 5.00 | %REC | 50 | 04/10/13 15:08 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 04/12/13 9:51 637384 **Project Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1304104-006A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W6* |
| **W Order:** | K1304104 | **Collection Date:** | 04/05/13 17:50 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 04/10/13 8:00 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R25516 |
| **Revision:** | 04/12/13 10:11 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K2278.D |
| **Col Type:** | TOTAL 192.65 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 1.00 | 0.20 | µg/L | 1 | 04/10/13 19:16 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 19:16 |
| 1,1,1-Trichloroethane | 79.7 | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 19:16 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 19:16 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 16.0 | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 19:16 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 19:16 |
| 1,1-Dichloroethane | 77.9 | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 19:16 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 19:16 |
| 1,2,3-Trichloropropane | ND | | 2.00 | 0.33 | µg/L | 1 | 04/10/13 19:16 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 0.10 | µg/L | 1 | 04/10/13 19:16 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 19:16 |
| 1,2-Dibromo-3-chloropropane | ND | | 5.00 | 1.00 | µg/L | 1 | 04/10/13 19:16 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 19:16 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 19:16 |
| 1,2-Dichloroethane | 0.40 | J | 0.50 | 0.16 | µg/L | 1 | 04/10/13 19:16 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 19:16 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 19:16 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 19:16 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 19:16 |
| 2-Butanone | ND | | 10.0 | 1.00 | µg/L | 1 | 04/10/13 19:16 |
| 2-Chloroethylvinyl ether | ND | | 5.00 | 2.50 | µg/L | 1 | 04/10/13 19:16 |
| 2-Hexanone | ND | | 5.00 | 1.00 | µg/L | 1 | 04/10/13 19:16 |
| 4-Chlorotoluene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 19:16 |
| 4-Methyl-2-pentanone | ND | | 5.00 | 1.00 | µg/L | 1 | 04/10/13 19:16 |
| Acetone | 1.59 | J | 10.0 | 1.00 | µg/L | 1 | 04/10/13 19:16 |
| Benzene | 0.46 | J | 0.50 | 0.10 | µg/L | 1 | 04/10/13 19:16 |
| Bromobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 19:16 |
| Bromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 19:16 |
| Bromodichloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 19:16 |
| Bromoform | ND | | 1.00 | 0.33 | µg/L | 1 | 04/10/13 19:16 |
| Bromomethane | ND | | 1.00 | 0.33 | µg/L | 1 | 04/10/13 19:16 |
| Carbon disulfide | ND | | 0.50 | 0.11 | µg/L | 1 | 04/10/13 19:16 |
| Carbon tetrachloride | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 19:16 |
| Chlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 19:16 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 04/12/13 10:12 637389 **Project Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | | | |
|---|---|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | | | **Lab ID:** | **K1304104-006A** |
| **Project:** | 189-02 | | | **Client Sample ID:** | ***189 - W6*** |
| **W Order:** | K1304104 | | | **Collection Date:** | 04/05/13 17:50 |
| **Matrix:** | GROUNDWATER | | | **Date Received:** | 04/10/13 8:00 |
| **Inst. ID:** | MSK_75 | **Sample Size** | 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | | **BatchNo:** | R25516 |
| **Revision:** | 04/12/13 10:11 | **TestCode:** | 8260W_CAL | **FileID:** | 1-SAMP-K2278.D |
| **Col Type:** | | | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | ND | | 1.00 | 0.33 | µg/L | 1 | 04/10/13 19:16 |
| Chloroform | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 19:16 |
| Chloromethane | ND | | 1.00 | 0.33 | µg/L | 1 | 04/10/13 19:16 |
| cis-1,2-Dichloroethene | 14.1 | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 19:16 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 19:16 |
| Cyclohexane | 0.15 J | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 19:16 |
| Dibromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 19:16 |
| Dibromomethane | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 19:16 |
| Dichlorodifluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 04/10/13 19:16 |
| Ethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 19:16 |
| Hexachlorobutadiene | ND | | 1.00 | 0.10 | µg/L | 1 | 04/10/13 19:16 |
| Isopropylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 19:16 |
| Methyl tert-butyl ether | ND | | 1.00 | 0.16 | µg/L | 1 | 04/10/13 19:16 |
| Methylene chloride | ND | | 2.00 | 0.16 | µg/L | 1 | 04/10/13 19:16 |
| n-Propylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 19:16 |
| Naphthalene | ND | | 1.00 | 0.10 | µg/L | 1 | 04/10/13 19:16 |
| o-Xylene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 19:16 |
| p-Isopropyltoluene | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 19:16 |
| sec-Butylbenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 19:16 |
| Styrene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 19:16 |
| Tetrachloroethene | 1.28 | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 19:16 |
| Toluene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 19:16 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 19:16 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 19:16 |
| Trichloroethene | 0.46 J | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 19:16 |
| Trichlorofluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 04/10/13 19:16 |
| Vinyl acetate | ND | | 2.00 | 1.00 | µg/L | 1 | 04/10/13 19:16 |
| Vinyl chloride | 0.61 J | | 1.00 | 0.33 | µg/L | 1 | 04/10/13 19:16 |
| Xylenes (total) | ND | | 1.00 | 0.30 | µg/L | 1 | 04/10/13 19:16 |
| Surr: 1,2-Dichloroethane-d4 | 109 | | 75-130 | 0.16 | %REC | 1 | 04/10/13 19:16 |
| Surr: Toluene-d8 | 94 | | 75-125 | 0.10 | %REC | 1 | 04/10/13 19:16 |
| Surr: 4-Bromofluorobenzene | 115 | | 75-125 | 0.10 | %REC | 1 | 04/10/13 19:16 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 04/12/13 10:12 637389 **Project Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1304104-007A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W7* |
| **W Order:** | K1304104 | **Collection Date:** | 04/05/13 13:30 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 04/10/13 8:00 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R25516 |
| **Revision:** | 04/12/13 10:11 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K2271.D |
| **Col Type:** | TOTAL 1281 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 20.0 | 4.00 | µg/L | 20 | 04/10/13 15:39 |
| 1,1,1,2-Tetrachloroethane | ND | | 10.0 | 3.20 | µg/L | 20 | 04/10/13 15:39 |
| 1,1,1-Trichloroethane | ND | | 10.0 | 2.00 | µg/L | 20 | 04/10/13 15:39 |
| 1,1,2,2-Tetrachloroethane | ND | | 10.0 | 2.00 | µg/L | 20 | 04/10/13 15:39 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 10.0 | 2.00 | µg/L | 20 | 04/10/13 15:39 |
| 1,1,2-Trichloroethane | ND | | 10.0 | 3.20 | µg/L | 20 | 04/10/13 15:39 |
| 1,1-Dichloroethane | 1100 | | 10.0 | 2.00 | µg/L | 20 | 04/10/13 15:39 |
| 1,1-Dichloroethene | 5.20 | J | 10.0 | 3.20 | µg/L | 20 | 04/10/13 15:39 |
| 1,2,3-Trichloropropane | ND | | 40.0 | 6.60 | µg/L | 20 | 04/10/13 15:39 |
| 1,2,4-Trichlorobenzene | ND | | 20.0 | 2.00 | µg/L | 20 | 04/10/13 15:39 |
| 1,2,4-Trimethylbenzene | ND | | 10.0 | 2.00 | µg/L | 20 | 04/10/13 15:39 |
| 1,2-Dibromo-3-chloropropane | ND | | 100 | 20.0 | µg/L | 20 | 04/10/13 15:39 |
| 1,2-Dibromoethane | ND | | 10.0 | 3.20 | µg/L | 20 | 04/10/13 15:39 |
| 1,2-Dichlorobenzene | ND | | 10.0 | 2.00 | µg/L | 20 | 04/10/13 15:39 |
| 1,2-Dichloroethane | 54.8 | | 10.0 | 3.20 | µg/L | 20 | 04/10/13 15:39 |
| 1,2-Dichloropropane | ND | | 10.0 | 3.20 | µg/L | 20 | 04/10/13 15:39 |
| 1,3,5-Trimethylbenzene | ND | | 10.0 | 2.00 | µg/L | 20 | 04/10/13 15:39 |
| 1,3-Dichlorobenzene | ND | | 10.0 | 2.00 | µg/L | 20 | 04/10/13 15:39 |
| 1,4-Dichlorobenzene | ND | | 10.0 | 3.20 | µg/L | 20 | 04/10/13 15:39 |
| 2-Butanone | ND | | 200 | 20.0 | µg/L | 20 | 04/10/13 15:39 |
| 2-Chloroethylvinyl ether | ND | | 100 | 50.0 | µg/L | 20 | 04/10/13 15:39 |
| 2-Hexanone | ND | | 100 | 20.0 | µg/L | 20 | 04/10/13 15:39 |
| 4-Chlorotoluene | ND | | 10.0 | 2.00 | µg/L | 20 | 04/10/13 15:39 |
| 4-Methyl-2-pentanone | ND | | 100 | 20.0 | µg/L | 20 | 04/10/13 15:39 |
| Acetone | ND | | 200 | 20.0 | µg/L | 20 | 04/10/13 15:39 |
| Benzene | ND | | 10.0 | 2.00 | µg/L | 20 | 04/10/13 15:39 |
| Bromobenzene | ND | | 10.0 | 2.00 | µg/L | 20 | 04/10/13 15:39 |
| Bromochloromethane | ND | | 10.0 | 2.00 | µg/L | 20 | 04/10/13 15:39 |
| Bromodichloromethane | ND | | 10.0 | 2.00 | µg/L | 20 | 04/10/13 15:39 |
| Bromoform | ND | | 20.0 | 6.60 | µg/L | 20 | 04/10/13 15:39 |
| Bromomethane | ND | | 20.0 | 6.60 | µg/L | 20 | 04/10/13 15:39 |
| Carbon disulfide | ND | | 10.0 | 2.20 | µg/L | 20 | 04/10/13 15:39 |
| Carbon tetrachloride | ND | | 10.0 | 2.00 | µg/L | 20 | 04/10/13 15:39 |
| Chlorobenzene | ND | | 10.0 | 2.00 | µg/L | 20 | 04/10/13 15:39 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1304104-007A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W7*** |
| **W Order:** | K1304104 | **Collection Date:** | 04/05/13 13:30 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 04/10/13 8:00 |
| **Inst. ID:** | MSK_75 **Sample Size** 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS **%Moisture:** | **BatchNo:** | R25516 |
| **Revision:** | 04/12/13 10:11 **TestCode:** 8260W_CAL | **FileID:** | 1-SAMP-K2271.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| VOLATILE ORGANIC COMPOUNDS BY GC/MS | | | | | SW8260B | | |
| Chloroethane | 8.60 | J | 20.0 | 6.60 | µg/L | 20 | 04/10/13 15:39 |
| Chloroform | ND | | 10.0 | 2.00 | µg/L | 20 | 04/10/13 15:39 |
| Chloromethane | ND | | 20.0 | 6.60 | µg/L | 20 | 04/10/13 15:39 |
| cis-1,2-Dichloroethene | 27.4 | | 10.0 | 2.00 | µg/L | 20 | 04/10/13 15:39 |
| cis-1,3-Dichloropropene | ND | | 10.0 | 3.20 | µg/L | 20 | 04/10/13 15:39 |
| Cyclohexane | ND | | 10.0 | 2.00 | µg/L | 20 | 04/10/13 15:39 |
| Dibromochloromethane | ND | | 10.0 | 2.00 | µg/L | 20 | 04/10/13 15:39 |
| Dibromomethane | ND | | 10.0 | 3.20 | µg/L | 20 | 04/10/13 15:39 |
| Dichlorodifluoromethane | ND | | 20.0 | 2.00 | µg/L | 20 | 04/10/13 15:39 |
| Ethylbenzene | ND | | 10.0 | 2.00 | µg/L | 20 | 04/10/13 15:39 |
| Hexachlorobutadiene | ND | | 20.0 | 2.00 | µg/L | 20 | 04/10/13 15:39 |
| Isopropylbenzene | ND | | 10.0 | 2.00 | µg/L | 20 | 04/10/13 15:39 |
| Methyl tert-butyl ether | ND | | 20.0 | 3.20 | µg/L | 20 | 04/10/13 15:39 |
| Methylene chloride | 4.60 | J | 40.0 | 3.20 | µg/L | 20 | 04/10/13 15:39 |
| n-Propylbenzene | ND | | 10.0 | 2.00 | µg/L | 20 | 04/10/13 15:39 |
| Naphthalene | ND | | 20.0 | 2.00 | µg/L | 20 | 04/10/13 15:39 |
| o-Xylene | ND | | 10.0 | 2.00 | µg/L | 20 | 04/10/13 15:39 |
| p-Isopropyltoluene | ND | | 10.0 | 3.20 | µg/L | 20 | 04/10/13 15:39 |
| sec-Butylbenzene | ND | | 10.0 | 3.20 | µg/L | 20 | 04/10/13 15:39 |
| Styrene | ND | | 10.0 | 2.00 | µg/L | 20 | 04/10/13 15:39 |
| Tetrachloroethene | ND | | 10.0 | 2.00 | µg/L | 20 | 04/10/13 15:39 |
| Toluene | ND | | 10.0 | 2.00 | µg/L | 20 | 04/10/13 15:39 |
| trans-1,2-Dichloroethene | ND | | 10.0 | 2.00 | µg/L | 20 | 04/10/13 15:39 |
| trans-1,3-Dichloropropene | ND | | 10.0 | 3.20 | µg/L | 20 | 04/10/13 15:39 |
| Trichloroethene | 32.0 | | 10.0 | 2.00 | µg/L | 20 | 04/10/13 15:39 |
| Trichlorofluoromethane | ND | | 20.0 | 2.00 | µg/L | 20 | 04/10/13 15:39 |
| Vinyl acetate | ND | | 40.0 | 20.0 | µg/L | 20 | 04/10/13 15:39 |
| Vinyl chloride | 48.4 | | 20.0 | 6.60 | µg/L | 20 | 04/10/13 15:39 |
| Xylenes (total) | ND | | 20.0 | 6.00 | µg/L | 20 | 04/10/13 15:39 |
| Surr: 1,2-Dichloroethane-d4 | 103 | | 75-130 | 3.20 | %REC | 20 | 04/10/13 15:39 |
| Surr: Toluene-d8 | 95 | | 75-125 | 2.00 | %REC | 20 | 04/10/13 15:39 |
| Surr: 4-Bromofluorobenzene | 115 | | 75-125 | 2.00 | %REC | 20 | 04/10/13 15:39 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 04/12/13 10:12 637385 **Project Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

**CLIENT** Ken W. Kloeber Consulting Engineers
**Project:** 189-02
**W Order:** K1304104
**Matrix:** GROUNDWATER
**Inst. ID:** MSK_75 **Sample Size** 10 mL
**ColumnID:** Rtx-VMS **%Moisture:**
**Revision:** 04/12/13 9:50 **TestCode:** 8260W_CAL
**Col Type:** TOTAL 66.2

**Lab ID:** K1304104-008A
**Client Sample ID:** *189 - W8*
**Collection Date:** 04/05/13 13:50
**Date Received:** 04/10/13 8:00
**PrepDate:**
**BatchNo:** R25517
**FileID:** 1-SAMP-K2309.D

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 2.00 | 0.40 | µg/L | 2 | 04/11/13 13:01 |
| 1,1,1,2-Tetrachloroethane | ND | | 1.00 | 0.32 | µg/L | 2 | 04/11/13 13:01 |
| 1,1,1-Trichloroethane | 7.92 | | 1.00 | 0.20 | µg/L | 2 | 04/11/13 13:01 |
| 1,1,2,2-Tetrachloroethane | ND | | 1.00 | 0.20 | µg/L | 2 | 04/11/13 13:01 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 2.92 | | 1.00 | 0.20 | µg/L | 2 | 04/11/13 13:01 |
| 1,1,2-Trichloroethane | ND | | 1.00 | 0.32 | µg/L | 2 | 04/11/13 13:01 |
| 1,1-Dichloroethane | 32.9 | | 1.00 | 0.20 | µg/L | 2 | 04/11/13 13:01 |
| 1,1-Dichloroethene | 0.40 | J | 1.00 | 0.32 | µg/L | 2 | 04/11/13 13:01 |
| 1,2,3-Trichloropropane | ND | | 4.00 | 0.66 | µg/L | 2 | 04/11/13 13:01 |
| 1,2,4-Trichlorobenzene | ND | | 2.00 | 0.20 | µg/L | 2 | 04/11/13 13:01 |
| 1,2,4-Trimethylbenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 04/11/13 13:01 |
| 1,2-Dibromo-3-chloropropane | ND | | 10.0 | 2.00 | µg/L | 2 | 04/11/13 13:01 |
| 1,2-Dibromoethane | ND | | 1.00 | 0.32 | µg/L | 2 | 04/11/13 13:01 |
| 1,2-Dichlorobenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 04/11/13 13:01 |
| 1,2-Dichloroethane | ND | | 1.00 | 0.32 | µg/L | 2 | 04/11/13 13:01 |
| 1,2-Dichloropropane | ND | | 1.00 | 0.32 | µg/L | 2 | 04/11/13 13:01 |
| 1,3,5-Trimethylbenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 04/11/13 13:01 |
| 1,3-Dichlorobenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 04/11/13 13:01 |
| 1,4-Dichlorobenzene | ND | | 1.00 | 0.32 | µg/L | 2 | 04/11/13 13:01 |
| 2-Butanone | ND | | 20.0 | 2.00 | µg/L | 2 | 04/11/13 13:01 |
| 2-Chloroethylvinyl ether | ND | | 10.0 | 5.00 | µg/L | 2 | 04/11/13 13:01 |
| 2-Hexanone | ND | | 10.0 | 2.00 | µg/L | 2 | 04/11/13 13:01 |
| 4-Chlorotoluene | ND | | 1.00 | 0.20 | µg/L | 2 | 04/11/13 13:01 |
| 4-Methyl-2-pentanone | ND | | 10.0 | 2.00 | µg/L | 2 | 04/11/13 13:01 |
| Acetone | ND | | 20.0 | 2.00 | µg/L | 2 | 04/11/13 13:01 |
| Benzene | 0.58 | J | 1.00 | 0.20 | µg/L | 2 | 04/11/13 13:01 |
| Bromobenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 04/11/13 13:01 |
| Bromochloromethane | ND | | 1.00 | 0.20 | µg/L | 2 | 04/11/13 13:01 |
| Bromodichloromethane | ND | | 1.00 | 0.20 | µg/L | 2 | 04/11/13 13:01 |
| Bromoform | ND | | 2.00 | 0.66 | µg/L | 2 | 04/11/13 13:01 |
| Bromomethane | ND | | 2.00 | 0.66 | µg/L | 2 | 04/11/13 13:01 |
| Carbon disulfide | ND | | 1.00 | 0.22 | µg/L | 2 | 04/11/13 13:01 |
| Carbon tetrachloride | ND | | 1.00 | 0.20 | µg/L | 2 | 04/11/13 13:01 |
| Chlorobenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 04/11/13 13:01 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 04/12/13 9:51 637402 **Project Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1304104-008A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W8*** |
| **W Order:** | K1304104 | **Collection Date:** | 04/05/13 13:50 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 04/10/13 8:00 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R25517 |
| **Revision:** | 04/12/13 9:50 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K2309.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | ND | | 2.00 | 0.66 | µg/L | 2 | 04/11/13 13:01 |
| Chloroform | ND | | 1.00 | 0.20 | µg/L | 2 | 04/11/13 13:01 |
| Chloromethane | 0.82 | J | 2.00 | 0.66 | µg/L | 2 | 04/11/13 13:01 |
| cis-1,2-Dichloroethene | 15.8 | | 1.00 | 0.20 | µg/L | 2 | 04/11/13 13:01 |
| cis-1,3-Dichloropropene | ND | | 1.00 | 0.32 | µg/L | 2 | 04/11/13 13:01 |
| Cyclohexane | 1.74 | | 1.00 | 0.20 | µg/L | 2 | 04/11/13 13:01 |
| Dibromochloromethane | ND | | 1.00 | 0.20 | µg/L | 2 | 04/11/13 13:01 |
| Dibromomethane | ND | | 1.00 | 0.32 | µg/L | 2 | 04/11/13 13:01 |
| Dichlorodifluoromethane | ND | | 2.00 | 0.20 | µg/L | 2 | 04/11/13 13:01 |
| Ethylbenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 04/11/13 13:01 |
| Hexachlorobutadiene | ND | | 2.00 | 0.20 | µg/L | 2 | 04/11/13 13:01 |
| Isopropylbenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 04/11/13 13:01 |
| Methyl tert-butyl ether | ND | | 2.00 | 0.32 | µg/L | 2 | 04/11/13 13:01 |
| Methylene chloride | ND | | 4.00 | 0.32 | µg/L | 2 | 04/11/13 13:01 |
| n-Propylbenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 04/11/13 13:01 |
| Naphthalene | ND | | 2.00 | 0.20 | µg/L | 2 | 04/11/13 13:01 |
| o-Xylene | ND | | 1.00 | 0.20 | µg/L | 2 | 04/11/13 13:01 |
| p-Isopropyltoluene | ND | | 1.00 | 0.32 | µg/L | 2 | 04/11/13 13:01 |
| sec-Butylbenzene | ND | | 1.00 | 0.32 | µg/L | 2 | 04/11/13 13:01 |
| Styrene | ND | | 1.00 | 0.20 | µg/L | 2 | 04/11/13 13:01 |
| Tetrachloroethene | ND | | 1.00 | 0.20 | µg/L | 2 | 04/11/13 13:01 |
| Toluene | ND | | 1.00 | 0.20 | µg/L | 2 | 04/11/13 13:01 |
| trans-1,2-Dichloroethene | ND | | 1.00 | 0.20 | µg/L | 2 | 04/11/13 13:01 |
| trans-1,3-Dichloropropene | ND | | 1.00 | 0.32 | µg/L | 2 | 04/11/13 13:01 |
| Trichloroethene | 0.32 | J | 1.00 | 0.20 | µg/L | 2 | 04/11/13 13:01 |
| Trichlorofluoromethane | ND | | 2.00 | 0.20 | µg/L | 2 | 04/11/13 13:01 |
| Vinyl acetate | ND | | 4.00 | 2.00 | µg/L | 2 | 04/11/13 13:01 |
| Vinyl chloride | 2.80 | | 2.00 | 0.66 | µg/L | 2 | 04/11/13 13:01 |
| Xylenes (total) | ND | | 2.00 | 0.60 | µg/L | 2 | 04/11/13 13:01 |
| Surr: 1,2-Dichloroethane-d4 | 110 | | 75-130 | 0.32 | %REC | 2 | 04/11/13 13:01 |
| Surr: Toluene-d8 | 93 | | 75-125 | 0.20 | %REC | 2 | 04/11/13 13:01 |
| Surr: 4-Bromofluorobenzene | 116 | | 75-125 | 0.20 | %REC | 2 | 04/11/13 13:01 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1304104-009A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W9* |
| **W Order:** | K1304104 | **Collection Date:** | 04/08/13 17:20 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 04/10/13 8:00 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R25517 |
| **Revision:** | 04/12/13 9:50 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K2310.D |
| **Col Type:** | TOTAL 1213.2 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 20.0 | 4.00 | µg/L | 20 | 04/11/13 13:32 |
| 1,1,1,2-Tetrachloroethane | ND | | 10.0 | 3.20 | µg/L | 20 | 04/11/13 13:32 |
| 1,1,1-Trichloroethane | 258 | | 10.0 | 2.00 | µg/L | 20 | 04/11/13 13:32 |
| 1,1,2,2-Tetrachloroethane | ND | | 10.0 | 2.00 | µg/L | 20 | 04/11/13 13:32 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 7.00 J | | 10.0 | 2.00 | µg/L | 20 | 04/11/13 13:32 |
| 1,1,2-Trichloroethane | ND | | 10.0 | 3.20 | µg/L | 20 | 04/11/13 13:32 |
| 1,1-Dichloroethane | 365 | | 10.0 | 2.00 | µg/L | 20 | 04/11/13 13:32 |
| 1,1-Dichloroethene | 8.60 J | | 10.0 | 3.20 | µg/L | 20 | 04/11/13 13:32 |
| 1,2,3-Trichloropropane | ND | | 40.0 | 6.60 | µg/L | 20 | 04/11/13 13:32 |
| 1,2,4-Trichlorobenzene | ND | | 20.0 | 2.00 | µg/L | 20 | 04/11/13 13:32 |
| 1,2,4-Trimethylbenzene | 9.40 J | | 10.0 | 2.00 | µg/L | 20 | 04/11/13 13:32 |
| 1,2-Dibromo-3-chloropropane | ND | | 100 | 20.0 | µg/L | 20 | 04/11/13 13:32 |
| 1,2-Dibromoethane | ND | | 10.0 | 3.20 | µg/L | 20 | 04/11/13 13:32 |
| 1,2-Dichlorobenzene | ND | | 10.0 | 2.00 | µg/L | 20 | 04/11/13 13:32 |
| 1,2-Dichloroethane | 4.80 J | | 10.0 | 3.20 | µg/L | 20 | 04/11/13 13:32 |
| 1,2-Dichloropropane | ND | | 10.0 | 3.20 | µg/L | 20 | 04/11/13 13:32 |
| 1,3,5-Trimethylbenzene | ND | | 10.0 | 2.00 | µg/L | 20 | 04/11/13 13:32 |
| 1,3-Dichlorobenzene | ND | | 10.0 | 2.00 | µg/L | 20 | 04/11/13 13:32 |
| 1,4-Dichlorobenzene | ND | | 10.0 | 3.20 | µg/L | 20 | 04/11/13 13:32 |
| 2-Butanone | ND | | 200 | 20.0 | µg/L | 20 | 04/11/13 13:32 |
| 2-Chloroethylvinyl ether | ND | | 100 | 50.0 | µg/L | 20 | 04/11/13 13:32 |
| 2-Hexanone | ND | | 100 | 20.0 | µg/L | 20 | 04/11/13 13:32 |
| 4-Chlorotoluene | ND | | 10.0 | 2.00 | µg/L | 20 | 04/11/13 13:32 |
| 4-Methyl-2-pentanone | ND | | 100 | 20.0 | µg/L | 20 | 04/11/13 13:32 |
| Acetone | ND | | 200 | 20.0 | µg/L | 20 | 04/11/13 13:32 |
| Benzene | ND | | 10.0 | 2.00 | µg/L | 20 | 04/11/13 13:32 |
| Bromobenzene | ND | | 10.0 | 2.00 | µg/L | 20 | 04/11/13 13:32 |
| Bromochloromethane | ND | | 10.0 | 2.00 | µg/L | 20 | 04/11/13 13:32 |
| Bromodichloromethane | ND | | 10.0 | 2.00 | µg/L | 20 | 04/11/13 13:32 |
| Bromoform | ND | | 20.0 | 6.60 | µg/L | 20 | 04/11/13 13:32 |
| Bromomethane | ND | | 20.0 | 6.60 | µg/L | 20 | 04/11/13 13:32 |
| Carbon disulfide | ND | | 10.0 | 2.20 | µg/L | 20 | 04/11/13 13:32 |
| Carbon tetrachloride | ND | | 10.0 | 2.00 | µg/L | 20 | 04/11/13 13:32 |
| Chlorobenzene | ND | | 10.0 | 2.00 | µg/L | 20 | 04/11/13 13:32 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

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East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1304104-009A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W9*** |
| **W Order:** | K1304104 | **Collection Date:** | 04/08/13 17:20 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 04/10/13 8:00 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R25517 |
| **Revision:** | 04/12/13 9:50 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K2310.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | 24.2 | | 20.0 | 6.60 | µg/L | 20 | 04/11/13 13:32 |
| Chloroform | ND | | 10.0 | 2.00 | µg/L | 20 | 04/11/13 13:32 |
| Chloromethane | ND | | 20.0 | 6.60 | µg/L | 20 | 04/11/13 13:32 |
| cis-1,2-Dichloroethene | 323 | | 10.0 | 2.00 | µg/L | 20 | 04/11/13 13:32 |
| cis-1,3-Dichloropropene | ND | | 10.0 | 3.20 | µg/L | 20 | 04/11/13 13:32 |
| Cyclohexane | ND | | 10.0 | 2.00 | µg/L | 20 | 04/11/13 13:32 |
| Dibromochloromethane | ND | | 10.0 | 2.00 | µg/L | 20 | 04/11/13 13:32 |
| Dibromomethane | ND | | 10.0 | 3.20 | µg/L | 20 | 04/11/13 13:32 |
| Dichlorodifluoromethane | ND | | 20.0 | 2.00 | µg/L | 20 | 04/11/13 13:32 |
| Ethylbenzene | 2.60 | J | 10.0 | 2.00 | µg/L | 20 | 04/11/13 13:32 |
| Hexachlorobutadiene | ND | | 20.0 | 2.00 | µg/L | 20 | 04/11/13 13:32 |
| Isopropylbenzene | ND | | 10.0 | 2.00 | µg/L | 20 | 04/11/13 13:32 |
| Methyl tert-butyl ether | ND | | 20.0 | 3.20 | µg/L | 20 | 04/11/13 13:32 |
| Methylene chloride | 5.40 | J | 40.0 | 3.20 | µg/L | 20 | 04/11/13 13:32 |
| n-Propylbenzene | ND | | 10.0 | 2.00 | µg/L | 20 | 04/11/13 13:32 |
| Naphthalene | ND | | 20.0 | 2.00 | µg/L | 20 | 04/11/13 13:32 |
| o-Xylene | 4.00 | J | 10.0 | 2.00 | µg/L | 20 | 04/11/13 13:32 |
| p-Isopropyltoluene | ND | | 10.0 | 3.20 | µg/L | 20 | 04/11/13 13:32 |
| sec-Butylbenzene | ND | | 10.0 | 3.20 | µg/L | 20 | 04/11/13 13:32 |
| Styrene | ND | | 10.0 | 2.00 | µg/L | 20 | 04/11/13 13:32 |
| Tetrachloroethene | ND | | 10.0 | 2.00 | µg/L | 20 | 04/11/13 13:32 |
| Toluene | 6.00 | J | 10.0 | 2.00 | µg/L | 20 | 04/11/13 13:32 |
| trans-1,2-Dichloroethene | 2.80 | J | 10.0 | 2.00 | µg/L | 20 | 04/11/13 13:32 |
| trans-1,3-Dichloropropene | ND | | 10.0 | 3.20 | µg/L | 20 | 04/11/13 13:32 |
| Trichloroethene | 39.4 | | 10.0 | 2.00 | µg/L | 20 | 04/11/13 13:32 |
| Trichlorofluoromethane | ND | | 20.0 | 2.00 | µg/L | 20 | 04/11/13 13:32 |
| Vinyl acetate | ND | | 40.0 | 20.0 | µg/L | 20 | 04/11/13 13:32 |
| Vinyl chloride | 153 | | 20.0 | 6.60 | µg/L | 20 | 04/11/13 13:32 |
| Xylenes (total) | ND | | 20.0 | 6.00 | µg/L | 20 | 04/11/13 13:32 |
| Surr: 1,2-Dichloroethane-d4 | 110 | | 75-130 | 3.20 | %REC | 20 | 04/11/13 13:32 |
| Surr: Toluene-d8 | 94 | | 75-125 | 2.00 | %REC | 20 | 04/11/13 13:32 |
| Surr: 4-Bromofluorobenzene | 116 | | 75-125 | 2.00 | %REC | 20 | 04/11/13 13:32 |

| **Qualifiers:** | | | | | |
|---|---|---|---|---|---|
| | * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| | E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| | J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| | P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

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East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1304104-010A** |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W10* ✓ |
| **W Order:** | K1304104 | **Collection Date:** | 04/05/13 16:50 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 04/10/13 8:00 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R25516 |
| **Revision:** | 04/12/13 9:44 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K2279.D |
| **Col Type:** | TOTAL 3.0 ✓ | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 1.00 | 0.20 | µg/L | 1 | 04/10/13 19:47 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 19:47 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 19:47 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 19:47 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 0.18 J | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 19:47 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 19:47 |
| 1,1-Dichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 19:47 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 19:47 |
| 1,2,3-Trichloropropane | ND | | 2.00 | 0.33 | µg/L | 1 | 04/10/13 19:47 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 0.10 | µg/L | 1 | 04/10/13 19:47 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 19:47 |
| 1,2-Dibromo-3-chloropropane | ND | | 5.00 | 1.00 | µg/L | 1 | 04/10/13 19:47 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 19:47 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 19:47 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 19:47 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 19:47 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 19:47 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 19:47 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 19:47 |
| 2-Butanone | ND | | 10.0 | 1.00 | µg/L | 1 | 04/10/13 19:47 |
| 2-Chloroethylvinyl ether | ND | | 5.00 | 2.50 | µg/L | 1 | 04/10/13 19:47 |
| 2-Hexanone | ND | | 5.00 | 1.00 | µg/L | 1 | 04/10/13 19:47 |
| 4-Chlorotoluene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 19:47 |
| 4-Methyl-2-pentanone | ND | | 5.00 | 1.00 | µg/L | 1 | 04/10/13 19:47 |
| Acetone | 2.84 J | | 10.0 | 1.00 | µg/L | 1 | 04/10/13 19:47 |
| Benzene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 19:47 |
| Bromobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 19:47 |
| Bromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 19:47 |
| Bromodichloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 19:47 |
| Bromoform | ND | | 1.00 | 0.33 | µg/L | 1 | 04/10/13 19:47 |
| Bromomethane | ND | | 1.00 | 0.33 | µg/L | 1 | 04/10/13 19:47 |
| Carbon disulfide | ND | | 0.50 | 0.11 | µg/L | 1 | 04/10/13 19:47 |
| Carbon tetrachloride | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 19:47 |
| Chlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 19:47 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

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East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | | | |
|---|---|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | | | **Lab ID:** | **K1304104-010A** |
| **Project:** | 189-02 | | | **Client Sample ID:** | ***189 - W10*** |
| **W Order:** | K1304104 | | | **Collection Date:** | 04/05/13 16:50 |
| **Matrix:** | GROUNDWATER | | | **Date Received:** | 04/10/13 8:00 |
| **Inst. ID:** | MSK_75 | **Sample Size** | 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | | **BatchNo:** | R25516 |
| **Revision:** | 04/12/13 9:44 | **TestCode:** | 8260W_CAL | **FileID:** | 1-SAMP-K2279.D |
| **Col Type:** | | | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| VOLATILE ORGANIC COMPOUNDS BY GC/MS | | | | | SW8260B | | |
| Chloroethane | ND | | 1.00 | 0.33 | µg/L | 1 | 04/10/13 19:47 |
| Chloroform | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 19:47 |
| Chloromethane | ND | | 1.00 | 0.33 | µg/L | 1 | 04/10/13 19:47 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 19:47 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 19:47 |
| Cyclohexane | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 19:47 |
| Dibromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 19:47 |
| Dibromomethane | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 19:47 |
| Dichlorodifluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 04/10/13 19:47 |
| Ethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 19:47 |
| Hexachlorobutadiene | ND | | 1.00 | 0.10 | µg/L | 1 | 04/10/13 19:47 |
| Isopropylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 19:47 |
| Methyl tert-butyl ether | ND | | 1.00 | 0.16 | µg/L | 1 | 04/10/13 19:47 |
| Methylene chloride | ND | | 2.00 | 0.16 | µg/L | 1 | 04/10/13 19:47 |
| n-Propylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 19:47 |
| Naphthalene | ND | | 1.00 | 0.10 | µg/L | 1 | 04/10/13 19:47 |
| o-Xylene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 19:47 |
| p-Isopropyltoluene | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 19:47 |
| sec-Butylbenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 19:47 |
| Styrene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 19:47 |
| Tetrachloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 19:47 |
| Toluene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 19:47 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 19:47 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 19:47 |
| Trichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 19:47 |
| Trichlorofluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 04/10/13 19:47 |
| Vinyl acetate | ND | | 2.00 | 1.00 | µg/L | 1 | 04/10/13 19:47 |
| Vinyl chloride | ND | | 1.00 | 0.33 | µg/L | 1 | 04/10/13 19:47 |
| Xylenes (total) | ND | | 1.00 | 0.30 | µg/L | 1 | 04/10/13 19:47 |
| Surr: 1,2-Dichloroethane-d4 | 109 | | 75-130 | 0.16 | %REC | 1 | 04/10/13 19:47 |
| Surr: Toluene-d8 | 94 | | 75-125 | 0.10 | %REC | 1 | 04/10/13 19:47 |
| Surr: 4-Bromofluorobenzene | 117 | | 75-125 | 0.10 | %REC | 1 | 04/10/13 19:47 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 04/12/13 9:51 637390 **Project Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

**CLIENT** Ken W. Kloeber Consulting Engineers
**Project:** 189-02
**W Order:** K1304104
**Matrix:** GROUNDWATER
**Inst. ID:** MSK_75 **Sample Size** 10 mL
**ColumnID:** Rtx-VMS **%Moisture:**
**Revision:** 04/12/13 9:44 **TestCode:** 8260W_CAL
**Col Type:** TOTAL 54.88

**Lab ID:** K1304104-011A
**Client Sample ID:** *189 - W11*
**Collection Date:** 04/05/13 17:00
**Date Received:** 04/10/13 8:00
**PrepDate:**
**BatchNo:** R25516
**FileID:** 1-SAMP-K2280.D

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 1.00 | 0.20 | µg/L | 1 | 04/10/13 20:18 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 20:18 |
| 1,1,1-Trichloroethane | 17.7 | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 20:18 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 20:18 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 14.3 | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 20:18 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 20:18 |
| 1,1-Dichloroethane | 19.3 | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 20:18 |
| 1,1-Dichloroethene | 0.41 J | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 20:18 |
| 1,2,3-Trichloropropane | ND | | 2.00 | 0.33 | µg/L | 1 | 04/10/13 20:18 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 0.10 | µg/L | 1 | 04/10/13 20:18 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 20:18 |
| 1,2-Dibromo-3-chloropropane | ND | | 5.00 | 1.00 | µg/L | 1 | 04/10/13 20:18 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 20:18 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 20:18 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 20:18 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 20:18 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 20:18 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 20:18 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 20:18 |
| 2-Butanone | ND | | 10.0 | 1.00 | µg/L | 1 | 04/10/13 20:18 |
| 2-Chloroethylvinyl ether | ND | | 5.00 | 2.50 | µg/L | 1 | 04/10/13 20:18 |
| 2-Hexanone | ND | | 5.00 | 1.00 | µg/L | 1 | 04/10/13 20:18 |
| 4-Chlorotoluene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 20:18 |
| 4-Methyl-2-pentanone | ND | | 5.00 | 1.00 | µg/L | 1 | 04/10/13 20:18 |
| Acetone | 2.25 J | | 10.0 | 1.00 | µg/L | 1 | 04/10/13 20:18 |
| Benzene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 20:18 |
| Bromobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 20:18 |
| Bromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 20:18 |
| Bromodichloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 20:18 |
| Bromoform | ND | | 1.00 | 0.33 | µg/L | 1 | 04/10/13 20:18 |
| Bromomethane | ND | | 1.00 | 0.33 | µg/L | 1 | 04/10/13 20:18 |
| Carbon disulfide | ND | | 0.50 | 0.11 | µg/L | 1 | 04/10/13 20:18 |
| Carbon tetrachloride | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 20:18 |
| Chlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 20:18 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 04/12/13 9:51 637391 **Project Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1304104-011A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W11*** |
| **W Order:** | K1304104 | **Collection Date:** | 04/05/13 17:00 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 04/10/13 8:00 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R25516 |
| **Revision:** | 04/12/13 9:44 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K2280.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | ND | | 1.00 | 0.33 | µg/L | 1 | 04/10/13 20:18 |
| Chloroform | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 20:18 |
| Chloromethane | ND | | 1.00 | 0.33 | µg/L | 1 | 04/10/13 20:18 |
| cis-1,2-Dichloroethene | 0.41 | J | 0.50 | 0.10 | µg/L | 1 | 04/10/13 20:18 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 20:18 |
| Cyclohexane | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 20:18 |
| Dibromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 20:18 |
| Dibromomethane | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 20:18 |
| Dichlorodifluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 04/10/13 20:18 |
| Ethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 20:18 |
| Hexachlorobutadiene | ND | | 1.00 | 0.10 | µg/L | 1 | 04/10/13 20:18 |
| Isopropylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 20:18 |
| Methyl tert-butyl ether | ND | | 1.00 | 0.16 | µg/L | 1 | 04/10/13 20:18 |
| Methylene chloride | ND | | 2.00 | 0.16 | µg/L | 1 | 04/10/13 20:18 |
| n-Propylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 20:18 |
| Naphthalene | ND | | 1.00 | 0.10 | µg/L | 1 | 04/10/13 20:18 |
| o-Xylene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 20:18 |
| p-Isopropyltoluene | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 20:18 |
| sec-Butylbenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 20:18 |
| Styrene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 20:18 |
| Tetrachloroethene | 0.41 | J | 0.50 | 0.10 | µg/L | 1 | 04/10/13 20:18 |
| Toluene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 20:18 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 20:18 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 20:18 |
| Trichloroethene | 0.10 | J | 0.50 | 0.10 | µg/L | 1 | 04/10/13 20:18 |
| Trichlorofluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 04/10/13 20:18 |
| Vinyl acetate | ND | | 2.00 | 1.00 | µg/L | 1 | 04/10/13 20:18 |
| Vinyl chloride | ND | | 1.00 | 0.33 | µg/L | 1 | 04/10/13 20:18 |
| Xylenes (total) | ND | | 1.00 | 0.30 | µg/L | 1 | 04/10/13 20:18 |
| Surr: 1,2-Dichloroethane-d4 | 107 | | 75-130 | 0.16 | %REC | 1 | 04/10/13 20:18 |
| Surr: Toluene-d8 | 94 | | 75-125 | 0.10 | %REC | 1 | 04/10/13 20:18 |
| Surr: 4-Bromofluorobenzene | 112 | | 75-125 | 0.10 | %REC | 1 | 04/10/13 20:18 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

# Life Science Laboratories, Inc.

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East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1304104-012A** |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W12* |
| **W Order:** | K1304104 | **Collection Date:** | 04/05/13 17:15 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 04/10/13 8:00 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R25516 |
| **Revision:** | 04/12/13 9:44 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K2274.D |
| **Col Type:** | TOTAL 215,30 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| VOLATILE ORGANIC COMPOUNDS BY GC/MS | | | | | SW8260B | | |
| (m+p)-Xylene | ND | | 5.00 | 1.00 | µg/L | 5 | 04/10/13 17:12 |
| 1,1,1,2-Tetrachloroethane | ND | | 2.50 | 0.80 | µg/L | 5 | 04/10/13 17:12 |
| 1,1,1-Trichloroethane | ND | | 2.50 | 0.50 | µg/L | 5 | 04/10/13 17:12 |
| 1,1,2,2-Tetrachloroethane | ND | | 2.50 | 0.50 | µg/L | 5 | 04/10/13 17:12 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 2.50 | 0.50 | µg/L | 5 | 04/10/13 17:12 |
| 1,1,2-Trichloroethane | ND | | 2.50 | 0.80 | µg/L | 5 | 04/10/13 17:12 |
| 1,1-Dichloroethane | 74.4 | | 2.50 | 0.50 | µg/L | 5 | 04/10/13 17:12 |
| 1,1-Dichloroethene | ND | | 2.50 | 0.80 | µg/L | 5 | 04/10/13 17:12 |
| 1,2,3-Trichloropropane | ND | | 10.0 | 1.65 | µg/L | 5 | 04/10/13 17:12 |
| 1,2,4-Trichlorobenzene | ND | | 5.00 | 0.50 | µg/L | 5 | 04/10/13 17:12 |
| 1,2,4-Trimethylbenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 04/10/13 17:12 |
| 1,2-Dibromo-3-chloropropane | ND | | 25.0 | 5.00 | µg/L | 5 | 04/10/13 17:12 |
| 1,2-Dibromoethane | ND | | 2.50 | 0.80 | µg/L | 5 | 04/10/13 17:12 |
| 1,2-Dichlorobenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 04/10/13 17:12 |
| 1,2-Dichloroethane | 3.40 | | 2.50 | 0.80 | µg/L | 5 | 04/10/13 17:12 |
| 1,2-Dichloropropane | ND | | 2.50 | 0.80 | µg/L | 5 | 04/10/13 17:12 |
| 1,3,5-Trimethylbenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 04/10/13 17:12 |
| 1,3-Dichlorobenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 04/10/13 17:12 |
| 1,4-Dichlorobenzene | ND | | 2.50 | 0.80 | µg/L | 5 | 04/10/13 17:12 |
| 2-Butanone | ND | | 50.0 | 5.00 | µg/L | 5 | 04/10/13 17:12 |
| 2-Chloroethylvinyl ether | ND | | 25.0 | 12.5 | µg/L | 5 | 04/10/13 17:12 |
| 2-Hexanone | ND | | 25.0 | 5.00 | µg/L | 5 | 04/10/13 17:12 |
| 4-Chlorotoluene | ND | | 2.50 | 0.50 | µg/L | 5 | 04/10/13 17:12 |
| 4-Methyl-2-pentanone | ND | | 25.0 | 5.00 | µg/L | 5 | 04/10/13 17:12 |
| Acetone | ND | | 50.0 | 5.00 | µg/L | 5 | 04/10/13 17:12 |
| Benzene | ND | | 2.50 | 0.50 | µg/L | 5 | 04/10/13 17:12 |
| Bromobenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 04/10/13 17:12 |
| Bromochloromethane | ND | | 2.50 | 0.50 | µg/L | 5 | 04/10/13 17:12 |
| Bromodichloromethane | ND | | 2.50 | 0.50 | µg/L | 5 | 04/10/13 17:12 |
| Bromoform | ND | | 5.00 | 1.65 | µg/L | 5 | 04/10/13 17:12 |
| Bromomethane | ND | | 5.00 | 1.65 | µg/L | 5 | 04/10/13 17:12 |
| Carbon disulfide | ND | | 2.50 | 0.55 | µg/L | 5 | 04/10/13 17:12 |
| Carbon tetrachloride | ND | | 2.50 | 0.50 | µg/L | 5 | 04/10/13 17:12 |
| Chlorobenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 04/10/13 17:12 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

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East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1304104-012A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W12*** |
| **W Order:** | K1304104 | **Collection Date:** | 04/05/13 17:15 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 04/10/13 8:00 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R25516 |
| **Revision:** | 04/12/13 9:44 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K2274.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | 48.8 | | 5.00 | 1.65 | µg/L | 5 | 04/10/13 17:12 |
| Chloroform | ND | | 2.50 | 0.50 | µg/L | 5 | 04/10/13 17:12 |
| Chloromethane | ND | | 5.00 | 1.65 | µg/L | 5 | 04/10/13 17:12 |
| cis-1,2-Dichloroethene | 9.35 | | 2.50 | 0.50 | µg/L | 5 | 04/10/13 17:12 |
| cis-1,3-Dichloropropene | ND | | 2.50 | 0.80 | µg/L | 5 | 04/10/13 17:12 |
| Cyclohexane | 1.40 | J | 2.50 | 0.50 | µg/L | 5 | 04/10/13 17:12 |
| Dibromochloromethane | ND | | 2.50 | 0.50 | µg/L | 5 | 04/10/13 17:12 |
| Dibromomethane | ND | | 2.50 | 0.80 | µg/L | 5 | 04/10/13 17:12 |
| Dichlorodifluoromethane | ND | | 5.00 | 0.50 | µg/L | 5 | 04/10/13 17:12 |
| Ethylbenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 04/10/13 17:12 |
| Hexachlorobutadiene | ND | | 5.00 | 0.50 | µg/L | 5 | 04/10/13 17:12 |
| Isopropylbenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 04/10/13 17:12 |
| Methyl tert-butyl ether | ND | | 5.00 | 0.80 | µg/L | 5 | 04/10/13 17:12 |
| Methylene chloride | 0.95 | J | 10.0 | 0.80 | µg/L | 5 | 04/10/13 17:12 |
| n-Propylbenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 04/10/13 17:12 |
| Naphthalene | ND | | 5.00 | 0.50 | µg/L | 5 | 04/10/13 17:12 |
| o-Xylene | ND | | 2.50 | 0.50 | µg/L | 5 | 04/10/13 17:12 |
| p-Isopropyltoluene | ND | | 2.50 | 0.80 | µg/L | 5 | 04/10/13 17:12 |
| sec-Butylbenzene | ND | | 2.50 | 0.80 | µg/L | 5 | 04/10/13 17:12 |
| Styrene | ND | | 2.50 | 0.50 | µg/L | 5 | 04/10/13 17:12 |
| Tetrachloroethene | ND | | 2.50 | 0.50 | µg/L | 5 | 04/10/13 17:12 |
| Toluene | ND | | 2.50 | 0.50 | µg/L | 5 | 04/10/13 17:12 |
| trans-1,2-Dichloroethene | ND | | 2.50 | 0.50 | µg/L | 5 | 04/10/13 17:12 |
| trans-1,3-Dichloropropene | ND | | 2.50 | 0.80 | µg/L | 5 | 04/10/13 17:12 |
| Trichloroethene | ND | | 2.50 | 0.50 | µg/L | 5 | 04/10/13 17:12 |
| Trichlorofluoromethane | ND | | 5.00 | 0.50 | µg/L | 5 | 04/10/13 17:12 |
| Vinyl acetate | ND | | 10.0 | 5.00 | µg/L | 5 | 04/10/13 17:12 |
| Vinyl chloride | 77.0 | | 5.00 | 1.65 | µg/L | 5 | 04/10/13 17:12 |
| Xylenes (total) | ND | | 5.00 | 1.50 | µg/L | 5 | 04/10/13 17:12 |
| Surr: 1,2-Dichloroethane-d4 | 107 | | 75-130 | 0.80 | %REC | 5 | 04/10/13 17:12 |
| Surr: Toluene-d8 | 94 | | 75-125 | 0.50 | %REC | 5 | 04/10/13 17:12 |
| Surr: 4-Bromofluorobenzene | 113 | | 75-125 | 0.50 | %REC | 5 | 04/10/13 17:12 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 04/12/13 9:51 637386 **Project Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1304104-013A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W13* |
| **W Order:** | K1304104 | **Collection Date:** | 04/05/13 16:40 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 04/10/13 8:00 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R25516 |
| **Revision:** | 04/12/13 9:44 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K2281.D |
| **Col Type:** | TOTAL 4.01 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | 0.37 | J | 1.00 | 0.20 | µg/L | 1 | 04/10/13 20:48 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 20:48 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 20:48 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 20:48 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 20:48 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 20:48 |
| 1,1-Dichloroethane | 0.19 | J | 0.50 | 0.10 | µg/L | 1 | 04/10/13 20:48 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 20:48 |
| 1,2,3-Trichloropropane | ND | | 2.00 | 0.33 | µg/L | 1 | 04/10/13 20:48 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 0.10 | µg/L | 1 | 04/10/13 20:48 |
| 1,2,4-Trimethylbenzene | 1.18 | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 20:48 |
| 1,2-Dibromo-3-chloropropane | ND | | 5.00 | 1.00 | µg/L | 1 | 04/10/13 20:48 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 20:48 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 20:48 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 20:48 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 20:48 |
| 1,3,5-Trimethylbenzene | 0.17 | J | 0.50 | 0.10 | µg/L | 1 | 04/10/13 20:48 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 20:48 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 20:48 |
| 2-Butanone | ND | | 10.0 | 1.00 | µg/L | 1 | 04/10/13 20:48 |
| 2-Chloroethylvinyl ether | ND | | 5.00 | 2.50 | µg/L | 1 | 04/10/13 20:48 |
| 2-Hexanone | ND | | 5.00 | 1.00 | µg/L | 1 | 04/10/13 20:48 |
| 4-Chlorotoluene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 20:48 |
| 4-Methyl-2-pentanone | ND | | 5.00 | 1.00 | µg/L | 1 | 04/10/13 20:48 |
| Acetone | ND | | 10.0 | 1.00 | µg/L | 1 | 04/10/13 20:48 |
| Benzene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 20:48 |
| Bromobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 20:48 |
| Bromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 20:48 |
| Bromodichloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 20:48 |
| Bromoform | ND | | 1.00 | 0.33 | µg/L | 1 | 04/10/13 20:48 |
| Bromomethane | ND | | 1.00 | 0.33 | µg/L | 1 | 04/10/13 20:48 |
| Carbon disulfide | ND | | 0.50 | 0.11 | µg/L | 1 | 04/10/13 20:48 |
| Carbon tetrachloride | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 20:48 |
| Chlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 20:48 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 04/12/13 9:51 637392 **Project Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1304104-013A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W13*** |
| **W Order:** | K1304104 | **Collection Date:** | 04/05/13 16:40 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 04/10/13 8:00 |
| **Inst. ID:** | MSK_75 **Sample Size** 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS **%Moisture:** | **BatchNo:** | R25516 |
| **Revision:** | 04/12/13 9:44 **TestCode:** 8260W_CAL | **FileID:** | 1-SAMP-K2281.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| VOLATILE ORGANIC COMPOUNDS BY GC/MS | | | | | SW8260B | | |
| Chloroethane | ND | | 1.00 | 0.33 | µg/L | 1 | 04/10/13 20:48 |
| Chloroform | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 20:48 |
| Chloromethane | ND | | 1.00 | 0.33 | µg/L | 1 | 04/10/13 20:48 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 20:48 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 20:48 |
| Cyclohexane | 0.27 | J | 0.50 | 0.10 | µg/L | 1 | 04/10/13 20:48 |
| Dibromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 20:48 |
| Dibromomethane | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 20:48 |
| Dichlorodifluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 04/10/13 20:48 |
| Ethylbenzene | 0.17 | J | 0.50 | 0.10 | µg/L | 1 | 04/10/13 20:48 |
| Hexachlorobutadiene | ND | | 1.00 | 0.10 | µg/L | 1 | 04/10/13 20:48 |
| Isopropylbenzene | 0.48 | J | 0.50 | 0.10 | µg/L | 1 | 04/10/13 20:48 |
| Methyl tert-butyl ether | ND | | 1.00 | 0.16 | µg/L | 1 | 04/10/13 20:48 |
| Methylene chloride | ND | | 2.00 | 0.16 | µg/L | 1 | 04/10/13 20:48 |
| n-Propylbenzene | 0.64 | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 20:48 |
| Naphthalene | ND | | 1.00 | 0.10 | µg/L | 1 | 04/10/13 20:48 |
| o-Xylene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 20:48 |
| p-Isopropyltoluene | 0.24 | J | 0.50 | 0.16 | µg/L | 1 | 04/10/13 20:48 |
| sec-Butylbenzene | 0.30 | J | 0.50 | 0.16 | µg/L | 1 | 04/10/13 20:48 |
| Styrene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 20:48 |
| Tetrachloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 20:48 |
| Toluene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 20:48 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 20:48 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 20:48 |
| Trichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 20:48 |
| Trichlorofluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 04/10/13 20:48 |
| Vinyl acetate | ND | | 2.00 | 1.00 | µg/L | 1 | 04/10/13 20:48 |
| Vinyl chloride | ND | | 1.00 | 0.33 | µg/L | 1 | 04/10/13 20:48 |
| Xylenes (total) | 0.37 | J | 1.00 | 0.30 | µg/L | 1 | 04/10/13 20:48 |
| Surr: 1,2-Dichloroethane-d4 | 108 | | 75-130 | 0.16 | %REC | 1 | 04/10/13 20:48 |
| Surr: Toluene-d8 | 94 | | 75-125 | 0.10 | %REC | 1 | 04/10/13 20:48 |
| Surr: 4-Bromofluorobenzene | 109 | | 75-125 | 0.10 | %REC | 1 | 04/10/13 20:48 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 04/12/13 9:51 637392 **Project Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1304104-014A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W14* |
| **W Order:** | K1304104 | **Collection Date:** | 04/05/13 17:30 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 04/10/13 8:00 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R25516 |
| **Revision:** | 04/12/13 9:44 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K2275.D |
| **Col Type:** | TOTAL 5308 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| VOLATILE ORGANIC COMPOUNDS BY GC/MS | | | | | SW8260B | | |
| (m+p)-Xylene | 35.5 | J | 50.0 | 10.0 | µg/L | 50 | 04/10/13 17:43 |
| 1,1,1,2-Tetrachloroethane | ND | | 25.0 | 8.00 | µg/L | 50 | 04/10/13 17:43 |
| 1,1,1-Trichloroethane | 1860 | | 25.0 | 5.00 | µg/L | 50 | 04/10/13 17:43 |
| 1,1,2,2-Tetrachloroethane | ND | | 25.0 | 5.00 | µg/L | 50 | 04/10/13 17:43 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 1330 | | 25.0 | 5.00 | µg/L | 50 | 04/10/13 17:43 |
| 1,1,2-Trichloroethane | ND | | 25.0 | 8.00 | µg/L | 50 | 04/10/13 17:43 |
| 1,1-Dichloroethane | 1650 | | 25.0 | 5.00 | µg/L | 50 | 04/10/13 17:43 |
| 1,1-Dichloroethene | 55.5 | | 25.0 | 8.00 | µg/L | 50 | 04/10/13 17:43 |
| 1,2,3-Trichloropropane | ND | | 100 | 16.5 | µg/L | 50 | 04/10/13 17:43 |
| 1,2,4-Trichlorobenzene | ND | | 50.0 | 5.00 | µg/L | 50 | 04/10/13 17:43 |
| 1,2,4-Trimethylbenzene | 33.5 | | 25.0 | 5.00 | µg/L | 50 | 04/10/13 17:43 |
| 1,2-Dibromo-3-chloropropane | ND | | 250 | 50.0 | µg/L | 50 | 04/10/13 17:43 |
| 1,2-Dibromoethane | ND | | 25.0 | 8.00 | µg/L | 50 | 04/10/13 17:43 |
| 1,2-Dichlorobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 04/10/13 17:43 |
| 1,2-Dichloroethane | ND | | 25.0 | 8.00 | µg/L | 50 | 04/10/13 17:43 |
| 1,2-Dichloropropane | ND | | 25.0 | 8.00 | µg/L | 50 | 04/10/13 17:43 |
| 1,3,5-Trimethylbenzene | 11.5 | J | 25.0 | 5.00 | µg/L | 50 | 04/10/13 17:43 |
| 1,3-Dichlorobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 04/10/13 17:43 |
| 1,4-Dichlorobenzene | ND | | 25.0 | 8.00 | µg/L | 50 | 04/10/13 17:43 |
| 2-Butanone | ND | | 500 | 50.0 | µg/L | 50 | 04/10/13 17:43 |
| 2-Chloroethylvinyl ether | ND | | 250 | 125 | µg/L | 50 | 04/10/13 17:43 |
| 2-Hexanone | ND | | 250 | 50.0 | µg/L | 50 | 04/10/13 17:43 |
| 4-Chlorotoluene | ND | | 25.0 | 5.00 | µg/L | 50 | 04/10/13 17:43 |
| 4-Methyl-2-pentanone | ND | | 250 | 50.0 | µg/L | 50 | 04/10/13 17:43 |
| Acetone | ND | | 500 | 50.0 | µg/L | 50 | 04/10/13 17:43 |
| Benzene | 15.0 | J | 25.0 | 5.00 | µg/L | 50 | 04/10/13 17:43 |
| Bromobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 04/10/13 17:43 |
| Bromochloromethane | ND | | 25.0 | 5.00 | µg/L | 50 | 04/10/13 17:43 |
| Bromodichloromethane | ND | | 25.0 | 5.00 | µg/L | 50 | 04/10/13 17:43 |
| Bromoform | ND | | 50.0 | 16.5 | µg/L | 50 | 04/10/13 17:43 |
| Bromomethane | ND | | 50.0 | 16.5 | µg/L | 50 | 04/10/13 17:43 |
| Carbon disulfide | ND | | 25.0 | 5.50 | µg/L | 50 | 04/10/13 17:43 |
| Carbon tetrachloride | ND | | 25.0 | 5.00 | µg/L | 50 | 04/10/13 17:43 |
| Chlorobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 04/10/13 17:43 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

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5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1304104-014A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W14*** |
| **W Order:** | K1304104 | **Collection Date:** | 04/05/13 17:30 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 04/10/13 8:00 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R25516 |
| **Revision:** | 04/12/13 9:44 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K2275.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | ND | | 50.0 | 16.5 | µg/L | 50 | 04/10/13 17:43 |
| Chloroform | ND | | 25.0 | 5.00 | µg/L | 50 | 04/10/13 17:43 |
| Chloromethane | 25.0 | J | 50.0 | 16.5 | µg/L | 50 | 04/10/13 17:43 |
| cis-1,2-Dichloroethene | 81.0 | | 25.0 | 5.00 | µg/L | 50 | 04/10/13 17:43 |
| cis-1,3-Dichloropropene | ND | | 25.0 | 8.00 | µg/L | 50 | 04/10/13 17:43 |
| Cyclohexane | 91.5 | | 25.0 | 5.00 | µg/L | 50 | 04/10/13 17:43 |
| Dibromochloromethane | ND | | 25.0 | 5.00 | µg/L | 50 | 04/10/13 17:43 |
| Dibromomethane | ND | | 25.0 | 8.00 | µg/L | 50 | 04/10/13 17:43 |
| Dichlorodifluoromethane | ND | | 50.0 | 5.00 | µg/L | 50 | 04/10/13 17:43 |
| Ethylbenzene | 7.50 | J | 25.0 | 5.00 | µg/L | 50 | 04/10/13 17:43 |
| Hexachlorobutadiene | ND | | 50.0 | 5.00 | µg/L | 50 | 04/10/13 17:43 |
| Isopropylbenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 04/10/13 17:43 |
| Methyl tert-butyl ether | ND | | 50.0 | 8.00 | µg/L | 50 | 04/10/13 17:43 |
| Methylene chloride | 11.0 | J | 100 | 8.00 | µg/L | 50 | 04/10/13 17:43 |
| n-Propylbenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 04/10/13 17:43 |
| Naphthalene | ND | | 50.0 | 5.00 | µg/L | 50 | 04/10/13 17:43 |
| o-Xylene | 13.0 | J | 25.0 | 5.00 | µg/L | 50 | 04/10/13 17:43 |
| p-Isopropyltoluene | ND | | 25.0 | 8.00 | µg/L | 50 | 04/10/13 17:43 |
| sec-Butylbenzene | ND | | 25.0 | 8.00 | µg/L | 50 | 04/10/13 17:43 |
| Styrene | ND | | 25.0 | 5.00 | µg/L | 50 | 04/10/13 17:43 |
| Tetrachloroethene | 61.5 | | 25.0 | 5.00 | µg/L | 50 | 04/10/13 17:43 |
| Toluene | 21.0 | J | 25.0 | 5.00 | µg/L | 50 | 04/10/13 17:43 |
| trans-1,2-Dichloroethene | ND | | 25.0 | 5.00 | µg/L | 50 | 04/10/13 17:43 |
| trans-1,3-Dichloropropene | ND | | 25.0 | 8.00 | µg/L | 50 | 04/10/13 17:43 |
| Trichloroethene | 5.50 | J | 25.0 | 5.00 | µg/L | 50 | 04/10/13 17:43 |
| Trichlorofluoromethane | ND | | 50.0 | 5.00 | µg/L | 50 | 04/10/13 17:43 |
| Vinyl acetate | ND | | 100 | 50.0 | µg/L | 50 | 04/10/13 17:43 |
| Vinyl chloride | ND | | 50.0 | 16.5 | µg/L | 50 | 04/10/13 17:43 |
| Xylenes (total) | 48.5 | J | 50.0 | 15.0 | µg/L | 50 | 04/10/13 17:43 |
| Surr: 1,2-Dichloroethane-d4 | 106 | | 75-130 | 8.00 | %REC | 50 | 04/10/13 17:43 |
| Surr: Toluene-d8 | 95 | | 75-125 | 5.00 | %REC | 50 | 04/10/13 17:43 |
| Surr: 4-Bromofluorobenzene | 113 | | 75-125 | 5.00 | %REC | 50 | 04/10/13 17:43 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

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East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1304104-015A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 -BL* |
| **W Order:** | K1304104 | **Collection Date:** | 04/05/13 12:00 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 04/10/13 8:00 |
| **Inst. ID:** | MSK_75 **Sample Size** 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS **%Moisture:** | **BatchNo:** | R25517 |
| **Revision:** | 04/12/13 9:50 **TestCode:** 8260W_CAL | **FileID:** | 1-SAMP-K2311.D |
| **Col Type:** | TOTAL MW-5 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 5.00 | 1.00 | µg/L | 5 | 04/11/13 14:03 |
| 1,1,1,2-Tetrachloroethane | ND | | 2.50 | 0.80 | µg/L | 5 | 04/11/13 14:03 |
| 1,1,1-Trichloroethane | ND | | 2.50 | 0.50 | µg/L | 5 | 04/11/13 14:03 |
| 1,1,2,2-Tetrachloroethane | ND | | 2.50 | 0.50 | µg/L | 5 | 04/11/13 14:03 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 2.50 | 0.50 | µg/L | 5 | 04/11/13 14:03 |
| 1,1,2-Trichloroethane | ND | | 2.50 | 0.80 | µg/L | 5 | 04/11/13 14:03 |
| 1,1-Dichloroethane | 54.2 | | 2.50 | 0.50 | µg/L | 5 | 04/11/13 14:03 |
| 1,1-Dichloroethene | ND | | 2.50 | 0.80 | µg/L | 5 | 04/11/13 14:03 |
| 1,2,3-Trichloropropane | ND | | 10.0 | 1.65 | µg/L | 5 | 04/11/13 14:03 |
| 1,2,4-Trichlorobenzene | ND | | 5.00 | 0.50 | µg/L | 5 | 04/11/13 14:03 |
| 1,2,4-Trimethylbenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 04/11/13 14:03 |
| 1,2-Dibromo-3-chloropropane | ND | | 25.0 | 5.00 | µg/L | 5 | 04/11/13 14:03 |
| 1,2-Dibromoethane | ND | | 2.50 | 0.80 | µg/L | 5 | 04/11/13 14:03 |
| 1,2-Dichlorobenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 04/11/13 14:03 |
| 1,2-Dichloroethane | 3.50 | | 2.50 | 0.80 | µg/L | 5 | 04/11/13 14:03 |
| 1,2-Dichloropropane | ND | | 2.50 | 0.80 | µg/L | 5 | 04/11/13 14:03 |
| 1,3,5-Trimethylbenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 04/11/13 14:03 |
| 1,3-Dichlorobenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 04/11/13 14:03 |
| 1,4-Dichlorobenzene | ND | | 2.50 | 0.80 | µg/L | 5 | 04/11/13 14:03 |
| 2-Butanone | ND | | 50.0 | 5.00 | µg/L | 5 | 04/11/13 14:03 |
| 2-Chloroethylvinyl ether | ND | | 25.0 | 12.5 | µg/L | 5 | 04/11/13 14:03 |
| 2-Hexanone | ND | | 25.0 | 5.00 | µg/L | 5 | 04/11/13 14:03 |
| 4-Chlorotoluene | ND | | 2.50 | 0.50 | µg/L | 5 | 04/11/13 14:03 |
| 4-Methyl-2-pentanone | ND | | 25.0 | 5.00 | µg/L | 5 | 04/11/13 14:03 |
| Acetone | ND | | 50.0 | 5.00 | µg/L | 5 | 04/11/13 14:03 |
| Benzene | ND | | 2.50 | 0.50 | µg/L | 5 | 04/11/13 14:03 |
| Bromobenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 04/11/13 14:03 |
| Bromochloromethane | ND | | 2.50 | 0.50 | µg/L | 5 | 04/11/13 14:03 |
| Bromodichloromethane | ND | | 2.50 | 0.50 | µg/L | 5 | 04/11/13 14:03 |
| Bromoform | ND | | 5.00 | 1.65 | µg/L | 5 | 04/11/13 14:03 |
| Bromomethane | ND | | 5.00 | 1.65 | µg/L | 5 | 04/11/13 14:03 |
| Carbon disulfide | ND | | 2.50 | 0.55 | µg/L | 5 | 04/11/13 14:03 |
| Carbon tetrachloride | ND | | 2.50 | 0.50 | µg/L | 5 | 04/11/13 14:03 |
| Chlorobenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 04/11/13 14:03 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 04/12/13 9:51 637404 **Project Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1304104-015A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 -BL*** |
| **W Order:** | K1304104 | **Collection Date:** | 04/05/13 12:00 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 04/10/13 8:00 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R25517 |
| **Revision:** | 04/12/13 9:50 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K2311.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | 57.6 | | 5.00 | 1.65 | µg/L | 5 | 04/11/13 14:03 |
| Chloroform | ND | | 2.50 | 0.50 | µg/L | 5 | 04/11/13 14:03 |
| Chloromethane | ND | | 5.00 | 1.65 | µg/L | 5 | 04/11/13 14:03 |
| cis-1,2-Dichloroethene | 7.00 | | 2.50 | 0.50 | µg/L | 5 | 04/11/13 14:03 |
| cis-1,3-Dichloropropene | ND | | 2.50 | 0.80 | µg/L | 5 | 04/11/13 14:03 |
| Cyclohexane | 1.95 J | | 2.50 | 0.50 | µg/L | 5 | 04/11/13 14:03 |
| Dibromochloromethane | ND | | 2.50 | 0.50 | µg/L | 5 | 04/11/13 14:03 |
| Dibromomethane | ND | | 2.50 | 0.80 | µg/L | 5 | 04/11/13 14:03 |
| Dichlorodifluoromethane | ND | | 5.00 | 0.50 | µg/L | 5 | 04/11/13 14:03 |
| Ethylbenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 04/11/13 14:03 |
| Hexachlorobutadiene | ND | | 5.00 | 0.50 | µg/L | 5 | 04/11/13 14:03 |
| Isopropylbenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 04/11/13 14:03 |
| Methyl tert-butyl ether | ND | | 5.00 | 0.80 | µg/L | 5 | 04/11/13 14:03 |
| Methylene chloride | 1.05 J | | 10.0 | 0.80 | µg/L | 5 | 04/11/13 14:03 |
| n-Propylbenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 04/11/13 14:03 |
| Naphthalene | ND | | 5.00 | 0.50 | µg/L | 5 | 04/11/13 14:03 |
| o-Xylene | ND | | 2.50 | 0.50 | µg/L | 5 | 04/11/13 14:03 |
| p-Isopropyltoluene | ND | | 2.50 | 0.80 | µg/L | 5 | 04/11/13 14:03 |
| sec-Butylbenzene | ND | | 2.50 | 0.80 | µg/L | 5 | 04/11/13 14:03 |
| Styrene | ND | | 2.50 | 0.50 | µg/L | 5 | 04/11/13 14:03 |
| Tetrachloroethene | ND | | 2.50 | 0.50 | µg/L | 5 | 04/11/13 14:03 |
| Toluene | ND | | 2.50 | 0.50 | µg/L | 5 | 04/11/13 14:03 |
| trans-1,2-Dichloroethene | ND | | 2.50 | 0.50 | µg/L | 5 | 04/11/13 14:03 |
| trans-1,3-Dichloropropene | ND | | 2.50 | 0.80 | µg/L | 5 | 04/11/13 14:03 |
| Trichloroethene | ND | | 2.50 | 0.50 | µg/L | 5 | 04/11/13 14:03 |
| Trichlorofluoromethane | ND | | 5.00 | 0.50 | µg/L | 5 | 04/11/13 14:03 |
| Vinyl acetate | ND | | 10.0 | 5.00 | µg/L | 5 | 04/11/13 14:03 |
| Vinyl chloride | 59.0 | | 5.00 | 1.65 | µg/L | 5 | 04/11/13 14:03 |
| Xylenes (total) | ND | | 5.00 | 1.50 | µg/L | 5 | 04/11/13 14:03 |
| Surr: 1,2-Dichloroethane-d4 | 110 | | 75-130 | 0.80 | %REC | 5 | 04/11/13 14:03 |
| Surr: Toluene-d8 | 92 | | 75-125 | 0.50 | %REC | 5 | 04/11/13 14:03 |
| Surr: 4-Bromofluorobenzene | 116 | | 75-125 | 0.50 | %REC | 5 | 04/11/13 14:03 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 04/12/13 9:51 637404 **Project Supervisor:** Anthony Crescenzi

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5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900 StateCertNo: 10248

# Analytical Results

| | | | | | |
|---|---|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | | | **Lab ID:** | **K1304104-016A** |
| **Project:** | 189-02 | | | **Client Sample ID:** | ***189 - TRIP*** |
| **W Order:** | K1304104 | | | **Collection Date:** | 03/19/13 0:00 |
| **Matrix:** | WATER Q | | | **Date Received:** | 04/10/13 8:00 |
| **Inst. ID:** | MSK_75 | **Sample Size** | 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | | **BatchNo:** | R25516 |
| **Revision:** | 04/12/13 10:11 | **TestCode:** | 8260W_CAL | **FileID:** | 1-SAMP-K2287.D |
| **Col Type:** | | | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 1.00 | 0.20 | µg/L | 1 | 04/10/13 23:54 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 23:54 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 23:54 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 23:54 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 23:54 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 23:54 |
| 1,1-Dichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 23:54 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 23:54 |
| 1,2,3-Trichloropropane | ND | | 2.00 | 0.33 | µg/L | 1 | 04/10/13 23:54 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 0.10 | µg/L | 1 | 04/10/13 23:54 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 23:54 |
| 1,2-Dibromo-3-chloropropane | ND | | 5.00 | 1.00 | µg/L | 1 | 04/10/13 23:54 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 23:54 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 23:54 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 23:54 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 23:54 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 23:54 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 23:54 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 23:54 |
| 2-Butanone | ND | | 10.0 | 1.00 | µg/L | 1 | 04/10/13 23:54 |
| 2-Chloroethylvinyl ether | ND | | 5.00 | 2.50 | µg/L | 1 | 04/10/13 23:54 |
| 2-Hexanone | ND | | 5.00 | 1.00 | µg/L | 1 | 04/10/13 23:54 |
| 4-Chlorotoluene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 23:54 |
| 4-Methyl-2-pentanone | ND | | 5.00 | 1.00 | µg/L | 1 | 04/10/13 23:54 |
| Acetone | ND | | 10.0 | 1.00 | µg/L | 1 | 04/10/13 23:54 |
| Benzene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 23:54 |
| Bromobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 23:54 |
| Bromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 23:54 |
| Bromodichloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 23:54 |
| Bromoform | ND | | 1.00 | 0.33 | µg/L | 1 | 04/10/13 23:54 |
| Bromomethane | ND | | 1.00 | 0.33 | µg/L | 1 | 04/10/13 23:54 |
| Carbon disulfide | ND | | 0.50 | 0.11 | µg/L | 1 | 04/10/13 23:54 |
| Carbon tetrachloride | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 23:54 |
| Chlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 23:54 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

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East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1304104-016A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - TRIP*** |
| **W Order:** | K1304104 | **Collection Date:** | 03/19/13 0:00 |
| **Matrix:** | WATER Q | **Date Received:** | 04/10/13 8:00 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R25516 |
| **Revision:** | 04/12/13 10:11 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K2287.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | ND | | 1.00 | 0.33 | µg/L | 1 | 04/10/13 23:54 |
| Chloroform | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 23:54 |
| Chloromethane | ND | | 1.00 | 0.33 | µg/L | 1 | 04/10/13 23:54 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 23:54 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 23:54 |
| Cyclohexane | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 23:54 |
| Dibromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 23:54 |
| Dibromomethane | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 23:54 |
| Dichlorodifluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 04/10/13 23:54 |
| Ethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 23:54 |
| Hexachlorobutadiene | ND | | 1.00 | 0.10 | µg/L | 1 | 04/10/13 23:54 |
| Isopropylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 23:54 |
| Methyl tert-butyl ether | ND | | 1.00 | 0.16 | µg/L | 1 | 04/10/13 23:54 |
| Methylene chloride | 0.30 | J | 2.00 | 0.16 | µg/L | 1 | 04/10/13 23:54 |
| n-Propylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 23:54 |
| Naphthalene | ND | | 1.00 | 0.10 | µg/L | 1 | 04/10/13 23:54 |
| o-Xylene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 23:54 |
| p-Isopropyltoluene | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 23:54 |
| sec-Butylbenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 23:54 |
| Styrene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 23:54 |
| Tetrachloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 23:54 |
| Toluene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 23:54 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 23:54 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 04/10/13 23:54 |
| Trichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 04/10/13 23:54 |
| Trichlorofluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 04/10/13 23:54 |
| Vinyl acetate | ND | | 2.00 | 1.00 | µg/L | 1 | 04/10/13 23:54 |
| Vinyl chloride | ND | | 1.00 | 0.33 | µg/L | 1 | 04/10/13 23:54 |
| Xylenes (total) | ND | | 1.00 | 0.30 | µg/L | 1 | 04/10/13 23:54 |
| Surr: 1,2-Dichloroethane-d4 | 106 | | 75-130 | 0.16 | %REC | 1 | 04/10/13 23:54 |
| Surr: Toluene-d8 | 94 | | 75-125 | 0.10 | %REC | 1 | 04/10/13 23:54 |
| Surr: 4-Bromofluorobenzene | 116 | | 75-125 | 0.10 | %REC | 1 | 04/10/13 23:54 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 04/12/13 10:12 637393 **Project Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

**5854 Butternut Drive**
**East Syracuse, NY 13057** **(315) 445-1900**

## ANALYTICAL QC SUMMARY REPORT

**Method:** SW8260B
**Work Order:** K1304104
**Project:** 189-02

**CLIENT:** Ken W. Kloeber Consulting Engineers

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Sample ID: **MB-25516** | SampType: **MBLK** | TestCode: **8260W_CAL** | Units: **µg/L** | Prep Date: | | RunNo: | **25516** | | |
| Client ID: **ZZZZZ** | Batch ID: **R25516** | Method: **SW8260B** | | Analysis Date: | **4/10/2013** | SeqNo: | **637383** | | |
| Instrument: **MSK_75** | ColumnID: **Rtx-VMS** | | | | | | | | |

| Analyte | QC Sample Result | PQL | SPK Added | Parent Sample Result | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (m+p)-Xylene | ND | 1.00 | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 0.500 | | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 0.500 | | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 0.500 | | | | | | | | | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | 0.500 | | | | | | | | | |
| 1,1,2-Trichloroethane | ND | 0.500 | | | | | | | | | |
| 1,1-Dichloroethane | ND | 0.500 | | | | | | | | | |
| 1,1-Dichloroethene | ND | 0.500 | | | | | | | | | |
| 1,2,3-Trichloropropane | ND | 2.00 | | | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 1.00 | | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 0.500 | | | | | | | | | |
| 1,2-Dibromo-3-chloropropane | ND | 5.00 | | | | | | | | | |
| 1,2-Dibromoethane | ND | 0.500 | | | | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.500 | | | | | | | | | |
| 1,2-Dichloroethane | ND | 0.500 | | | | | | | | | |
| 1,2-Dichloropropane | ND | 0.500 | | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 0.500 | | | | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.500 | | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.500 | | | | | | | | | |
| 2-Butanone | ND | 10.0 | | | | | | | | | |
| 2-Chloroethylvinyl ether | ND | 5.00 | | | | | | | | | |
| 2-Hexanone | ND | 5.00 | | | | | | | | | |
| 4-Chlorotoluene | ND | 0.500 | | | | | | | | | |
| 4-Methyl-2-pentanone | ND | 5.00 | | | | | | | | | |
| Acetone | ND | 10.0 | | | | | | | | | |
| Benzene | ND | 0.500 | | | | | | | | | |
| Bromobenzene | ND | 0.500 | | | | | | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value exceeds the instrument calibration range | J | Analyte detected below the PQL |
| ND | Not Detected at the Practical Quantitation Limit (PQL) | R | RPD exceeds accepted precision limit | S | Spike Recovery outside accepted recovery limits |
| U | Not Detected at the MDC or RL | | | | |

**Date:** *12-Apr-13*

# Life Science Laboratories, Inc.

**5854 Butternut Drive**

**East Syracuse, NY 13057** **(315) 445-1900**


# ANALYTICAL QC SUMMARY REPORT

**Method:** SW8260B
**Work Order:** K1304104
**Project:** 189-02

**CLIENT:** Ken W. Kloeber Consulting Engineers

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | **MB-25516** | SampType: | **MBLK** | TestCode: | **8260W_CAL** | Units: | **µg/L** | Prep Date: | |
| Client ID: | **ZZZZZ** | Batch ID: | **R25516** | Method: | **SW8260B** | | | Analysis Date: | **4/10/2013** |
| Instrument: | **MSK_75** | ColumnID: | **Rtx-VMS** | | | | | | |

| Analyte | QC Sample Result | PQL | SPK Added | Parent Sample Result | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromochloromethane | ND | 0.500 | | | | | | | | | |
| Bromodichloromethane | ND | 0.500 | | | | | | | | | |
| Bromoform | ND | 1.00 | | | | | | | | | |
| Bromomethane | ND | 1.00 | | | | | | | | | |
| Carbon disulfide | ND | 0.500 | | | | | | | | | |
| Carbon tetrachloride | ND | 0.500 | | | | | | | | | |
| Chlorobenzene | ND | 0.500 | | | | | | | | | |
| Chloroethane | ND | 1.00 | | | | | | | | | |
| Chloroform | ND | 0.500 | | | | | | | | | |
| Chloromethane | ND | 1.00 | | | | | | | | | |
| cis-1,2-Dichloroethene | ND | 0.500 | | | | | | | | | |
| cis-1,3-Dichloropropene | ND | 0.500 | | | | | | | | | |
| Cyclohexane | ND | 0.500 | | | | | | | | | |
| Dibromochloromethane | ND | 0.500 | | | | | | | | | |
| Dibromomethane | ND | 0.500 | | | | | | | | | |
| Dichlorodifluoromethane | ND | 1.00 | | | | | | | | | |
| Ethylbenzene | ND | 0.500 | | | | | | | | | |
| Hexachlorobutadiene | ND | 1.00 | | | | | | | | | |
| Isopropylbenzene | ND | 0.500 | | | | | | | | | |
| Methyl tert-butyl ether | ND | 1.00 | | | | | | | | | |
| Methylene chloride | 0.250 | 2.00 | | | | | | | | | J |
| n-Propylbenzene | ND | 0.500 | | | | | | | | | |
| Naphthalene | ND | 1.00 | | | | | | | | | |
| o-Xylene | ND | 0.500 | | | | | | | | | |
| p-Isopropyltoluene | ND | 0.500 | | | | | | | | | |
| sec-Butylbenzene | ND | 0.500 | | | | | | | | | |
| Styrene | ND | 0.500 | | | | | | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value exceeds the instrument calibration range | J | Analyte detected below the PQL |
| ND | Not Detected at the Practical Quantitation Limit (PQL) | R | RPD exceeds accepted precision limit | S | Spike Recovery outside accepted recovery limits |
| U | Not Detected at the MDC or RL | | | | |

**Date:** *12-Apr-13*

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**5854 Butternut Drive**

**East Syracuse, NY 13057** **(315) 445-1900**


# ANALYTICAL QC SUMMARY REPORT

**Method:** SW8260B
**Work Order:** K1304104
**Project:** 189-02

**CLIENT:** Ken W. Kloeber Consulting Engineers

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Sample ID: **MB-25516** | SampType: **MBLK** | TestCode: **8260W_CAL** | Units: **µg/L** | | Prep Date: | | | RunNo: | **25516** |
| Client ID: **ZZZZZ** | Batch ID: **R25516** | Method: **SW8260B** | | | Analysis Date: **4/10/2013** | | | SeqNo: | **637383** |
| Instrument: **MSK_75** | ColumnID: **Rtx-VMS** | | | | | | | | |

| Analyte | QC Sample Result | PQL | SPK Added | Parent Sample Result | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | ND | 0.500 | | | | | | | | | |
| Toluene | ND | 0.500 | | | | | | | | | |
| trans-1,2-Dichloroethene | ND | 0.500 | | | | | | | | | |
| trans-1,3-Dichloropropene | ND | 0.500 | | | | | | | | | |
| Trichloroethene | ND | 0.500 | | | | | | | | | |
| Trichlorofluoromethane | ND | 1.00 | | | | | | | | | |
| Vinyl acetate | ND | 2.00 | | | | | | | | | |
| Vinyl chloride | ND | 1.00 | | | | | | | | | |
| Xylenes (total) | ND | 1.00 | | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.78 | 0.100 | 10 | 0 | 98 | 75 | 130 | | | | |
| Surr: Toluene-d8 | 9.81 | 0.100 | 10 | 0 | 98 | 75 | 125 | | | | |
| Surr: 4-Bromofluorobenzene | 11.6 | 0.100 | 10 | 0 | 116 | 75 | 125 | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value exceeds the instrument calibration range | J | Analyte detected below the PQL |
| ND | Not Detected at the Practical Quantitation Limit (PQL) | R | RPD exceeds accepted precision limit | S | Spike Recovery outside accepted recovery limits |
| U | Not Detected at the MDC or RL | | | | |

**Date:** *12-Apr-13*

# Life Science Laboratories, Inc.

**5854 Butternut Drive**

**East Syracuse, NY 13057** **(315) 445-1900**


# ANALYTICAL QC SUMMARY REPORT

**Method:** SW8260B
**Work Order:** K1304104
**Project:** 189-02

**CLIENT:** Ken W. Kloeber Consulting Engineers

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Sample ID: **MB-25517** | SampType: **MBLK** | TestCode: **8260W_CAL** | Units: **µg/L** | Prep Date: | | RunNo: | **25517** | | |
| Client ID: **ZZZZZ** | Batch ID: **R25517** | Method: **SW8260B** | | Analysis Date: | **4/11/2013** | SeqNo: | **637398** | | |
| Instrument: **MSK_75** | ColumnID: **Rtx-VMS** | | | | | | | | |

| Analyte | QC Sample Result | PQL | SPK Added | Parent Sample Result | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (m+p)-Xylene | ND | 1.00 | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 0.500 | | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 0.500 | | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 0.500 | | | | | | | | | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | 0.500 | | | | | | | | | |
| 1,1,2-Trichloroethane | ND | 0.500 | | | | | | | | | |
| 1,1-Dichloroethane | ND | 0.500 | | | | | | | | | |
| 1,1-Dichloroethene | ND | 0.500 | | | | | | | | | |
| 1,2,3-Trichloropropane | ND | 2.00 | | | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 1.00 | | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 0.500 | | | | | | | | | |
| 1,2-Dibromo-3-chloropropane | ND | 5.00 | | | | | | | | | |
| 1,2-Dibromoethane | ND | 0.500 | | | | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.500 | | | | | | | | | |
| 1,2-Dichloroethane | ND | 0.500 | | | | | | | | | |
| 1,2-Dichloropropane | ND | 0.500 | | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 0.500 | | | | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.500 | | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.500 | | | | | | | | | |
| 2-Butanone | ND | 10.0 | | | | | | | | | |
| 2-Chloroethylvinyl ether | ND | 5.00 | | | | | | | | | |
| 2-Hexanone | ND | 5.00 | | | | | | | | | |
| 4-Chlorotoluene | ND | 0.500 | | | | | | | | | |
| 4-Methyl-2-pentanone | ND | 5.00 | | | | | | | | | |
| Acetone | ND | 10.0 | | | | | | | | | |
| Benzene | ND | 0.500 | | | | | | | | | |
| Bromobenzene | ND | 0.500 | | | | | | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value exceeds the instrument calibration range | J | Analyte detected below the PQL |
| ND | Not Detected at the Practical Quantitation Limit (PQL) | R | RPD exceeds accepted precision limit | S | Spike Recovery outside accepted recovery limits |
| U | Not Detected at the MDC or RL | | | | |

**Date:** *12-Apr-13*

# Life Science Laboratories, Inc.

**5854 Butternut Drive**
**East Syracuse, NY 13057** **(315) 445-1900**

## ANALYTICAL QC SUMMARY REPORT

**Method:** SW8260B
**Work Order:** K1304104
**Project:** 189-02

**CLIENT:** Ken W. Kloeber Consulting Engineers

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | **MB-25517** | SampType: | **MBLK** | TestCode: | **8260W_CAL** | Units: | **µg/L** | Prep Date: | RunNo: **25517** |
| Client ID: | **ZZZZZ** | Batch ID: | **R25517** | Method: | **SW8260B** | | | Analysis Date: **4/11/2013** | SeqNo: **637398** |
| Instrument: | **MSK_75** | ColumnID: | **Rtx-VMS** | | | | | | |

| Analyte | QC Sample Result | PQL | SPK Added | Parent Sample Result | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromochloromethane | ND | 0.500 | | | | | | | | | |
| Bromodichloromethane | ND | 0.500 | | | | | | | | | |
| Bromoform | ND | 1.00 | | | | | | | | | |
| Bromomethane | ND | 1.00 | | | | | | | | | |
| Carbon disulfide | ND | 0.500 | | | | | | | | | |
| Carbon tetrachloride | ND | 0.500 | | | | | | | | | |
| Chlorobenzene | ND | 0.500 | | | | | | | | | |
| Chloroethane | ND | 1.00 | | | | | | | | | |
| Chloroform | ND | 0.500 | | | | | | | | | |
| Chloromethane | ND | 1.00 | | | | | | | | | |
| cis-1,2-Dichloroethene | ND | 0.500 | | | | | | | | | |
| cis-1,3-Dichloropropene | ND | 0.500 | | | | | | | | | |
| Cyclohexane | ND | 0.500 | | | | | | | | | |
| Dibromochloromethane | ND | 0.500 | | | | | | | | | |
| Dibromomethane | ND | 0.500 | | | | | | | | | |
| Dichlorodifluoromethane | ND | 1.00 | | | | | | | | | |
| Ethylbenzene | ND | 0.500 | | | | | | | | | |
| Hexachlorobutadiene | ND | 1.00 | | | | | | | | | |
| Isopropylbenzene | ND | 0.500 | | | | | | | | | |
| Methyl tert-butyl ether | ND | 1.00 | | | | | | | | | |
| Methylene chloride | 0.550 | 2.00 | | | | | | | | | J |
| n-Propylbenzene | ND | 0.500 | | | | | | | | | |
| Naphthalene | ND | 1.00 | | | | | | | | | |
| o-Xylene | ND | 0.500 | | | | | | | | | |
| p-Isopropyltoluene | ND | 0.500 | | | | | | | | | |
| sec-Butylbenzene | ND | 0.500 | | | | | | | | | |
| Styrene | ND | 0.500 | | | | | | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value exceeds the instrument calibration range | J | Analyte detected below the PQL |
| ND | Not Detected at the Practical Quantitation Limit (PQL) | R | RPD exceeds accepted precision limit | S | Spike Recovery outside accepted recovery limits |
| U | Not Detected at the MDC or RL | | | | |

**Date:** *12-Apr-13*

# Life Science Laboratories, Inc.

**5854 Butternut Drive**

**East Syracuse, NY 13057** **(315) 445-1900**


## ANALYTICAL QC SUMMARY REPORT

**Method:** SW8260B
**Work Order:** K1304104
**Project:** 189-02

**CLIENT:** Ken W. Kloeber Consulting Engineers

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID: **MB-25517** | SampType: **MBLK** | TestCode: **8260W_CAL** | Units: **µg/L** | | Prep Date: | | | | | RunNo: | **25517** | |
| Client ID: **ZZZZZ** | Batch ID: **R25517** | Method: **SW8260B** | | | Analysis Date: | **4/11/2013** | | | | SeqNo: | **637398** | |
| Instrument: **MSK_75** | ColumnID: **Rtx-VMS** | | | | | | | | | | | |

| Analyte | QC Sample Result | PQL | SPK Added | Parent Sample Result | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | ND | 0.500 | | | | | | | | | |
| Toluene | ND | 0.500 | | | | | | | | | |
| trans-1,2-Dichloroethene | ND | 0.500 | | | | | | | | | |
| trans-1,3-Dichloropropene | ND | 0.500 | | | | | | | | | |
| Trichloroethene | ND | 0.500 | | | | | | | | | |
| Trichlorofluoromethane | ND | 1.00 | | | | | | | | | |
| Vinyl acetate | ND | 2.00 | | | | | | | | | |
| Vinyl chloride | ND | 1.00 | | | | | | | | | |
| Xylenes (total) | ND | 1.00 | | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 10.2 | 0.100 | 10 | 0 | 102 | 75 | 130 | | | | |
| Surr: Toluene-d8 | 9.58 | 0.100 | 10 | 0 | 96 | 75 | 125 | | | | |
| Surr: 4-Bromofluorobenzene | 11.5 | 0.100 | 10 | 0 | 115 | 75 | 125 | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value exceeds the instrument calibration range | J | Analyte detected below the PQL |
| ND | Not Detected at the Practical Quantitation Limit (PQL) | R | RPD exceeds accepted precision limit | S | Spike Recovery outside accepted recovery limits |
| U | Not Detected at the MDC or RL | | | | |

**Date:** *12-Apr-13*

**Life Science Laboratories, Inc.**
**5854 Butternut Drive**
**East Syracuse, NY 13057** **(315) 445-1900**

Monday, December 31, 2012

Ken W. Kloeber
Ken W. Kloeber Consulting Engineers
PO Box 140
Boston, NY 14025

TEL: (716) 864-0012

Project: 189-02
RE: Analytical Results Order No.: K1212218

Dear Ken W. Kloeber:

Life Science Laboratories, Inc. received 16 sample(s) on 12/19/2012 for the analyses presented in the following report. Sample results relate only to the samples as received by the laboratory.

Very truly yours,
Life Science Laboratories, Inc.

Anthony Crescenzi
Project Manager

## Life Science Laboratories, Inc.

### Sample Receipt Checklist

Client Name: **KLOEBERENG**

Date and Time Received: **12/19/2012 8:05:00 AM**

Work Order Number: **K1212218**

Received by: gis

Checklist completed by: GS 12-18-12 (Initials / Date)

Reviewed by: AL 12-19-12 (Initials / Date)

Delivery Method: FedEx

| | | | |
|---|---|---|---|
| Shipping container/cooler in good condition? | Yes ☑ | No ☐ | Not Present ☐ |
| Custody seals intact on shipping container/cooler? | Yes ☐ | No ☐ | Not Present ☑ |
| Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Applicable ☑ |
| Chain of custody present? | Yes ☑ | No ☐ | |
| Chain of custody signed when relinquished and received? | Yes ☑ | No ☐ | |
| Chain of custody agrees with sample labels? | Yes ☑ | No ☐ | |
| Samples in proper container/bottle? | Yes ☑ | No ☐ | |
| Sample containers intact? | Yes ☑ | No ☐ | |
| Sufficient sample volume for indicated test? | Yes ☑ | No ☐ | |
| All samples received within holding time? | Yes ☑ | No ☐ | |
| Container/Temp Blank temperature in compliance? | Yes ☑ | No ☐ | |
| Water - VOA vials have zero headspace? | Yes ☑ | No ☐ | No VOA vials submitted ☐ |
| Water - pH acceptable upon receipt? | Yes ☐ | No ☐ | Not Applicable ☑ |

Comments:

Corrective Action:

K1212218

# Ken W. Kloeber Consulting Engineers

(716) 864-0012 tel
(775) 860-3804 fax
KloeberEng@aol.com
PO Box 140 • Boston NY 14025

KWKCE Proj no. 189-02
PO no.
Sampled by initials: KK

For Lab use

## Environmental Sample Chain-of-Custody

| | KWKCE Sample ID or Location | Date | Time | Type | Matrix | No. of containers | (1) 8260 | (2) | (3) | (4) | (5) | (6) | TAT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 001 | 189-W1 | 12-17 | 1610 | G C | GW | 2 | X | | | | | | |
| 002 | 189-W2 | 12-17 | 1555 | G C | | | | | | | | | |
| 003 | 189-W3 | 12-17 | 1630 | G C | | | | | | | | | |
| 004 | 189-W4 | 12/18 | 1700 | G C | | | | | | | | | |
| 005 | 189-W5 | 12/18 | 1630 | G C | | | | | | | | | |
| 006 | 189-W6 | 12/18 | 1720 | G C | | | | | | | | | |
| 007 | 189-W7 | 12/18 | 1710 | G C | | | | | | | | | |
| 008 | 189-W8 | 12-18 | 1500 | G C | | | | | | | | | |
| 009 | 189-W9 | 12-17 | 1530 | G C | | | | | | | | | |
| 010 | 189-W10 | 12/18 | 1530 | G C | | | | | | | | | |
| 011 | 189-W11 | 12/18 | 1545 | G C | | | | | | | | | |
| 012 | 189-W12 | 12/18 | 1600 | G C | | | | | | | | | |
| 013 | 189-W13 | 12/18 | 1640 | G C | | | | | | | | | |
| 014 | 189-W14 | 12/18 | 1700 | G C | | | | | | | | | |
| 015 | 189-WBL | 12/18 | 1200 | G C | | | | | | | | | |
| | 189-TRIP BLANK | | | G C | | | | | | | | | |
| 016 | 189-TRIP | 12-17 | | G C | | | | | | | | | |

Remarks / Instructions:

KEEP LIMITS AS LOW AS POSSIBLE; REPORT ALL RESULTS AND QC VALUES (QS, JS, ETC.) AND ALL DATA & QC QUALIFIERS.

EMAIL REPORT & INVOICE; FOLLOW UP W/ EQUIS EDD.

EQUIS EDD

USE EXPANDED LIST FOR 8260 **

| | Courier | Picked-up or dropped-off location |
|---|---|---|
| Signature of person sampling | FEDEX 6 | Waldon |
| Relinquished-by signature | Date: 12/18 Time: 1800 | Received-by signature |
| Relinquished-by signature | Date: 12-19-12 Time: 0805 | Received-by signature: 5.0°C on ice via FedEx |
| Relinquished-by signature | Date Time | Received-at-Lab-by signature |

| Analysis requested above / Test Method | Sample Container(s) Type | Size | Preservative(s) |
|---|---|---|---|
| (1) EPA 8260 ** | VOA | 40 | HCl 40 |
| (2) | | | |
| (3) | | | |
| (4) | | | |
| (5) | | | |
| (6) | | | |

Lab use

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1212218-015A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 -WBL* |
| **W Order:** | K1212218 | **Collection Date:** | 12/18/12 12:00 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 12/19/12 8:05 |
| **Inst. ID:** | MS01_11 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R25031 |
| **Revision:** | 12/27/12 14:09 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-T5169.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 1.00 | 0.20 | µg/L | 1 | 12/27/12 11:22 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/27/12 11:22 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/27/12 11:22 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/27/12 11:22 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/27/12 11:22 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/27/12 11:22 |
| 1,1-Dichloroethane | 0.21 | J | 0.50 | 0.10 | µg/L | 1 | 12/27/12 11:22 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/27/12 11:22 |
| 1,2,3-Trichloropropane | ND | | 2.00 | 0.33 | µg/L | 1 | 12/27/12 11:22 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 0.10 | µg/L | 1 | 12/27/12 11:22 |
| 1,2,4-Trimethylbenzene | 0.11 | J | 0.50 | 0.10 | µg/L | 1 | 12/27/12 11:22 |
| 1,2-Dibromo-3-chloropropane | ND | | 5.00 | 1.00 | µg/L | 1 | 12/27/12 11:22 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/27/12 11:22 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/27/12 11:22 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/27/12 11:22 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/27/12 11:22 |
| 1,3,5-Trimethylbenzene | 0.34 | J | 0.50 | 0.10 | µg/L | 1 | 12/27/12 11:22 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/27/12 11:22 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/27/12 11:22 |
| 2-Butanone | ND | | 10.0 | 1.00 | µg/L | 1 | 12/27/12 11:22 |
| 2-Chloroethylvinyl ether | ND | | 5.00 | 2.50 | µg/L | 1 | 12/27/12 11:22 |
| 2-Hexanone | ND | | 5.00 | 1.00 | µg/L | 1 | 12/27/12 11:22 |
| 4-Chlorotoluene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/27/12 11:22 |
| 4-Methyl-2-pentanone | ND | | 5.00 | 1.00 | µg/L | 1 | 12/27/12 11:22 |
| Acetone | ND | | 10.0 | 1.00 | µg/L | 1 | 12/27/12 11:22 |
| Benzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/27/12 11:22 |
| Bromobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/27/12 11:22 |
| Bromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/27/12 11:22 |
| Bromodichloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/27/12 11:22 |
| Bromoform | ND | | 1.00 | 0.33 | µg/L | 1 | 12/27/12 11:22 |
| Bromomethane | ND | | 1.00 | 0.33 | µg/L | 1 | 12/27/12 11:22 |
| Carbon disulfide | ND | | 0.50 | 0.11 | µg/L | 1 | 12/27/12 11:22 |
| Carbon tetrachloride | ND | | 0.50 | 0.10 | µg/L | 1 | 12/27/12 11:22 |
| Chlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/27/12 11:22 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 12/27/12 14:11 626564 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1212218-015A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 -WBL*** |
| **W Order:** | K1212218 | **Collection Date:** | 12/18/12 12:00 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 12/19/12 8:05 |
| **Inst. ID:** | MS01_11 **Sample Size** 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS **%Moisture:** | **BatchNo:** | R25031 |
| **Revision:** | 12/27/12 14:09 **TestCode:** 8260W_CAL | **FileID:** | 1-SAMP-T5169.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | ND | | 1.00 | 0.33 | µg/L | 1 | 12/27/12 11:22 |
| Chloroform | ND | | 0.50 | 0.10 | µg/L | 1 | 12/27/12 11:22 |
| Chloromethane | ND | | 1.00 | 0.33 | µg/L | 1 | 12/27/12 11:22 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/27/12 11:22 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/27/12 11:22 |
| Cyclohexane | 0.61 | | 0.50 | 0.10 | µg/L | 1 | 12/27/12 11:22 |
| Dibromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/27/12 11:22 |
| Dibromomethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/27/12 11:22 |
| Dichlorodifluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 12/27/12 11:22 |
| Ethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/27/12 11:22 |
| Hexachlorobutadiene | ND | | 1.00 | 0.10 | µg/L | 1 | 12/27/12 11:22 |
| Isopropylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/27/12 11:22 |
| Methyl tert-butyl ether | ND | | 1.00 | 0.16 | µg/L | 1 | 12/27/12 11:22 |
| Methylene chloride | ND | | 2.00 | 0.16 | µg/L | 1 | 12/27/12 11:22 |
| n-Propylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/27/12 11:22 |
| Naphthalene | ND | | 1.00 | 0.10 | µg/L | 1 | 12/27/12 11:22 |
| o-Xylene | 0.16 | J | 0.50 | 0.10 | µg/L | 1 | 12/27/12 11:22 |
| p-Isopropyltoluene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/27/12 11:22 |
| sec-Butylbenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/27/12 11:22 |
| Styrene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/27/12 11:22 |
| Tetrachloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/27/12 11:22 |
| Toluene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/27/12 11:22 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/27/12 11:22 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/27/12 11:22 |
| Trichloroethene | 0.62 | | 0.50 | 0.10 | µg/L | 1 | 12/27/12 11:22 |
| Trichlorofluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 12/27/12 11:22 |
| Vinyl acetate | ND | | 2.00 | 1.00 | µg/L | 1 | 12/27/12 11:22 |
| Vinyl chloride | ND | | 1.00 | 0.33 | µg/L | 1 | 12/27/12 11:22 |
| Xylenes (total) | ND | | 1.00 | 0.30 | µg/L | 1 | 12/27/12 11:22 |
| Surr: 1,2-Dichloroethane-d4 | 115 | | 75-130 | 0.16 | %REC | 1 | 12/27/12 11:22 |
| Surr: Toluene-d8 | 108 | | 75-125 | 0.10 | %REC | 1 | 12/27/12 11:22 |
| Surr: 4-Bromofluorobenzene | 106 | | 75-125 | 0.10 | %REC | 1 | 12/27/12 11:22 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 12/27/12 14:11 626564 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1212218-016A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - TRIP*** |
| **W Order:** | K1212218 | **Collection Date:** | 12/17/12 0:00 |
| **Matrix:** | WATER Q | **Date Received:** | 12/19/12 8:05 |
| **Inst. ID:** | MS01_11 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R25019 |
| **Revision:** | 12/27/12 10:50 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-T5086.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 1.00 | 0.20 | µg/L | 1 | 12/19/12 20:54 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/19/12 20:54 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/19/12 20:54 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/19/12 20:54 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/19/12 20:54 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/19/12 20:54 |
| 1,1-Dichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/19/12 20:54 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/19/12 20:54 |
| 1,2,3-Trichloropropane | ND | | 2.00 | 0.33 | µg/L | 1 | 12/19/12 20:54 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 0.10 | µg/L | 1 | 12/19/12 20:54 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/19/12 20:54 |
| 1,2-Dibromo-3-chloropropane | ND | | 5.00 | 1.00 | µg/L | 1 | 12/19/12 20:54 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/19/12 20:54 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/19/12 20:54 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/19/12 20:54 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/19/12 20:54 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/19/12 20:54 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/19/12 20:54 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/19/12 20:54 |
| 2-Butanone | ND | | 10.0 | 1.00 | µg/L | 1 | 12/19/12 20:54 |
| 2-Chloroethylvinyl ether | ND | | 5.00 | 2.50 | µg/L | 1 | 12/19/12 20:54 |
| 2-Hexanone | ND | | 5.00 | 1.00 | µg/L | 1 | 12/19/12 20:54 |
| 4-Chlorotoluene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/19/12 20:54 |
| 4-Methyl-2-pentanone | ND | | 5.00 | 1.00 | µg/L | 1 | 12/19/12 20:54 |
| Acetone | ND | | 10.0 | 1.00 | µg/L | 1 | 12/19/12 20:54 |
| Benzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/19/12 20:54 |
| Bromobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/19/12 20:54 |
| Bromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/19/12 20:54 |
| Bromodichloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/19/12 20:54 |
| Bromoform | ND | | 1.00 | 0.33 | µg/L | 1 | 12/19/12 20:54 |
| Bromomethane | ND | | 1.00 | 0.33 | µg/L | 1 | 12/19/12 20:54 |
| Carbon disulfide | ND | | 0.50 | 0.11 | µg/L | 1 | 12/19/12 20:54 |
| Carbon tetrachloride | ND | | 0.50 | 0.10 | µg/L | 1 | 12/19/12 20:54 |
| Chlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/19/12 20:54 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1212218-016A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - TRIP* |
| **W Order:** | K1212218 | **Collection Date:** | 12/17/12 0:00 |
| **Matrix:** | WATER Q | **Date Received:** | 12/19/12 8:05 |
| **Inst. ID:** | MS01_11 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R25019 |
| **Revision:** | 12/27/12 10:50 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-T5086.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | ND | | 1.00 | 0.33 | µg/L | 1 | 12/19/12 20:54 |
| Chloroform | ND | | 0.50 | 0.10 | µg/L | 1 | 12/19/12 20:54 |
| Chloromethane | ND | | 1.00 | 0.33 | µg/L | 1 | 12/19/12 20:54 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/19/12 20:54 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/19/12 20:54 |
| Cyclohexane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/19/12 20:54 |
| Dibromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/19/12 20:54 |
| Dibromomethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/19/12 20:54 |
| Dichlorodifluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 12/19/12 20:54 |
| Ethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/19/12 20:54 |
| Hexachlorobutadiene | ND | | 1.00 | 0.10 | µg/L | 1 | 12/19/12 20:54 |
| Isopropylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/19/12 20:54 |
| Methyl tert-butyl ether | ND | | 1.00 | 0.16 | µg/L | 1 | 12/19/12 20:54 |
| Methylene chloride | 0.45 | J | 2.00 | 0.16 | µg/L | 1 | 12/19/12 20:54 |
| n-Propylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/19/12 20:54 |
| Naphthalene | ND | | 1.00 | 0.10 | µg/L | 1 | 12/19/12 20:54 |
| o-Xylene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/19/12 20:54 |
| p-Isopropyltoluene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/19/12 20:54 |
| sec-Butylbenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/19/12 20:54 |
| Styrene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/19/12 20:54 |
| Tetrachloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/19/12 20:54 |
| Toluene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/19/12 20:54 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/19/12 20:54 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/19/12 20:54 |
| Trichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/19/12 20:54 |
| Trichlorofluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 12/19/12 20:54 |
| Vinyl acetate | ND | | 2.00 | 1.00 | µg/L | 1 | 12/19/12 20:54 |
| Vinyl chloride | ND | | 1.00 | 0.33 | µg/L | 1 | 12/19/12 20:54 |
| Xylenes (total) | ND | | 1.00 | 0.30 | µg/L | 1 | 12/19/12 20:54 |
| Surr: 1,2-Dichloroethane-d4 | 113 | | 75-130 | 0.16 | %REC | 1 | 12/19/12 20:54 |
| Surr: Toluene-d8 | 109 | | 75-125 | 0.10 | %REC | 1 | 12/19/12 20:54 |
| Surr: 4-Bromofluorobenzene | 102 | | 75-125 | 0.10 | %REC | 1 | 12/19/12 20:54 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 12/27/12 14:11 626417 **roject Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

**CLIENT** Ken W. Kloeber Consulting Engineers
**Project:** 189-02
**W Order:** K1212218
**Matrix:** GROUNDWATER
**Inst. ID:** MS01_11 **Sample Size** 10 mL
**ColumnID:** Rtx-VMS **%Moisture:**
**Revision:** 12/26/12 12:02 **TestCode:** 8260W_CAL
**Col Type:** TOTAL 4266

**Lab ID:** K1212218-001A
**Client Sample ID:** *189 - W1*
**Collection Date:** 12/17/12 16:10
**Date Received:** 12/19/12 8:05
**PrepDate:**
**BatchNo:** R25020
**FileID:** 1-SAMP-T5106.D

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 50.0 | 10.0 | µg/L | 50 | 12/20/12 13:23 |
| 1,1,1,2-Tetrachloroethane | ND | | 25.0 | 8.00 | µg/L | 50 | 12/20/12 13:23 |
| 1,1,1-Trichloroethane | 970 | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 13:23 |
| 1,1,2,2-Tetrachloroethane | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 13:23 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 5.00 | J | 25.0 | 5.00 | µg/L | 50 | 12/20/12 13:23 |
| 1,1,2-Trichloroethane | ND | | 25.0 | 8.00 | µg/L | 50 | 12/20/12 13:23 |
| 1,1-Dichloroethane | 2290 | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 13:23 |
| 1,1-Dichloroethene | 29.0 | | 25.0 | 8.00 | µg/L | 50 | 12/20/12 13:23 |
| 1,2,3-Trichloropropane | ND | | 100 | 16.5 | µg/L | 50 | 12/20/12 13:23 |
| 1,2,4-Trichlorobenzene | ND | | 50.0 | 5.00 | µg/L | 50 | 12/20/12 13:23 |
| 1,2,4-Trimethylbenzene | 43.5 | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 13:23 |
| 1,2-Dibromo-3-chloropropane | ND | | 250 | 50.0 | µg/L | 50 | 12/20/12 13:23 |
| 1,2-Dibromoethane | ND | | 25.0 | 8.00 | µg/L | 50 | 12/20/12 13:23 |
| 1,2-Dichlorobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 13:23 |
| 1,2-Dichloroethane | ND | | 25.0 | 8.00 | µg/L | 50 | 12/20/12 13:23 |
| 1,2-Dichloropropane | ND | | 25.0 | 8.00 | µg/L | 50 | 12/20/12 13:23 |
| 1,3,5-Trimethylbenzene | 11.0 | J | 25.0 | 5.00 | µg/L | 50 | 12/20/12 13:23 |
| 1,3-Dichlorobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 13:23 |
| 1,4-Dichlorobenzene | ND | | 25.0 | 8.00 | µg/L | 50 | 12/20/12 13:23 |
| 2-Butanone | ND | | 500 | 50.0 | µg/L | 50 | 12/20/12 13:23 |
| 2-Chloroethylvinyl ether | ND | | 250 | 125 | µg/L | 50 | 12/20/12 13:23 |
| 2-Hexanone | ND | | 250 | 50.0 | µg/L | 50 | 12/20/12 13:23 |
| 4-Chlorotoluene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 13:23 |
| 4-Methyl-2-pentanone | ND | | 250 | 50.0 | µg/L | 50 | 12/20/12 13:23 |
| Acetone | ND | | 500 | 50.0 | µg/L | 50 | 12/20/12 13:23 |
| Benzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 13:23 |
| Bromobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 13:23 |
| Bromochloromethane | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 13:23 |
| Bromodichloromethane | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 13:23 |
| Bromoform | ND | | 50.0 | 16.5 | µg/L | 50 | 12/20/12 13:23 |
| Bromomethane | ND | | 50.0 | 16.5 | µg/L | 50 | 12/20/12 13:23 |
| Carbon disulfide | ND | | 25.0 | 5.50 | µg/L | 50 | 12/20/12 13:23 |
| Carbon tetrachloride | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 13:23 |
| Chlorobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 13:23 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 12/27/12 14:11 626382 **roject Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1212218-001A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W1*** |
| **W Order:** | K1212218 | **Collection Date:** | 12/17/12 16:10 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 12/19/12 8:05 |
| **Inst. ID:** | MS01_11 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R25020 |
| **Revision:** | 12/26/12 12:02 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-T5106.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | 49.5 | J | 50.0 | 16.5 | µg/L | 50 | 12/20/12 13:23 |
| Chloroform | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 13:23 |
| Chloromethane | ND | | 50.0 | 16.5 | µg/L | 50 | 12/20/12 13:23 |
| cis-1,2-Dichloroethene | 482 | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 13:23 |
| cis-1,3-Dichloropropene | ND | | 25.0 | 8.00 | µg/L | 50 | 12/20/12 13:23 |
| Cyclohexane | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 13:23 |
| Dibromochloromethane | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 13:23 |
| Dibromomethane | ND | | 25.0 | 8.00 | µg/L | 50 | 12/20/12 13:23 |
| Dichlorodifluoromethane | ND | | 50.0 | 5.00 | µg/L | 50 | 12/20/12 13:23 |
| Ethylbenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 13:23 |
| Hexachlorobutadiene | ND | | 50.0 | 5.00 | µg/L | 50 | 12/20/12 13:23 |
| Isopropylbenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 13:23 |
| Methyl tert-butyl ether | ND | | 50.0 | 8.00 | µg/L | 50 | 12/20/12 13:23 |
| Methylene chloride | 21.0 | J | 100 | 8.00 | µg/L | 50 | 12/20/12 13:23 |
| n-Propylbenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 13:23 |
| Naphthalene | ND | | 50.0 | 5.00 | µg/L | 50 | 12/20/12 13:23 |
| o-Xylene | 5.00 | J | 25.0 | 5.00 | µg/L | 50 | 12/20/12 13:23 |
| p-Isopropyltoluene | ND | | 25.0 | 8.00 | µg/L | 50 | 12/20/12 13:23 |
| sec-Butylbenzene | ND | | 25.0 | 8.00 | µg/L | 50 | 12/20/12 13:23 |
| Styrene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 13:23 |
| Tetrachloroethene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 13:23 |
| Toluene | 5.00 | J | 25.0 | 5.00 | µg/L | 50 | 12/20/12 13:23 |
| trans-1,2-Dichloroethene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 13:23 |
| trans-1,3-Dichloropropene | ND | | 25.0 | 8.00 | µg/L | 50 | 12/20/12 13:23 |
| Trichloroethene | 37.0 | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 13:23 |
| Trichlorofluoromethane | ND | | 50.0 | 5.00 | µg/L | 50 | 12/20/12 13:23 |
| Vinyl acetate | ND | | 100 | 50.0 | µg/L | 50 | 12/20/12 13:23 |
| Vinyl chloride | 318 | | 50.0 | 16.5 | µg/L | 50 | 12/20/12 13:23 |
| Xylenes (total) | ND | | 50.0 | 15.0 | µg/L | 50 | 12/20/12 13:23 |
| Surr: 1,2-Dichloroethane-d4 | 116 | | 75-130 | 8.00 | %REC | 50 | 12/20/12 13:23 |
| Surr: Toluene-d8 | 106 | | 75-125 | 5.00 | %REC | 50 | 12/20/12 13:23 |
| Surr: 4-Bromofluorobenzene | 98 | | 75-125 | 5.00 | %REC | 50 | 12/20/12 13:23 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 12/27/12 14:11 626382 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1212218-002A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W2* |
| **W Order:** | K1212218 | **Collection Date:** | 12/17/12 15:55 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 12/19/12 8:05 |
| **Inst. ID:** | MS01_11 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R25020 |
| **Revision:** | 12/26/12 12:02 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-T5107.D |
| **Col Type:** | TOTAL 873.4 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 20.0 | 4.00 | µg/L | 20 | 12/20/12 13:54 |
| 1,1,1,2-Tetrachloroethane | ND | | 10.0 | 3.20 | µg/L | 20 | 12/20/12 13:54 |
| 1,1,1-Trichloroethane | 162 | | 10.0 | 2.00 | µg/L | 20 | 12/20/12 13:54 |
| 1,1,2,2-Tetrachloroethane | ND | | 10.0 | 2.00 | µg/L | 20 | 12/20/12 13:54 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 10.0 | 2.00 | µg/L | 20 | 12/20/12 13:54 |
| 1,1,2-Trichloroethane | ND | | 10.0 | 3.20 | µg/L | 20 | 12/20/12 13:54 |
| 1,1-Dichloroethane | 363 | | 10.0 | 2.00 | µg/L | 20 | 12/20/12 13:54 |
| 1,1-Dichloroethene | 3.60 J | | 10.0 | 3.20 | µg/L | 20 | 12/20/12 13:54 |
| 1,2,3-Trichloropropane | ND | | 40.0 | 6.60 | µg/L | 20 | 12/20/12 13:54 |
| 1,2,4-Trichlorobenzene | ND | | 20.0 | 2.00 | µg/L | 20 | 12/20/12 13:54 |
| 1,2,4-Trimethylbenzene | 5.80 J | | 10.0 | 2.00 | µg/L | 20 | 12/20/12 13:54 |
| 1,2-Dibromo-3-chloropropane | ND | | 100 | 20.0 | µg/L | 20 | 12/20/12 13:54 |
| 1,2-Dibromoethane | ND | | 10.0 | 3.20 | µg/L | 20 | 12/20/12 13:54 |
| 1,2-Dichlorobenzene | ND | | 10.0 | 2.00 | µg/L | 20 | 12/20/12 13:54 |
| 1,2-Dichloroethane | 4.40 J | | 10.0 | 3.20 | µg/L | 20 | 12/20/12 13:54 |
| 1,2-Dichloropropane | ND | | 10.0 | 3.20 | µg/L | 20 | 12/20/12 13:54 |
| 1,3,5-Trimethylbenzene | ND | | 10.0 | 2.00 | µg/L | 20 | 12/20/12 13:54 |
| 1,3-Dichlorobenzene | ND | | 10.0 | 2.00 | µg/L | 20 | 12/20/12 13:54 |
| 1,4-Dichlorobenzene | ND | | 10.0 | 3.20 | µg/L | 20 | 12/20/12 13:54 |
| 2-Butanone | ND | | 200 | 20.0 | µg/L | 20 | 12/20/12 13:54 |
| 2-Chloroethylvinyl ether | ND | | 100 | 50.0 | µg/L | 20 | 12/20/12 13:54 |
| 2-Hexanone | ND | | 100 | 20.0 | µg/L | 20 | 12/20/12 13:54 |
| 4-Chlorotoluene | ND | | 10.0 | 2.00 | µg/L | 20 | 12/20/12 13:54 |
| 4-Methyl-2-pentanone | ND | | 100 | 20.0 | µg/L | 20 | 12/20/12 13:54 |
| Acetone | ND | | 200 | 20.0 | µg/L | 20 | 12/20/12 13:54 |
| Benzene | ND | | 10.0 | 2.00 | µg/L | 20 | 12/20/12 13:54 |
| Bromobenzene | ND | | 10.0 | 2.00 | µg/L | 20 | 12/20/12 13:54 |
| Bromochloromethane | ND | | 10.0 | 2.00 | µg/L | 20 | 12/20/12 13:54 |
| Bromodichloromethane | ND | | 10.0 | 2.00 | µg/L | 20 | 12/20/12 13:54 |
| Bromoform | ND | | 20.0 | 6.60 | µg/L | 20 | 12/20/12 13:54 |
| Bromomethane | ND | | 20.0 | 6.60 | µg/L | 20 | 12/20/12 13:54 |
| Carbon disulfide | ND | | 10.0 | 2.20 | µg/L | 20 | 12/20/12 13:54 |
| Carbon tetrachloride | ND | | 10.0 | 2.00 | µg/L | 20 | 12/20/12 13:54 |
| Chlorobenzene | ND | | 10.0 | 2.00 | µg/L | 20 | 12/20/12 13:54 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 12/27/12 14:11 626383 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1212218-002A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W2*** |
| **W Order:** | K1212218 | **Collection Date:** | 12/17/12 15:55 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 12/19/12 8:05 |
| **Inst. ID:** | MS01_11 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R25020 |
| **Revision:** | 12/26/12 12:02 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-T5107.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | ND | | 20.0 | 6.60 | µg/L | 20 | 12/20/12 13:54 |
| Chloroform | ND | | 10.0 | 2.00 | µg/L | 20 | 12/20/12 13:54 |
| Chloromethane | ND | | 20.0 | 6.60 | µg/L | 20 | 12/20/12 13:54 |
| cis-1,2-Dichloroethene | 294 | | 10.0 | 2.00 | µg/L | 20 | 12/20/12 13:54 |
| cis-1,3-Dichloropropene | ND | | 10.0 | 3.20 | µg/L | 20 | 12/20/12 13:54 |
| Cyclohexane | ND | | 10.0 | 2.00 | µg/L | 20 | 12/20/12 13:54 |
| Dibromochloromethane | ND | | 10.0 | 2.00 | µg/L | 20 | 12/20/12 13:54 |
| Dibromomethane | ND | | 10.0 | 3.20 | µg/L | 20 | 12/20/12 13:54 |
| Dichlorodifluoromethane | ND | | 20.0 | 2.00 | µg/L | 20 | 12/20/12 13:54 |
| Ethylbenzene | ND | | 10.0 | 2.00 | µg/L | 20 | 12/20/12 13:54 |
| Hexachlorobutadiene | ND | | 20.0 | 2.00 | µg/L | 20 | 12/20/12 13:54 |
| Isopropylbenzene | ND | | 10.0 | 2.00 | µg/L | 20 | 12/20/12 13:54 |
| Methyl tert-butyl ether | ND | | 20.0 | 3.20 | µg/L | 20 | 12/20/12 13:54 |
| Methylene chloride | 8.20 | J | 40.0 | 3.20 | µg/L | 20 | 12/20/12 13:54 |
| n-Propylbenzene | ND | | 10.0 | 2.00 | µg/L | 20 | 12/20/12 13:54 |
| Naphthalene | ND | | 20.0 | 2.00 | µg/L | 20 | 12/20/12 13:54 |
| o-Xylene | ND | | 10.0 | 2.00 | µg/L | 20 | 12/20/12 13:54 |
| p-Isopropyltoluene | ND | | 10.0 | 3.20 | µg/L | 20 | 12/20/12 13:54 |
| sec-Butylbenzene | ND | | 10.0 | 3.20 | µg/L | 20 | 12/20/12 13:54 |
| Styrene | ND | | 10.0 | 2.00 | µg/L | 20 | 12/20/12 13:54 |
| Tetrachloroethene | ND | | 10.0 | 2.00 | µg/L | 20 | 12/20/12 13:54 |
| Toluene | ND | | 10.0 | 2.00 | µg/L | 20 | 12/20/12 13:54 |
| trans-1,2-Dichloroethene | ND | | 10.0 | 2.00 | µg/L | 20 | 12/20/12 13:54 |
| trans-1,3-Dichloropropene | ND | | 10.0 | 3.20 | µg/L | 20 | 12/20/12 13:54 |
| Trichloroethene | 8.00 | J | 10.0 | 2.00 | µg/L | 20 | 12/20/12 13:54 |
| Trichlorofluoromethane | ND | | 20.0 | 2.00 | µg/L | 20 | 12/20/12 13:54 |
| Vinyl acetate | ND | | 40.0 | 20.0 | µg/L | 20 | 12/20/12 13:54 |
| Vinyl chloride | 24.4 | | 20.0 | 6.60 | µg/L | 20 | 12/20/12 13:54 |
| Xylenes (total) | ND | | 20.0 | 6.00 | µg/L | 20 | 12/20/12 13:54 |
| Surr: 1,2-Dichloroethane-d4 | 117 | | 75-130 | 3.20 | %REC | 20 | 12/20/12 13:54 |
| Surr: Toluene-d8 | 106 | | 75-125 | 2.00 | %REC | 20 | 12/20/12 13:54 |
| Surr: 4-Bromofluorobenzene | 102 | | 75-125 | 2.00 | %REC | 20 | 12/20/12 13:54 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 12/27/12 14:11 626383 **roject Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1212218-003A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W3* |
| **W Order:** | K1212218 | **Collection Date:** | 12/17/12 16:30 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 12/19/12 8:05 |
| **Inst. ID:** | MS01_11 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R25020 |
| **Revision:** | 12/26/12 12:02 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-T5104.D |
| **Col Type:** | TOTAL 215.66 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | 0.78 | J | 2.00 | 0.40 | µg/L | 2 | 12/20/12 12:20 |
| 1,1,1,2-Tetrachloroethane | ND | | 1.00 | 0.32 | µg/L | 2 | 12/20/12 12:20 |
| 1,1,1-Trichloroethane | 41.4 | | 1.00 | 0.20 | µg/L | 2 | 12/20/12 12:20 |
| 1,1,2,2-Tetrachloroethane | ND | | 1.00 | 0.20 | µg/L | 2 | 12/20/12 12:20 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 3.52 | | 1.00 | 0.20 | µg/L | 2 | 12/20/12 12:20 |
| 1,1,2-Trichloroethane | ND | | 1.00 | 0.32 | µg/L | 2 | 12/20/12 12:20 |
| 1,1-Dichloroethane | 86.4 | | 1.00 | 0.20 | µg/L | 2 | 12/20/12 12:20 |
| 1,1-Dichloroethene | 0.64 | J | 1.00 | 0.32 | µg/L | 2 | 12/20/12 12:20 |
| 1,2,3-Trichloropropane | ND | | 4.00 | 0.66 | µg/L | 2 | 12/20/12 12:20 |
| 1,2,4-Trichlorobenzene | ND | | 2.00 | 0.20 | µg/L | 2 | 12/20/12 12:20 |
| 1,2,4-Trimethylbenzene | 19.6 | | 1.00 | 0.20 | µg/L | 2 | 12/20/12 12:20 |
| 1,2-Dibromo-3-chloropropane | ND | | 10.0 | 2.00 | µg/L | 2 | 12/20/12 12:20 |
| 1,2-Dibromoethane | ND | | 1.00 | 0.32 | µg/L | 2 | 12/20/12 12:20 |
| 1,2-Dichlorobenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 12/20/12 12:20 |
| 1,2-Dichloroethane | ND | | 1.00 | 0.32 | µg/L | 2 | 12/20/12 12:20 |
| 1,2-Dichloropropane | ND | | 1.00 | 0.32 | µg/L | 2 | 12/20/12 12:20 |
| 1,3,5-Trimethylbenzene | 1.78 | | 1.00 | 0.20 | µg/L | 2 | 12/20/12 12:20 |
| 1,3-Dichlorobenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 12/20/12 12:20 |
| 1,4-Dichlorobenzene | ND | | 1.00 | 0.32 | µg/L | 2 | 12/20/12 12:20 |
| 2-Butanone | ND | | 20.0 | 2.00 | µg/L | 2 | 12/20/12 12:20 |
| 2-Chloroethylvinyl ether | ND | | 10.0 | 5.00 | µg/L | 2 | 12/20/12 12:20 |
| 2-Hexanone | ND | | 10.0 | 2.00 | µg/L | 2 | 12/20/12 12:20 |
| 4-Chlorotoluene | ND | | 1.00 | 0.20 | µg/L | 2 | 12/20/12 12:20 |
| 4-Methyl-2-pentanone | ND | | 10.0 | 2.00 | µg/L | 2 | 12/20/12 12:20 |
| Acetone | 4.62 | J | 20.0 | 2.00 | µg/L | 2 | 12/20/12 12:20 |
| Benzene | ND | | 1.00 | 0.20 | µg/L | 2 | 12/20/12 12:20 |
| Bromobenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 12/20/12 12:20 |
| Bromochloromethane | ND | | 1.00 | 0.20 | µg/L | 2 | 12/20/12 12:20 |
| Bromodichloromethane | ND | | 1.00 | 0.20 | µg/L | 2 | 12/20/12 12:20 |
| Bromoform | ND | | 2.00 | 0.66 | µg/L | 2 | 12/20/12 12:20 |
| Bromomethane | ND | | 2.00 | 0.66 | µg/L | 2 | 12/20/12 12:20 |
| Carbon disulfide | 5.86 | | 1.00 | 0.22 | µg/L | 2 | 12/20/12 12:20 |
| Carbon tetrachloride | ND | | 1.00 | 0.20 | µg/L | 2 | 12/20/12 12:20 |
| Chlorobenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 12/20/12 12:20 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 12/27/12 14:11 626380 **roject Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1212218-003A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W3*** |
| **W Order:** | K1212218 | **Collection Date:** | 12/17/12 16:30 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 12/19/12 8:05 |
| **Inst. ID:** | MS01_11 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R25020 |
| **Revision:** | 12/26/12 12:02 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-T5104.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | ND | | 2.00 | 0.66 | µg/L | 2 | 12/20/12 12:20 |
| Chloroform | ND | | 1.00 | 0.20 | µg/L | 2 | 12/20/12 12:20 |
| Chloromethane | ND | | 2.00 | 0.66 | µg/L | 2 | 12/20/12 12:20 |
| cis-1,2-Dichloroethene | 24.1 | | 1.00 | 0.20 | µg/L | 2 | 12/20/12 12:20 |
| cis-1,3-Dichloropropene | ND | | 1.00 | 0.32 | µg/L | 2 | 12/20/12 12:20 |
| Cyclohexane | 0.40 | J | 1.00 | 0.20 | µg/L | 2 | 12/20/12 12:20 |
| Dibromochloromethane | ND | | 1.00 | 0.20 | µg/L | 2 | 12/20/12 12:20 |
| Dibromomethane | ND | | 1.00 | 0.32 | µg/L | 2 | 12/20/12 12:20 |
| Dichlorodifluoromethane | ND | | 2.00 | 0.20 | µg/L | 2 | 12/20/12 12:20 |
| Ethylbenzene | 0.68 | J | 1.00 | 0.20 | µg/L | 2 | 12/20/12 12:20 |
| Hexachlorobutadiene | ND | | 2.00 | 0.20 | µg/L | 2 | 12/20/12 12:20 |
| Isopropylbenzene | 0.32 | J | 1.00 | 0.20 | µg/L | 2 | 12/20/12 12:20 |
| Methyl tert-butyl ether | ND | | 2.00 | 0.32 | µg/L | 2 | 12/20/12 12:20 |
| Methylene chloride | 0.48 | J | 4.00 | 0.32 | µg/L | 2 | 12/20/12 12:20 |
| n-Propylbenzene | 0.96 | J | 1.00 | 0.20 | µg/L | 2 | 12/20/12 12:20 |
| Naphthalene | ND | | 2.00 | 0.20 | µg/L | 2 | 12/20/12 12:20 |
| o-Xylene | 3.44 | | 1.00 | 0.20 | µg/L | 2 | 12/20/12 12:20 |
| p-Isopropyltoluene | 1.54 | | 1.00 | 0.32 | µg/L | 2 | 12/20/12 12:20 |
| sec-Butylbenzene | 0.80 | J | 1.00 | 0.32 | µg/L | 2 | 12/20/12 12:20 |
| Styrene | ND | | 1.00 | 0.20 | µg/L | 2 | 12/20/12 12:20 |
| Tetrachloroethene | 0.92 | J | 1.00 | 0.20 | µg/L | 2 | 12/20/12 12:20 |
| Toluene | 0.92 | J | 1.00 | 0.20 | µg/L | 2 | 12/20/12 12:20 |
| trans-1,2-Dichloroethene | 0.46 | J | 1.00 | 0.20 | µg/L | 2 | 12/20/12 12:20 |
| trans-1,3-Dichloropropene | ND | | 1.00 | 0.32 | µg/L | 2 | 12/20/12 12:20 |
| Trichloroethene | 3.64 | | 1.00 | 0.20 | µg/L | 2 | 12/20/12 12:20 |
| Trichlorofluoromethane | ND | | 2.00 | 0.20 | µg/L | 2 | 12/20/12 12:20 |
| Vinyl acetate | ND | | 4.00 | 2.00 | µg/L | 2 | 12/20/12 12:20 |
| Vinyl chloride | 12.4 | | 2.00 | 0.66 | µg/L | 2 | 12/20/12 12:20 |
| Xylenes (total) | 4.22 | | 2.00 | 0.60 | µg/L | 2 | 12/20/12 12:20 |
| Surr: 1,2-Dichloroethane-d4 | 118 | | 75-130 | 0.32 | %REC | 2 | 12/20/12 12:20 |
| Surr: Toluene-d8 | 94 | | 75-125 | 0.20 | %REC | 2 | 12/20/12 12:20 |
| Surr: 4-Bromofluorobenzene | 107 | | 75-125 | 0.20 | %REC | 2 | 12/20/12 12:20 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 12/27/12 14:11 626380 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1212218-004A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W4* |
| **W Order:** | K1212218 | **Collection Date:** | 12/18/12 17:00 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 12/19/12 8:05 |
| **Inst. ID:** | MS01_11 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R25020 |
| **Revision:** | 12/26/12 12:02 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-T5105.D |
| **Col Type:** | TOTAL 20.39 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 1.00 | 0.20 | µg/L | 1 | 12/20/12 12:51 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/20/12 12:51 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 12:51 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 12:51 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 12:51 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/20/12 12:51 |
| 1,1-Dichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 12:51 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/20/12 12:51 |
| 1,2,3-Trichloropropane | ND | | 2.00 | 0.33 | µg/L | 1 | 12/20/12 12:51 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 0.10 | µg/L | 1 | 12/20/12 12:51 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 12:51 |
| 1,2-Dibromo-3-chloropropane | ND | | 5.00 | 1.00 | µg/L | 1 | 12/20/12 12:51 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/20/12 12:51 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 12:51 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/20/12 12:51 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/20/12 12:51 |
| 1,3,5-Trimethylbenzene | 0.18 | J | 0.50 | 0.10 | µg/L | 1 | 12/20/12 12:51 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 12:51 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/20/12 12:51 |
| 2-Butanone | 4.85 | J | 10.0 | 1.00 | µg/L | 1 | 12/20/12 12:51 |
| 2-Chloroethylvinyl ether | ND | | 5.00 | 2.50 | µg/L | 1 | 12/20/12 12:51 |
| 2-Hexanone | ND | | 5.00 | 1.00 | µg/L | 1 | 12/20/12 12:51 |
| 4-Chlorotoluene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 12:51 |
| 4-Methyl-2-pentanone | ND | | 5.00 | 1.00 | µg/L | 1 | 12/20/12 12:51 |
| Acetone | 11.9 | | 10.0 | 1.00 | µg/L | 1 | 12/20/12 12:51 |
| Benzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 12:51 |
| Bromobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 12:51 |
| Bromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 12:51 |
| Bromodichloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 12:51 |
| Bromoform | ND | | 1.00 | 0.33 | µg/L | 1 | 12/20/12 12:51 |
| Bromomethane | ND | | 1.00 | 0.33 | µg/L | 1 | 12/20/12 12:51 |
| Carbon disulfide | ND | | 0.50 | 0.11 | µg/L | 1 | 12/20/12 12:51 |
| Carbon tetrachloride | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 12:51 |
| Chlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 12:51 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 12/27/12 14:11 626381 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1212218-004A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W4*** |
| **W Order:** | K1212218 | **Collection Date:** | 12/18/12 17:00 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 12/19/12 8:05 |
| **Inst. ID:** | MS01_11 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R25020 |
| **Revision:** | 12/26/12 12:02 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-T5105.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | ND | | 1.00 | 0.33 | µg/L | 1 | 12/20/12 12:51 |
| Chloroform | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 12:51 |
| Chloromethane | ND | | 1.00 | 0.33 | µg/L | 1 | 12/20/12 12:51 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 12:51 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/20/12 12:51 |
| Cyclohexane | 1.60 | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 12:51 |
| Dibromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 12:51 |
| Dibromomethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/20/12 12:51 |
| Dichlorodifluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 12/20/12 12:51 |
| Ethylbenzene | 1.36 | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 12:51 |
| Hexachlorobutadiene | ND | | 1.00 | 0.10 | µg/L | 1 | 12/20/12 12:51 |
| Isopropylbenzene | 0.20 | J | 0.50 | 0.10 | µg/L | 1 | 12/20/12 12:51 |
| Methyl tert-butyl ether | ND | | 1.00 | 0.16 | µg/L | 1 | 12/20/12 12:51 |
| Methylene chloride | ND | | 2.00 | 0.16 | µg/L | 1 | 12/20/12 12:51 |
| n-Propylbenzene | 0.30 | J | 0.50 | 0.10 | µg/L | 1 | 12/20/12 12:51 |
| Naphthalene | ND | | 1.00 | 0.10 | µg/L | 1 | 12/20/12 12:51 |
| o-Xylene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 12:51 |
| p-Isopropyltoluene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/20/12 12:51 |
| sec-Butylbenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/20/12 12:51 |
| Styrene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 12:51 |
| Tetrachloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 12:51 |
| Toluene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 12:51 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 12:51 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/20/12 12:51 |
| Trichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 12:51 |
| Trichlorofluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 12/20/12 12:51 |
| Vinyl acetate | ND | | 2.00 | 1.00 | µg/L | 1 | 12/20/12 12:51 |
| Vinyl chloride | ND | | 1.00 | 0.33 | µg/L | 1 | 12/20/12 12:51 |
| Xylenes (total) | ND | | 1.00 | 0.30 | µg/L | 1 | 12/20/12 12:51 |
| Surr: 1,2-Dichloroethane-d4 | 118 | | 75-130 | 0.16 | %REC | 1 | 12/20/12 12:51 |
| Surr: Toluene-d8 | 106 | | 75-125 | 0.10 | %REC | 1 | 12/20/12 12:51 |
| Surr: 4-Bromofluorobenzene | 105 | | 75-125 | 0.10 | %REC | 1 | 12/20/12 12:51 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 12/27/12 14:11 626381 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
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East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1212218-005A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W5* |
| **W Order:** | K1212218 | **Collection Date:** | 12/18/12 16:30 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 12/19/12 8:05 |
| **Inst. ID:** | MS01_11 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R25019 |
| **Revision:** | 12/26/12 12:05 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-T5070.D |
| **Col Type:** | TOTAL 2240 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 50.0 | 10.0 | µg/L | 50 | 12/19/12 12:31 |
| 1,1,1,2-Tetrachloroethane | ND | | 25.0 | 8.00 | µg/L | 50 | 12/19/12 12:31 |
| 1,1,1-Trichloroethane | ND | | 25.0 | 5.00 | µg/L | 50 | 12/19/12 12:31 |
| 1,1,2,2-Tetrachloroethane | ND | | 25.0 | 5.00 | µg/L | 50 | 12/19/12 12:31 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 25.0 | 5.00 | µg/L | 50 | 12/19/12 12:31 |
| 1,1,2-Trichloroethane | ND | | 25.0 | 8.00 | µg/L | 50 | 12/19/12 12:31 |
| 1,1-Dichloroethane | 1410 | | 25.0 | 5.00 | µg/L | 50 | 12/19/12 12:31 |
| 1,1-Dichloroethene | 10.0 | J | 25.0 | 8.00 | µg/L | 50 | 12/19/12 12:31 |
| 1,2,3-Trichloropropane | ND | | 100 | 16.5 | µg/L | 50 | 12/19/12 12:31 |
| 1,2,4-Trichlorobenzene | ND | | 50.0 | 5.00 | µg/L | 50 | 12/19/12 12:31 |
| 1,2,4-Trimethylbenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/19/12 12:31 |
| 1,2-Dibromo-3-chloropropane | ND | | 250 | 50.0 | µg/L | 50 | 12/19/12 12:31 |
| 1,2-Dibromoethane | ND | | 25.0 | 8.00 | µg/L | 50 | 12/19/12 12:31 |
| 1,2-Dichlorobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/19/12 12:31 |
| 1,2-Dichloroethane | 17.5 | J | 25.0 | 8.00 | µg/L | 50 | 12/19/12 12:31 |
| 1,2-Dichloropropane | ND | | 25.0 | 8.00 | µg/L | 50 | 12/19/12 12:31 |
| 1,3,5-Trimethylbenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/19/12 12:31 |
| 1,3-Dichlorobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/19/12 12:31 |
| 1,4-Dichlorobenzene | ND | | 25.0 | 8.00 | µg/L | 50 | 12/19/12 12:31 |
| 2-Butanone | ND | | 500 | 50.0 | µg/L | 50 | 12/19/12 12:31 |
| 2-Chloroethylvinyl ether | ND | | 250 | 125 | µg/L | 50 | 12/19/12 12:31 |
| 2-Hexanone | ND | | 250 | 50.0 | µg/L | 50 | 12/19/12 12:31 |
| 4-Chlorotoluene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/19/12 12:31 |
| 4-Methyl-2-pentanone | ND | | 250 | 50.0 | µg/L | 50 | 12/19/12 12:31 |
| Acetone | ND | | 500 | 50.0 | µg/L | 50 | 12/19/12 12:31 |
| Benzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/19/12 12:31 |
| Bromobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/19/12 12:31 |
| Bromochloromethane | ND | | 25.0 | 5.00 | µg/L | 50 | 12/19/12 12:31 |
| Bromodichloromethane | ND | | 25.0 | 5.00 | µg/L | 50 | 12/19/12 12:31 |
| Bromoform | ND | | 50.0 | 16.5 | µg/L | 50 | 12/19/12 12:31 |
| Bromomethane | ND | | 50.0 | 16.5 | µg/L | 50 | 12/19/12 12:31 |
| Carbon disulfide | ND | | 25.0 | 5.50 | µg/L | 50 | 12/19/12 12:31 |
| Carbon tetrachloride | ND | | 25.0 | 5.00 | µg/L | 50 | 12/19/12 12:31 |
| Chlorobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/19/12 12:31 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 12/27/12 14:11 626414 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
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East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1212218-005A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W5*** |
| **W Order:** | K1212218 | **Collection Date:** | 12/18/12 16:30 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 12/19/12 8:05 |
| **Inst. ID:** | MS01_11 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R25019 |
| **Revision:** | 12/26/12 12:05 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-T5070.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | 91.5 | | 50.0 | 16.5 | µg/L | 50 | 12/19/12 12:31 |
| Chloroform | ND | | 25.0 | 5.00 | µg/L | 50 | 12/19/12 12:31 |
| Chloromethane | ND | | 50.0 | 16.5 | µg/L | 50 | 12/19/12 12:31 |
| cis-1,2-Dichloroethene | 144 | | 25.0 | 5.00 | µg/L | 50 | 12/19/12 12:31 |
| cis-1,3-Dichloropropene | ND | | 25.0 | 8.00 | µg/L | 50 | 12/19/12 12:31 |
| Cyclohexane | ND | | 25.0 | 5.00 | µg/L | 50 | 12/19/12 12:31 |
| Dibromochloromethane | ND | | 25.0 | 5.00 | µg/L | 50 | 12/19/12 12:31 |
| Dibromomethane | ND | | 25.0 | 8.00 | µg/L | 50 | 12/19/12 12:31 |
| Dichlorodifluoromethane | ND | | 50.0 | 5.00 | µg/L | 50 | 12/19/12 12:31 |
| Ethylbenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/19/12 12:31 |
| Hexachlorobutadiene | ND | | 50.0 | 5.00 | µg/L | 50 | 12/19/12 12:31 |
| Isopropylbenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/19/12 12:31 |
| Methyl tert-butyl ether | ND | | 50.0 | 8.00 | µg/L | 50 | 12/19/12 12:31 |
| Methylene chloride | 38.0 | J | 100 | 8.00 | µg/L | 50 | 12/19/12 12:31 |
| n-Propylbenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/19/12 12:31 |
| Naphthalene | ND | | 50.0 | 5.00 | µg/L | 50 | 12/19/12 12:31 |
| o-Xylene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/19/12 12:31 |
| p-Isopropyltoluene | ND | | 25.0 | 8.00 | µg/L | 50 | 12/19/12 12:31 |
| sec-Butylbenzene | ND | | 25.0 | 8.00 | µg/L | 50 | 12/19/12 12:31 |
| Styrene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/19/12 12:31 |
| Tetrachloroethene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/19/12 12:31 |
| Toluene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/19/12 12:31 |
| trans-1,2-Dichloroethene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/19/12 12:31 |
| trans-1,3-Dichloropropene | ND | | 25.0 | 8.00 | µg/L | 50 | 12/19/12 12:31 |
| Trichloroethene | 9.00 | J | 25.0 | 5.00 | µg/L | 50 | 12/19/12 12:31 |
| Trichlorofluoromethane | ND | | 50.0 | 5.00 | µg/L | 50 | 12/19/12 12:31 |
| Vinyl acetate | ND | | 100 | 50.0 | µg/L | 50 | 12/19/12 12:31 |
| Vinyl chloride | 664 | | 50.0 | 16.5 | µg/L | 50 | 12/19/12 12:31 |
| Xylenes (total) | ND | | 50.0 | 15.0 | µg/L | 50 | 12/19/12 12:31 |
| Surr: 1,2-Dichloroethane-d4 | 112 | | 75-130 | 8.00 | %REC | 50 | 12/19/12 12:31 |
| Surr: Toluene-d8 | 108 | | 75-125 | 5.00 | %REC | 50 | 12/19/12 12:31 |
| Surr: 4-Bromofluorobenzene | 104 | | 75-125 | 5.00 | %REC | 50 | 12/19/12 12:31 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 12/27/12 14:11 626414 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1212218-006A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W6* |
| **W Order:** | K1212218 | **Collection Date:** | 12/18/12 17:20 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 12/19/12 8:05 |
| **Inst. ID:** | MS01_11 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R25019 |
| **Revision:** | 12/27/12 10:50 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-T5084.D |
| **Col Type:** | TOTAL 13.57 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 1.00 | 0.20 | µg/L | 1 | 12/19/12 19:51 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/19/12 19:51 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/19/12 19:51 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/19/12 19:51 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/19/12 19:51 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/19/12 19:51 |
| 1,1-Dichloroethane | 8.99 | | 0.50 | 0.10 | µg/L | 1 | 12/19/12 19:51 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/19/12 19:51 |
| 1,2,3-Trichloropropane | ND | | 2.00 | 0.33 | µg/L | 1 | 12/19/12 19:51 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 0.10 | µg/L | 1 | 12/19/12 19:51 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/19/12 19:51 |
| 1,2-Dibromo-3-chloropropane | ND | | 5.00 | 1.00 | µg/L | 1 | 12/19/12 19:51 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/19/12 19:51 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/19/12 19:51 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/19/12 19:51 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/19/12 19:51 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/19/12 19:51 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/19/12 19:51 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/19/12 19:51 |
| 2-Butanone | ND | | 10.0 | 1.00 | µg/L | 1 | 12/19/12 19:51 |
| 2-Chloroethylvinyl ether | ND | | 5.00 | 2.50 | µg/L | 1 | 12/19/12 19:51 |
| 2-Hexanone | ND | | 5.00 | 1.00 | µg/L | 1 | 12/19/12 19:51 |
| 4-Chlorotoluene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/19/12 19:51 |
| 4-Methyl-2-pentanone | ND | | 5.00 | 1.00 | µg/L | 1 | 12/19/12 19:51 |
| Acetone | ND | | 10.0 | 1.00 | µg/L | 1 | 12/19/12 19:51 |
| Benzene | 1.17 | | 0.50 | 0.10 | µg/L | 1 | 12/19/12 19:51 |
| Bromobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/19/12 19:51 |
| Bromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/19/12 19:51 |
| Bromodichloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/19/12 19:51 |
| Bromoform | ND | | 1.00 | 0.33 | µg/L | 1 | 12/19/12 19:51 |
| Bromomethane | ND | | 1.00 | 0.33 | µg/L | 1 | 12/19/12 19:51 |
| Carbon disulfide | ND | | 0.50 | 0.11 | µg/L | 1 | 12/19/12 19:51 |
| Carbon tetrachloride | ND | | 0.50 | 0.10 | µg/L | 1 | 12/19/12 19:51 |
| Chlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/19/12 19:51 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 12/27/12 14:11 626416 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1212218-006A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W6* |
| **W Order:** | K1212218 | **Collection Date:** | 12/18/12 17:20 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 12/19/12 8:05 |
| **Inst. ID:** | MS01_11 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R25019 |
| **Revision:** | 12/27/12 10:50 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-T5084.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | ND | | 1.00 | 0.33 | µg/L | 1 | 12/19/12 19:51 |
| Chloroform | ND | | 0.50 | 0.10 | µg/L | 1 | 12/19/12 19:51 |
| Chloromethane | ND | | 1.00 | 0.33 | µg/L | 1 | 12/19/12 19:51 |
| cis-1,2-Dichloroethene | 3.12 | | 0.50 | 0.10 | µg/L | 1 | 12/19/12 19:51 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/19/12 19:51 |
| Cyclohexane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/19/12 19:51 |
| Dibromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/19/12 19:51 |
| Dibromomethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/19/12 19:51 |
| Dichlorodifluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 12/19/12 19:51 |
| Ethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/19/12 19:51 |
| Hexachlorobutadiene | ND | | 1.00 | 0.10 | µg/L | 1 | 12/19/12 19:51 |
| Isopropylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/19/12 19:51 |
| Methyl tert-butyl ether | ND | | 1.00 | 0.16 | µg/L | 1 | 12/19/12 19:51 |
| Methylene chloride | ND | | 2.00 | 0.16 | µg/L | 1 | 12/19/12 19:51 |
| n-Propylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/19/12 19:51 |
| Naphthalene | ND | | 1.00 | 0.10 | µg/L | 1 | 12/19/12 19:51 |
| o-Xylene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/19/12 19:51 |
| p-Isopropyltoluene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/19/12 19:51 |
| sec-Butylbenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/19/12 19:51 |
| Styrene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/19/12 19:51 |
| Tetrachloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/19/12 19:51 |
| Toluene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/19/12 19:51 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/19/12 19:51 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/19/12 19:51 |
| Trichloroethene | 0.29 J | | 0.50 | 0.10 | µg/L | 1 | 12/19/12 19:51 |
| Trichlorofluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 12/19/12 19:51 |
| Vinyl acetate | ND | | 2.00 | 1.00 | µg/L | 1 | 12/19/12 19:51 |
| Vinyl chloride | ND | | 1.00 | 0.33 | µg/L | 1 | 12/19/12 19:51 |
| Xylenes (total) | ND | | 1.00 | 0.30 | µg/L | 1 | 12/19/12 19:51 |
| Surr: 1,2-Dichloroethane-d4 | 112 | | 75-130 | 0.16 | %REC | 1 | 12/19/12 19:51 |
| Surr: Toluene-d8 | 106 | | 75-125 | 0.10 | %REC | 1 | 12/19/12 19:51 |
| Surr: 4-Bromofluorobenzene | 103 | | 75-125 | 0.10 | %REC | 1 | 12/19/12 19:51 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 12/27/12 14:11 626416 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1212218-007A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W7* |
| **W Order:** | K1212218 | **Collection Date:** | 12/18/12 17:10 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 12/19/12 8:05 |
| **Inst. ID:** | MS01_11 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R25020 |
| **Revision:** | 12/26/12 12:02 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-T5108.D |
| **Col Type:** | TOTAL 868.5 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 50.0 | 10.0 | µg/L | 50 | 12/20/12 14:26 |
| 1,1,1,2-Tetrachloroethane | ND | | 25.0 | 8.00 | µg/L | 50 | 12/20/12 14:26 |
| 1,1,1-Trichloroethane | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 14:26 |
| 1,1,2,2-Tetrachloroethane | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 14:26 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 14:26 |
| 1,1,2-Trichloroethane | ND | | 25.0 | 8.00 | µg/L | 50 | 12/20/12 14:26 |
| 1,1-Dichloroethane | 761 | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 14:26 |
| 1,1-Dichloroethene | ND | | 25.0 | 8.00 | µg/L | 50 | 12/20/12 14:26 |
| 1,2,3-Trichloropropane | ND | | 100 | 16.5 | µg/L | 50 | 12/20/12 14:26 |
| 1,2,4-Trichlorobenzene | ND | | 50.0 | 5.00 | µg/L | 50 | 12/20/12 14:26 |
| 1,2,4-Trimethylbenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 14:26 |
| 1,2-Dibromo-3-chloropropane | ND | | 250 | 50.0 | µg/L | 50 | 12/20/12 14:26 |
| 1,2-Dibromoethane | ND | | 25.0 | 8.00 | µg/L | 50 | 12/20/12 14:26 |
| 1,2-Dichlorobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 14:26 |
| 1,2-Dichloroethane | 34.5 | | 25.0 | 8.00 | µg/L | 50 | 12/20/12 14:26 |
| 1,2-Dichloropropane | ND | | 25.0 | 8.00 | µg/L | 50 | 12/20/12 14:26 |
| 1,3,5-Trimethylbenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 14:26 |
| 1,3-Dichlorobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 14:26 |
| 1,4-Dichlorobenzene | ND | | 25.0 | 8.00 | µg/L | 50 | 12/20/12 14:26 |
| 2-Butanone | ND | | 500 | 50.0 | µg/L | 50 | 12/20/12 14:26 |
| 2-Chloroethylvinyl ether | ND | | 250 | 125 | µg/L | 50 | 12/20/12 14:26 |
| 2-Hexanone | ND | | 250 | 50.0 | µg/L | 50 | 12/20/12 14:26 |
| 4-Chlorotoluene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 14:26 |
| 4-Methyl-2-pentanone | ND | | 250 | 50.0 | µg/L | 50 | 12/20/12 14:26 |
| Acetone | ND | | 500 | 50.0 | µg/L | 50 | 12/20/12 14:26 |
| Benzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 14:26 |
| Bromobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 14:26 |
| Bromochloromethane | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 14:26 |
| Bromodichloromethane | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 14:26 |
| Bromoform | ND | | 50.0 | 16.5 | µg/L | 50 | 12/20/12 14:26 |
| Bromomethane | ND | | 50.0 | 16.5 | µg/L | 50 | 12/20/12 14:26 |
| Carbon disulfide | ND | | 25.0 | 5.50 | µg/L | 50 | 12/20/12 14:26 |
| Carbon tetrachloride | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 14:26 |
| Chlorobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 14:26 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 12/27/12 14:11 626384 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1212218-007A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W7*** |
| **W Order:** | K1212218 | **Collection Date:** | 12/18/12 17:10 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 12/19/12 8:05 |
| **Inst. ID:** | MS01_11 **Sample Size** 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS **%Moisture:** | **BatchNo:** | R25020 |
| **Revision:** | 12/26/12 12:02 **TestCode:** 8260W_CAL | **FileID:** | 1-SAMP-T5108.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | ND | | 50.0 | 16.5 | µg/L | 50 | 12/20/12 14:26 |
| Chloroform | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 14:26 |
| Chloromethane | ND | | 50.0 | 16.5 | µg/L | 50 | 12/20/12 14:26 |
| cis-1,2-Dichloroethene | 16.0 | J | 25.0 | 5.00 | µg/L | 50 | 12/20/12 14:26 |
| cis-1,3-Dichloropropene | ND | | 25.0 | 8.00 | µg/L | 50 | 12/20/12 14:26 |
| Cyclohexane | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 14:26 |
| Dibromochloromethane | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 14:26 |
| Dibromomethane | ND | | 25.0 | 8.00 | µg/L | 50 | 12/20/12 14:26 |
| Dichlorodifluoromethane | ND | | 50.0 | 5.00 | µg/L | 50 | 12/20/12 14:26 |
| Ethylbenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 14:26 |
| Hexachlorobutadiene | ND | | 50.0 | 5.00 | µg/L | 50 | 12/20/12 14:26 |
| Isopropylbenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 14:26 |
| Methyl tert-butyl ether | ND | | 50.0 | 8.00 | µg/L | 50 | 12/20/12 14:26 |
| Methylene chloride | 22.5 | J | 100 | 8.00 | µg/L | 50 | 12/20/12 14:26 |
| n-Propylbenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 14:26 |
| Naphthalene | ND | | 50.0 | 5.00 | µg/L | 50 | 12/20/12 14:26 |
| o-Xylene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 14:26 |
| p-Isopropyltoluene | ND | | 25.0 | 8.00 | µg/L | 50 | 12/20/12 14:26 |
| sec-Butylbenzene | ND | | 25.0 | 8.00 | µg/L | 50 | 12/20/12 14:26 |
| Styrene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 14:26 |
| Tetrachloroethene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 14:26 |
| Toluene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 14:26 |
| trans-1,2-Dichloroethene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 14:26 |
| trans-1,3-Dichloropropene | ND | | 25.0 | 8.00 | µg/L | 50 | 12/20/12 14:26 |
| Trichloroethene | 12.0 | J | 25.0 | 5.00 | µg/L | 50 | 12/20/12 14:26 |
| Trichlorofluoromethane | ND | | 50.0 | 5.00 | µg/L | 50 | 12/20/12 14:26 |
| Vinyl acetate | ND | | 100 | 50.0 | µg/L | 50 | 12/20/12 14:26 |
| Vinyl chloride | 22.5 | J | 50.0 | 16.5 | µg/L | 50 | 12/20/12 14:26 |
| Xylenes (total) | ND | | 50.0 | 15.0 | µg/L | 50 | 12/20/12 14:26 |
| Surr: 1,2-Dichloroethane-d4 | 119 | | 75-130 | 8.00 | %REC | 50 | 12/20/12 14:26 |
| Surr: Toluene-d8 | 106 | | 75-125 | 5.00 | %REC | 50 | 12/20/12 14:26 |
| Surr: 4-Bromofluorobenzene | 102 | | 75-125 | 5.00 | %REC | 50 | 12/20/12 14:26 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 12/27/12 14:11 626384 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1212218-008A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W8* |
| **W Order:** | K1212218 | **Collection Date:** | 12/18/12 15:00 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 12/19/12 8:05 |
| **Inst. ID:** | MS01_11 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R25020 |
| **Revision:** | 12/26/12 12:02 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-T5109.D |
| **Col Type:** | TOTAL 380 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 50.0 | 10.0 | µg/L | 50 | 12/20/12 14:57 |
| 1,1,1,2-Tetrachloroethane | ND | | 25.0 | 8.00 | µg/L | 50 | 12/20/12 14:57 |
| 1,1,1-Trichloroethane | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 14:57 |
| 1,1,2,2-Tetrachloroethane | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 14:57 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 14:57 |
| 1,1,2-Trichloroethane | ND | | 25.0 | 8.00 | µg/L | 50 | 12/20/12 14:57 |
| 1,1-Dichloroethane | 198 | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 14:57 |
| 1,1-Dichloroethene | ND | | 25.0 | 8.00 | µg/L | 50 | 12/20/12 14:57 |
| 1,2,3-Trichloropropane | ND | | 100 | 16.5 | µg/L | 50 | 12/20/12 14:57 |
| 1,2,4-Trichlorobenzene | ND | | 50.0 | 5.00 | µg/L | 50 | 12/20/12 14:57 |
| 1,2,4-Trimethylbenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 14:57 |
| 1,2-Dibromo-3-chloropropane | ND | | 250 | 50.0 | µg/L | 50 | 12/20/12 14:57 |
| 1,2-Dibromoethane | ND | | 25.0 | 8.00 | µg/L | 50 | 12/20/12 14:57 |
| 1,2-Dichlorobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 14:57 |
| 1,2-Dichloroethane | ND | | 25.0 | 8.00 | µg/L | 50 | 12/20/12 14:57 |
| 1,2-Dichloropropane | ND | | 25.0 | 8.00 | µg/L | 50 | 12/20/12 14:57 |
| 1,3,5-Trimethylbenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 14:57 |
| 1,3-Dichlorobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 14:57 |
| 1,4-Dichlorobenzene | ND | | 25.0 | 8.00 | µg/L | 50 | 12/20/12 14:57 |
| 2-Butanone | ND | | 500 | 50.0 | µg/L | 50 | 12/20/12 14:57 |
| 2-Chloroethylvinyl ether | ND | | 250 | 125 | µg/L | 50 | 12/20/12 14:57 |
| 2-Hexanone | ND | | 250 | 50.0 | µg/L | 50 | 12/20/12 14:57 |
| 4-Chlorotoluene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 14:57 |
| 4-Methyl-2-pentanone | ND | | 250 | 50.0 | µg/L | 50 | 12/20/12 14:57 |
| Acetone | ND | | 500 | 50.0 | µg/L | 50 | 12/20/12 14:57 |
| Benzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 14:57 |
| Bromobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 14:57 |
| Bromochloromethane | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 14:57 |
| Bromodichloromethane | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 14:57 |
| Bromoform | ND | | 50.0 | 16.5 | µg/L | 50 | 12/20/12 14:57 |
| Bromomethane | ND | | 50.0 | 16.5 | µg/L | 50 | 12/20/12 14:57 |
| Carbon disulfide | ND | | 25.0 | 5.50 | µg/L | 50 | 12/20/12 14:57 |
| Carbon tetrachloride | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 14:57 |
| Chlorobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 14:57 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

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East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1212218-008A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W8*** |
| **W Order:** | K1212218 | **Collection Date:** | 12/18/12 15:00 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 12/19/12 8:05 |
| **Inst. ID:** | MS01_11 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R25020 |
| **Revision:** | 12/26/12 12:02 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-T5109.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | ND | | 50.0 | 16.5 | µg/L | 50 | 12/20/12 14:57 |
| Chloroform | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 14:57 |
| Chloromethane | ND | | 50.0 | 16.5 | µg/L | 50 | 12/20/12 14:57 |
| cis-1,2-Dichloroethene | 120 | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 14:57 |
| cis-1,3-Dichloropropene | ND | | 25.0 | 8.00 | µg/L | 50 | 12/20/12 14:57 |
| Cyclohexane | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 14:57 |
| Dibromochloromethane | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 14:57 |
| Dibromomethane | ND | | 25.0 | 8.00 | µg/L | 50 | 12/20/12 14:57 |
| Dichlorodifluoromethane | ND | | 50.0 | 5.00 | µg/L | 50 | 12/20/12 14:57 |
| Ethylbenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 14:57 |
| Hexachlorobutadiene | ND | | 50.0 | 5.00 | µg/L | 50 | 12/20/12 14:57 |
| Isopropylbenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 14:57 |
| Methyl tert-butyl ether | ND | | 50.0 | 8.00 | µg/L | 50 | 12/20/12 14:57 |
| Methylene chloride | 21.0 | J | 100 | 8.00 | µg/L | 50 | 12/20/12 14:57 |
| n-Propylbenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 14:57 |
| Naphthalene | ND | | 50.0 | 5.00 | µg/L | 50 | 12/20/12 14:57 |
| o-Xylene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 14:57 |
| p-Isopropyltoluene | ND | | 25.0 | 8.00 | µg/L | 50 | 12/20/12 14:57 |
| sec-Butylbenzene | ND | | 25.0 | 8.00 | µg/L | 50 | 12/20/12 14:57 |
| Styrene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 14:57 |
| Tetrachloroethene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 14:57 |
| Toluene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 14:57 |
| trans-1,2-Dichloroethene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 14:57 |
| trans-1,3-Dichloropropene | ND | | 25.0 | 8.00 | µg/L | 50 | 12/20/12 14:57 |
| Trichloroethene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 14:57 |
| Trichlorofluoromethane | ND | | 50.0 | 5.00 | µg/L | 50 | 12/20/12 14:57 |
| Vinyl acetate | ND | | 100 | 50.0 | µg/L | 50 | 12/20/12 14:57 |
| Vinyl chloride | 41.0 | J | 50.0 | 16.5 | µg/L | 50 | 12/20/12 14:57 |
| Xylenes (total) | ND | | 50.0 | 15.0 | µg/L | 50 | 12/20/12 14:57 |
| Surr: 1,2-Dichloroethane-d4 | 119 | | 75-130 | 8.00 | %REC | 50 | 12/20/12 14:57 |
| Surr: Toluene-d8 | 106 | | 75-125 | 5.00 | %REC | 50 | 12/20/12 14:57 |
| Surr: 4-Bromofluorobenzene | 101 | | 75-125 | 5.00 | %REC | 50 | 12/20/12 14:57 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 12/27/12 14:11 626385 **roject Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1212218-009A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W9* |
| **W Order:** | K1212218 | **Collection Date:** | 12/17/12 15:30 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 12/19/12 8:05 |
| **Inst. ID:** | MS01_11 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R25020 |
| **Revision:** | 12/26/12 12:02 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-T5110.D |
| **Col Type:** | TOTAL 1860 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 50.0 | 10.0 | µg/L | 50 | 12/20/12 15:29 |
| 1,1,1,2-Tetrachloroethane | ND | | 25.0 | 8.00 | µg/L | 50 | 12/20/12 15:29 |
| 1,1,1-Trichloroethane | 106 | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 15:29 |
| 1,1,2,2-Tetrachloroethane | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 15:29 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 15:29 |
| 1,1,2-Trichloroethane | ND | | 25.0 | 8.00 | µg/L | 50 | 12/20/12 15:29 |
| 1,1-Dichloroethane | 943 | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 15:29 |
| 1,1-Dichloroethene | 22.0 | J | 25.0 | 8.00 | µg/L | 50 | 12/20/12 15:29 |
| 1,2,3-Trichloropropane | ND | | 100 | 16.5 | µg/L | 50 | 12/20/12 15:29 |
| 1,2,4-Trichlorobenzene | ND | | 50.0 | 5.00 | µg/L | 50 | 12/20/12 15:29 |
| 1,2,4-Trimethylbenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 15:29 |
| 1,2-Dibromo-3-chloropropane | ND | | 250 | 50.0 | µg/L | 50 | 12/20/12 15:29 |
| 1,2-Dibromoethane | ND | | 25.0 | 8.00 | µg/L | 50 | 12/20/12 15:29 |
| 1,2-Dichlorobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 15:29 |
| 1,2-Dichloroethane | ND | | 25.0 | 8.00 | µg/L | 50 | 12/20/12 15:29 |
| 1,2-Dichloropropane | ND | | 25.0 | 8.00 | µg/L | 50 | 12/20/12 15:29 |
| 1,3,5-Trimethylbenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 15:29 |
| 1,3-Dichlorobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 15:29 |
| 1,4-Dichlorobenzene | ND | | 25.0 | 8.00 | µg/L | 50 | 12/20/12 15:29 |
| 2-Butanone | ND | | 500 | 50.0 | µg/L | 50 | 12/20/12 15:29 |
| 2-Chloroethylvinyl ether | ND | | 250 | 125 | µg/L | 50 | 12/20/12 15:29 |
| 2-Hexanone | ND | | 250 | 50.0 | µg/L | 50 | 12/20/12 15:29 |
| 4-Chlorotoluene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 15:29 |
| 4-Methyl-2-pentanone | ND | | 250 | 50.0 | µg/L | 50 | 12/20/12 15:29 |
| Acetone | ND | | 500 | 50.0 | µg/L | 50 | 12/20/12 15:29 |
| Benzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 15:29 |
| Bromobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 15:29 |
| Bromochloromethane | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 15:29 |
| Bromodichloromethane | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 15:29 |
| Bromoform | ND | | 50.0 | 16.5 | µg/L | 50 | 12/20/12 15:29 |
| Bromomethane | ND | | 50.0 | 16.5 | µg/L | 50 | 12/20/12 15:29 |
| Carbon disulfide | ND | | 25.0 | 5.50 | µg/L | 50 | 12/20/12 15:29 |
| Carbon tetrachloride | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 15:29 |
| Chlorobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 15:29 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 12/27/12 14:11 626386 **roject Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1212218-009A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W9*** |
| **W Order:** | K1212218 | **Collection Date:** | 12/17/12 15:30 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 12/19/12 8:05 |
| **Inst. ID:** | MS01_11 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R25020 |
| **Revision:** | 12/26/12 12:02 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-T5110.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | ND | | 50.0 | 16.5 | µg/L | 50 | 12/20/12 15:29 |
| Chloroform | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 15:29 |
| Chloromethane | ND | | 50.0 | 16.5 | µg/L | 50 | 12/20/12 15:29 |
| cis-1,2-Dichloroethene | 398 | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 15:29 |
| cis-1,3-Dichloropropene | ND | | 25.0 | 8.00 | µg/L | 50 | 12/20/12 15:29 |
| Cyclohexane | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 15:29 |
| Dibromochloromethane | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 15:29 |
| Dibromomethane | ND | | 25.0 | 8.00 | µg/L | 50 | 12/20/12 15:29 |
| Dichlorodifluoromethane | ND | | 50.0 | 5.00 | µg/L | 50 | 12/20/12 15:29 |
| Ethylbenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 15:29 |
| Hexachlorobutadiene | ND | | 50.0 | 5.00 | µg/L | 50 | 12/20/12 15:29 |
| Isopropylbenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 15:29 |
| Methyl tert-butyl ether | ND | | 50.0 | 8.00 | µg/L | 50 | 12/20/12 15:29 |
| Methylene chloride | 24.0 | J | 100 | 8.00 | µg/L | 50 | 12/20/12 15:29 |
| n-Propylbenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 15:29 |
| Naphthalene | ND | | 50.0 | 5.00 | µg/L | 50 | 12/20/12 15:29 |
| o-Xylene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 15:29 |
| p-Isopropyltoluene | ND | | 25.0 | 8.00 | µg/L | 50 | 12/20/12 15:29 |
| sec-Butylbenzene | ND | | 25.0 | 8.00 | µg/L | 50 | 12/20/12 15:29 |
| Styrene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 15:29 |
| Tetrachloroethene | 8.00 | J | 25.0 | 5.00 | µg/L | 50 | 12/20/12 15:29 |
| Toluene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 15:29 |
| trans-1,2-Dichloroethene | ND | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 15:29 |
| trans-1,3-Dichloropropene | ND | | 25.0 | 8.00 | µg/L | 50 | 12/20/12 15:29 |
| Trichloroethene | 241 | | 25.0 | 5.00 | µg/L | 50 | 12/20/12 15:29 |
| Trichlorofluoromethane | ND | | 50.0 | 5.00 | µg/L | 50 | 12/20/12 15:29 |
| Vinyl acetate | ND | | 100 | 50.0 | µg/L | 50 | 12/20/12 15:29 |
| Vinyl chloride | 118 | | 50.0 | 16.5 | µg/L | 50 | 12/20/12 15:29 |
| Xylenes (total) | ND | | 50.0 | 15.0 | µg/L | 50 | 12/20/12 15:29 |
| Surr: 1,2-Dichloroethane-d4 | 123 | | 75-130 | 8.00 | %REC | 50 | 12/20/12 15:29 |
| Surr: Toluene-d8 | 106 | | 75-125 | 5.00 | %REC | 50 | 12/20/12 15:29 |
| Surr: 4-Bromofluorobenzene | 102 | | 75-125 | 5.00 | %REC | 50 | 12/20/12 15:29 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 12/27/12 14:11 626386 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1212218-010A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W10* |
| **W Order:** | K1212218 | **Collection Date:** | 12/18/12 15:30 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 12/19/12 8:05 |
| **Inst. ID:** | MS01_11 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R25020 |
| **Revision:** | 12/26/12 12:02 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-T5100.D |
| **Col Type:** | TOTAL 6.31 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 1.00 | 0.20 | µg/L | 1 | 12/20/12 10:14 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/20/12 10:14 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 10:14 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 10:14 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 0.14 | J | 0.50 | 0.10 | µg/L | 1 | 12/20/12 10:14 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/20/12 10:14 |
| 1,1-Dichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 10:14 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/20/12 10:14 |
| 1,2,3-Trichloropropane | ND | | 2.00 | 0.33 | µg/L | 1 | 12/20/12 10:14 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 0.10 | µg/L | 1 | 12/20/12 10:14 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 10:14 |
| 1,2-Dibromo-3-chloropropane | ND | | 5.00 | 1.00 | µg/L | 1 | 12/20/12 10:14 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/20/12 10:14 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 10:14 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/20/12 10:14 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/20/12 10:14 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 10:14 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 10:14 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/20/12 10:14 |
| 2-Butanone | ND | | 10.0 | 1.00 | µg/L | 1 | 12/20/12 10:14 |
| 2-Chloroethylvinyl ether | ND | | 5.00 | 2.50 | µg/L | 1 | 12/20/12 10:14 |
| 2-Hexanone | ND | | 5.00 | 1.00 | µg/L | 1 | 12/20/12 10:14 |
| 4-Chlorotoluene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 10:14 |
| 4-Methyl-2-pentanone | ND | | 5.00 | 1.00 | µg/L | 1 | 12/20/12 10:14 |
| Acetone | 2.69 | J | 10.0 | 1.00 | µg/L | 1 | 12/20/12 10:14 |
| Benzene | 0.24 | J | 0.50 | 0.10 | µg/L | 1 | 12/20/12 10:14 |
| Bromobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 10:14 |
| Bromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 10:14 |
| Bromodichloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 10:14 |
| Bromoform | ND | | 1.00 | 0.33 | µg/L | 1 | 12/20/12 10:14 |
| Bromomethane | ND | | 1.00 | 0.33 | µg/L | 1 | 12/20/12 10:14 |
| Carbon disulfide | ND | | 0.50 | 0.11 | µg/L | 1 | 12/20/12 10:14 |
| Carbon tetrachloride | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 10:14 |
| Chlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 10:14 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

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East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1212218-010A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W10*** |
| **W Order:** | K1212218 | **Collection Date:** | 12/18/12 15:30 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 12/19/12 8:05 |
| **Inst. ID:** | MS01_11 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R25020 |
| **Revision:** | 12/26/12 12:02 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-T5100.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | ND | | 1.00 | 0.33 | µg/L | 1 | 12/20/12 10:14 |
| Chloroform | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 10:14 |
| Chloromethane | ND | | 1.00 | 0.33 | µg/L | 1 | 12/20/12 10:14 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 10:14 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/20/12 10:14 |
| Cyclohexane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 10:14 |
| Dibromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 10:14 |
| Dibromomethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/20/12 10:14 |
| Dichlorodifluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 12/20/12 10:14 |
| Ethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 10:14 |
| Hexachlorobutadiene | ND | | 1.00 | 0.10 | µg/L | 1 | 12/20/12 10:14 |
| Isopropylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 10:14 |
| Methyl tert-butyl ether | ND | | 1.00 | 0.16 | µg/L | 1 | 12/20/12 10:14 |
| Methylene chloride | ND | | 2.00 | 0.16 | µg/L | 1 | 12/20/12 10:14 |
| n-Propylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 10:14 |
| Naphthalene | ND | | 1.00 | 0.10 | µg/L | 1 | 12/20/12 10:14 |
| o-Xylene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 10:14 |
| p-Isopropyltoluene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/20/12 10:14 |
| sec-Butylbenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/20/12 10:14 |
| Styrene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 10:14 |
| Tetrachloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 10:14 |
| Toluene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 10:14 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 10:14 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/20/12 10:14 |
| Trichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 10:14 |
| Trichlorofluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 12/20/12 10:14 |
| Vinyl acetate | ND | | 2.00 | 1.00 | µg/L | 1 | 12/20/12 10:14 |
| Vinyl chloride | ND | | 1.00 | 0.33 | µg/L | 1 | 12/20/12 10:14 |
| Xylenes (total) | ND | | 1.00 | 0.30 | µg/L | 1 | 12/20/12 10:14 |
| Surr: 1,2-Dichloroethane-d4 | 119 | | 75-130 | 0.16 | %REC | 1 | 12/20/12 10:14 |
| Surr: Toluene-d8 | 105 | | 75-125 | 0.10 | %REC | 1 | 12/20/12 10:14 |
| Surr: 4-Bromofluorobenzene | 103 | | 75-125 | 0.10 | %REC | 1 | 12/20/12 10:14 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 12/27/12 14:11 626376 **roject Supervisor:** Anthony Crescenzi

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5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1212218-011A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W11* |
| **W Order:** | K1212218 | **Collection Date:** | 12/18/12 15:45 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 12/19/12 8:05 |
| **Inst. ID:** | MS01_11 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R25020 |
| **Revision:** | 12/26/12 12:02 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-T5101.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 1.00 | 0.20 | µg/L | 1 | 12/20/12 10:45 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/20/12 10:45 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 10:45 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 10:45 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 10:45 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/20/12 10:45 |
| 1,1-Dichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 10:45 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/20/12 10:45 |
| 1,2,3-Trichloropropane | ND | | 2.00 | 0.33 | µg/L | 1 | 12/20/12 10:45 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 0.10 | µg/L | 1 | 12/20/12 10:45 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 10:45 |
| 1,2-Dibromo-3-chloropropane | ND | | 5.00 | 1.00 | µg/L | 1 | 12/20/12 10:45 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/20/12 10:45 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 10:45 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/20/12 10:45 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/20/12 10:45 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 10:45 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 10:45 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/20/12 10:45 |
| 2-Butanone | ND | | 10.0 | 1.00 | µg/L | 1 | 12/20/12 10:45 |
| 2-Chloroethylvinyl ether | ND | | 5.00 | 2.50 | µg/L | 1 | 12/20/12 10:45 |
| 2-Hexanone | ND | | 5.00 | 1.00 | µg/L | 1 | 12/20/12 10:45 |
| 4-Chlorotoluene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 10:45 |
| 4-Methyl-2-pentanone | ND | | 5.00 | 1.00 | µg/L | 1 | 12/20/12 10:45 |
| Acetone | 2.02 | J | 10.0 | 1.00 | µg/L | 1 | 12/20/12 10:45 |
| Benzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 10:45 |
| Bromobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 10:45 |
| Bromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 10:45 |
| Bromodichloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 10:45 |
| Bromoform | ND | | 1.00 | 0.33 | µg/L | 1 | 12/20/12 10:45 |
| Bromomethane | ND | | 1.00 | 0.33 | µg/L | 1 | 12/20/12 10:45 |
| Carbon disulfide | 0.13 | J | 0.50 | 0.11 | µg/L | 1 | 12/20/12 10:45 |
| Carbon tetrachloride | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 10:45 |
| Chlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 10:45 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

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5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1212218-011A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W11* |
| **W Order:** | K1212218 | **Collection Date:** | 12/18/12 15:45 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 12/19/12 8:05 |
| **Inst. ID:** | MS01_11 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R25020 |
| **Revision:** | 12/26/12 12:02 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-T5101.D |
| **Col Type:** | TOTAL 2.32 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | ND | | 1.00 | 0.33 | µg/L | 1 | 12/20/12 10:45 |
| Chloroform | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 10:45 |
| Chloromethane | ND | | 1.00 | 0.33 | µg/L | 1 | 12/20/12 10:45 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 10:45 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/20/12 10:45 |
| Cyclohexane | 0.20 | J | 0.50 | 0.10 | µg/L | 1 | 12/20/12 10:45 |
| Dibromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 10:45 |
| Dibromomethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/20/12 10:45 |
| Dichlorodifluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 12/20/12 10:45 |
| Ethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 10:45 |
| Hexachlorobutadiene | ND | | 1.00 | 0.10 | µg/L | 1 | 12/20/12 10:45 |
| Isopropylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 10:45 |
| Methyl tert-butyl ether | ND | | 1.00 | 0.16 | µg/L | 1 | 12/20/12 10:45 |
| Methylene chloride | ND | | 2.00 | 0.16 | µg/L | 1 | 12/20/12 10:45 |
| n-Propylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 10:45 |
| Naphthalene | ND | | 1.00 | 0.10 | µg/L | 1 | 12/20/12 10:45 |
| o-Xylene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 10:45 |
| p-Isopropyltoluene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/20/12 10:45 |
| sec-Butylbenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/20/12 10:45 |
| Styrene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 10:45 |
| Tetrachloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 10:45 |
| Toluene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 10:45 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 10:45 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/20/12 10:45 |
| Trichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 10:45 |
| Trichlorofluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 12/20/12 10:45 |
| Vinyl acetate | ND | | 2.00 | 1.00 | µg/L | 1 | 12/20/12 10:45 |
| Vinyl chloride | ND | | 1.00 | 0.33 | µg/L | 1 | 12/20/12 10:45 |
| Xylenes (total) | ND | | 1.00 | 0.30 | µg/L | 1 | 12/20/12 10:45 |
| Surr: 1,2-Dichloroethane-d4 | 120 | | 75-130 | 0.16 | %REC | 1 | 12/20/12 10:45 |
| Surr: Toluene-d8 | 105 | | 75-125 | 0.10 | %REC | 1 | 12/20/12 10:45 |
| Surr: 4-Bromofluorobenzene | 106 | | 75-125 | 0.10 | %REC | 1 | 12/20/12 10:45 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 12/27/12 14:11 626377 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1212218-012A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W12* |
| **W Order:** | K1212218 | **Collection Date:** | 12/18/12 16:00 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 12/19/12 8:05 |
| **Inst. ID:** | MS01_11 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R25019 |
| **Revision:** | 12/26/12 12:05 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-T5074.D |
| **Col Type:** | TOTAL 324.85 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 5.00 | 1.00 | µg/L | 5 | 12/19/12 14:37 |
| 1,1,1,2-Tetrachloroethane | ND | | 2.50 | 0.80 | µg/L | 5 | 12/19/12 14:37 |
| 1,1,1-Trichloroethane | ND | | 2.50 | 0.50 | µg/L | 5 | 12/19/12 14:37 |
| 1,1,2,2-Tetrachloroethane | ND | | 2.50 | 0.50 | µg/L | 5 | 12/19/12 14:37 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 2.50 | 0.50 | µg/L | 5 | 12/19/12 14:37 |
| 1,1,2-Trichloroethane | ND | | 2.50 | 0.80 | µg/L | 5 | 12/19/12 14:37 |
| 1,1-Dichloroethane | 160 | | 2.50 | 0.50 | µg/L | 5 | 12/19/12 14:37 |
| 1,1-Dichloroethene | ND | | 2.50 | 0.80 | µg/L | 5 | 12/19/12 14:37 |
| 1,2,3-Trichloropropane | ND | | 10.0 | 1.65 | µg/L | 5 | 12/19/12 14:37 |
| 1,2,4-Trichlorobenzene | ND | | 5.00 | 0.50 | µg/L | 5 | 12/19/12 14:37 |
| 1,2,4-Trimethylbenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 12/19/12 14:37 |
| 1,2-Dibromo-3-chloropropane | ND | | 25.0 | 5.00 | µg/L | 5 | 12/19/12 14:37 |
| 1,2-Dibromoethane | ND | | 2.50 | 0.80 | µg/L | 5 | 12/19/12 14:37 |
| 1,2-Dichlorobenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 12/19/12 14:37 |
| 1,2-Dichloroethane | 4.65 | | 2.50 | 0.80 | µg/L | 5 | 12/19/12 14:37 |
| 1,2-Dichloropropane | ND | | 2.50 | 0.80 | µg/L | 5 | 12/19/12 14:37 |
| 1,3,5-Trimethylbenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 12/19/12 14:37 |
| 1,3-Dichlorobenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 12/19/12 14:37 |
| 1,4-Dichlorobenzene | ND | | 2.50 | 0.80 | µg/L | 5 | 12/19/12 14:37 |
| 2-Butanone | ND | | 50.0 | 5.00 | µg/L | 5 | 12/19/12 14:37 |
| 2-Chloroethylvinyl ether | ND | | 25.0 | 12.5 | µg/L | 5 | 12/19/12 14:37 |
| 2-Hexanone | ND | | 25.0 | 5.00 | µg/L | 5 | 12/19/12 14:37 |
| 4-Chlorotoluene | ND | | 2.50 | 0.50 | µg/L | 5 | 12/19/12 14:37 |
| 4-Methyl-2-pentanone | ND | | 25.0 | 5.00 | µg/L | 5 | 12/19/12 14:37 |
| Acetone | ND | | 50.0 | 5.00 | µg/L | 5 | 12/19/12 14:37 |
| Benzene | ND | | 2.50 | 0.50 | µg/L | 5 | 12/19/12 14:37 |
| Bromobenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 12/19/12 14:37 |
| Bromochloromethane | ND | | 2.50 | 0.50 | µg/L | 5 | 12/19/12 14:37 |
| Bromodichloromethane | ND | | 2.50 | 0.50 | µg/L | 5 | 12/19/12 14:37 |
| Bromoform | ND | | 5.00 | 1.65 | µg/L | 5 | 12/19/12 14:37 |
| Bromomethane | ND | | 5.00 | 1.65 | µg/L | 5 | 12/19/12 14:37 |
| Carbon disulfide | ND | | 2.50 | 0.55 | µg/L | 5 | 12/19/12 14:37 |
| Carbon tetrachloride | ND | | 2.50 | 0.50 | µg/L | 5 | 12/19/12 14:37 |
| Chlorobenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 12/19/12 14:37 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 12/27/12 14:11 626415 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1212218-012A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W12*** |
| **W Order:** | K1212218 | **Collection Date:** | 12/18/12 16:00 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 12/19/12 8:05 |
| **Inst. ID:** | MS01_11 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R25019 |
| **Revision:** | 12/26/12 12:05 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-T5074.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | 29.2 | | 5.00 | 1.65 | µg/L | 5 | 12/19/12 14:37 |
| Chloroform | ND | | 2.50 | 0.50 | µg/L | 5 | 12/19/12 14:37 |
| Chloromethane | ND | | 5.00 | 1.65 | µg/L | 5 | 12/19/12 14:37 |
| cis-1,2-Dichloroethene | 20.6 | | 2.50 | 0.50 | µg/L | 5 | 12/19/12 14:37 |
| cis-1,3-Dichloropropene | ND | | 2.50 | 0.80 | µg/L | 5 | 12/19/12 14:37 |
| Cyclohexane | ND | | 2.50 | 0.50 | µg/L | 5 | 12/19/12 14:37 |
| Dibromochloromethane | ND | | 2.50 | 0.50 | µg/L | 5 | 12/19/12 14:37 |
| Dibromomethane | ND | | 2.50 | 0.80 | µg/L | 5 | 12/19/12 14:37 |
| Dichlorodifluoromethane | ND | | 5.00 | 0.50 | µg/L | 5 | 12/19/12 14:37 |
| Ethylbenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 12/19/12 14:37 |
| Hexachlorobutadiene | ND | | 5.00 | 0.50 | µg/L | 5 | 12/19/12 14:37 |
| Isopropylbenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 12/19/12 14:37 |
| Methyl tert-butyl ether | ND | | 5.00 | 0.80 | µg/L | 5 | 12/19/12 14:37 |
| Methylene chloride | 2.65 | J | 10.0 | 0.80 | µg/L | 5 | 12/19/12 14:37 |
| n-Propylbenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 12/19/12 14:37 |
| Naphthalene | ND | | 5.00 | 0.50 | µg/L | 5 | 12/19/12 14:37 |
| o-Xylene | ND | | 2.50 | 0.50 | µg/L | 5 | 12/19/12 14:37 |
| p-Isopropyltoluene | ND | | 2.50 | 0.80 | µg/L | 5 | 12/19/12 14:37 |
| sec-Butylbenzene | ND | | 2.50 | 0.80 | µg/L | 5 | 12/19/12 14:37 |
| Styrene | ND | | 2.50 | 0.50 | µg/L | 5 | 12/19/12 14:37 |
| Tetrachloroethene | ND | | 2.50 | 0.50 | µg/L | 5 | 12/19/12 14:37 |
| Toluene | ND | | 2.50 | 0.50 | µg/L | 5 | 12/19/12 14:37 |
| trans-1,2-Dichloroethene | ND | | 2.50 | 0.50 | µg/L | 5 | 12/19/12 14:37 |
| trans-1,3-Dichloropropene | ND | | 2.50 | 0.80 | µg/L | 5 | 12/19/12 14:37 |
| Trichloroethene | 0.75 | J | 2.50 | 0.50 | µg/L | 5 | 12/19/12 14:37 |
| Trichlorofluoromethane | ND | | 5.00 | 0.50 | µg/L | 5 | 12/19/12 14:37 |
| Vinyl acetate | ND | | 10.0 | 5.00 | µg/L | 5 | 12/19/12 14:37 |
| Vinyl chloride | 107 | | 5.00 | 1.65 | µg/L | 5 | 12/19/12 14:37 |
| Xylenes (total) | ND | | 5.00 | 1.50 | µg/L | 5 | 12/19/12 14:37 |
| Surr: 1,2-Dichloroethane-d4 | 114 | | 75-130 | 0.80 | %REC | 5 | 12/19/12 14:37 |
| Surr: Toluene-d8 | 107 | | 75-125 | 0.50 | %REC | 5 | 12/19/12 14:37 |
| Surr: 4-Bromofluorobenzene | 105 | | 75-125 | 0.50 | %REC | 5 | 12/19/12 14:37 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 12/27/12 14:11 626415 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1212218-013A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W13* |
| **W Order:** | K1212218 | **Collection Date:** | 12/18/12 16:40 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 12/19/12 8:05 |
| **Inst. ID:** | MS01_11 **Sample Size** 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS **%Moisture:** | **BatchNo:** | R25020 |
| **Revision:** | 12/26/12 12:02 **TestCode:** 8260W_CAL | **FileID:** | 1-SAMP-T5102.D |
| **Col Type:** | TOTAL 0.92 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 1.00 | 0.20 | µg/L | 1 | 12/20/12 11:17 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/20/12 11:17 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 11:17 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 11:17 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 11:17 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/20/12 11:17 |
| 1,1-Dichloroethane | 0.23 | J | 0.50 | 0.10 | µg/L | 1 | 12/20/12 11:17 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/20/12 11:17 |
| 1,2,3-Trichloropropane | ND | | 2.00 | 0.33 | µg/L | 1 | 12/20/12 11:17 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 0.10 | µg/L | 1 | 12/20/12 11:17 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 11:17 |
| 1,2-Dibromo-3-chloropropane | ND | | 5.00 | 1.00 | µg/L | 1 | 12/20/12 11:17 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/20/12 11:17 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 11:17 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/20/12 11:17 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/20/12 11:17 |
| 1,3,5-Trimethylbenzene | 0.22 | J | 0.50 | 0.10 | µg/L | 1 | 12/20/12 11:17 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 11:17 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/20/12 11:17 |
| 2-Butanone | ND | | 10.0 | 1.00 | µg/L | 1 | 12/20/12 11:17 |
| 2-Chloroethylvinyl ether | ND | | 5.00 | 2.50 | µg/L | 1 | 12/20/12 11:17 |
| 2-Hexanone | ND | | 5.00 | 1.00 | µg/L | 1 | 12/20/12 11:17 |
| 4-Chlorotoluene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 11:17 |
| 4-Methyl-2-pentanone | ND | | 5.00 | 1.00 | µg/L | 1 | 12/20/12 11:17 |
| Acetone | ND | | 10.0 | 1.00 | µg/L | 1 | 12/20/12 11:17 |
| Benzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 11:17 |
| Bromobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 11:17 |
| Bromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 11:17 |
| Bromodichloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 11:17 |
| Bromoform | ND | | 1.00 | 0.33 | µg/L | 1 | 12/20/12 11:17 |
| Bromomethane | ND | | 1.00 | 0.33 | µg/L | 1 | 12/20/12 11:17 |
| Carbon disulfide | ND | | 0.50 | 0.11 | µg/L | 1 | 12/20/12 11:17 |
| Carbon tetrachloride | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 11:17 |
| Chlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 11:17 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 12/27/12 14:11 626378 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1212218-013A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W13*** |
| **W Order:** | K1212218 | **Collection Date:** | 12/18/12 16:40 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 12/19/12 8:05 |
| **Inst. ID:** | MS01_11 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R25020 |
| **Revision:** | 12/26/12 12:02 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-T5102.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | ND | | 1.00 | 0.33 | µg/L | 1 | 12/20/12 11:17 |
| Chloroform | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 11:17 |
| Chloromethane | ND | | 1.00 | 0.33 | µg/L | 1 | 12/20/12 11:17 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 11:17 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/20/12 11:17 |
| Cyclohexane | 0.37 | J | 0.50 | 0.10 | µg/L | 1 | 12/20/12 11:17 |
| Dibromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 11:17 |
| Dibromomethane | ND | | 0.50 | 0.16 | µg/L | 1 | 12/20/12 11:17 |
| Dichlorodifluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 12/20/12 11:17 |
| Ethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 11:17 |
| Hexachlorobutadiene | ND | | 1.00 | 0.10 | µg/L | 1 | 12/20/12 11:17 |
| Isopropylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 11:17 |
| Methyl tert-butyl ether | ND | | 1.00 | 0.16 | µg/L | 1 | 12/20/12 11:17 |
| Methylene chloride | ND | | 2.00 | 0.16 | µg/L | 1 | 12/20/12 11:17 |
| n-Propylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 11:17 |
| Naphthalene | ND | | 1.00 | 0.10 | µg/L | 1 | 12/20/12 11:17 |
| o-Xylene | 0.10 | J | 0.50 | 0.10 | µg/L | 1 | 12/20/12 11:17 |
| p-Isopropyltoluene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/20/12 11:17 |
| sec-Butylbenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/20/12 11:17 |
| Styrene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 11:17 |
| Tetrachloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 11:17 |
| Toluene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 11:17 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 11:17 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 12/20/12 11:17 |
| Trichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 12/20/12 11:17 |
| Trichlorofluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 12/20/12 11:17 |
| Vinyl acetate | ND | | 2.00 | 1.00 | µg/L | 1 | 12/20/12 11:17 |
| Vinyl chloride | ND | | 1.00 | 0.33 | µg/L | 1 | 12/20/12 11:17 |
| Xylenes (total) | ND | | 1.00 | 0.30 | µg/L | 1 | 12/20/12 11:17 |
| Surr: 1,2-Dichloroethane-d4 | 119 | | 75-130 | 0.16 | %REC | 1 | 12/20/12 11:17 |
| Surr: Toluene-d8 | 108 | | 75-125 | 0.10 | %REC | 1 | 12/20/12 11:17 |
| Surr: 4-Bromofluorobenzene | 104 | | 75-125 | 0.10 | %REC | 1 | 12/20/12 11:17 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 12/27/12 14:11 626378 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1212218-014A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W14* |
| **W Order:** | K1212218 | **Collection Date:** | 12/18/12 17:00 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 12/19/12 8:05 |
| **Inst. ID:** | MS01_11 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R25020 |
| **Revision:** | 12/26/12 12:02 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-T5111.D |
| **Col Type:** | TOTAL 4998 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 100 | 20.0 | µg/L | 100 | 12/20/12 16:00 |
| 1,1,1,2-Tetrachloroethane | ND | | 50.0 | 16.0 | µg/L | 100 | 12/20/12 16:00 |
| 1,1,1-Trichloroethane | 1920 | | 50.0 | 10.0 | µg/L | 100 | 12/20/12 16:00 |
| 1,1,2,2-Tetrachloroethane | ND | | 50.0 | 10.0 | µg/L | 100 | 12/20/12 16:00 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 725 | | 50.0 | 10.0 | µg/L | 100 | 12/20/12 16:00 |
| 1,1,2-Trichloroethane | ND | | 50.0 | 16.0 | µg/L | 100 | 12/20/12 16:00 |
| 1,1-Dichloroethane | 2010 | | 50.0 | 10.0 | µg/L | 100 | 12/20/12 16:00 |
| 1,1-Dichloroethene | 46.0 | J | 50.0 | 16.0 | µg/L | 100 | 12/20/12 16:00 |
| 1,2,3-Trichloropropane | ND | | 200 | 33.0 | µg/L | 100 | 12/20/12 16:00 |
| 1,2,4-Trichlorobenzene | ND | | 100 | 10.0 | µg/L | 100 | 12/20/12 16:00 |
| 1,2,4-Trimethylbenzene | ND | | 50.0 | 10.0 | µg/L | 100 | 12/20/12 16:00 |
| 1,2-Dibromo-3-chloropropane | ND | | 500 | 100 | µg/L | 100 | 12/20/12 16:00 |
| 1,2-Dibromoethane | ND | | 50.0 | 16.0 | µg/L | 100 | 12/20/12 16:00 |
| 1,2-Dichlorobenzene | ND | | 50.0 | 10.0 | µg/L | 100 | 12/20/12 16:00 |
| 1,2-Dichloroethane | ND | | 50.0 | 16.0 | µg/L | 100 | 12/20/12 16:00 |
| 1,2-Dichloropropane | ND | | 50.0 | 16.0 | µg/L | 100 | 12/20/12 16:00 |
| 1,3,5-Trimethylbenzene | ND | | 50.0 | 10.0 | µg/L | 100 | 12/20/12 16:00 |
| 1,3-Dichlorobenzene | ND | | 50.0 | 10.0 | µg/L | 100 | 12/20/12 16:00 |
| 1,4-Dichlorobenzene | ND | | 50.0 | 16.0 | µg/L | 100 | 12/20/12 16:00 |
| 2-Butanone | ND | | 1000 | 100 | µg/L | 100 | 12/20/12 16:00 |
| 2-Chloroethylvinyl ether | ND | | 500 | 250 | µg/L | 100 | 12/20/12 16:00 |
| 2-Hexanone | ND | | 500 | 100 | µg/L | 100 | 12/20/12 16:00 |
| 4-Chlorotoluene | ND | | 50.0 | 10.0 | µg/L | 100 | 12/20/12 16:00 |
| 4-Methyl-2-pentanone | ND | | 500 | 100 | µg/L | 100 | 12/20/12 16:00 |
| Acetone | ND | | 1000 | 100 | µg/L | 100 | 12/20/12 16:00 |
| Benzene | 10.0 | J | 50.0 | 10.0 | µg/L | 100 | 12/20/12 16:00 |
| Bromobenzene | ND | | 50.0 | 10.0 | µg/L | 100 | 12/20/12 16:00 |
| Bromochloromethane | ND | | 50.0 | 10.0 | µg/L | 100 | 12/20/12 16:00 |
| Bromodichloromethane | ND | | 50.0 | 10.0 | µg/L | 100 | 12/20/12 16:00 |
| Bromoform | ND | | 100 | 33.0 | µg/L | 100 | 12/20/12 16:00 |
| Bromomethane | ND | | 100 | 33.0 | µg/L | 100 | 12/20/12 16:00 |
| Carbon disulfide | ND | | 50.0 | 11.0 | µg/L | 100 | 12/20/12 16:00 |
| Carbon tetrachloride | ND | | 50.0 | 10.0 | µg/L | 100 | 12/20/12 16:00 |
| Chlorobenzene | ND | | 50.0 | 10.0 | µg/L | 100 | 12/20/12 16:00 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 12/27/12 14:11 626387 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1212218-014A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W14*** |
| **W Order:** | K1212218 | **Collection Date:** | 12/18/12 17:00 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 12/19/12 8:05 |
| **Inst. ID:** | MS01_11 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R25020 |
| **Revision:** | 12/26/12 12:02 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-T5111.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | ND | | 100 | 33.0 | µg/L | 100 | 12/20/12 16:00 |
| Chloroform | ND | | 50.0 | 10.0 | µg/L | 100 | 12/20/12 16:00 |
| Chloromethane | 38.0 | J | 100 | 33.0 | µg/L | 100 | 12/20/12 16:00 |
| cis-1,2-Dichloroethene | 75.0 | | 50.0 | 10.0 | µg/L | 100 | 12/20/12 16:00 |
| cis-1,3-Dichloropropene | ND | | 50.0 | 16.0 | µg/L | 100 | 12/20/12 16:00 |
| Cyclohexane | 29.0 | J | 50.0 | 10.0 | µg/L | 100 | 12/20/12 16:00 |
| Dibromochloromethane | ND | | 50.0 | 10.0 | µg/L | 100 | 12/20/12 16:00 |
| Dibromomethane | ND | | 50.0 | 16.0 | µg/L | 100 | 12/20/12 16:00 |
| Dichlorodifluoromethane | ND | | 100 | 10.0 | µg/L | 100 | 12/20/12 16:00 |
| Ethylbenzene | ND | | 50.0 | 10.0 | µg/L | 100 | 12/20/12 16:00 |
| Hexachlorobutadiene | ND | | 100 | 10.0 | µg/L | 100 | 12/20/12 16:00 |
| Isopropylbenzene | ND | | 50.0 | 10.0 | µg/L | 100 | 12/20/12 16:00 |
| Methyl tert-butyl ether | ND | | 100 | 16.0 | µg/L | 100 | 12/20/12 16:00 |
| Methylene chloride | 43.0 | J | 200 | 16.0 | µg/L | 100 | 12/20/12 16:00 |
| n-Propylbenzene | ND | | 50.0 | 10.0 | µg/L | 100 | 12/20/12 16:00 |
| Naphthalene | ND | | 100 | 10.0 | µg/L | 100 | 12/20/12 16:00 |
| o-Xylene | ND | | 50.0 | 10.0 | µg/L | 100 | 12/20/12 16:00 |
| p-Isopropyltoluene | ND | | 50.0 | 16.0 | µg/L | 100 | 12/20/12 16:00 |
| sec-Butylbenzene | ND | | 50.0 | 16.0 | µg/L | 100 | 12/20/12 16:00 |
| Styrene | ND | | 50.0 | 10.0 | µg/L | 100 | 12/20/12 16:00 |
| Tetrachloroethene | 82.0 | | 50.0 | 10.0 | µg/L | 100 | 12/20/12 16:00 |
| Toluene | 20.0 | J | 50.0 | 10.0 | µg/L | 100 | 12/20/12 16:00 |
| trans-1,2-Dichloroethene | ND | | 50.0 | 10.0 | µg/L | 100 | 12/20/12 16:00 |
| trans-1,3-Dichloropropene | ND | | 50.0 | 16.0 | µg/L | 100 | 12/20/12 16:00 |
| Trichloroethene | ND | | 50.0 | 10.0 | µg/L | 100 | 12/20/12 16:00 |
| Trichlorofluoromethane | ND | | 100 | 10.0 | µg/L | 100 | 12/20/12 16:00 |
| Vinyl acetate | ND | | 200 | 100 | µg/L | 100 | 12/20/12 16:00 |
| Vinyl chloride | ND | | 100 | 33.0 | µg/L | 100 | 12/20/12 16:00 |
| Xylenes (total) | ND | | 100 | 30.0 | µg/L | 100 | 12/20/12 16:00 |
| Surr: 1,2-Dichloroethane-d4 | 120 | | 75-130 | 16.0 | %REC | 100 | 12/20/12 16:00 |
| Surr: Toluene-d8 | 107 | | 75-125 | 10.0 | %REC | 100 | 12/20/12 16:00 |
| Surr: 4-Bromofluorobenzene | 102 | | 75-125 | 10.0 | %REC | 100 | 12/20/12 16:00 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 12/27/12 14:11 626387 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

Friday, October 19, 2012

Ken W. Kloeber
Ken W. Kloeber Consulting Engineers
PO Box 140
Boston, NY 14025

TEL: (716) 864-0012

Project: 189-02
RE: Analytical Results Order No.: K1210056

Dear Ken W. Kloeber:

Life Science Laboratories, Inc. received 16 sample(s) on 10/4/2012 for the analyses presented in the following report. Sample results relate only to the samples as received by the laboratory.

Very truly yours,
Life Science Laboratories, Inc.

Anthony Crescenzi
Project Manager

## Ken Kloeber PE

**Subject:** FW: LSL Analytical Report- K1210056 Kloeber

**From:** Anthony Crescenzi
**Sent:** Friday, October 19, 2012 2:26 PM
**To:** Mark Vandewarker; Hugh Guider
**Subject:** FW: LSL Analytical Report- K1210056 Kloeber

Hugh - Acetone and MeCl2 are common volatile laboratory contaminants. QA/QC guidelines allow concentrations 3X the PQL for these compounds and the reported concentrations were all less than the PQL. The associated method blanks showed similar concentrations less than the PQL. For samples requiring dilutions the background concentrations of acetone and MeCl2 are multiplied by the dilution factor (as are all compounds) and thus the reported concentrations of the contaminants are much higher than undiluted samples.

Mark Vandewarker

**Hugh,**

**You can let Mr. Kloeber know that he will see this pattern next time too. When reporting estimated concentrations "J values" below the reporting limit for acetone and methylene chloride in a lab environment that is using those solvents positive hits are common.**
Thanks,
Tony

-----Original Message-----
From: Hugh Guider
Sent: Friday, October 19, 2012 1:36 PM
To: Anthony Crescenzi
Subject: FW: LSL Analytical Report- K1210056 Kloeber

-----Original Message-----
From: Ken Kloeber PE [mailto:KloeberEng@aol.com]
Sent: Friday, October 19, 2012 1:25 PM
To: Hugh Guider
Subject: RE: LSL Analytical Report- K1210056

Hugh,

Re this report....

Taking just a QUICK look, I see that we have acetone and methcl showing up again -- please look at and forward the QA.

Thanks,
Ken

-----Original Message-----
From: Mindi Brown [mailto:brownma@lsl-inc.com]
Sent: Fri Oct 19, 2012 12:48 PM

# Life Science Laboratories, Inc.

## Sample Receipt Checklist

Client Name: **KLOEBERENG**

Date and Time Received: **10/4/2012 11:00:00 AM**

Work Order Number: **K1210056**

Received by: gis

Checklist completed by: GS (Initials) 10-4-12 (Date)

Reviewed by: AC (Initials) 10-4-12 (Date)

Delivery Method: FedEx

| | | | |
|---|---|---|---|
| Shipping container/cooler in good condition? | Yes ☑ | No ☐ | Not Present ☐ |
| Custody seals intact on shipping container/cooler? | Yes ☐ | No ☐ | Not Present ☑ |
| Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Applicable ☑ |
| Chain of custody present? | Yes ☑ | No ☐ | |
| Chain of custody signed when relinquished and received? | Yes ☑ | No ☐ | |
| Chain of custody agrees with sample labels? | Yes ☑ | No ☐ | |
| Samples in proper container/bottle? | Yes ☑ | No ☐ | |
| Sample containers intact? | Yes ☑ | No ☐ | |
| Sufficient sample volume for indicated test? | Yes ☑ | No ☐ | |
| All samples received within holding time? | Yes ☑ | No ☐ | |
| Container/Temp Blank temperature in compliance? | Yes ☑ | No ☐ | |
| Water - VOA vials have zero headspace? | Yes ☑ | No ☐ | No VOA vials submitted ☐ |
| Water - pH acceptable upon receipt? | Yes ☐ | No ☐ | Not Applicable ☑ |

Comments:

Corrective Action:

K1210056

# Ken W. Kloeber Consulting Engineers

(716) 864-0012 tel
(775) 860-3804 fax
KloeberEng@aol.com
PO Box 140 • Boston NY 14025

KWKCE Proj no. 189-02
Sampled by initials: KwK
PO no. 189-02

For Lab use

## Environmental Sample Chain-of-Custody

| | KWKCE Sample ID or Location | Date | Time | Type | Matrix | No. of containers | (1) | (2) | (3) | (4) | (5) | (6) | TAT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 001 | 189-W1 | 10/2/12 | 1815 | G C | GW | 2 | X | | | | | | |
| 002 | 189-W2 | | 1800 | G C | | 2 | X | | | | | | |
| 003 | 189-W3 | | 1735 | G C | | 2 | X | | | | | | |
| 004 | 189-W4 | | 1450 | G C | | 2 | X | | | | | | |
| 005 | 189-W5 | | 1850 | G C | | 2 | X | | | | | | |
| 006 | 189-W6 | | 1530 | G C | | 2 | X | | | | | | |
| 007 | 189-W7 | | 1620 | G C | | 2 | X | | | | | | |
| 008 | 189-W8 | | 1450 | G C | | 2 | X | | | | | | |
| 009 | 189-W9 | | 1715 | G C | | 2 | X | | | | | | |
| 010 | 189-W10 | | 1600 | G C | | 2 | X | | | | | | |
| 011 | 189-W11 | | 1650 | G C | | 2 | X | | | | | | |
| 012 | 189-W12 | | 1640 | G C | | 2 | X | | | | | | |
| 013 | 189-W13 | | 1545 | G C | | 2 | X | | | | | | |
| 014 | 189-W14 | | 1615 | G C | | 2 | X | | | | | | |
| 015 | 189-TRIP | | 1700 | G C | DI | 2 | X | | | | | | |
| 016 | 189-BL | | 1200 | G C | GW | 2 | X | | | | | | |
| | | | | G C | | | | | | | | | |

Remarks / Instructions

KEEP LIMITS AS LOW AS POSSIBLE; REPORT ALL RESULTS AND QC VALUES (RS, JS, ETC) AND ALL DATA & QC QUALIFIERS.

EMAIL REPORT & INVOICE. FOLLOW UP W/ EQUIS EDD.

~~KY~~ USE EXPANDED LIST OF 8260 COMPOUNDS

| Signature of person sampling | Courier | Picked-up or dropped-off location |
|---|---|---|
| KLloober | FEDEX | |

| | Date | Time | |
|---|---|---|---|
| Relinquished-by signature | | | Received-by signature |
| Relinquished-by signature | | | Received-by signature |
| Relinquished-by signature | 10-4-12 | 11:00 | Received-at-Lab-by signature: via FedEx |

| Analysis requested above / Test Method | Sample Container(s) Type | Size | Preservative(s) |
|---|---|---|---|
| (1) EPA 8260 ~~KY~~ | VOA | 40 | HCl, 4° |
| (2) | | | |
| (3) | | | |
| (4) | | | |
| (5) | | | |
| (6) | | | |

Lab use 5.0° on Ice

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1210056-015A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - TRIP* |
| **W Order:** | K1210056 | **Collection Date:** | 10/02/12 17:00 |
| **Matrix:** | WATER Q | **Date Received:** | 10/04/12 11:00 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R24661 |
| **Revision:** | 10/18/12 14:30 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K0701.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 1.00 | 0.20 | µg/L | 1 | 10/06/12 22:04 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 22:04 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 22:04 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 22:04 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 22:04 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 22:04 |
| 1,1-Dichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 22:04 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 22:04 |
| 1,2,3-Trichloropropane | ND | | 2.00 | 0.33 | µg/L | 1 | 10/06/12 22:04 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 0.10 | µg/L | 1 | 10/06/12 22:04 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 22:04 |
| 1,2-Dibromo-3-chloropropane | ND | | 5.00 | 1.00 | µg/L | 1 | 10/06/12 22:04 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 22:04 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 22:04 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 22:04 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 22:04 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 22:04 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 22:04 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 22:04 |
| 2-Butanone | ND | | 10.0 | 1.00 | µg/L | 1 | 10/06/12 22:04 |
| 2-Chloroethylvinyl ether | ND | | 5.00 | 2.50 | µg/L | 1 | 10/06/12 22:04 |
| 2-Hexanone | ND | | 5.00 | 1.00 | µg/L | 1 | 10/06/12 22:04 |
| 4-Chlorotoluene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 22:04 |
| 4-Methyl-2-pentanone | ND | | 5.00 | 1.00 | µg/L | 1 | 10/06/12 22:04 |
| Acetone | ND | | 10.0 | 1.00 | µg/L | 1 | 10/06/12 22:04 |
| Benzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 22:04 |
| Bromobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 22:04 |
| Bromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 22:04 |
| Bromodichloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 22:04 |
| Bromoform | ND | | 1.00 | 0.33 | µg/L | 1 | 10/06/12 22:04 |
| Bromomethane | ND | | 1.00 | 0.33 | µg/L | 1 | 10/06/12 22:04 |
| Carbon disulfide | ND | | 0.50 | 0.11 | µg/L | 1 | 10/06/12 22:04 |
| Carbon tetrachloride | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 22:04 |
| Chlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 22:04 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1210056-015A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - TRIP*** |
| **W Order:** | K1210056 | **Collection Date:** | 10/02/12 17:00 |
| **Matrix:** | WATER Q | **Date Received:** | 10/04/12 11:00 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R24661 |
| **Revision:** | 10/18/12 14:30 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K0701.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | ND | | 1.00 | 0.33 | µg/L | 1 | 10/06/12 22:04 |
| Chloroform | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 22:04 |
| Chloromethane | ND | | 1.00 | 0.33 | µg/L | 1 | 10/06/12 22:04 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 22:04 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 22:04 |
| Cyclohexane | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 22:04 |
| Dibromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 22:04 |
| Dibromomethane | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 22:04 |
| Dichlorodifluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 10/06/12 22:04 |
| Ethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 22:04 |
| Hexachlorobutadiene | ND | | 1.00 | 0.10 | µg/L | 1 | 10/06/12 22:04 |
| Isopropylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 22:04 |
| Methyl tert-butyl ether | ND | | 1.00 | 0.16 | µg/L | 1 | 10/06/12 22:04 |
| Methylene chloride | 0.57 | J | 2.00 | 0.16 | µg/L | 1 | 10/06/12 22:04 |
| n-Propylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 22:04 |
| Naphthalene | ND | | 1.00 | 0.10 | µg/L | 1 | 10/06/12 22:04 |
| o-Xylene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 22:04 |
| p-Isopropyltoluene | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 22:04 |
| sec-Butylbenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 22:04 |
| Styrene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 22:04 |
| Tetrachloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 22:04 |
| Toluene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 22:04 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 22:04 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 22:04 |
| Trichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 22:04 |
| Trichlorofluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 10/06/12 22:04 |
| Vinyl acetate | ND | | 2.00 | 1.00 | µg/L | 1 | 10/06/12 22:04 |
| Vinyl chloride | ND | | 1.00 | 0.33 | µg/L | 1 | 10/06/12 22:04 |
| Xylenes (total) | ND | | 1.00 | 0.30 | µg/L | 1 | 10/06/12 22:04 |
| Surr: 1,2-Dichloroethane-d4 | 109 | | 75-130 | 0.16 | %REC | 1 | 10/06/12 22:04 |
| Surr: Toluene-d8 | 105 | | 75-125 | 0.10 | %REC | 1 | 10/06/12 22:04 |
| Surr: 4-Bromofluorobenzene | 107 | | 75-125 | 0.10 | %REC | 1 | 10/06/12 22:04 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 10/18/12 14:37 619195 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1210056-001A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W1* |
| **W Order:** | K1210056 | **Collection Date:** | 10/02/12 18:15 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 10/04/12 11:00 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R24662 |
| **Revision:** | 10/18/12 14:35 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K0722.D |
| **Col Type:** | Total 111.73 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 2.00 | 0.40 | µg/L | 2 | 10/08/12 14:18 |
| 1,1,1,2-Tetrachloroethane | ND | | 1.00 | 0.32 | µg/L | 2 | 10/08/12 14:18 |
| 1,1,1-Trichloroethane | 2.10 | | 1.00 | 0.20 | µg/L | 2 | 10/08/12 14:18 |
| 1,1,2,2-Tetrachloroethane | ND | | 1.00 | 0.20 | µg/L | 2 | 10/08/12 14:18 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 1.00 | 0.20 | µg/L | 2 | 10/08/12 14:18 |
| 1,1,2-Trichloroethane | ND | | 1.00 | 0.32 | µg/L | 2 | 10/08/12 14:18 |
| 1,1-Dichloroethane | 8.40 | | 1.00 | 0.20 | µg/L | 2 | 10/08/12 14:18 |
| 1,1-Dichloroethene | ND | | 1.00 | 0.32 | µg/L | 2 | 10/08/12 14:18 |
| 1,2,3-Trichloropropane | ND | | 4.00 | 0.66 | µg/L | 2 | 10/08/12 14:18 |
| 1,2,4-Trichlorobenzene | ND | | 2.00 | 0.20 | µg/L | 2 | 10/08/12 14:18 |
| 1,2,4-Trimethylbenzene | 1.78 | | 1.00 | 0.20 | µg/L | 2 | 10/08/12 14:18 |
| 1,2-Dibromo-3-chloropropane | ND | | 10.0 | 2.00 | µg/L | 2 | 10/08/12 14:18 |
| 1,2-Dibromoethane | ND | | 1.00 | 0.32 | µg/L | 2 | 10/08/12 14:18 |
| 1,2-Dichlorobenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 10/08/12 14:18 |
| 1,2-Dichloroethane | ND | | 1.00 | 0.32 | µg/L | 2 | 10/08/12 14:18 |
| 1,2-Dichloropropane | ND | | 1.00 | 0.32 | µg/L | 2 | 10/08/12 14:18 |
| 1,3,5-Trimethylbenzene | 0.44 | J | 1.00 | 0.20 | µg/L | 2 | 10/08/12 14:18 |
| 1,3-Dichlorobenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 10/08/12 14:18 |
| 1,4-Dichlorobenzene | ND | | 1.00 | 0.32 | µg/L | 2 | 10/08/12 14:18 |
| 2-Butanone | 80.0 | | 20.0 | 2.00 | µg/L | 2 | 10/08/12 14:18 |
| 2-Chloroethylvinyl ether | ND | | 10.0 | 5.00 | µg/L | 2 | 10/08/12 14:18 |
| 2-Hexanone | ND | | 10.0 | 2.00 | µg/L | 2 | 10/08/12 14:18 |
| 4-Chlorotoluene | ND | | 1.00 | 0.20 | µg/L | 2 | 10/08/12 14:18 |
| 4-Methyl-2-pentanone | ND | | 10.0 | 2.00 | µg/L | 2 | 10/08/12 14:18 |
| Acetone | 10.0 | J | 20.0 | 2.00 | µg/L | 2 | 10/08/12 14:18 |
| Benzene | ND | | 1.00 | 0.20 | µg/L | 2 | 10/08/12 14:18 |
| Bromobenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 10/08/12 14:18 |
| Bromochloromethane | ND | | 1.00 | 0.20 | µg/L | 2 | 10/08/12 14:18 |
| Bromodichloromethane | ND | | 1.00 | 0.20 | µg/L | 2 | 10/08/12 14:18 |
| Bromoform | ND | | 2.00 | 0.66 | µg/L | 2 | 10/08/12 14:18 |
| Bromomethane | ND | | 2.00 | 0.66 | µg/L | 2 | 10/08/12 14:18 |
| Carbon disulfide | ND | | 1.00 | 0.22 | µg/L | 2 | 10/08/12 14:18 |
| Carbon tetrachloride | ND | | 1.00 | 0.20 | µg/L | 2 | 10/08/12 14:18 |
| Chlorobenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 10/08/12 14:18 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

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East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1210056-001A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W1*** |
| **W Order:** | K1210056 | **Collection Date:** | 10/02/12 18:15 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 10/04/12 11:00 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R24662 |
| **Revision:** | 10/18/12 14:35 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K0722.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | 6.42 | | 2.00 | 0.66 | µg/L | 2 | 10/08/12 14:18 |
| Chloroform | ND | | 1.00 | 0.20 | µg/L | 2 | 10/08/12 14:18 |
| Chloromethane | ND | | 2.00 | 0.66 | µg/L | 2 | 10/08/12 14:18 |
| cis-1,2-Dichloroethene | 0.68 | J | 1.00 | 0.20 | µg/L | 2 | 10/08/12 14:18 |
| cis-1,3-Dichloropropene | ND | | 1.00 | 0.32 | µg/L | 2 | 10/08/12 14:18 |
| Cyclohexane | ND | | 1.00 | 0.20 | µg/L | 2 | 10/08/12 14:18 |
| Dibromochloromethane | ND | | 1.00 | 0.20 | µg/L | 2 | 10/08/12 14:18 |
| Dibromomethane | ND | | 1.00 | 0.32 | µg/L | 2 | 10/08/12 14:18 |
| Dichlorodifluoromethane | ND | | 2.00 | 0.20 | µg/L | 2 | 10/08/12 14:18 |
| Ethylbenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 10/08/12 14:18 |
| Hexachlorobutadiene | ND | | 2.00 | 0.20 | µg/L | 2 | 10/08/12 14:18 |
| Isopropylbenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 10/08/12 14:18 |
| Methyl tert-butyl ether | ND | | 2.00 | 0.32 | µg/L | 2 | 10/08/12 14:18 |
| Methylene chloride | 0.82 | J | 4.00 | 0.32 | µg/L | 2 | 10/08/12 14:18 |
| n-Propylbenzene | ND | | 1.00 | 0.20 | µg/L | 2 | 10/08/12 14:18 |
| Naphthalene | ND | | 2.00 | 0.20 | µg/L | 2 | 10/08/12 14:18 |
| o-Xylene | ND | | 1.00 | 0.20 | µg/L | 2 | 10/08/12 14:18 |
| p-Isopropyltoluene | ND | | 1.00 | 0.32 | µg/L | 2 | 10/08/12 14:18 |
| sec-Butylbenzene | ND | | 1.00 | 0.32 | µg/L | 2 | 10/08/12 14:18 |
| Styrene | ND | | 1.00 | 0.20 | µg/L | 2 | 10/08/12 14:18 |
| Tetrachloroethene | ND | | 1.00 | 0.20 | µg/L | 2 | 10/08/12 14:18 |
| Toluene | 0.22 | J | 1.00 | 0.20 | µg/L | 2 | 10/08/12 14:18 |
| trans-1,2-Dichloroethene | ND | | 1.00 | 0.20 | µg/L | 2 | 10/08/12 14:18 |
| trans-1,3-Dichloropropene | ND | | 1.00 | 0.32 | µg/L | 2 | 10/08/12 14:18 |
| Trichloroethene | ND | | 1.00 | 0.20 | µg/L | 2 | 10/08/12 14:18 |
| Trichlorofluoromethane | ND | | 2.00 | 0.20 | µg/L | 2 | 10/08/12 14:18 |
| Vinyl acetate | ND | | 4.00 | 2.00 | µg/L | 2 | 10/08/12 14:18 |
| Vinyl chloride | 0.86 | J | 2.00 | 0.66 | µg/L | 2 | 10/08/12 14:18 |
| Xylenes (total) | ND | | 2.00 | 0.60 | µg/L | 2 | 10/08/12 14:18 |
| Surr: 1,2-Dichloroethane-d4 | 111 | | 75-130 | 0.32 | %REC | 2 | 10/08/12 14:18 |
| Surr: Toluene-d8 | 104 | | 75-125 | 0.20 | %REC | 2 | 10/08/12 14:18 |
| Surr: 4-Bromofluorobenzene | 112 | | 75-125 | 0.20 | %REC | 2 | 10/08/12 14:18 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 10/18/12 14:37 619202 **roject Supervisor:** Anthony Crescenzi

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East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1210056-002A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W2* |
| **W Order:** | K1210056 | **Collection Date:** | 10/02/12 18:00 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 10/04/12 11:00 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R24661 |
| **Revision:** | 10/18/12 14:30 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K0680.D |
| **Col Type:** | Total 1783 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 50.0 | 10.0 | µg/L | 50 | 10/06/12 10:55 |
| 1,1,1,2-Tetrachloroethane | ND | | 25.0 | 8.00 | µg/L | 50 | 10/06/12 10:55 |
| 1,1,1-Trichloroethane | 128 | | 25.0 | 5.00 | µg/L | 50 | 10/06/12 10:55 |
| 1,1,2,2-Tetrachloroethane | ND | | 25.0 | 5.00 | µg/L | 50 | 10/06/12 10:55 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 7.00 | J | 25.0 | 5.00 | µg/L | 50 | 10/06/12 10:55 |
| 1,1,2-Trichloroethane | ND | | 25.0 | 8.00 | µg/L | 50 | 10/06/12 10:55 |
| 1,1-Dichloroethane | 1180 | | 25.0 | 5.00 | µg/L | 50 | 10/06/12 10:55 |
| 1,1-Dichloroethene | ND | | 25.0 | 8.00 | µg/L | 50 | 10/06/12 10:55 |
| 1,2,3-Trichloropropane | ND | | 100 | 16.5 | µg/L | 50 | 10/06/12 10:55 |
| 1,2,4-Trichlorobenzene | ND | | 50.0 | 5.00 | µg/L | 50 | 10/06/12 10:55 |
| 1,2,4-Trimethylbenzene | 40.0 | | 25.0 | 5.00 | µg/L | 50 | 10/06/12 10:55 |
| 1,2-Dibromo-3-chloropropane | ND | | 250 | 50.0 | µg/L | 50 | 10/06/12 10:55 |
| 1,2-Dibromoethane | ND | | 25.0 | 8.00 | µg/L | 50 | 10/06/12 10:55 |
| 1,2-Dichlorobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 10/06/12 10:55 |
| 1,2-Dichloroethane | ND | | 25.0 | 8.00 | µg/L | 50 | 10/06/12 10:55 |
| 1,2-Dichloropropane | ND | | 25.0 | 8.00 | µg/L | 50 | 10/06/12 10:55 |
| 1,3,5-Trimethylbenzene | 7.00 | J | 25.0 | 5.00 | µg/L | 50 | 10/06/12 10:55 |
| 1,3-Dichlorobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 10/06/12 10:55 |
| 1,4-Dichlorobenzene | ND | | 25.0 | 8.00 | µg/L | 50 | 10/06/12 10:55 |
| 2-Butanone | 129 | J | 500 | 50.0 | µg/L | 50 | 10/06/12 10:55 |
| 2-Chloroethylvinyl ether | ND | | 250 | 125 | µg/L | 50 | 10/06/12 10:55 |
| 2-Hexanone | ND | | 250 | 50.0 | µg/L | 50 | 10/06/12 10:55 |
| 4-Chlorotoluene | ND | | 25.0 | 5.00 | µg/L | 50 | 10/06/12 10:55 |
| 4-Methyl-2-pentanone | ND | | 250 | 50.0 | µg/L | 50 | 10/06/12 10:55 |
| Acetone | ND | | 500 | 50.0 | µg/L | 50 | 10/06/12 10:55 |
| Benzene | ND | | 25.0 | 5.00 | µg/L | 50 | 10/06/12 10:55 |
| Bromobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 10/06/12 10:55 |
| Bromochloromethane | ND | | 25.0 | 5.00 | µg/L | 50 | 10/06/12 10:55 |
| Bromodichloromethane | ND | | 25.0 | 5.00 | µg/L | 50 | 10/06/12 10:55 |
| Bromoform | ND | | 50.0 | 16.5 | µg/L | 50 | 10/06/12 10:55 |
| Bromomethane | ND | | 50.0 | 16.5 | µg/L | 50 | 10/06/12 10:55 |
| Carbon disulfide | ND | | 25.0 | 5.50 | µg/L | 50 | 10/06/12 10:55 |
| Carbon tetrachloride | ND | | 25.0 | 5.00 | µg/L | 50 | 10/06/12 10:55 |
| Chlorobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 10/06/12 10:55 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

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East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1210056-002A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W2*** |
| **W Order:** | K1210056 | **Collection Date:** | 10/02/12 18:00 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 10/04/12 11:00 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R24661 |
| **Revision:** | 10/18/12 14:30 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K0680.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | 17.5 | J | 50.0 | 16.5 | µg/L | 50 | 10/06/12 10:55 |
| Chloroform | ND | | 25.0 | 5.00 | µg/L | 50 | 10/06/12 10:55 |
| Chloromethane | ND | | 50.0 | 16.5 | µg/L | 50 | 10/06/12 10:55 |
| cis-1,2-Dichloroethene | 26.5 | | 25.0 | 5.00 | µg/L | 50 | 10/06/12 10:55 |
| cis-1,3-Dichloropropene | ND | | 25.0 | 8.00 | µg/L | 50 | 10/06/12 10:55 |
| Cyclohexane | ND | | 25.0 | 5.00 | µg/L | 50 | 10/06/12 10:55 |
| Dibromochloromethane | ND | | 25.0 | 5.00 | µg/L | 50 | 10/06/12 10:55 |
| Dibromomethane | ND | | 25.0 | 8.00 | µg/L | 50 | 10/06/12 10:55 |
| Dichlorodifluoromethane | ND | | 50.0 | 5.00 | µg/L | 50 | 10/06/12 10:55 |
| Ethylbenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 10/06/12 10:55 |
| Hexachlorobutadiene | ND | | 50.0 | 5.00 | µg/L | 50 | 10/06/12 10:55 |
| Isopropylbenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 10/06/12 10:55 |
| Methyl tert-butyl ether | ND | | 50.0 | 8.00 | µg/L | 50 | 10/06/12 10:55 |
| Methylene chloride | 25.0 | J | 100 | 8.00 | µg/L | 50 | 10/06/12 10:55 |
| n-Propylbenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 10/06/12 10:55 |
| Naphthalene | ND | | 50.0 | 5.00 | µg/L | 50 | 10/06/12 10:55 |
| o-Xylene | ND | | 25.0 | 5.00 | µg/L | 50 | 10/06/12 10:55 |
| p-Isopropyltoluene | ND | | 25.0 | 8.00 | µg/L | 50 | 10/06/12 10:55 |
| sec-Butylbenzene | ND | | 25.0 | 8.00 | µg/L | 50 | 10/06/12 10:55 |
| Styrene | ND | | 25.0 | 5.00 | µg/L | 50 | 10/06/12 10:55 |
| Tetrachloroethene | ND | | 25.0 | 5.00 | µg/L | 50 | 10/06/12 10:55 |
| Toluene | ND | | 25.0 | 5.00 | µg/L | 50 | 10/06/12 10:55 |
| trans-1,2-Dichloroethene | 5.00 | J | 25.0 | 5.00 | µg/L | 50 | 10/06/12 10:55 |
| trans-1,3-Dichloropropene | ND | | 25.0 | 8.00 | µg/L | 50 | 10/06/12 10:55 |
| Trichloroethene | ND | | 25.0 | 5.00 | µg/L | 50 | 10/06/12 10:55 |
| Trichlorofluoromethane | ND | | 50.0 | 5.00 | µg/L | 50 | 10/06/12 10:55 |
| Vinyl acetate | ND | | 100 | 50.0 | µg/L | 50 | 10/06/12 10:55 |
| Vinyl chloride | 218 | | 50.0 | 16.5 | µg/L | 50 | 10/06/12 10:55 |
| Xylenes (total) | ND | | 50.0 | 15.0 | µg/L | 50 | 10/06/12 10:55 |
| Surr: 1,2-Dichloroethane-d4 | 107 | | 75-130 | 8.00 | %REC | 50 | 10/06/12 10:55 |
| Surr: Toluene-d8 | 106 | | 75-125 | 5.00 | %REC | 50 | 10/06/12 10:55 |
| Surr: 4-Bromofluorobenzene | 110 | | 75-125 | 5.00 | %REC | 50 | 10/06/12 10:55 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 10/18/12 14:37 619184 **roject Supervisor:** Anthony Crescenzi

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East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1210056-003A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W3* |
| **W Order:** | K1210056 | **Collection Date:** | 10/02/12 17:35 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 10/04/12 11:00 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R24662 |
| **Revision:** | 10/18/12 14:35 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K0723.D |
| **Col Type:** | TOTAL 133.77 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | 0.54 | J | 1.00 | 0.20 | µg/L | 1 | 10/08/12 14:50 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 10/08/12 14:50 |
| 1,1,1-Trichloroethane | 28.1 | | 0.50 | 0.10 | µg/L | 1 | 10/08/12 14:50 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 10/08/12 14:50 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 1.85 | | 0.50 | 0.10 | µg/L | 1 | 10/08/12 14:50 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 10/08/12 14:50 |
| 1,1-Dichloroethane | 54.6 | | 0.50 | 0.10 | µg/L | 1 | 10/08/12 14:50 |
| 1,1-Dichloroethene | 0.41 | J | 0.50 | 0.16 | µg/L | 1 | 10/08/12 14:50 |
| 1,2,3-Trichloropropane | ND | | 2.00 | 0.33 | µg/L | 1 | 10/08/12 14:50 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 0.10 | µg/L | 1 | 10/08/12 14:50 |
| 1,2,4-Trimethylbenzene | 2.70 | | 0.50 | 0.10 | µg/L | 1 | 10/08/12 14:50 |
| 1,2-Dibromo-3-chloropropane | ND | | 5.00 | 1.00 | µg/L | 1 | 10/08/12 14:50 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.16 | µg/L | 1 | 10/08/12 14:50 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/08/12 14:50 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 10/08/12 14:50 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.16 | µg/L | 1 | 10/08/12 14:50 |
| 1,3,5-Trimethylbenzene | 2.54 | | 0.50 | 0.10 | µg/L | 1 | 10/08/12 14:50 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/08/12 14:50 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 10/08/12 14:50 |
| 2-Butanone | 1.37 | J | 10.0 | 1.00 | µg/L | 1 | 10/08/12 14:50 |
| 2-Chloroethylvinyl ether | ND | | 5.00 | 2.50 | µg/L | 1 | 10/08/12 14:50 |
| 2-Hexanone | ND | | 5.00 | 1.00 | µg/L | 1 | 10/08/12 14:50 |
| 4-Chlorotoluene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/08/12 14:50 |
| 4-Methyl-2-pentanone | ND | | 5.00 | 1.00 | µg/L | 1 | 10/08/12 14:50 |
| Acetone | 3.00 | J | 10.0 | 1.00 | µg/L | 1 | 10/08/12 14:50 |
| Benzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/08/12 14:50 |
| Bromobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/08/12 14:50 |
| Bromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 10/08/12 14:50 |
| Bromodichloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 10/08/12 14:50 |
| Bromoform | ND | | 1.00 | 0.33 | µg/L | 1 | 10/08/12 14:50 |
| Bromomethane | ND | | 1.00 | 0.33 | µg/L | 1 | 10/08/12 14:50 |
| Carbon disulfide | ND | | 0.50 | 0.11 | µg/L | 1 | 10/08/12 14:50 |
| Carbon tetrachloride | ND | | 0.50 | 0.10 | µg/L | 1 | 10/08/12 14:50 |
| Chlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/08/12 14:50 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

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# Analytical Results

StateCertNo: 10248

| | | | | | |
|---|---|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | | | **Lab ID:** | K1210056-003A |
| **Project:** | 189-02 | | | **Client Sample ID:** | *189 - W3* |
| **W Order:** | K1210056 | | | **Collection Date:** | 10/02/12 17:35 |
| **Matrix:** | GROUNDWATER | | | **Date Received:** | 10/04/12 11:00 |
| **Inst. ID:** | MSK_75 | **Sample Size** | 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | | **BatchNo:** | R24662 |
| **Revision:** | 10/18/12 14:35 | **TestCode:** | 8260W_CAL | **FileID:** | 1-SAMP-K0723.D |
| **Col Type:** | | | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | ND | | 1.00 | 0.33 | µg/L | 1 | 10/08/12 14:50 |
| Chloroform | ND | | 0.50 | 0.10 | µg/L | 1 | 10/08/12 14:50 |
| Chloromethane | ND | | 1.00 | 0.33 | µg/L | 1 | 10/08/12 14:50 |
| cis-1,2-Dichloroethene | 19.4 | | 0.50 | 0.10 | µg/L | 1 | 10/08/12 14:50 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 10/08/12 14:50 |
| Cyclohexane | 0.15 | J | 0.50 | 0.10 | µg/L | 1 | 10/08/12 14:50 |
| Dibromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 10/08/12 14:50 |
| Dibromomethane | ND | | 0.50 | 0.16 | µg/L | 1 | 10/08/12 14:50 |
| Dichlorodifluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 10/08/12 14:50 |
| Ethylbenzene | 0.15 | J | 0.50 | 0.10 | µg/L | 1 | 10/08/12 14:50 |
| Hexachlorobutadiene | ND | | 1.00 | 0.10 | µg/L | 1 | 10/08/12 14:50 |
| Isopropylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/08/12 14:50 |
| Methyl tert-butyl ether | ND | | 1.00 | 0.16 | µg/L | 1 | 10/08/12 14:50 |
| Methylene chloride | 0.24 | J | 2.00 | 0.16 | µg/L | 1 | 10/08/12 14:50 |
| n-Propylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/08/12 14:50 |
| Naphthalene | ND | | 1.00 | 0.10 | µg/L | 1 | 10/08/12 14:50 |
| o-Xylene | 1.81 | | 0.50 | 0.10 | µg/L | 1 | 10/08/12 14:50 |
| p-Isopropyltoluene | 0.38 | J | 0.50 | 0.16 | µg/L | 1 | 10/08/12 14:50 |
| sec-Butylbenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 10/08/12 14:50 |
| Styrene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/08/12 14:50 |
| Tetrachloroethene | 0.29 | J | 0.50 | 0.10 | µg/L | 1 | 10/08/12 14:50 |
| Toluene | 0.45 | J | 0.50 | 0.10 | µg/L | 1 | 10/08/12 14:50 |
| trans-1,2-Dichloroethene | 0.22 | J | 0.50 | 0.10 | µg/L | 1 | 10/08/12 14:50 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 10/08/12 14:50 |
| Trichloroethene | 1.47 | | 0.50 | 0.10 | µg/L | 1 | 10/08/12 14:50 |
| Trichlorofluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 10/08/12 14:50 |
| Vinyl acetate | ND | | 2.00 | 1.00 | µg/L | 1 | 10/08/12 14:50 |
| Vinyl chloride | 14.1 | | 1.00 | 0.33 | µg/L | 1 | 10/08/12 14:50 |
| Xylenes (total) | 2.35 | | 1.00 | 0.30 | µg/L | 1 | 10/08/12 14:50 |
| Surr: 1,2-Dichloroethane-d4 | 110 | | 75-130 | 0.16 | %REC | 1 | 10/08/12 14:50 |
| Surr: Toluene-d8 | 103 | | 75-125 | 0.10 | %REC | 1 | 10/08/12 14:50 |
| Surr: 4-Bromofluorobenzene | 109 | | 75-125 | 0.10 | %REC | 1 | 10/08/12 14:50 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 10/18/12 14:37 619203 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1210056-004A** |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W4* |
| **W Order:** | K1210056 | **Collection Date:** | 10/02/12 14:50 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 10/04/12 11:00 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R24661 |
| **Revision:** | 10/18/12 14:30 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K0682.D |
| **Col Type:** | TOTAL 122 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | 1.04 | | 1.00 | 0.20 | µg/L | 1 | 10/06/12 11:59 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 11:59 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 11:59 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 11:59 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 11:59 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 11:59 |
| 1,1-Dichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 11:59 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 11:59 |
| 1,2,3-Trichloropropane | ND | | 2.00 | 0.33 | µg/L | 1 | 10/06/12 11:59 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 0.10 | µg/L | 1 | 10/06/12 11:59 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 11:59 |
| 1,2-Dibromo-3-chloropropane | ND | | 5.00 | 1.00 | µg/L | 1 | 10/06/12 11:59 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 11:59 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 11:59 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 11:59 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 11:59 |
| 1,3,5-Trimethylbenzene | 0.28 | J | 0.50 | 0.10 | µg/L | 1 | 10/06/12 11:59 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 11:59 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 11:59 |
| 2-Butanone | ND | | 10.0 | 1.00 | µg/L | 1 | 10/06/12 11:59 |
| 2-Chloroethylvinyl ether | ND | | 5.00 | 2.50 | µg/L | 1 | 10/06/12 11:59 |
| 2-Hexanone | ND | | 5.00 | 1.00 | µg/L | 1 | 10/06/12 11:59 |
| 4-Chlorotoluene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 11:59 |
| 4-Methyl-2-pentanone | ND | | 5.00 | 1.00 | µg/L | 1 | 10/06/12 11:59 |
| Acetone | ND | | 10.0 | 1.00 | µg/L | 1 | 10/06/12 11:59 |
| Benzene | 0.41 | J | 0.50 | 0.10 | µg/L | 1 | 10/06/12 11:59 |
| Bromobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 11:59 |
| Bromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 11:59 |
| Bromodichloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 11:59 |
| Bromoform | ND | | 1.00 | 0.33 | µg/L | 1 | 10/06/12 11:59 |
| Bromomethane | 1.35 | | 1.00 | 0.33 | µg/L | 1 | 10/06/12 11:59 |
| Carbon disulfide | ND | | 0.50 | 0.11 | µg/L | 1 | 10/06/12 11:59 |
| Carbon tetrachloride | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 11:59 |
| Chlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 11:59 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 10/18/12 14:37 619185 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1210056-004A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W4*** |
| **W Order:** | K1210056 | **Collection Date:** | 10/02/12 14:50 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 10/04/12 11:00 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R24661 |
| **Revision:** | 10/18/12 14:30 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K0682.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | ND | | 1.00 | 0.33 | µg/L | 1 | 10/06/12 11:59 |
| Chloroform | 0.22 | J | 0.50 | 0.10 | µg/L | 1 | 10/06/12 11:59 |
| Chloromethane | ND | | 1.00 | 0.33 | µg/L | 1 | 10/06/12 11:59 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 11:59 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 11:59 |
| Cyclohexane | 5.15 | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 11:59 |
| Dibromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 11:59 |
| Dibromomethane | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 11:59 |
| Dichlorodifluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 10/06/12 11:59 |
| Ethylbenzene | 2.17 | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 11:59 |
| Hexachlorobutadiene | ND | | 1.00 | 0.10 | µg/L | 1 | 10/06/12 11:59 |
| Isopropylbenzene | 0.35 | J | 0.50 | 0.10 | µg/L | 1 | 10/06/12 11:59 |
| Methyl tert-butyl ether | 0.16 | J | 1.00 | 0.16 | µg/L | 1 | 10/06/12 11:59 |
| Methylene chloride | 0.21 | J | 2.00 | 0.16 | µg/L | 1 | 10/06/12 11:59 |
| n-Propylbenzene | 0.21 | J | 0.50 | 0.10 | µg/L | 1 | 10/06/12 11:59 |
| Naphthalene | ND | | 1.00 | 0.10 | µg/L | 1 | 10/06/12 11:59 |
| o-Xylene | 0.65 | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 11:59 |
| p-Isopropyltoluene | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 11:59 |
| sec-Butylbenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 11:59 |
| Styrene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 11:59 |
| Tetrachloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 11:59 |
| Toluene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 11:59 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 11:59 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 11:59 |
| Trichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 11:59 |
| Trichlorofluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 10/06/12 11:59 |
| Vinyl acetate | ND | | 2.00 | 1.00 | µg/L | 1 | 10/06/12 11:59 |
| Vinyl chloride | ND | | 1.00 | 0.33 | µg/L | 1 | 10/06/12 11:59 |
| Xylenes (total) | 1.69 | | 1.00 | 0.30 | µg/L | 1 | 10/06/12 11:59 |
| Surr: 1,2-Dichloroethane-d4 | 106 | | 75-130 | 0.16 | %REC | 1 | 10/06/12 11:59 |
| Surr: Toluene-d8 | 105 | | 75-125 | 0.10 | %REC | 1 | 10/06/12 11:59 |
| Surr: 4-Bromofluorobenzene | 114 | | 75-125 | 0.10 | %REC | 1 | 10/06/12 11:59 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

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East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1210056-005A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W5*** |
| **W Order:** | K1210056 | **Collection Date:** | 10/02/12 18:30 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 10/04/12 11:00 |
| **Inst. ID:** | MSK_75 **Sample Size** 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS **%Moisture:** | **BatchNo:** | R24661 |
| **Revision:** | 10/18/12 14:30 **TestCode:** 8260W_CAL | **FileID:** | 1-SAMP-K0683.D |
| **Col Type:** | TOTAL 1471.3 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 25.0 | 5.00 | µg/L | 25 | 10/06/12 12:31 |
| 1,1,1,2-Tetrachloroethane | ND | | 12.5 | 4.00 | µg/L | 25 | 10/06/12 12:31 |
| 1,1,1-Trichloroethane | ND | | 12.5 | 2.50 | µg/L | 25 | 10/06/12 12:31 |
| 1,1,2,2-Tetrachloroethane | ND | | 12.5 | 2.50 | µg/L | 25 | 10/06/12 12:31 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 12.5 | 2.50 | µg/L | 25 | 10/06/12 12:31 |
| 1,1,2-Trichloroethane | ND | | 12.5 | 4.00 | µg/L | 25 | 10/06/12 12:31 |
| 1,1-Dichloroethane | 902 | | 12.5 | 2.50 | µg/L | 25 | 10/06/12 12:31 |
| 1,1-Dichloroethene | 6.75 | J | 12.5 | 4.00 | µg/L | 25 | 10/06/12 12:31 |
| 1,2,3-Trichloropropane | ND | | 50.0 | 8.25 | µg/L | 25 | 10/06/12 12:31 |
| 1,2,4-Trichlorobenzene | ND | | 25.0 | 2.50 | µg/L | 25 | 10/06/12 12:31 |
| 1,2,4-Trimethylbenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 10/06/12 12:31 |
| 1,2-Dibromo-3-chloropropane | ND | | 125 | 25.0 | µg/L | 25 | 10/06/12 12:31 |
| 1,2-Dibromoethane | ND | | 12.5 | 4.00 | µg/L | 25 | 10/06/12 12:31 |
| 1,2-Dichlorobenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 10/06/12 12:31 |
| 1,2-Dichloroethane | 12.8 | | 12.5 | 4.00 | µg/L | 25 | 10/06/12 12:31 |
| 1,2-Dichloropropane | ND | | 12.5 | 4.00 | µg/L | 25 | 10/06/12 12:31 |
| 1,3,5-Trimethylbenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 10/06/12 12:31 |
| 1,3-Dichlorobenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 10/06/12 12:31 |
| 1,4-Dichlorobenzene | ND | | 12.5 | 4.00 | µg/L | 25 | 10/06/12 12:31 |
| 2-Butanone | ND | | 250 | 25.0 | µg/L | 25 | 10/06/12 12:31 |
| 2-Chloroethylvinyl ether | ND | | 125 | 62.5 | µg/L | 25 | 10/06/12 12:31 |
| 2-Hexanone | ND | | 125 | 25.0 | µg/L | 25 | 10/06/12 12:31 |
| 4-Chlorotoluene | ND | | 12.5 | 2.50 | µg/L | 25 | 10/06/12 12:31 |
| 4-Methyl-2-pentanone | ND | | 125 | 25.0 | µg/L | 25 | 10/06/12 12:31 |
| Acetone | ND | | 250 | 25.0 | µg/L | 25 | 10/06/12 12:31 |
| Benzene | ND | | 12.5 | 2.50 | µg/L | 25 | 10/06/12 12:31 |
| Bromobenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 10/06/12 12:31 |
| Bromochloromethane | ND | | 12.5 | 2.50 | µg/L | 25 | 10/06/12 12:31 |
| Bromodichloromethane | ND | | 12.5 | 2.50 | µg/L | 25 | 10/06/12 12:31 |
| Bromoform | ND | | 25.0 | 8.25 | µg/L | 25 | 10/06/12 12:31 |
| Bromomethane | ND | | 25.0 | 8.25 | µg/L | 25 | 10/06/12 12:31 |
| Carbon disulfide | ND | | 12.5 | 2.75 | µg/L | 25 | 10/06/12 12:31 |
| Carbon tetrachloride | ND | | 12.5 | 2.50 | µg/L | 25 | 10/06/12 12:31 |
| Chlorobenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 10/06/12 12:31 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

# Life Science Laboratories, Inc.

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East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | | | |
|---|---|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | | | **Lab ID:** | **K1210056-005A** |
| **Project:** | 189-02 | | | **Client Sample ID:** | ***189 - W5*** |
| **W Order:** | K1210056 | | | **Collection Date:** | 10/02/12 18:30 |
| **Matrix:** | GROUNDWATER | | | **Date Received:** | 10/04/12 11:00 |
| **Inst. ID:** | MSK_75 | **Sample Size** | 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | | **BatchNo:** | R24661 |
| **Revision:** | 10/18/12 14:30 | **TestCode:** | 8260W_CAL | **FileID:** | 1-SAMP-K0683.D |
| **Col Type:** | | | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | 32.5 | | 25.0 | 8.25 | µg/L | 25 | 10/06/12 12:31 |
| Chloroform | ND | | 12.5 | 2.50 | µg/L | 25 | 10/06/12 12:31 |
| Chloromethane | ND | | 25.0 | 8.25 | µg/L | 25 | 10/06/12 12:31 |
| cis-1,2-Dichloroethene | 170 | | 12.5 | 2.50 | µg/L | 25 | 10/06/12 12:31 |
| cis-1,3-Dichloropropene | ND | | 12.5 | 4.00 | µg/L | 25 | 10/06/12 12:31 |
| Cyclohexane | 6.00 J | | 12.5 | 2.50 | µg/L | 25 | 10/06/12 12:31 |
| Dibromochloromethane | ND | | 12.5 | 2.50 | µg/L | 25 | 10/06/12 12:31 |
| Dibromomethane | ND | | 12.5 | 4.00 | µg/L | 25 | 10/06/12 12:31 |
| Dichlorodifluoromethane | ND | | 25.0 | 2.50 | µg/L | 25 | 10/06/12 12:31 |
| Ethylbenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 10/06/12 12:31 |
| Hexachlorobutadiene | ND | | 25.0 | 2.50 | µg/L | 25 | 10/06/12 12:31 |
| Isopropylbenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 10/06/12 12:31 |
| Methyl tert-butyl ether | ND | | 25.0 | 4.00 | µg/L | 25 | 10/06/12 12:31 |
| Methylene chloride | 13.0 J | | 50.0 | 4.00 | µg/L | 25 | 10/06/12 12:31 |
| n-Propylbenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 10/06/12 12:31 |
| Naphthalene | ND | | 25.0 | 2.50 | µg/L | 25 | 10/06/12 12:31 |
| o-Xylene | ND | | 12.5 | 2.50 | µg/L | 25 | 10/06/12 12:31 |
| p-Isopropyltoluene | ND | | 12.5 | 4.00 | µg/L | 25 | 10/06/12 12:31 |
| sec-Butylbenzene | ND | | 12.5 | 4.00 | µg/L | 25 | 10/06/12 12:31 |
| Styrene | ND | | 12.5 | 2.50 | µg/L | 25 | 10/06/12 12:31 |
| Tetrachloroethene | ND | | 12.5 | 2.50 | µg/L | 25 | 10/06/12 12:31 |
| Toluene | ND | | 12.5 | 2.50 | µg/L | 25 | 10/06/12 12:31 |
| trans-1,2-Dichloroethene | 3.25 J | | 12.5 | 2.50 | µg/L | 25 | 10/06/12 12:31 |
| trans-1,3-Dichloropropene | ND | | 12.5 | 4.00 | µg/L | 25 | 10/06/12 12:31 |
| Trichloroethene | ND | | 12.5 | 2.50 | µg/L | 25 | 10/06/12 12:31 |
| Trichlorofluoromethane | ND | | 25.0 | 2.50 | µg/L | 25 | 10/06/12 12:31 |
| Vinyl acetate | ND | | 50.0 | 25.0 | µg/L | 25 | 10/06/12 12:31 |
| Vinyl chloride | 495 | | 25.0 | 8.25 | µg/L | 25 | 10/06/12 12:31 |
| Xylenes (total) | ND | | 25.0 | 7.50 | µg/L | 25 | 10/06/12 12:31 |
| Surr: 1,2-Dichloroethane-d4 | 109 | | 75-130 | 4.00 | %REC | 25 | 10/06/12 12:31 |
| Surr: Toluene-d8 | 106 | | 75-125 | 2.50 | %REC | 25 | 10/06/12 12:31 |
| Surr: 4-Bromofluorobenzene | 111 | | 75-125 | 2.50 | %REC | 25 | 10/06/12 12:31 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 10/18/12 14:37 619186 **roject Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

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East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1210056-006A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W6* |
| **W Order:** | K1210056 | **Collection Date:** | 10/02/12 15:30 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 10/04/12 11:00 |
| **Inst. ID:** | MSK_75 **Sample Size** 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS **%Moisture:** | **BatchNo:** | R24661 |
| **Revision:** | 10/18/12 14:30 **TestCode:** 8260W_CAL | **FileID:** | 1-SAMP-K0684.D |
| **Col Type:** | TOTAL 51.91 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | 0.24 | J | 1.00 | 0.20 | µg/L | 1 | 10/06/12 13:03 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 13:03 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 13:03 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 13:03 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 13:03 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 13:03 |
| 1,1-Dichloroethane | 18.1 | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 13:03 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 13:03 |
| 1,2,3-Trichloropropane | ND | | 2.00 | 0.33 | µg/L | 1 | 10/06/12 13:03 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 0.10 | µg/L | 1 | 10/06/12 13:03 |
| 1,2,4-Trimethylbenzene | 0.19 | J | 0.50 | 0.10 | µg/L | 1 | 10/06/12 13:03 |
| 1,2-Dibromo-3-chloropropane | ND | | 5.00 | 1.00 | µg/L | 1 | 10/06/12 13:03 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 13:03 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 13:03 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 13:03 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 13:03 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 13:03 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 13:03 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 13:03 |
| 2-Butanone | ND | | 10.0 | 1.00 | µg/L | 1 | 10/06/12 13:03 |
| 2-Chloroethylvinyl ether | ND | | 5.00 | 2.50 | µg/L | 1 | 10/06/12 13:03 |
| 2-Hexanone | ND | | 5.00 | 1.00 | µg/L | 1 | 10/06/12 13:03 |
| 4-Chlorotoluene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 13:03 |
| 4-Methyl-2-pentanone | ND | | 5.00 | 1.00 | µg/L | 1 | 10/06/12 13:03 |
| Acetone | ND | | 10.0 | 1.00 | µg/L | 1 | 10/06/12 13:03 |
| Benzene | 18.7 | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 13:03 |
| Bromobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 13:03 |
| Bromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 13:03 |
| Bromodichloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 13:03 |
| Bromoform | ND | | 1.00 | 0.33 | µg/L | 1 | 10/06/12 13:03 |
| Bromomethane | ND | | 1.00 | 0.33 | µg/L | 1 | 10/06/12 13:03 |
| Carbon disulfide | ND | | 0.50 | 0.11 | µg/L | 1 | 10/06/12 13:03 |
| Carbon tetrachloride | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 13:03 |
| Chlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 13:03 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

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East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1210056-006A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W6* |
| **W Order:** | K1210056 | **Collection Date:** | 10/02/12 15:30 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 10/04/12 11:00 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R24661 |
| **Revision:** | 10/18/12 14:30 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K0684.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | ND | | 1.00 | 0.33 | µg/L | 1 | 10/06/12 13:03 |
| Chloroform | 0.17 | J | 0.50 | 0.10 | µg/L | 1 | 10/06/12 13:03 |
| Chloromethane | 3.08 | | 1.00 | 0.33 | µg/L | 1 | 10/06/12 13:03 |
| cis-1,2-Dichloroethene | 5.26 | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 13:03 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 13:03 |
| Cyclohexane | 3.41 | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 13:03 |
| Dibromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 13:03 |
| Dibromomethane | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 13:03 |
| Dichlorodifluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 10/06/12 13:03 |
| Ethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 13:03 |
| Hexachlorobutadiene | ND | | 1.00 | 0.10 | µg/L | 1 | 10/06/12 13:03 |
| Isopropylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 13:03 |
| Methyl tert-butyl ether | ND | | 1.00 | 0.16 | µg/L | 1 | 10/06/12 13:03 |
| Methylene chloride | 0.18 | J | 2.00 | 0.16 | µg/L | 1 | 10/06/12 13:03 |
| n-Propylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 13:03 |
| Naphthalene | ND | | 1.00 | 0.10 | µg/L | 1 | 10/06/12 13:03 |
| o-Xylene | 2.27 | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 13:03 |
| p-Isopropyltoluene | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 13:03 |
| sec-Butylbenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 13:03 |
| Styrene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 13:03 |
| Tetrachloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 13:03 |
| Toluene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 13:03 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 13:03 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 13:03 |
| Trichloroethene | 0.31 | J | 0.50 | 0.10 | µg/L | 1 | 10/06/12 13:03 |
| Trichlorofluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 10/06/12 13:03 |
| Vinyl acetate | ND | | 2.00 | 1.00 | µg/L | 1 | 10/06/12 13:03 |
| Vinyl chloride | ND | | 1.00 | 0.33 | µg/L | 1 | 10/06/12 13:03 |
| Xylenes (total) | 2.51 | | 1.00 | 0.30 | µg/L | 1 | 10/06/12 13:03 |
| Surr: 1,2-Dichloroethane-d4 | 106 | | 75-130 | 0.16 | %REC | 1 | 10/06/12 13:03 |
| Surr: Toluene-d8 | 105 | | 75-125 | 0.10 | %REC | 1 | 10/06/12 13:03 |
| Surr: 4-Bromofluorobenzene | 113 | | 75-125 | 0.10 | %REC | 1 | 10/06/12 13:03 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

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East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1210056-007A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W7* |
| **W Order:** | K1210056 | **Collection Date:** | 10/02/12 16:20 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 10/04/12 11:00 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R24661 |
| **Revision:** | 10/18/12 14:30 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K0685.D |
| **Col Type:** | TOTAL 302 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 20.0 | 4.00 | µg/L | 20 | 10/06/12 13:34 |
| 1,1,1,2-Tetrachloroethane | ND | | 10.0 | 3.20 | µg/L | 20 | 10/06/12 13:34 |
| 1,1,1-Trichloroethane | ND | | 10.0 | 2.00 | µg/L | 20 | 10/06/12 13:34 |
| 1,1,2,2-Tetrachloroethane | ND | | 10.0 | 2.00 | µg/L | 20 | 10/06/12 13:34 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 10.0 | 2.00 | µg/L | 20 | 10/06/12 13:34 |
| 1,1,2-Trichloroethane | ND | | 10.0 | 3.20 | µg/L | 20 | 10/06/12 13:34 |
| 1,1-Dichloroethane | 260 | | 10.0 | 2.00 | µg/L | 20 | 10/06/12 13:34 |
| 1,1-Dichloroethene | ND | | 10.0 | 3.20 | µg/L | 20 | 10/06/12 13:34 |
| 1,2,3-Trichloropropane | ND | | 40.0 | 6.60 | µg/L | 20 | 10/06/12 13:34 |
| 1,2,4-Trichlorobenzene | ND | | 20.0 | 2.00 | µg/L | 20 | 10/06/12 13:34 |
| 1,2,4-Trimethylbenzene | ND | | 10.0 | 2.00 | µg/L | 20 | 10/06/12 13:34 |
| 1,2-Dibromo-3-chloropropane | ND | | 100 | 20.0 | µg/L | 20 | 10/06/12 13:34 |
| 1,2-Dibromoethane | ND | | 10.0 | 3.20 | µg/L | 20 | 10/06/12 13:34 |
| 1,2-Dichlorobenzene | ND | | 10.0 | 2.00 | µg/L | 20 | 10/06/12 13:34 |
| 1,2-Dichloroethane | 6.80 | J | 10.0 | 3.20 | µg/L | 20 | 10/06/12 13:34 |
| 1,2-Dichloropropane | ND | | 10.0 | 3.20 | µg/L | 20 | 10/06/12 13:34 |
| 1,3,5-Trimethylbenzene | ND | | 10.0 | 2.00 | µg/L | 20 | 10/06/12 13:34 |
| 1,3-Dichlorobenzene | ND | | 10.0 | 2.00 | µg/L | 20 | 10/06/12 13:34 |
| 1,4-Dichlorobenzene | ND | | 10.0 | 3.20 | µg/L | 20 | 10/06/12 13:34 |
| 2-Butanone | ND | | 200 | 20.0 | µg/L | 20 | 10/06/12 13:34 |
| 2-Chloroethylvinyl ether | ND | | 100 | 50.0 | µg/L | 20 | 10/06/12 13:34 |
| 2-Hexanone | ND | | 100 | 20.0 | µg/L | 20 | 10/06/12 13:34 |
| 4-Chlorotoluene | ND | | 10.0 | 2.00 | µg/L | 20 | 10/06/12 13:34 |
| 4-Methyl-2-pentanone | ND | | 100 | 20.0 | µg/L | 20 | 10/06/12 13:34 |
| Acetone | ND | | 200 | 20.0 | µg/L | 20 | 10/06/12 13:34 |
| Benzene | ND | | 10.0 | 2.00 | µg/L | 20 | 10/06/12 13:34 |
| Bromobenzene | ND | | 10.0 | 2.00 | µg/L | 20 | 10/06/12 13:34 |
| Bromochloromethane | ND | | 10.0 | 2.00 | µg/L | 20 | 10/06/12 13:34 |
| Bromodichloromethane | ND | | 10.0 | 2.00 | µg/L | 20 | 10/06/12 13:34 |
| Bromoform | ND | | 20.0 | 6.60 | µg/L | 20 | 10/06/12 13:34 |
| Bromomethane | ND | | 20.0 | 6.60 | µg/L | 20 | 10/06/12 13:34 |
| Carbon disulfide | ND | | 10.0 | 2.20 | µg/L | 20 | 10/06/12 13:34 |
| Carbon tetrachloride | ND | | 10.0 | 2.00 | µg/L | 20 | 10/06/12 13:34 |
| Chlorobenzene | ND | | 10.0 | 2.00 | µg/L | 20 | 10/06/12 13:34 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 10/18/12 14:37 619188 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1210056-007A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W7* |
| **W Order:** | K1210056 | **Collection Date:** | 10/02/12 16:20 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 10/04/12 11:00 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R24661 |
| **Revision:** | 10/18/12 14:30 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K0685.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | ND | | 20.0 | 6.60 | µg/L | 20 | 10/06/12 13:34 |
| Chloroform | ND | | 10.0 | 2.00 | µg/L | 20 | 10/06/12 13:34 |
| Chloromethane | ND | | 20.0 | 6.60 | µg/L | 20 | 10/06/12 13:34 |
| cis-1,2-Dichloroethene | 6.40 | J | 10.0 | 2.00 | µg/L | 20 | 10/06/12 13:34 |
| cis-1,3-Dichloropropene | ND | | 10.0 | 3.20 | µg/L | 20 | 10/06/12 13:34 |
| Cyclohexane | ND | | 10.0 | 2.00 | µg/L | 20 | 10/06/12 13:34 |
| Dibromochloromethane | ND | | 10.0 | 2.00 | µg/L | 20 | 10/06/12 13:34 |
| Dibromomethane | ND | | 10.0 | 3.20 | µg/L | 20 | 10/06/12 13:34 |
| Dichlorodifluoromethane | ND | | 20.0 | 2.00 | µg/L | 20 | 10/06/12 13:34 |
| Ethylbenzene | ND | | 10.0 | 2.00 | µg/L | 20 | 10/06/12 13:34 |
| Hexachlorobutadiene | ND | | 20.0 | 2.00 | µg/L | 20 | 10/06/12 13:34 |
| Isopropylbenzene | ND | | 10.0 | 2.00 | µg/L | 20 | 10/06/12 13:34 |
| Methyl tert-butyl ether | ND | | 20.0 | 3.20 | µg/L | 20 | 10/06/12 13:34 |
| Methylene chloride | 9.60 | J | 40.0 | 3.20 | µg/L | 20 | 10/06/12 13:34 |
| n-Propylbenzene | ND | | 10.0 | 2.00 | µg/L | 20 | 10/06/12 13:34 |
| Naphthalene | ND | | 20.0 | 2.00 | µg/L | 20 | 10/06/12 13:34 |
| o-Xylene | ND | | 10.0 | 2.00 | µg/L | 20 | 10/06/12 13:34 |
| p-Isopropyltoluene | ND | | 10.0 | 3.20 | µg/L | 20 | 10/06/12 13:34 |
| sec-Butylbenzene | ND | | 10.0 | 3.20 | µg/L | 20 | 10/06/12 13:34 |
| Styrene | ND | | 10.0 | 2.00 | µg/L | 20 | 10/06/12 13:34 |
| Tetrachloroethene | ND | | 10.0 | 2.00 | µg/L | 20 | 10/06/12 13:34 |
| Toluene | ND | | 10.0 | 2.00 | µg/L | 20 | 10/06/12 13:34 |
| trans-1,2-Dichloroethene | ND | | 10.0 | 2.00 | µg/L | 20 | 10/06/12 13:34 |
| trans-1,3-Dichloropropene | ND | | 10.0 | 3.20 | µg/L | 20 | 10/06/12 13:34 |
| Trichloroethene | 3.20 | J | 10.0 | 2.00 | µg/L | 20 | 10/06/12 13:34 |
| Trichlorofluoromethane | ND | | 20.0 | 2.00 | µg/L | 20 | 10/06/12 13:34 |
| Vinyl acetate | ND | | 40.0 | 20.0 | µg/L | 20 | 10/06/12 13:34 |
| Vinyl chloride | 16.0 | J | 20.0 | 6.60 | µg/L | 20 | 10/06/12 13:34 |
| Xylenes (total) | ND | | 20.0 | 6.00 | µg/L | 20 | 10/06/12 13:34 |
| Surr: 1,2-Dichloroethane-d4 | 109 | | 75-130 | 3.20 | %REC | 20 | 10/06/12 13:34 |
| Surr: Toluene-d8 | 106 | | 75-125 | 2.00 | %REC | 20 | 10/06/12 13:34 |
| Surr: 4-Bromofluorobenzene | 113 | | 75-125 | 2.00 | %REC | 20 | 10/06/12 13:34 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

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# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1210056-008A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W8* |
| **W Order:** | K1210056 | **Collection Date:** | 10/02/12 14:50 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 10/04/12 11:00 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R24661 |
| **Revision:** | 10/18/12 14:30 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K0686.D |
| **Col Type:** | TOTAL 174.82 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 1.00 | 0.20 | µg/L | 1 | 10/06/12 14:06 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 14:06 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 14:06 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 14:06 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 14:06 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 14:06 |
| 1,1-Dichloroethane | 80.2 | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 14:06 |
| 1,1-Dichloroethene | 1.69 | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 14:06 |
| 1,2,3-Trichloropropane | ND | | 2.00 | 0.33 | µg/L | 1 | 10/06/12 14:06 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 0.10 | µg/L | 1 | 10/06/12 14:06 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 14:06 |
| 1,2-Dibromo-3-chloropropane | ND | | 5.00 | 1.00 | µg/L | 1 | 10/06/12 14:06 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 14:06 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 14:06 |
| 1,2-Dichloroethane | 1.72 | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 14:06 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 14:06 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 14:06 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 14:06 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 14:06 |
| 2-Butanone | ND | | 10.0 | 1.00 | µg/L | 1 | 10/06/12 14:06 |
| 2-Chloroethylvinyl ether | ND | | 5.00 | 2.50 | µg/L | 1 | 10/06/12 14:06 |
| 2-Hexanone | ND | | 5.00 | 1.00 | µg/L | 1 | 10/06/12 14:06 |
| 4-Chlorotoluene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 14:06 |
| 4-Methyl-2-pentanone | ND | | 5.00 | 1.00 | µg/L | 1 | 10/06/12 14:06 |
| Acetone | ND | | 10.0 | 1.00 | µg/L | 1 | 10/06/12 14:06 |
| Benzene | 2.62 | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 14:06 |
| Bromobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 14:06 |
| Bromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 14:06 |
| Bromodichloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 14:06 |
| Bromoform | ND | | 1.00 | 0.33 | µg/L | 1 | 10/06/12 14:06 |
| Bromomethane | ND | | 1.00 | 0.33 | µg/L | 1 | 10/06/12 14:06 |
| Carbon disulfide | ND | | 0.50 | 0.11 | µg/L | 1 | 10/06/12 14:06 |
| Carbon tetrachloride | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 14:06 |
| Chlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 14:06 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 10/18/12 14:37 619189 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1210056-008A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W8* |
| **W Order:** | K1210056 | **Collection Date:** | 10/02/12 14:50 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 10/04/12 11:00 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R24661 |
| **Revision:** | 10/18/12 14:30 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K0686.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | 0.39 | J | 1.00 | 0.33 | µg/L | 1 | 10/06/12 14:06 |
| Chloroform | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 14:06 |
| Chloromethane | ND | | 1.00 | 0.33 | µg/L | 1 | 10/06/12 14:06 |
| cis-1,2-Dichloroethene | 63.8 | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 14:06 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 14:06 |
| Cyclohexane | 1.91 | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 14:06 |
| Dibromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 14:06 |
| Dibromomethane | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 14:06 |
| Dichlorodifluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 10/06/12 14:06 |
| Ethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 14:06 |
| Hexachlorobutadiene | ND | | 1.00 | 0.10 | µg/L | 1 | 10/06/12 14:06 |
| Isopropylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 14:06 |
| Methyl tert-butyl ether | 0.26 | J | 1.00 | 0.16 | µg/L | 1 | 10/06/12 14:06 |
| Methylene chloride | 0.18 | J | 2.00 | 0.16 | µg/L | 1 | 10/06/12 14:06 |
| n-Propylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 14:06 |
| Naphthalene | ND | | 1.00 | 0.10 | µg/L | 1 | 10/06/12 14:06 |
| o-Xylene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 14:06 |
| p-Isopropyltoluene | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 14:06 |
| sec-Butylbenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 14:06 |
| Styrene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 14:06 |
| Tetrachloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 14:06 |
| Toluene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 14:06 |
| trans-1,2-Dichloroethene | 0.43 | J | 0.50 | 0.10 | µg/L | 1 | 10/06/12 14:06 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 14:06 |
| Trichloroethene | 0.52 | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 14:06 |
| Trichlorofluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 10/06/12 14:06 |
| Vinyl acetate | ND | | 2.00 | 1.00 | µg/L | 1 | 10/06/12 14:06 |
| Vinyl chloride | 21.1 | | 1.00 | 0.33 | µg/L | 1 | 10/06/12 14:06 |
| Xylenes (total) | ND | | 1.00 | 0.30 | µg/L | 1 | 10/06/12 14:06 |
| Surr: 1,2-Dichloroethane-d4 | 109 | | 75-130 | 0.16 | %REC | 1 | 10/06/12 14:06 |
| Surr: Toluene-d8 | 105 | | 75-125 | 0.10 | %REC | 1 | 10/06/12 14:06 |
| Surr: 4-Bromofluorobenzene | 113 | | 75-125 | 0.10 | %REC | 1 | 10/06/12 14:06 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

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East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1210056-009A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W9* |
| **W Order:** | K1210056 | **Collection Date:** | 10/02/12 17:15 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 10/04/12 11:00 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R24662 |
| **Revision:** | 10/18/12 14:35 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K0726.D |
| **Col Type:** | TOTAL 286.25 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 5.00 | 1.00 | µg/L | 5 | 10/08/12 16:26 |
| 1,1,1,2-Tetrachloroethane | ND | | 2.50 | 0.80 | µg/L | 5 | 10/08/12 16:26 |
| 1,1,1-Trichloroethane | 15.4 | | 2.50 | 0.50 | µg/L | 5 | 10/08/12 16:26 |
| 1,1,2,2-Tetrachloroethane | ND | | 2.50 | 0.50 | µg/L | 5 | 10/08/12 16:26 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 2.50 | 0.50 | µg/L | 5 | 10/08/12 16:26 |
| 1,1,2-Trichloroethane | ND | | 2.50 | 0.80 | µg/L | 5 | 10/08/12 16:26 |
| 1,1-Dichloroethane | 139 | | 2.50 | 0.50 | µg/L | 5 | 10/08/12 16:26 |
| 1,1-Dichloroethene | 2.85 | | 2.50 | 0.80 | µg/L | 5 | 10/08/12 16:26 |
| 1,2,3-Trichloropropane | ND | | 10.0 | 1.65 | µg/L | 5 | 10/08/12 16:26 |
| 1,2,4-Trichlorobenzene | ND | | 5.00 | 0.50 | µg/L | 5 | 10/08/12 16:26 |
| 1,2,4-Trimethylbenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 10/08/12 16:26 |
| 1,2-Dibromo-3-chloropropane | ND | | 25.0 | 5.00 | µg/L | 5 | 10/08/12 16:26 |
| 1,2-Dibromoethane | ND | | 2.50 | 0.80 | µg/L | 5 | 10/08/12 16:26 |
| 1,2-Dichlorobenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 10/08/12 16:26 |
| 1,2-Dichloroethane | 2.60 | | 2.50 | 0.80 | µg/L | 5 | 10/08/12 16:26 |
| 1,2-Dichloropropane | ND | | 2.50 | 0.80 | µg/L | 5 | 10/08/12 16:26 |
| 1,3,5-Trimethylbenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 10/08/12 16:26 |
| 1,3-Dichlorobenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 10/08/12 16:26 |
| 1,4-Dichlorobenzene | ND | | 2.50 | 0.80 | µg/L | 5 | 10/08/12 16:26 |
| 2-Butanone | ND | | 50.0 | 5.00 | µg/L | 5 | 10/08/12 16:26 |
| 2-Chloroethylvinyl ether | ND | | 25.0 | 12.5 | µg/L | 5 | 10/08/12 16:26 |
| 2-Hexanone | ND | | 25.0 | 5.00 | µg/L | 5 | 10/08/12 16:26 |
| 4-Chlorotoluene | ND | | 2.50 | 0.50 | µg/L | 5 | 10/08/12 16:26 |
| 4-Methyl-2-pentanone | ND | | 25.0 | 5.00 | µg/L | 5 | 10/08/12 16:26 |
| Acetone | ND | | 50.0 | 5.00 | µg/L | 5 | 10/08/12 16:26 |
| Benzene | 0.55 | J | 2.50 | 0.50 | µg/L | 5 | 10/08/12 16:26 |
| Bromobenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 10/08/12 16:26 |
| Bromochloromethane | ND | | 2.50 | 0.50 | µg/L | 5 | 10/08/12 16:26 |
| Bromodichloromethane | ND | | 2.50 | 0.50 | µg/L | 5 | 10/08/12 16:26 |
| Bromoform | ND | | 5.00 | 1.65 | µg/L | 5 | 10/08/12 16:26 |
| Bromomethane | ND | | 5.00 | 1.65 | µg/L | 5 | 10/08/12 16:26 |
| Carbon disulfide | ND | | 2.50 | 0.55 | µg/L | 5 | 10/08/12 16:26 |
| Carbon tetrachloride | ND | | 2.50 | 0.50 | µg/L | 5 | 10/08/12 16:26 |
| Chlorobenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 10/08/12 16:26 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

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East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1210056-009A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W9* |
| **W Order:** | K1210056 | **Collection Date:** | 10/02/12 17:15 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 10/04/12 11:00 |
| **Inst. ID:** | MSK_75 **Sample Size** 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS **%Moisture:** | **BatchNo:** | R24662 |
| **Revision:** | 10/18/12 14:35 **TestCode:** 8260W_CAL | **FileID:** | 1-SAMP-K0726.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | ND | | 5.00 | 1.65 | µg/L | 5 | 10/08/12 16:26 |
| Chloroform | ND | | 2.50 | 0.50 | µg/L | 5 | 10/08/12 16:26 |
| Chloromethane | ND | | 5.00 | 1.65 | µg/L | 5 | 10/08/12 16:26 |
| cis-1,2-Dichloroethene | 75.8 | | 2.50 | 0.50 | µg/L | 5 | 10/08/12 16:26 |
| cis-1,3-Dichloropropene | ND | | 2.50 | 0.80 | µg/L | 5 | 10/08/12 16:26 |
| Cyclohexane | ND | | 2.50 | 0.50 | µg/L | 5 | 10/08/12 16:26 |
| Dibromochloromethane | ND | | 2.50 | 0.50 | µg/L | 5 | 10/08/12 16:26 |
| Dibromomethane | ND | | 2.50 | 0.80 | µg/L | 5 | 10/08/12 16:26 |
| Dichlorodifluoromethane | ND | | 5.00 | 0.50 | µg/L | 5 | 10/08/12 16:26 |
| Ethylbenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 10/08/12 16:26 |
| Hexachlorobutadiene | ND | | 5.00 | 0.50 | µg/L | 5 | 10/08/12 16:26 |
| Isopropylbenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 10/08/12 16:26 |
| Methyl tert-butyl ether | ND | | 5.00 | 0.80 | µg/L | 5 | 10/08/12 16:26 |
| Methylene chloride | 2.40 | J | 10.0 | 0.80 | µg/L | 5 | 10/08/12 16:26 |
| n-Propylbenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 10/08/12 16:26 |
| Naphthalene | ND | | 5.00 | 0.50 | µg/L | 5 | 10/08/12 16:26 |
| o-Xylene | ND | | 2.50 | 0.50 | µg/L | 5 | 10/08/12 16:26 |
| p-Isopropyltoluene | ND | | 2.50 | 0.80 | µg/L | 5 | 10/08/12 16:26 |
| sec-Butylbenzene | ND | | 2.50 | 0.80 | µg/L | 5 | 10/08/12 16:26 |
| Styrene | ND | | 2.50 | 0.50 | µg/L | 5 | 10/08/12 16:26 |
| Tetrachloroethene | 0.75 | J | 2.50 | 0.50 | µg/L | 5 | 10/08/12 16:26 |
| Toluene | ND | | 2.50 | 0.50 | µg/L | 5 | 10/08/12 16:26 |
| trans-1,2-Dichloroethene | 0.60 | J | 2.50 | 0.50 | µg/L | 5 | 10/08/12 16:26 |
| trans-1,3-Dichloropropene | ND | | 2.50 | 0.80 | µg/L | 5 | 10/08/12 16:26 |
| Trichloroethene | 28.0 | | 2.50 | 0.50 | µg/L | 5 | 10/08/12 16:26 |
| Trichlorofluoromethane | ND | | 5.00 | 0.50 | µg/L | 5 | 10/08/12 16:26 |
| Vinyl acetate | ND | | 10.0 | 5.00 | µg/L | 5 | 10/08/12 16:26 |
| Vinyl chloride | 18.3 | | 5.00 | 1.65 | µg/L | 5 | 10/08/12 16:26 |
| Xylenes (total) | ND | | 5.00 | 1.50 | µg/L | 5 | 10/08/12 16:26 |
| Surr: 1,2-Dichloroethane-d4 | 112 | | 75-130 | 0.80 | %REC | 5 | 10/08/12 16:26 |
| Surr: Toluene-d8 | 103 | | 75-125 | 0.50 | %REC | 5 | 10/08/12 16:26 |
| Surr: 4-Bromofluorobenzene | 113 | | 75-125 | 0.50 | %REC | 5 | 10/08/12 16:26 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 10/18/12 14:37 619204 **roject Supervisor:** Anthony Crescenzi

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East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1210056-010A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W10* |
| **W Order:** | K1210056 | **Collection Date:** | 10/02/12 16:00 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 10/04/12 11:00 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R24661 |
| **Revision:** | 10/18/12 14:30 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K0688.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 1.00 | 0.20 | µg/L | 1 | 10/06/12 15:10 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 15:10 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 15:10 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 15:10 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 15:10 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 15:10 |
| 1,1-Dichloroethane | 0.12 | J | 0.50 | 0.10 | µg/L | 1 | 10/06/12 15:10 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 15:10 |
| 1,2,3-Trichloropropane | ND | | 2.00 | 0.33 | µg/L | 1 | 10/06/12 15:10 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 0.10 | µg/L | 1 | 10/06/12 15:10 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 15:10 |
| 1,2-Dibromo-3-chloropropane | ND | | 5.00 | 1.00 | µg/L | 1 | 10/06/12 15:10 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 15:10 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 15:10 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 15:10 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 15:10 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 15:10 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 15:10 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 15:10 |
| 2-Butanone | ND | | 10.0 | 1.00 | µg/L | 1 | 10/06/12 15:10 |
| 2-Chloroethylvinyl ether | ND | | 5.00 | 2.50 | µg/L | 1 | 10/06/12 15:10 |
| 2-Hexanone | ND | | 5.00 | 1.00 | µg/L | 1 | 10/06/12 15:10 |
| 4-Chlorotoluene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 15:10 |
| 4-Methyl-2-pentanone | ND | | 5.00 | 1.00 | µg/L | 1 | 10/06/12 15:10 |
| Acetone | 5.12 | J | 10.0 | 1.00 | µg/L | 1 | 10/06/12 15:10 |
| Benzene | 0.17 | J | 0.50 | 0.10 | µg/L | 1 | 10/06/12 15:10 |
| Bromobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 15:10 |
| Bromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 15:10 |
| Bromodichloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 15:10 |
| Bromoform | ND | | 1.00 | 0.33 | µg/L | 1 | 10/06/12 15:10 |
| Bromomethane | ND | | 1.00 | 0.33 | µg/L | 1 | 10/06/12 15:10 |
| Carbon disulfide | ND | | 0.50 | 0.11 | µg/L | 1 | 10/06/12 15:10 |
| Carbon tetrachloride | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 15:10 |
| Chlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 15:10 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

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East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1210056-010A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W10*** |
| **W Order:** | K1210056 | **Collection Date:** | 10/02/12 16:00 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 10/04/12 11:00 |
| **Inst. ID:** | MSK_75 **Sample Size** 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS **%Moisture:** | **BatchNo:** | R24661 |
| **Revision:** | 10/18/12 14:30 **TestCode:** 8260W_CAL | **FileID:** | 1-SAMP-K0688.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | ND | | 1.00 | 0.33 | µg/L | 1 | 10/06/12 15:10 |
| Chloroform | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 15:10 |
| Chloromethane | ND | | 1.00 | 0.33 | µg/L | 1 | 10/06/12 15:10 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 15:10 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 15:10 |
| Cyclohexane | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 15:10 |
| Dibromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 15:10 |
| Dibromomethane | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 15:10 |
| Dichlorodifluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 10/06/12 15:10 |
| Ethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 15:10 |
| Hexachlorobutadiene | ND | | 1.00 | 0.10 | µg/L | 1 | 10/06/12 15:10 |
| Isopropylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 15:10 |
| Methyl tert-butyl ether | ND | | 1.00 | 0.16 | µg/L | 1 | 10/06/12 15:10 |
| Methylene chloride | 0.22 | J | 2.00 | 0.16 | µg/L | 1 | 10/06/12 15:10 |
| n-Propylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 15:10 |
| Naphthalene | ND | | 1.00 | 0.10 | µg/L | 1 | 10/06/12 15:10 |
| o-Xylene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 15:10 |
| p-Isopropyltoluene | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 15:10 |
| sec-Butylbenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 15:10 |
| Styrene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 15:10 |
| Tetrachloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 15:10 |
| Toluene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 15:10 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 15:10 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 15:10 |
| Trichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 15:10 |
| Trichlorofluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 10/06/12 15:10 |
| Vinyl acetate | ND | | 2.00 | 1.00 | µg/L | 1 | 10/06/12 15:10 |
| Vinyl chloride | ND | | 1.00 | 0.33 | µg/L | 1 | 10/06/12 15:10 |
| Xylenes (total) | ND | | 1.00 | 0.30 | µg/L | 1 | 10/06/12 15:10 |
| Surr: 1,2-Dichloroethane-d4 | 108 | | 75-130 | 0.16 | %REC | 1 | 10/06/12 15:10 |
| Surr: Toluene-d8 | 104 | | 75-125 | 0.10 | %REC | 1 | 10/06/12 15:10 |
| Surr: 4-Bromofluorobenzene | 115 | | 75-125 | 0.10 | %REC | 1 | 10/06/12 15:10 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

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East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1210056-011A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W11* |
| **W Order:** | K1210056 | **Collection Date:** | 10/02/12 16:50 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 10/04/12 11:00 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R24661 |
| **Revision:** | 10/18/12 14:30 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K0689.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 1.00 | 0.20 | µg/L | 1 | 10/06/12 15:42 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 15:42 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 15:42 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 15:42 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 15:42 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 15:42 |
| 1,1-Dichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 15:42 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 15:42 |
| 1,2,3-Trichloropropane | ND | | 2.00 | 0.33 | µg/L | 1 | 10/06/12 15:42 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 0.10 | µg/L | 1 | 10/06/12 15:42 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 15:42 |
| 1,2-Dibromo-3-chloropropane | ND | | 5.00 | 1.00 | µg/L | 1 | 10/06/12 15:42 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 15:42 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 15:42 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 15:42 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 15:42 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 15:42 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 15:42 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 15:42 |
| 2-Butanone | ND | | 10.0 | 1.00 | µg/L | 1 | 10/06/12 15:42 |
| 2-Chloroethylvinyl ether | ND | | 5.00 | 2.50 | µg/L | 1 | 10/06/12 15:42 |
| 2-Hexanone | ND | | 5.00 | 1.00 | µg/L | 1 | 10/06/12 15:42 |
| 4-Chlorotoluene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 15:42 |
| 4-Methyl-2-pentanone | ND | | 5.00 | 1.00 | µg/L | 1 | 10/06/12 15:42 |
| Acetone | 2.57 | J | 10.0 | 1.00 | µg/L | 1 | 10/06/12 15:42 |
| Benzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 15:42 |
| Bromobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 15:42 |
| Bromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 15:42 |
| Bromodichloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 15:42 |
| Bromoform | ND | | 1.00 | 0.33 | µg/L | 1 | 10/06/12 15:42 |
| Bromomethane | ND | | 1.00 | 0.33 | µg/L | 1 | 10/06/12 15:42 |
| Carbon disulfide | ND | | 0.50 | 0.11 | µg/L | 1 | 10/06/12 15:42 |
| Carbon tetrachloride | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 15:42 |
| Chlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 15:42 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 10/18/12 14:37 619191 **roject Supervisor:** Anthony Crescenzi

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5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1210056-011A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W11*** |
| **W Order:** | K1210056 | **Collection Date:** | 10/02/12 16:50 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 10/04/12 11:00 |
| **Inst. ID:** | MSK_75 **Sample Size** 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS **%Moisture:** | **BatchNo:** | R24661 |
| **Revision:** | 10/18/12 14:30 **TestCode:** 8260W_CAL | **FileID:** | 1-SAMP-K0689.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | ND | | 1.00 | 0.33 | µg/L | 1 | 10/06/12 15:42 |
| Chloroform | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 15:42 |
| Chloromethane | ND | | 1.00 | 0.33 | µg/L | 1 | 10/06/12 15:42 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 15:42 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 15:42 |
| Cyclohexane | 0.35 | J | 0.50 | 0.10 | µg/L | 1 | 10/06/12 15:42 |
| Dibromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 15:42 |
| Dibromomethane | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 15:42 |
| Dichlorodifluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 10/06/12 15:42 |
| Ethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 15:42 |
| Hexachlorobutadiene | ND | | 1.00 | 0.10 | µg/L | 1 | 10/06/12 15:42 |
| Isopropylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 15:42 |
| Methyl tert-butyl ether | ND | | 1.00 | 0.16 | µg/L | 1 | 10/06/12 15:42 |
| Methylene chloride | 0.18 | J | 2.00 | 0.16 | µg/L | 1 | 10/06/12 15:42 |
| n-Propylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 15:42 |
| Naphthalene | ND | | 1.00 | 0.10 | µg/L | 1 | 10/06/12 15:42 |
| o-Xylene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 15:42 |
| p-Isopropyltoluene | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 15:42 |
| sec-Butylbenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 15:42 |
| Styrene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 15:42 |
| Tetrachloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 15:42 |
| Toluene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 15:42 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 15:42 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 15:42 |
| Trichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 15:42 |
| Trichlorofluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 10/06/12 15:42 |
| Vinyl acetate | ND | | 2.00 | 1.00 | µg/L | 1 | 10/06/12 15:42 |
| Vinyl chloride | ND | | 1.00 | 0.33 | µg/L | 1 | 10/06/12 15:42 |
| Xylenes (total) | ND | | 1.00 | 0.30 | µg/L | 1 | 10/06/12 15:42 |
| Surr: 1,2-Dichloroethane-d4 | 107 | | 75-130 | 0.16 | %REC | 1 | 10/06/12 15:42 |
| Surr: Toluene-d8 | 105 | | 75-125 | 0.10 | %REC | 1 | 10/06/12 15:42 |
| Surr: 4-Bromofluorobenzene | 110 | | 75-125 | 0.10 | %REC | 1 | 10/06/12 15:42 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 10/18/12 14:37 619191 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1210056-012A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W12* |
| **W Order:** | K1210056 | **Collection Date:** | 10/02/12 16:40 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 10/04/12 11:00 |
| **Inst. ID:** | MSK_75 **Sample Size** 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS **%Moisture:** | **BatchNo:** | R24661 |
| **Revision:** | 10/18/12 14:30 **TestCode:** 8260W_CAL | **FileID:** | 1-SAMP-K0690.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 5.00 | 1.00 | µg/L | 5 | 10/06/12 16:14 |
| 1,1,1,2-Tetrachloroethane | ND | | 2.50 | 0.80 | µg/L | 5 | 10/06/12 16:14 |
| 1,1,1-Trichloroethane | ND | | 2.50 | 0.50 | µg/L | 5 | 10/06/12 16:14 |
| 1,1,2,2-Tetrachloroethane | ND | | 2.50 | 0.50 | µg/L | 5 | 10/06/12 16:14 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 2.50 | 0.50 | µg/L | 5 | 10/06/12 16:14 |
| 1,1,2-Trichloroethane | ND | | 2.50 | 0.80 | µg/L | 5 | 10/06/12 16:14 |
| 1,1-Dichloroethane | 134 | | 2.50 | 0.50 | µg/L | 5 | 10/06/12 16:14 |
| 1,1-Dichloroethene | ND | | 2.50 | 0.80 | µg/L | 5 | 10/06/12 16:14 |
| 1,2,3-Trichloropropane | ND | | 10.0 | 1.65 | µg/L | 5 | 10/06/12 16:14 |
| 1,2,4-Trichlorobenzene | ND | | 5.00 | 0.50 | µg/L | 5 | 10/06/12 16:14 |
| 1,2,4-Trimethylbenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 10/06/12 16:14 |
| 1,2-Dibromo-3-chloropropane | ND | | 25.0 | 5.00 | µg/L | 5 | 10/06/12 16:14 |
| 1,2-Dibromoethane | ND | | 2.50 | 0.80 | µg/L | 5 | 10/06/12 16:14 |
| 1,2-Dichlorobenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 10/06/12 16:14 |
| 1,2-Dichloroethane | 4.10 | | 2.50 | 0.80 | µg/L | 5 | 10/06/12 16:14 |
| 1,2-Dichloropropane | ND | | 2.50 | 0.80 | µg/L | 5 | 10/06/12 16:14 |
| 1,3,5-Trimethylbenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 10/06/12 16:14 |
| 1,3-Dichlorobenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 10/06/12 16:14 |
| 1,4-Dichlorobenzene | ND | | 2.50 | 0.80 | µg/L | 5 | 10/06/12 16:14 |
| 2-Butanone | ND | | 50.0 | 5.00 | µg/L | 5 | 10/06/12 16:14 |
| 2-Chloroethylvinyl ether | ND | | 25.0 | 12.5 | µg/L | 5 | 10/06/12 16:14 |
| 2-Hexanone | ND | | 25.0 | 5.00 | µg/L | 5 | 10/06/12 16:14 |
| 4-Chlorotoluene | ND | | 2.50 | 0.50 | µg/L | 5 | 10/06/12 16:14 |
| 4-Methyl-2-pentanone | ND | | 25.0 | 5.00 | µg/L | 5 | 10/06/12 16:14 |
| Acetone | ND | | 50.0 | 5.00 | µg/L | 5 | 10/06/12 16:14 |
| Benzene | ND | | 2.50 | 0.50 | µg/L | 5 | 10/06/12 16:14 |
| Bromobenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 10/06/12 16:14 |
| Bromochloromethane | ND | | 2.50 | 0.50 | µg/L | 5 | 10/06/12 16:14 |
| Bromodichloromethane | ND | | 2.50 | 0.50 | µg/L | 5 | 10/06/12 16:14 |
| Bromoform | ND | | 5.00 | 1.65 | µg/L | 5 | 10/06/12 16:14 |
| Bromomethane | ND | | 5.00 | 1.65 | µg/L | 5 | 10/06/12 16:14 |
| Carbon disulfide | ND | | 2.50 | 0.55 | µg/L | 5 | 10/06/12 16:14 |
| Carbon tetrachloride | ND | | 2.50 | 0.50 | µg/L | 5 | 10/06/12 16:14 |
| Chlorobenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 10/06/12 16:14 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

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East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1210056-012A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W12*** |
| **W Order:** | K1210056 | **Collection Date:** | 10/02/12 16:40 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 10/04/12 11:00 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R24661 |
| **Revision:** | 10/18/12 14:30 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K0690.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | 21.6 | | 5.00 | 1.65 | µg/L | 5 | 10/06/12 16:14 |
| Chloroform | ND | | 2.50 | 0.50 | µg/L | 5 | 10/06/12 16:14 |
| Chloromethane | ND | | 5.00 | 1.65 | µg/L | 5 | 10/06/12 16:14 |
| cis-1,2-Dichloroethene | 15.9 | | 2.50 | 0.50 | µg/L | 5 | 10/06/12 16:14 |
| cis-1,3-Dichloropropene | ND | | 2.50 | 0.80 | µg/L | 5 | 10/06/12 16:14 |
| Cyclohexane | ND | | 2.50 | 0.50 | µg/L | 5 | 10/06/12 16:14 |
| Dibromochloromethane | ND | | 2.50 | 0.50 | µg/L | 5 | 10/06/12 16:14 |
| Dibromomethane | ND | | 2.50 | 0.80 | µg/L | 5 | 10/06/12 16:14 |
| Dichlorodifluoromethane | ND | | 5.00 | 0.50 | µg/L | 5 | 10/06/12 16:14 |
| Ethylbenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 10/06/12 16:14 |
| Hexachlorobutadiene | ND | | 5.00 | 0.50 | µg/L | 5 | 10/06/12 16:14 |
| Isopropylbenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 10/06/12 16:14 |
| Methyl tert-butyl ether | ND | | 5.00 | 0.80 | µg/L | 5 | 10/06/12 16:14 |
| Methylene chloride | 2.25 | J | 10.0 | 0.80 | µg/L | 5 | 10/06/12 16:14 |
| n-Propylbenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 10/06/12 16:14 |
| Naphthalene | ND | | 5.00 | 0.50 | µg/L | 5 | 10/06/12 16:14 |
| o-Xylene | ND | | 2.50 | 0.50 | µg/L | 5 | 10/06/12 16:14 |
| p-Isopropyltoluene | ND | | 2.50 | 0.80 | µg/L | 5 | 10/06/12 16:14 |
| sec-Butylbenzene | ND | | 2.50 | 0.80 | µg/L | 5 | 10/06/12 16:14 |
| Styrene | ND | | 2.50 | 0.50 | µg/L | 5 | 10/06/12 16:14 |
| Tetrachloroethene | ND | | 2.50 | 0.50 | µg/L | 5 | 10/06/12 16:14 |
| Toluene | ND | | 2.50 | 0.50 | µg/L | 5 | 10/06/12 16:14 |
| trans-1,2-Dichloroethene | ND | | 2.50 | 0.50 | µg/L | 5 | 10/06/12 16:14 |
| trans-1,3-Dichloropropene | ND | | 2.50 | 0.80 | µg/L | 5 | 10/06/12 16:14 |
| Trichloroethene | ND | | 2.50 | 0.50 | µg/L | 5 | 10/06/12 16:14 |
| Trichlorofluoromethane | ND | | 5.00 | 0.50 | µg/L | 5 | 10/06/12 16:14 |
| Vinyl acetate | ND | | 10.0 | 5.00 | µg/L | 5 | 10/06/12 16:14 |
| Vinyl chloride | 71.4 | | 5.00 | 1.65 | µg/L | 5 | 10/06/12 16:14 |
| Xylenes (total) | ND | | 5.00 | 1.50 | µg/L | 5 | 10/06/12 16:14 |
| Surr: 1,2-Dichloroethane-d4 | 109 | | 75-130 | 0.80 | %REC | 5 | 10/06/12 16:14 |
| Surr: Toluene-d8 | 105 | | 75-125 | 0.50 | %REC | 5 | 10/06/12 16:14 |
| Surr: 4-Bromofluorobenzene | 111 | | 75-125 | 0.50 | %REC | 5 | 10/06/12 16:14 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 10/18/12 14:37 619192 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1210056-013A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W13* |
| **W Order:** | K1210056 | **Collection Date:** | 10/02/12 15:45 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 10/04/12 11:00 |
| **Inst. ID:** | MSK_75 **Sample Size** 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS **%Moisture:** | **BatchNo:** | R24661 |
| **Revision:** | 10/18/12 14:30 **TestCode:** 8260W_CAL | **FileID:** | 1-SAMP-K0691.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | 0.34 | J | 1.00 | 0.20 | µg/L | 1 | 10/06/12 16:46 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 16:46 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 16:46 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 16:46 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 16:46 |
| 1,1,2-Trichloroethane | 1.94 | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 16:46 |
| 1,1-Dichloroethane | 0.29 | J | 0.50 | 0.10 | µg/L | 1 | 10/06/12 16:46 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 16:46 |
| 1,2,3-Trichloropropane | ND | | 2.00 | 0.33 | µg/L | 1 | 10/06/12 16:46 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 0.10 | µg/L | 1 | 10/06/12 16:46 |
| 1,2,4-Trimethylbenzene | 0.18 | J | 0.50 | 0.10 | µg/L | 1 | 10/06/12 16:46 |
| 1,2-Dibromo-3-chloropropane | ND | | 5.00 | 1.00 | µg/L | 1 | 10/06/12 16:46 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 16:46 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 16:46 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 16:46 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 16:46 |
| 1,3,5-Trimethylbenzene | 0.61 | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 16:46 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 16:46 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 16:46 |
| 2-Butanone | ND | | 10.0 | 1.00 | µg/L | 1 | 10/06/12 16:46 |
| 2-Chloroethylvinyl ether | ND | | 5.00 | 2.50 | µg/L | 1 | 10/06/12 16:46 |
| 2-Hexanone | ND | | 5.00 | 1.00 | µg/L | 1 | 10/06/12 16:46 |
| 4-Chlorotoluene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 16:46 |
| 4-Methyl-2-pentanone | ND | | 5.00 | 1.00 | µg/L | 1 | 10/06/12 16:46 |
| Acetone | ND | | 10.0 | 1.00 | µg/L | 1 | 10/06/12 16:46 |
| Benzene | 0.22 | J | 0.50 | 0.10 | µg/L | 1 | 10/06/12 16:46 |
| Bromobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 16:46 |
| Bromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 16:46 |
| Bromodichloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 16:46 |
| Bromoform | ND | | 1.00 | 0.33 | µg/L | 1 | 10/06/12 16:46 |
| Bromomethane | ND | | 1.00 | 0.33 | µg/L | 1 | 10/06/12 16:46 |
| Carbon disulfide | ND | | 0.50 | 0.11 | µg/L | 1 | 10/06/12 16:46 |
| Carbon tetrachloride | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 16:46 |
| Chlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 16:46 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 10/18/12 14:37 619193 **roject Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1210056-013A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W13*** |
| **W Order:** | K1210056 | **Collection Date:** | 10/02/12 15:45 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 10/04/12 11:00 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R24661 |
| **Revision:** | 10/18/12 14:30 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K0691.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | ND | | 1.00 | 0.33 | µg/L | 1 | 10/06/12 16:46 |
| Chloroform | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 16:46 |
| Chloromethane | ND | | 1.00 | 0.33 | µg/L | 1 | 10/06/12 16:46 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 16:46 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 16:46 |
| Cyclohexane | 2.31 | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 16:46 |
| Dibromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 16:46 |
| Dibromomethane | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 16:46 |
| Dichlorodifluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 10/06/12 16:46 |
| Ethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 16:46 |
| Hexachlorobutadiene | ND | | 1.00 | 0.10 | µg/L | 1 | 10/06/12 16:46 |
| Isopropylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 16:46 |
| Methyl tert-butyl ether | ND | | 1.00 | 0.16 | µg/L | 1 | 10/06/12 16:46 |
| Methylene chloride | 0.20 | J | 2.00 | 0.16 | µg/L | 1 | 10/06/12 16:46 |
| n-Propylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 16:46 |
| Naphthalene | ND | | 1.00 | 0.10 | µg/L | 1 | 10/06/12 16:46 |
| o-Xylene | 0.22 | J | 0.50 | 0.10 | µg/L | 1 | 10/06/12 16:46 |
| p-Isopropyltoluene | 0.16 | J | 0.50 | 0.16 | µg/L | 1 | 10/06/12 16:46 |
| sec-Butylbenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 16:46 |
| Styrene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 16:46 |
| Tetrachloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 16:46 |
| Toluene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 16:46 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 16:46 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 10/06/12 16:46 |
| Trichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 10/06/12 16:46 |
| Trichlorofluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 10/06/12 16:46 |
| Vinyl acetate | ND | | 2.00 | 1.00 | µg/L | 1 | 10/06/12 16:46 |
| Vinyl chloride | ND | | 1.00 | 0.33 | µg/L | 1 | 10/06/12 16:46 |
| Xylenes (total) | 0.56 | J | 1.00 | 0.30 | µg/L | 1 | 10/06/12 16:46 |
| Surr: 1,2-Dichloroethane-d4 | 109 | | 75-130 | 0.16 | %REC | 1 | 10/06/12 16:46 |
| Surr: Toluene-d8 | 105 | | 75-125 | 0.10 | %REC | 1 | 10/06/12 16:46 |
| Surr: 4-Bromofluorobenzene | 107 | | 75-125 | 0.10 | %REC | 1 | 10/06/12 16:46 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

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East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1210056-014A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W14*** |
| **W Order:** | K1210056 | **Collection Date:** | 10/02/12 16:15 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 10/04/12 11:00 |
| **Inst. ID:** | MSK_75 **Sample Size** 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS **%Moisture:** | **BatchNo:** | R24661 |
| **Revision:** | 10/18/12 14:30 **TestCode:** 8260W_CAL | **FileID:** | 1-SAMP-K0692.D |
| **Col Type:** | TOTAL 12601 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | 25.0 | J | 100 | 20.0 | µg/L | 100 | 10/06/12 17:18 |
| 1,1,1,2-Tetrachloroethane | ND | | 50.0 | 16.0 | µg/L | 100 | 10/06/12 17:18 |
| 1,1,1-Trichloroethane | 5660 | | 50.0 | 10.0 | µg/L | 100 | 10/06/12 17:18 |
| 1,1,2,2-Tetrachloroethane | ND | | 50.0 | 10.0 | µg/L | 100 | 10/06/12 17:18 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 2030 | | 50.0 | 10.0 | µg/L | 100 | 10/06/12 17:18 |
| 1,1,2-Trichloroethane | ND | | 50.0 | 16.0 | µg/L | 100 | 10/06/12 17:18 |
| 1,1-Dichloroethane | 3900 | | 50.0 | 10.0 | µg/L | 100 | 10/06/12 17:18 |
| 1,1-Dichloroethene | 119 | | 50.0 | 16.0 | µg/L | 100 | 10/06/12 17:18 |
| 1,2,3-Trichloropropane | ND | | 200 | 33.0 | µg/L | 100 | 10/06/12 17:18 |
| 1,2,4-Trichlorobenzene | ND | | 100 | 10.0 | µg/L | 100 | 10/06/12 17:18 |
| 1,2,4-Trimethylbenzene | 17.0 | J | 50.0 | 10.0 | µg/L | 100 | 10/06/12 17:18 |
| 1,2-Dibromo-3-chloropropane | ND | | 500 | 100 | µg/L | 100 | 10/06/12 17:18 |
| 1,2-Dibromoethane | ND | | 50.0 | 16.0 | µg/L | 100 | 10/06/12 17:18 |
| 1,2-Dichlorobenzene | ND | | 50.0 | 10.0 | µg/L | 100 | 10/06/12 17:18 |
| 1,2-Dichloroethane | ND | | 50.0 | 16.0 | µg/L | 100 | 10/06/12 17:18 |
| 1,2-Dichloropropane | ND | | 50.0 | 16.0 | µg/L | 100 | 10/06/12 17:18 |
| 1,3,5-Trimethylbenzene | ND | | 50.0 | 10.0 | µg/L | 100 | 10/06/12 17:18 |
| 1,3-Dichlorobenzene | ND | | 50.0 | 10.0 | µg/L | 100 | 10/06/12 17:18 |
| 1,4-Dichlorobenzene | ND | | 50.0 | 16.0 | µg/L | 100 | 10/06/12 17:18 |
| 2-Butanone | ND | | 1000 | 100 | µg/L | 100 | 10/06/12 17:18 |
| 2-Chloroethylvinyl ether | ND | | 500 | 250 | µg/L | 100 | 10/06/12 17:18 |
| 2-Hexanone | ND | | 500 | 100 | µg/L | 100 | 10/06/12 17:18 |
| 4-Chlorotoluene | ND | | 50.0 | 10.0 | µg/L | 100 | 10/06/12 17:18 |
| 4-Methyl-2-pentanone | ND | | 500 | 100 | µg/L | 100 | 10/06/12 17:18 |
| Acetone | ND | | 1000 | 100 | µg/L | 100 | 10/06/12 17:18 |
| Benzene | 19.0 | J | 50.0 | 10.0 | µg/L | 100 | 10/06/12 17:18 |
| Bromobenzene | ND | | 50.0 | 10.0 | µg/L | 100 | 10/06/12 17:18 |
| Bromochloromethane | ND | | 50.0 | 10.0 | µg/L | 100 | 10/06/12 17:18 |
| Bromodichloromethane | ND | | 50.0 | 10.0 | µg/L | 100 | 10/06/12 17:18 |
| Bromoform | ND | | 100 | 33.0 | µg/L | 100 | 10/06/12 17:18 |
| Bromomethane | ND | | 100 | 33.0 | µg/L | 100 | 10/06/12 17:18 |
| Carbon disulfide | ND | | 50.0 | 11.0 | µg/L | 100 | 10/06/12 17:18 |
| Carbon tetrachloride | ND | | 50.0 | 10.0 | µg/L | 100 | 10/06/12 17:18 |
| Chlorobenzene | ND | | 50.0 | 10.0 | µg/L | 100 | 10/06/12 17:18 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

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East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1210056-014A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W14*** |
| **W Order:** | K1210056 | **Collection Date:** | 10/02/12 16:15 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 10/04/12 11:00 |
| **Inst. ID:** | MSK_75 **Sample Size** 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS **%Moisture:** | **BatchNo:** | R24661 |
| **Revision:** | 10/18/12 14:30 **TestCode:** 8260W_CAL | **FileID:** | 1-SAMP-K0692.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | ND | | 100 | 33.0 | µg/L | 100 | 10/06/12 17:18 |
| Chloroform | ND | | 50.0 | 10.0 | µg/L | 100 | 10/06/12 17:18 |
| Chloromethane | ND | | 100 | 33.0 | µg/L | 100 | 10/06/12 17:18 |
| cis-1,2-Dichloroethene | 236 | | 50.0 | 10.0 | µg/L | 100 | 10/06/12 17:18 |
| cis-1,3-Dichloropropene | ND | | 50.0 | 16.0 | µg/L | 100 | 10/06/12 17:18 |
| Cyclohexane | 105 | | 50.0 | 10.0 | µg/L | 100 | 10/06/12 17:18 |
| Dibromochloromethane | ND | | 50.0 | 10.0 | µg/L | 100 | 10/06/12 17:18 |
| Dibromomethane | ND | | 50.0 | 16.0 | µg/L | 100 | 10/06/12 17:18 |
| Dichlorodifluoromethane | ND | | 100 | 10.0 | µg/L | 100 | 10/06/12 17:18 |
| Ethylbenzene | ND | | 50.0 | 10.0 | µg/L | 100 | 10/06/12 17:18 |
| Hexachlorobutadiene | ND | | 100 | 10.0 | µg/L | 100 | 10/06/12 17:18 |
| Isopropylbenzene | ND | | 50.0 | 10.0 | µg/L | 100 | 10/06/12 17:18 |
| Methyl tert-butyl ether | ND | | 100 | 16.0 | µg/L | 100 | 10/06/12 17:18 |
| Methylene chloride | 53.0 | J | 200 | 16.0 | µg/L | 100 | 10/06/12 17:18 |
| n-Propylbenzene | ND | | 50.0 | 10.0 | µg/L | 100 | 10/06/12 17:18 |
| Naphthalene | ND | | 100 | 10.0 | µg/L | 100 | 10/06/12 17:18 |
| o-Xylene | 11.0 | J | 50.0 | 10.0 | µg/L | 100 | 10/06/12 17:18 |
| p-Isopropyltoluene | ND | | 50.0 | 16.0 | µg/L | 100 | 10/06/12 17:18 |
| sec-Butylbenzene | ND | | 50.0 | 16.0 | µg/L | 100 | 10/06/12 17:18 |
| Styrene | ND | | 50.0 | 10.0 | µg/L | 100 | 10/06/12 17:18 |
| Tetrachloroethene | 375 | | 50.0 | 10.0 | µg/L | 100 | 10/06/12 17:18 |
| Toluene | 29.0 | J | 50.0 | 10.0 | µg/L | 100 | 10/06/12 17:18 |
| trans-1,2-Dichloroethene | ND | | 50.0 | 10.0 | µg/L | 100 | 10/06/12 17:18 |
| trans-1,3-Dichloropropene | ND | | 50.0 | 16.0 | µg/L | 100 | 10/06/12 17:18 |
| Trichloroethene | 22.0 | J | 50.0 | 10.0 | µg/L | 100 | 10/06/12 17:18 |
| Trichlorofluoromethane | ND | | 100 | 10.0 | µg/L | 100 | 10/06/12 17:18 |
| Vinyl acetate | ND | | 200 | 100 | µg/L | 100 | 10/06/12 17:18 |
| Vinyl chloride | ND | | 100 | 33.0 | µg/L | 100 | 10/06/12 17:18 |
| Xylenes (total) | 36.0 | J | 100 | 30.0 | µg/L | 100 | 10/06/12 17:18 |
| Surr: 1,2-Dichloroethane-d4 | 108 | | 75-130 | 16.0 | %REC | 100 | 10/06/12 17:18 |
| Surr: Toluene-d8 | 106 | | 75-125 | 10.0 | %REC | 100 | 10/06/12 17:18 |
| Surr: 4-Bromofluorobenzene | 112 | | 75-125 | 10.0 | %REC | 100 | 10/06/12 17:18 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 10/18/12 14:37 619194 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1210056-016A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - BL* |
| **W Order:** | K1210056 | **Collection Date:** | 10/02/12 12:00 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 10/04/12 11:00 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R24662 |
| **Revision:** | 10/18/12 14:35 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K0721.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 100 | 20.0 | µg/L | 100 | 10/08/12 13:46 |
| 1,1,1,2-Tetrachloroethane | ND | | 50.0 | 16.0 | µg/L | 100 | 10/08/12 13:46 |
| 1,1,1-Trichloroethane | ND | | 50.0 | 10.0 | µg/L | 100 | 10/08/12 13:46 |
| 1,1,2,2-Tetrachloroethane | ND | | 50.0 | 10.0 | µg/L | 100 | 10/08/12 13:46 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 50.0 | 10.0 | µg/L | 100 | 10/08/12 13:46 |
| 1,1,2-Trichloroethane | ND | | 50.0 | 16.0 | µg/L | 100 | 10/08/12 13:46 |
| 1,1-Dichloroethane | 1140 | | 50.0 | 10.0 | µg/L | 100 | 10/08/12 13:46 |
| 1,1-Dichloroethene | ND | | 50.0 | 16.0 | µg/L | 100 | 10/08/12 13:46 |
| 1,2,3-Trichloropropane | ND | | 200 | 33.0 | µg/L | 100 | 10/08/12 13:46 |
| 1,2,4-Trichlorobenzene | ND | | 100 | 10.0 | µg/L | 100 | 10/08/12 13:46 |
| 1,2,4-Trimethylbenzene | ND | | 50.0 | 10.0 | µg/L | 100 | 10/08/12 13:46 |
| 1,2-Dibromo-3-chloropropane | ND | | 500 | 100 | µg/L | 100 | 10/08/12 13:46 |
| 1,2-Dibromoethane | ND | | 50.0 | 16.0 | µg/L | 100 | 10/08/12 13:46 |
| 1,2-Dichlorobenzene | ND | | 50.0 | 10.0 | µg/L | 100 | 10/08/12 13:46 |
| 1,2-Dichloroethane | ND | | 50.0 | 16.0 | µg/L | 100 | 10/08/12 13:46 |
| 1,2-Dichloropropane | ND | | 50.0 | 16.0 | µg/L | 100 | 10/08/12 13:46 |
| 1,3,5-Trimethylbenzene | ND | | 50.0 | 10.0 | µg/L | 100 | 10/08/12 13:46 |
| 1,3-Dichlorobenzene | ND | | 50.0 | 10.0 | µg/L | 100 | 10/08/12 13:46 |
| 1,4-Dichlorobenzene | ND | | 50.0 | 16.0 | µg/L | 100 | 10/08/12 13:46 |
| 2-Butanone | ND | | 1000 | 100 | µg/L | 100 | 10/08/12 13:46 |
| 2-Chloroethylvinyl ether | ND | | 500 | 250 | µg/L | 100 | 10/08/12 13:46 |
| 2-Hexanone | ND | | 500 | 100 | µg/L | 100 | 10/08/12 13:46 |
| 4-Chlorotoluene | ND | | 50.0 | 10.0 | µg/L | 100 | 10/08/12 13:46 |
| 4-Methyl-2-pentanone | ND | | 500 | 100 | µg/L | 100 | 10/08/12 13:46 |
| Acetone | ND | | 1000 | 100 | µg/L | 100 | 10/08/12 13:46 |
| Benzene | ND | | 50.0 | 10.0 | µg/L | 100 | 10/08/12 13:46 |
| Bromobenzene | ND | | 50.0 | 10.0 | µg/L | 100 | 10/08/12 13:46 |
| Bromochloromethane | ND | | 50.0 | 10.0 | µg/L | 100 | 10/08/12 13:46 |
| Bromodichloromethane | ND | | 50.0 | 10.0 | µg/L | 100 | 10/08/12 13:46 |
| Bromoform | ND | | 100 | 33.0 | µg/L | 100 | 10/08/12 13:46 |
| Bromomethane | ND | | 100 | 33.0 | µg/L | 100 | 10/08/12 13:46 |
| Carbon disulfide | ND | | 50.0 | 11.0 | µg/L | 100 | 10/08/12 13:46 |
| Carbon tetrachloride | ND | | 50.0 | 10.0 | µg/L | 100 | 10/08/12 13:46 |
| Chlorobenzene | ND | | 50.0 | 10.0 | µg/L | 100 | 10/08/12 13:46 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | | | |
|---|---|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | | | **Lab ID:** | K1210056-016A |
| **Project:** | 189-02 | | | **Client Sample ID:** | *189 - BL* |
| **W Order:** | K1210056 | | | **Collection Date:** | 10/02/12 12:00 |
| **Matrix:** | GROUNDWATER | | | **Date Received:** | 10/04/12 11:00 |
| **Inst. ID:** | MSK_75 | **Sample Size** | 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | | **BatchNo:** | R24662 |
| **Revision:** | 10/18/12 14:35 | **TestCode:** | 8260W_CAL | **FileID:** | 1-SAMP-K0721.D |
| **Col Type:** | | | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | ND | | 100 | 33.0 | µg/L | 100 | 10/08/12 13:46 |
| Chloroform | ND | | 50.0 | 10.0 | µg/L | 100 | 10/08/12 13:46 |
| Chloromethane | ND | | 100 | 33.0 | µg/L | 100 | 10/08/12 13:46 |
| cis-1,2-Dichloroethene | 223 | | 50.0 | 10.0 | µg/L | 100 | 10/08/12 13:46 |
| cis-1,3-Dichloropropene | ND | | 50.0 | 16.0 | µg/L | 100 | 10/08/12 13:46 |
| Cyclohexane | ND | | 50.0 | 10.0 | µg/L | 100 | 10/08/12 13:46 |
| Dibromochloromethane | ND | | 50.0 | 10.0 | µg/L | 100 | 10/08/12 13:46 |
| Dibromomethane | ND | | 50.0 | 16.0 | µg/L | 100 | 10/08/12 13:46 |
| Dichlorodifluoromethane | ND | | 100 | 10.0 | µg/L | 100 | 10/08/12 13:46 |
| Ethylbenzene | ND | | 50.0 | 10.0 | µg/L | 100 | 10/08/12 13:46 |
| Hexachlorobutadiene | ND | | 100 | 10.0 | µg/L | 100 | 10/08/12 13:46 |
| Isopropylbenzene | ND | | 50.0 | 10.0 | µg/L | 100 | 10/08/12 13:46 |
| Methyl tert-butyl ether | ND | | 100 | 16.0 | µg/L | 100 | 10/08/12 13:46 |
| Methylene chloride | 57.0 | J | 200 | 16.0 | µg/L | 100 | 10/08/12 13:46 |
| n-Propylbenzene | ND | | 50.0 | 10.0 | µg/L | 100 | 10/08/12 13:46 |
| Naphthalene | ND | | 100 | 10.0 | µg/L | 100 | 10/08/12 13:46 |
| o-Xylene | ND | | 50.0 | 10.0 | µg/L | 100 | 10/08/12 13:46 |
| p-Isopropyltoluene | ND | | 50.0 | 16.0 | µg/L | 100 | 10/08/12 13:46 |
| sec-Butylbenzene | ND | | 50.0 | 16.0 | µg/L | 100 | 10/08/12 13:46 |
| Styrene | ND | | 50.0 | 10.0 | µg/L | 100 | 10/08/12 13:46 |
| Tetrachloroethene | ND | | 50.0 | 10.0 | µg/L | 100 | 10/08/12 13:46 |
| Toluene | ND | | 50.0 | 10.0 | µg/L | 100 | 10/08/12 13:46 |
| trans-1,2-Dichloroethene | ND | | 50.0 | 10.0 | µg/L | 100 | 10/08/12 13:46 |
| trans-1,3-Dichloropropene | ND | | 50.0 | 16.0 | µg/L | 100 | 10/08/12 13:46 |
| Trichloroethene | ND | | 50.0 | 10.0 | µg/L | 100 | 10/08/12 13:46 |
| Trichlorofluoromethane | ND | | 100 | 10.0 | µg/L | 100 | 10/08/12 13:46 |
| Vinyl acetate | ND | | 200 | 100 | µg/L | 100 | 10/08/12 13:46 |
| Vinyl chloride | 711 | | 100 | 33.0 | µg/L | 100 | 10/08/12 13:46 |
| Xylenes (total) | ND | | 100 | 30.0 | µg/L | 100 | 10/08/12 13:46 |
| Surr: 1,2-Dichloroethane-d4 | 109 | | 75-130 | 16.0 | %REC | 100 | 10/08/12 13:46 |
| Surr: Toluene-d8 | 103 | | 75-125 | 10.0 | %REC | 100 | 10/08/12 13:46 |
| Surr: 4-Bromofluorobenzene | 114 | | 75-125 | 10.0 | %REC | 100 | 10/08/12 13:46 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 10/18/12 14:37 619201 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
**5854 Butternut Drive**
**East Syracuse, NY 13057** **(315) 445-1900**

Monday, July 09, 2012

Ken W. Kloeber
Ken W. Kloeber Consulting Engineers
PO Box 140
Boston, NY 14025

TEL: (716) 864-0012

Project: 189-02
RE: Analytical Results Order No.: K1207002

Dear Ken W. Kloeber:

Life Science Laboratories, Inc. received 17 sample(s) on 7/2/2012 for the analyses presented in the following report. Sample results relate only to the samples as received by the laboratory.

Very truly yours,
Life Science Laboratories, Inc.

Anthony Crescenzi
Project Manager

## Ken Kloeber PE

---

**From:** Hugh Guider [guiderhm@lsl-inc.com]
**Sent:** Fri Jul 13, 2012 1:28 PM
**To:** KloeberEng@aol.com
**Subject:** RE: Acetone and SGC
**Follow Up Flag:** Follow up
**Flag Status:** Red

**Hey Ken;**

**From lab**

Method Blank results were similar to samples:

MB-120702: Ace 2.6 MeCl2 0.48
MB-120705 Ace 3.2 MeCl2 0.73
MB-120706 Ace 2.2 MeCl2 0.55

**Nothing yet on Excel tables.**

**Hugh**

Hugh Guider, Director
Client Services
Life Science Laboratories, Inc.
315-445-1900
315-445-1104 Fax
guiderhm@lsl-inc.com

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---

**From:** Ken Kloeber PE [mailto:KloeberEng@aol.com]
**Sent:** Friday, July 13, 2012 10:02 AM
**To:** Hugh Guider
**Subject:** Acetone and SGC

Hey Hugh,

Did you find anything more re: what the method blank showed?

## Ken Kloeber PE

---

**From:** Hugh Guider [guiderhm@lsl-inc.com]
**Sent:** Fri May 25, 2012 9:01 AM
**To:** KloeberEng@aol.com
**Subject:** RE: LSL Invoice - AX - PROJECT - K1203241

### Response from lab on MeCl

It is possible that trip blank or field blank water can be contaminated with methylene chloride in the lab upon filling of the vials or glass bottles. Methylene chloride is a known common laboratory contaminant and on occasion becomes elevated. The instrument did not detect methylene chloride above the MDL for the QC associated with the samples in Work Order K1203241.

Hugh

Hugh Guider, Director
Client Services
Life Science Laboratories, Inc.
315-445-1900
315-445-1104 Fax
guiderhm@lsl-inc.com

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---

**From: Ken Kloeber PE**
**Sent: Tue Jul 10, 2012 6:41 PM**
**To: Hugh Guider**
**Subject: RE: LSL Analytical Report - K1207002**

**Hi Hugh,**

**I see that 189-W10 (historically clean well), 189-W11 (historically clean well), 189-Trip, 189-Field all show both acetone and methcl- Could you check into the QA/QC?**

**Thanks**

# Ken W. Kloeber Consulting Engineers

(716) 864-0012 tel
(775) 860-3804 fax
KloeberEng@aol.com
PO Box 140 • Boston NY 14025

KWKCE Proj no. 189-02

Sampled by initials: KK

PO no.

For Lab use: K1207002

## Environmental Sample Chain-of-Custody

| | KWKCE Sample ID or Location | Date | Time | Type | Matrix | No. of containers | (1) VOCs | (2) | (3) | (4) | (5) | (6) | TAT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 001 | 189-W1 | 6/30/12 | 1700 | G C | GW | 2 | X | | | | | | |
| 002 | 189-W2 | | 1630 | G C | | | | | | | | | |
| 003 | 189-W3 | | 1610 | G C | | | | | | | | | |
| 004 | 189-W4 | 6/24/12 | 1530 | G C | | | | | | | | | |
| 005 | 189-W5 | | 1610 | G C | | | | | | | | | |
| 006 | 189-W6 | | 1440 | G C | | | | | | | | | |
| 007 | 189-W7 | | 1400 | G C | | | | | | | | | |
| 008 | 189-W8 | | 1520 | G C | | | | | | | | | |
| 009 | 189-W9 | 6/30/12 | 1540 | G C | | | | | | | | | |
| 010 | 189-W10 | 6/24/12 | 1430 | G C | | | | | | | | | |
| 011 | 189-W11 | | 1450 | G C | | | | | | | | | |
| 012 | 189-W12 | | 1510 | G C | | | | | | | | | |
| 013 | 189-W13 | | 1420 | G C | | | | | | | | | |
| 014 | 189-W14 | | 1410 | G C | | | | | | | | | |
| 015 | 189-WBL | 6/30/12 | 1200 | G C | | | | | | | | | |
| 016 | 189-TRIP | 6/30/12 | — | G C | D1 | | | | | | | | |
| 017 | 189-FIELD | 6/30/12 | 1500 | G C | D1 | | | | | | | | |

Remarks / Instructions:

KEEP LIMITS AS LOW AS POSSIBLE; REPORT ALL RESULTS AND QC VALUES (QS, JS, ETC.) AND ALL DATA & QC QUALIFIERS.

EMAIL REPORT & INVOICE. FOLLOW UP W/ EQUIS EDD.

~~XX~~ USE EXPANDED 8260 LIST

NO TICS

| Signature of person sampling | Courier | Picked-up or dropped-off location |
|---|---|---|
| K. Kloeber | VELOCITY | TERMINAL |

| Relinquished-by signature | Date | Time | Received-by signature |
|---|---|---|---|
| K. Kloeber | 6/30 | 1800 | VELOCITY EXP. |
| Relinquished-by signature | Date | Time | Received-by signature |
| | | | |
| Relinquished-by signature | Date | Time | Received-at-Lab-by signature |
| | 7/2/12 | 0810 | |

| Analysis requested above / Test Method | Sample Container(s) Type | Size | Preservative(s) |
|---|---|---|---|
| (1) EPA 8260B ~~+++~~ | VOA | 40 | HCl, 4° |
| (2) | | | |
| (3) | | | |
| (4) | | | |
| (5) | | | |
| (6) | | | |

Lab use: 12.0° via courier

Velocity express
real time delivery

www.velocityexp.com
**888-397-8632**

**CONTROL NUMBER**

DATE 6/30/12

**DELIVERY CHARGES** x PREPAID COLLECT BILL TO

**BUS/AIRLINE CHARGES** ☐ PREPAID ☐ COLLECT

☐ C.O.D.

**TYPE OF DELIVERY** NAM PR EXP AS REL OTHER

| SHIPPER'S NO. | | CONSIGNEE'S NO. |
|---|---|---|
| | Ken Kloeber Consulting Engineers | Life Science Labs |
| | PO Box 140 | 5854 BUTTERNUT DRIVE |
| | Boston NY 14025-0140 | EAST SYRACUSE NY 13057 |
| | Ken Kloeber (716) 864-0012 | HUGH GUIDER (315) 445-1900 |

| | DESCRIPTION AND MARKS | WEIGHT |
|---|---|---|
| 1 | COOLER - WATER SAMPLES | 18 |
| | NEED NEXT-BUSINESS-DAY DELIVERY | |

**BILL TO:**

**C.O.D. AMOUNT**

**BUS/AIRLINE NUMBER** ▶

**BUS/AIRLINE CHARGES** ▶

RECEIVED IN GOOD CONDITION
BY Greg Smith 7-2-12 05:03

TOTAL ➡

# Life Science Laboratories, Inc.

## Sample Receipt Checklist

Client Name: **KLOEBERENG**

Date and Time Received: **7/2/2012 8:10:00 AM**

Work Order Number: **K1207002**

Received by: gis

Checklist completed by: GS (Initials) 7-2-12 (Date)

Reviewed by: AE (Initials) 7-2-12 (Date)

Delivery Method: Courier

| | | | |
|---|---|---|---|
| Shipping container/cooler in good condition? | Yes ☑ | No ☐ | Not Present ☐ |
| Custody seals intact on shipping container/cooler? | Yes ☐ | No ☐ | Not Present ☑ |
| Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Applicable ☑ |
| Chain of custody present? | Yes ☑ | No ☐ | |
| Chain of custody signed when relinquished and received? | Yes ☑ | No ☐ | |
| Chain of custody agrees with sample labels? | Yes ☑ | No ☐ | |
| Samples in proper container/bottle? | Yes ☑ | No ☐ | |
| Sample containers intact? | Yes ☑ | No ☐ | |
| Sufficient sample volume for indicated test? | Yes ☑ | No ☐ | |
| All samples received within holding time? | Yes ☑ | No ☐ | |
| Container/Temp Blank temperature in compliance? | Yes ☐ | No ☑ | |
| Water - VOA vials have zero headspace? | Yes ☑ | No ☐ | No VOA vials submitted ☐ |
| Water - pH acceptable upon receipt? | Yes ☐ | No ☐ | Not Applicable ☑ |

Comments:

Client notified of receipt temperature.

Corrective Action:

## Hugh Guider

Supporting Docs

**From:** Ken Kloeber [KloeberEng@aol.com]
**Sent:** Monday, July 02, 2012 9:24 AM
**To:** Hugh Guider
**Subject:** Re: 189-02

Yeah,

Sorry about that. Had to hold some on ice from last weekend as I couldn't take remainder until Sat. Holiday? What's that?

Ken Kloeber PE

716-864-0012 cell/voicemail
775-860-3804 direct fax

Sent from my BlackBerry

**From:** "Hugh Guider" <guiderhm@lsl-inc.com>
**Date:** Mon, 2 Jul 2012 08:32:26 -0400
**To:** <KloeberEng@aol.com>
**Cc:** Greg Smith<smithg@lsl-inc.com>
**Subject:** RE: 189-02

**Morning Ken:**

**Samples were received this morning. Half were taken on 6/24 so are over a week old? With the holiday LSL only has 4 days to run them. Are these dates correct? Also even with ice pack temp was 12C.**

**Hugh**

Hugh Guider, Director
Client Services
Life Science Laboratories, Inc.
315-445-1900
315-445-1104 Fax
guiderhm@lsl-inc.com
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**From:** Ken Kloeber PE [mailto:KloeberEng@aol.com]
**Sent:** Wednesday, June 27, 2012 3:36 PM
**To:** Hugh Guider
**Subject:** 189-02

Safe and sound!

Was the 2nd pkg on purpose, or did you forget to include w/ cooler?

Ken

7/2/2012

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1207002-001A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W1* |
| **W Order:** | K1207002 | **Collection Date:** | 06/30/12 17:00 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 07/02/12 8:10 |
| **Inst. ID:** | MS01_11 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R24262 |
| **Revision:** | 07/06/12 8:58 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-T3474.D |
| **Col Type:** | | Total = 3486 | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 50.0 | 10.0 | µg/L | 50 | 07/02/12 14:27 |
| 1,1,1,2-Tetrachloroethane | ND | | 25.0 | 8.00 | µg/L | 50 | 07/02/12 14:27 |
| 1,1,1-Trichloroethane | 1070 | | 25.0 | 5.00 | µg/L | 50 | 07/02/12 14:27 |
| 1,1,2,2-Tetrachloroethane | ND | | 25.0 | 5.00 | µg/L | 50 | 07/02/12 14:27 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 6.00 | J | 25.0 | 5.00 | µg/L | 50 | 07/02/12 14:27 |
| 1,1,2-Trichloroethane | ND | | 25.0 | 8.00 | µg/L | 50 | 07/02/12 14:27 |
| 1,1-Dichloroethane | 1450 | | 25.0 | 5.00 | µg/L | 50 | 07/02/12 14:27 |
| 1,1-Dichloroethene | 13.5 | J | 25.0 | 8.00 | µg/L | 50 | 07/02/12 14:27 |
| 1,2,3-Trichloropropane | ND | | 100 | 16.5 | µg/L | 50 | 07/02/12 14:27 |
| 1,2,4-Trichlorobenzene | ND | | 50.0 | 5.00 | µg/L | 50 | 07/02/12 14:27 |
| 1,2,4-Trimethylbenzene | 49.0 | | 25.0 | 5.00 | µg/L | 50 | 07/02/12 14:27 |
| 1,2-Dibromo-3-chloropropane | ND | | 250 | 50.0 | µg/L | 50 | 07/02/12 14:27 |
| 1,2-Dibromoethane | ND | | 25.0 | 8.00 | µg/L | 50 | 07/02/12 14:27 |
| 1,2-Dichlorobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 07/02/12 14:27 |
| 1,2-Dichloroethane | ND | | 25.0 | 8.00 | µg/L | 50 | 07/02/12 14:27 |
| 1,2-Dichloropropane | ND | | 25.0 | 8.00 | µg/L | 50 | 07/02/12 14:27 |
| 1,3,5-Trimethylbenzene | 10.5 | J | 25.0 | 5.00 | µg/L | 50 | 07/02/12 14:27 |
| 1,3-Dichlorobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 07/02/12 14:27 |
| 1,4-Dichlorobenzene | ND | | 25.0 | 8.00 | µg/L | 50 | 07/02/12 14:27 |
| 2-Butanone | ND | | 500 | 50.0 | µg/L | 50 | 07/02/12 14:27 |
| 2-Chloroethylvinyl ether | ND | | 250 | 125 | µg/L | 50 | 07/02/12 14:27 |
| 2-Hexanone | ND | | 250 | 50.0 | µg/L | 50 | 07/02/12 14:27 |
| 4-Chlorotoluene | ND | | 25.0 | 5.00 | µg/L | 50 | 07/02/12 14:27 |
| 4-Methyl-2-pentanone | ND | | 250 | 50.0 | µg/L | 50 | 07/02/12 14:27 |
| Acetone | 176 | J | 500 | 50.0 | µg/L | 50 | 07/02/12 14:27 |
| Benzene | ND | | 25.0 | 5.00 | µg/L | 50 | 07/02/12 14:27 |
| Bromobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 07/02/12 14:27 |
| Bromochloromethane | ND | | 25.0 | 5.00 | µg/L | 50 | 07/02/12 14:27 |
| Bromodichloromethane | ND | | 25.0 | 5.00 | µg/L | 50 | 07/02/12 14:27 |
| Bromoform | ND | | 50.0 | 16.5 | µg/L | 50 | 07/02/12 14:27 |
| Bromomethane | ND | | 50.0 | 16.5 | µg/L | 50 | 07/02/12 14:27 |
| Carbon disulfide | 56.0 | | 25.0 | 5.50 | µg/L | 50 | 07/02/12 14:27 |
| Carbon tetrachloride | ND | | 25.0 | 5.00 | µg/L | 50 | 07/02/12 14:27 |
| Chlorobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 07/02/12 14:27 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 07/06/12 11:13 608058 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1207002-001A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W1* |
| **W Order:** | K1207002 | **Collection Date:** | 06/30/12 17:00 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 07/02/12 8:10 |
| **Inst. ID:** | MS01_11 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R24262 |
| **Revision:** | 07/06/12 8:58 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-T3474.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | 27.0 | J | 50.0 | 16.5 | µg/L | 50 | 07/02/12 14:27 |
| Chloroform | ND | | 25.0 | 5.00 | µg/L | 50 | 07/02/12 14:27 |
| Chloromethane | ND | | 50.0 | 16.5 | µg/L | 50 | 07/02/12 14:27 |
| cis-1,2-Dichloroethene | 326 | | 25.0 | 5.00 | µg/L | 50 | 07/02/12 14:27 |
| cis-1,3-Dichloropropene | ND | | 25.0 | 8.00 | µg/L | 50 | 07/02/12 14:27 |
| Cyclohexane | ND | | 25.0 | 5.00 | µg/L | 50 | 07/02/12 14:27 |
| Dibromochloromethane | ND | | 25.0 | 5.00 | µg/L | 50 | 07/02/12 14:27 |
| Dibromomethane | ND | | 25.0 | 8.00 | µg/L | 50 | 07/02/12 14:27 |
| Dichlorodifluoromethane | ND | | 50.0 | 5.00 | µg/L | 50 | 07/02/12 14:27 |
| Ethylbenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 07/02/12 14:27 |
| Hexachlorobutadiene | ND | | 50.0 | 5.00 | µg/L | 50 | 07/02/12 14:27 |
| Isopropylbenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 07/02/12 14:27 |
| Methyl tert-butyl ether | 8.00 | J | 50.0 | 8.00 | µg/L | 50 | 07/02/12 14:27 |
| Methylene chloride | 40.5 | J | 100 | 8.00 | µg/L | 50 | 07/02/12 14:27 |
| n-Propylbenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 07/02/12 14:27 |
| Naphthalene | ND | | 50.0 | 5.00 | µg/L | 50 | 07/02/12 14:27 |
| o-Xylene | ND | | 25.0 | 5.00 | µg/L | 50 | 07/02/12 14:27 |
| p-Isopropyltoluene | ND | | 25.0 | 8.00 | µg/L | 50 | 07/02/12 14:27 |
| sec-Butylbenzene | ND | | 25.0 | 8.00 | µg/L | 50 | 07/02/12 14:27 |
| Styrene | ND | | 25.0 | 5.00 | µg/L | 50 | 07/02/12 14:27 |
| Tetrachloroethene | ND | | 25.0 | 5.00 | µg/L | 50 | 07/02/12 14:27 |
| Toluene | ND | | 25.0 | 5.00 | µg/L | 50 | 07/02/12 14:27 |
| trans-1,2-Dichloroethene | 5.50 | J | 25.0 | 5.00 | µg/L | 50 | 07/02/12 14:27 |
| trans-1,3-Dichloropropene | ND | | 25.0 | 8.00 | µg/L | 50 | 07/02/12 14:27 |
| Trichloroethene | 12.0 | J | 25.0 | 5.00 | µg/L | 50 | 07/02/12 14:27 |
| Trichlorofluoromethane | ND | | 50.0 | 5.00 | µg/L | 50 | 07/02/12 14:27 |
| Vinyl acetate | ND | | 100 | 50.0 | µg/L | 50 | 07/02/12 14:27 |
| Vinyl chloride | 236 | | 50.0 | 16.5 | µg/L | 50 | 07/02/12 14:27 |
| Xylenes (total) | ND | | 50.0 | 15.0 | µg/L | 50 | 07/02/12 14:27 |
| Surr: 1,2-Dichloroethane-d4 | 103 | | 75-130 | 8.00 | %REC | 50 | 07/02/12 14:27 |
| Surr: Toluene-d8 | 95 | | 75-125 | 5.00 | %REC | 50 | 07/02/12 14:27 |
| Surr: 4-Bromofluorobenzene | 97 | | 75-125 | 5.00 | %REC | 50 | 07/02/12 14:27 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 07/06/12 11:13 608058 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1207002-015A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - WBL* MW-1 |
| **W Order:** | K1207002 | **Collection Date:** | 06/30/12 12:00 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 07/02/12 8:10 |
| **Inst. ID:** | MS01_11 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R24263 |
| **Revision:** | 07/06/12 11:13 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-T3495.D |
| **Col Type:** | | Total = 4520 | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 100 | 20.0 | µg/L | 100 | 07/05/12 14:06 |
| 1,1,1,2-Tetrachloroethane | ND | | 50.0 | 16.0 | µg/L | 100 | 07/05/12 14:06 |
| 1,1,1-Trichloroethane | 1390 | | 50.0 | 10.0 | µg/L | 100 | 07/05/12 14:06 |
| 1,1,2,2-Tetrachloroethane | ND | | 50.0 | 10.0 | µg/L | 100 | 07/05/12 14:06 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 50.0 | 10.0 | µg/L | 100 | 07/05/12 14:06 |
| 1,1,2-Trichloroethane | ND | | 50.0 | 16.0 | µg/L | 100 | 07/05/12 14:06 |
| 1,1-Dichloroethane | 1840 | | 50.0 | 10.0 | µg/L | 100 | 07/05/12 14:06 |
| 1,1-Dichloroethene | 22.0 | J | 50.0 | 16.0 | µg/L | 100 | 07/05/12 14:06 |
| 1,2,3-Trichloropropane | ND | | 200 | 33.0 | µg/L | 100 | 07/05/12 14:06 |
| 1,2,4-Trichlorobenzene | ND | | 100 | 10.0 | µg/L | 100 | 07/05/12 14:06 |
| 1,2,4-Trimethylbenzene | 51.0 | | 50.0 | 10.0 | µg/L | 100 | 07/05/12 14:06 |
| 1,2-Dibromo-3-chloropropane | ND | | 500 | 100 | µg/L | 100 | 07/05/12 14:06 |
| 1,2-Dibromoethane | ND | | 50.0 | 16.0 | µg/L | 100 | 07/05/12 14:06 |
| 1,2-Dichlorobenzene | ND | | 50.0 | 10.0 | µg/L | 100 | 07/05/12 14:06 |
| 1,2-Dichloroethane | ND | | 50.0 | 16.0 | µg/L | 100 | 07/05/12 14:06 |
| 1,2-Dichloropropane | ND | | 50.0 | 16.0 | µg/L | 100 | 07/05/12 14:06 |
| 1,3,5-Trimethylbenzene | 13.0 | J | 50.0 | 10.0 | µg/L | 100 | 07/05/12 14:06 |
| 1,3-Dichlorobenzene | ND | | 50.0 | 10.0 | µg/L | 100 | 07/05/12 14:06 |
| 1,4-Dichlorobenzene | ND | | 50.0 | 16.0 | µg/L | 100 | 07/05/12 14:06 |
| 2-Butanone | ND | | 1000 | 100 | µg/L | 100 | 07/05/12 14:06 |
| 2-Chloroethylvinyl ether | ND | | 500 | 250 | µg/L | 100 | 07/05/12 14:06 |
| 2-Hexanone | ND | | 500 | 100 | µg/L | 100 | 07/05/12 14:06 |
| 4-Chlorotoluene | ND | | 50.0 | 10.0 | µg/L | 100 | 07/05/12 14:06 |
| 4-Methyl-2-pentanone | ND | | 500 | 100 | µg/L | 100 | 07/05/12 14:06 |
| Acetone | 270 | J | 1000 | 100 | µg/L | 100 | 07/05/12 14:06 |
| Benzene | ND | | 50.0 | 10.0 | µg/L | 100 | 07/05/12 14:06 |
| Bromobenzene | ND | | 50.0 | 10.0 | µg/L | 100 | 07/05/12 14:06 |
| Bromochloromethane | ND | | 50.0 | 10.0 | µg/L | 100 | 07/05/12 14:06 |
| Bromodichloromethane | ND | | 50.0 | 10.0 | µg/L | 100 | 07/05/12 14:06 |
| Bromoform | ND | | 100 | 33.0 | µg/L | 100 | 07/05/12 14:06 |
| Bromomethane | ND | | 100 | 33.0 | µg/L | 100 | 07/05/12 14:06 |
| Carbon disulfide | ND | | 50.0 | 11.0 | µg/L | 100 | 07/05/12 14:06 |
| Carbon tetrachloride | ND | | 50.0 | 10.0 | µg/L | 100 | 07/05/12 14:06 |
| Chlorobenzene | ND | | 50.0 | 10.0 | µg/L | 100 | 07/05/12 14:06 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 07/06/12 11:13 608150 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1207002-015A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - WBL* |
| **W Order:** | K1207002 | **Collection Date:** | 06/30/12 12:00 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 07/02/12 8:10 |
| **Inst. ID:** | MS01_11 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R24263 |
| **Revision:** | 07/06/12 11:13 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-T3495.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | ND | | 100 | 33.0 | µg/L | 100 | 07/05/12 14:06 |
| Chloroform | ND | | 50.0 | 10.0 | µg/L | 100 | 07/05/12 14:06 |
| Chloromethane | ND | | 100 | 33.0 | µg/L | 100 | 07/05/12 14:06 |
| cis-1,2-Dichloroethene | 419 | | 50.0 | 10.0 | µg/L | 100 | 07/05/12 14:06 |
| cis-1,3-Dichloropropene | ND | | 50.0 | 16.0 | µg/L | 100 | 07/05/12 14:06 |
| Cyclohexane | ND | | 50.0 | 10.0 | µg/L | 100 | 07/05/12 14:06 |
| Dibromochloromethane | ND | | 50.0 | 10.0 | µg/L | 100 | 07/05/12 14:06 |
| Dibromomethane | ND | | 50.0 | 16.0 | µg/L | 100 | 07/05/12 14:06 |
| Dichlorodifluoromethane | ND | | 100 | 10.0 | µg/L | 100 | 07/05/12 14:06 |
| Ethylbenzene | ND | | 50.0 | 10.0 | µg/L | 100 | 07/05/12 14:06 |
| Hexachlorobutadiene | ND | | 100 | 10.0 | µg/L | 100 | 07/05/12 14:06 |
| Isopropylbenzene | ND | | 50.0 | 10.0 | µg/L | 100 | 07/05/12 14:06 |
| Methyl tert-butyl ether | ND | | 100 | 16.0 | µg/L | 100 | 07/05/12 14:06 |
| Methylene chloride | 83.0 | J | 200 | 16.0 | µg/L | 100 | 07/05/12 14:06 |
| n-Propylbenzene | ND | | 50.0 | 10.0 | µg/L | 100 | 07/05/12 14:06 |
| Naphthalene | ND | | 100 | 10.0 | µg/L | 100 | 07/05/12 14:06 |
| o-Xylene | ND | | 50.0 | 10.0 | µg/L | 100 | 07/05/12 14:06 |
| p-Isopropyltoluene | ND | | 50.0 | 16.0 | µg/L | 100 | 07/05/12 14:06 |
| sec-Butylbenzene | ND | | 50.0 | 16.0 | µg/L | 100 | 07/05/12 14:06 |
| Styrene | ND | | 50.0 | 10.0 | µg/L | 100 | 07/05/12 14:06 |
| Tetrachloroethene | ND | | 50.0 | 10.0 | µg/L | 100 | 07/05/12 14:06 |
| Toluene | ND | | 50.0 | 10.0 | µg/L | 100 | 07/05/12 14:06 |
| trans-1,2-Dichloroethene | ND | | 50.0 | 10.0 | µg/L | 100 | 07/05/12 14:06 |
| trans-1,3-Dichloropropene | ND | | 50.0 | 16.0 | µg/L | 100 | 07/05/12 14:06 |
| Trichloroethene | 17.0 | J | 50.0 | 10.0 | µg/L | 100 | 07/05/12 14:06 |
| Trichlorofluoromethane | ND | | 100 | 10.0 | µg/L | 100 | 07/05/12 14:06 |
| Vinyl acetate | ND | | 200 | 100 | µg/L | 100 | 07/05/12 14:06 |
| Vinyl chloride | 415 | | 100 | 33.0 | µg/L | 100 | 07/05/12 14:06 |
| Xylenes (total) | ND | | 100 | 30.0 | µg/L | 100 | 07/05/12 14:06 |
| Surr: 1,2-Dichloroethane-d4 | 95 | | 75-130 | 16.0 | %REC | 100 | 07/05/12 14:06 |
| Surr: Toluene-d8 | 92 | | 75-125 | 10.0 | %REC | 100 | 07/05/12 14:06 |
| Surr: 4-Bromofluorobenzene | 99 | | 75-125 | 10.0 | %REC | 100 | 07/05/12 14:06 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 07/06/12 11:13 608150 **roject Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

**CLIENT** Ken W. Kloeber Consulting Engineers
**Project:** 189-02
**W Order:** K1207002
**Matrix:** GROUNDWATER
**Inst. ID:** MS01_11 **Sample Size** 10 mL
**ColumnID:** Rtx-VMS **%Moisture:**
**Revision:** 07/06/12 8:58 **TestCode:** 8260W_CAL
**Col Type:**

**Lab ID:** K1207002-002A
**Client Sample ID:** *189 - W2*
**Collection Date:** 06/30/12 16:30
**Date Received:** 07/02/12 8:10
**PrepDate:**
**BatchNo:** R24262
**FileID:** 1-SAMP-T3475.D

Total = 3783

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | 24.0 | J | 50.0 | 10.0 | µg/L | 50 | 07/02/12 15:01 |
| 1,1,1,2-Tetrachloroethane | ND | | 25.0 | 8.00 | µg/L | 50 | 07/02/12 15:01 |
| 1,1,1-Trichloroethane | 1080 | | 25.0 | 5.00 | µg/L | 50 | 07/02/12 15:01 |
| 1,1,2,2-Tetrachloroethane | ND | | 25.0 | 5.00 | µg/L | 50 | 07/02/12 15:01 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 21.5 | J | 25.0 | 5.00 | µg/L | 50 | 07/02/12 15:01 |
| 1,1,2-Trichloroethane | ND | | 25.0 | 8.00 | µg/L | 50 | 07/02/12 15:01 |
| 1,1-Dichloroethane | 1400 | | 25.0 | 5.00 | µg/L | 50 | 07/02/12 15:01 |
| 1,1-Dichloroethene | 27.5 | | 25.0 | 8.00 | µg/L | 50 | 07/02/12 15:01 |
| 1,2,3-Trichloropropane | ND | | 100 | 16.5 | µg/L | 50 | 07/02/12 15:01 |
| 1,2,4-Trichlorobenzene | ND | | 50.0 | 5.00 | µg/L | 50 | 07/02/12 15:01 |
| 1,2,4-Trimethylbenzene | 92.0 | | 25.0 | 5.00 | µg/L | 50 | 07/02/12 15:01 |
| 1,2-Dibromo-3-chloropropane | ND | | 250 | 50.0 | µg/L | 50 | 07/02/12 15:01 |
| 1,2-Dibromoethane | ND | | 25.0 | 8.00 | µg/L | 50 | 07/02/12 15:01 |
| 1,2-Dichlorobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 07/02/12 15:01 |
| 1,2-Dichloroethane | 8.50 | J | 25.0 | 8.00 | µg/L | 50 | 07/02/12 15:01 |
| 1,2-Dichloropropane | ND | | 25.0 | 8.00 | µg/L | 50 | 07/02/12 15:01 |
| 1,3,5-Trimethylbenzene | 16.5 | J | 25.0 | 5.00 | µg/L | 50 | 07/02/12 15:01 |
| 1,3-Dichlorobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 07/02/12 15:01 |
| 1,4-Dichlorobenzene | ND | | 25.0 | 8.00 | µg/L | 50 | 07/02/12 15:01 |
| 2-Butanone | 59.0 | J | 500 | 50.0 | µg/L | 50 | 07/02/12 15:01 |
| 2-Chloroethylvinyl ether | ND | | 250 | 125 | µg/L | 50 | 07/02/12 15:01 |
| 2-Hexanone | ND | | 250 | 50.0 | µg/L | 50 | 07/02/12 15:01 |
| 4-Chlorotoluene | ND | | 25.0 | 5.00 | µg/L | 50 | 07/02/12 15:01 |
| 4-Methyl-2-pentanone | ND | | 250 | 50.0 | µg/L | 50 | 07/02/12 15:01 |
| Acetone | 154 | J | 500 | 50.0 | µg/L | 50 | 07/02/12 15:01 |
| Benzene | ND | | 25.0 | 5.00 | µg/L | 50 | 07/02/12 15:01 |
| Bromobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 07/02/12 15:01 |
| Bromochloromethane | ND | | 25.0 | 5.00 | µg/L | 50 | 07/02/12 15:01 |
| Bromodichloromethane | ND | | 25.0 | 5.00 | µg/L | 50 | 07/02/12 15:01 |
| Bromoform | ND | | 50.0 | 16.5 | µg/L | 50 | 07/02/12 15:01 |
| Bromomethane | ND | | 50.0 | 16.5 | µg/L | 50 | 07/02/12 15:01 |
| Carbon disulfide | ND | | 25.0 | 5.50 | µg/L | 50 | 07/02/12 15:01 |
| Carbon tetrachloride | ND | | 25.0 | 5.00 | µg/L | 50 | 07/02/12 15:01 |
| Chlorobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 07/02/12 15:01 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 07/06/12 11:13 608059 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | | | |
|---|---|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | | | **Lab ID:** | K1207002-002A |
| **Project:** | 189-02 | | | **Client Sample ID:** | *189 - W2* |
| **W Order:** | K1207002 | | | **Collection Date:** | 06/30/12 16:30 |
| **Matrix:** | GROUNDWATER | | | **Date Received:** | 07/02/12 8:10 |
| **Inst. ID:** | MS01_11 | **Sample Size** | 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | | **BatchNo:** | R24262 |
| **Revision:** | 07/06/12 8:58 | **TestCode:** | 8260W_CAL | **FileID:** | 1-SAMP-T3475.D |
| **Col Type:** | | | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | 122 | | 50.0 | 16.5 | µg/L | 50 | 07/02/12 15:01 |
| Chloroform | ND | | 25.0 | 5.00 | µg/L | 50 | 07/02/12 15:01 |
| Chloromethane | ND | | 50.0 | 16.5 | µg/L | 50 | 07/02/12 15:01 |
| cis-1,2-Dichloroethene | 332 | | 25.0 | 5.00 | µg/L | 50 | 07/02/12 15:01 |
| cis-1,3-Dichloropropene | ND | | 25.0 | 8.00 | µg/L | 50 | 07/02/12 15:01 |
| Cyclohexane | ND | | 25.0 | 5.00 | µg/L | 50 | 07/02/12 15:01 |
| Dibromochloromethane | ND | | 25.0 | 5.00 | µg/L | 50 | 07/02/12 15:01 |
| Dibromomethane | ND | | 25.0 | 8.00 | µg/L | 50 | 07/02/12 15:01 |
| Dichlorodifluoromethane | ND | | 50.0 | 5.00 | µg/L | 50 | 07/02/12 15:01 |
| Ethylbenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 07/02/12 15:01 |
| Hexachlorobutadiene | ND | | 50.0 | 5.00 | µg/L | 50 | 07/02/12 15:01 |
| Isopropylbenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 07/02/12 15:01 |
| Methyl tert-butyl ether | ND | | 50.0 | 8.00 | µg/L | 50 | 07/02/12 15:01 |
| Methylene chloride | 41.5 | J | 100 | 8.00 | µg/L | 50 | 07/02/12 15:01 |
| n-Propylbenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 07/02/12 15:01 |
| Naphthalene | ND | | 50.0 | 5.00 | µg/L | 50 | 07/02/12 15:01 |
| o-Xylene | 10.5 | J | 25.0 | 5.00 | µg/L | 50 | 07/02/12 15:01 |
| p-Isopropyltoluene | ND | | 25.0 | 8.00 | µg/L | 50 | 07/02/12 15:01 |
| sec-Butylbenzene | ND | | 25.0 | 8.00 | µg/L | 50 | 07/02/12 15:01 |
| Styrene | ND | | 25.0 | 5.00 | µg/L | 50 | 07/02/12 15:01 |
| Tetrachloroethene | ND | | 25.0 | 5.00 | µg/L | 50 | 07/02/12 15:01 |
| Toluene | 12.5 | J | 25.0 | 5.00 | µg/L | 50 | 07/02/12 15:01 |
| trans-1,2-Dichloroethene | 6.00 | J | 25.0 | 5.00 | µg/L | 50 | 07/02/12 15:01 |
| trans-1,3-Dichloropropene | ND | | 25.0 | 8.00 | µg/L | 50 | 07/02/12 15:01 |
| Trichloroethene | 9.50 | J | 25.0 | 5.00 | µg/L | 50 | 07/02/12 15:01 |
| Trichlorofluoromethane | ND | | 50.0 | 5.00 | µg/L | 50 | 07/02/12 15:01 |
| Vinyl acetate | ND | | 100 | 50.0 | µg/L | 50 | 07/02/12 15:01 |
| Vinyl chloride | 366 | | 50.0 | 16.5 | µg/L | 50 | 07/02/12 15:01 |
| Xylenes (total) | 34.5 | J | 50.0 | 15.0 | µg/L | 50 | 07/02/12 15:01 |
| Surr: 1,2-Dichloroethane-d4 | 89 | | 75-130 | 8.00 | %REC | 50 | 07/02/12 15:01 |
| Surr: Toluene-d8 | 95 | | 75-125 | 5.00 | %REC | 50 | 07/02/12 15:01 |
| Surr: 4-Bromofluorobenzene | 98 | | 75-125 | 5.00 | %REC | 50 | 07/02/12 15:01 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 07/06/12 11:13 608059 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

**CLIENT** Ken W. Kloeber Consulting Engineers
**Project:** 189-02
**W Order:** K1207002
**Matrix:** GROUNDWATER
**Inst. ID:** MS01_11
**ColumnID:** Rtx-VMS
**Revision:** 07/06/12 8:58
**Col Type:**

**Sample Size** 10 mL
**%Moisture:**
**TestCode:** 8260W_CAL

**Lab ID:** K1207002-003A
**Client Sample ID:** *189 - W3*
**Collection Date:** 06/30/12 16:10
**Date Received:** 07/02/12 8:10
**PrepDate:**
**BatchNo:** R24262
**FileID:** 1-SAMP-T3476.D

Total = 2701.65

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| VOLATILE ORGANIC COMPOUNDS BY GC/MS | | | | | SW8260B | | |
| (m+p)-Xylene | 16.5 | J | 25.0 | 5.00 | µg/L | 25 | 07/02/12 15:36 |
| 1,1,1,2-Tetrachloroethane | ND | | 12.5 | 4.00 | µg/L | 25 | 07/02/12 15:36 |
| 1,1,1-Trichloroethane | 1090 | | 12.5 | 2.50 | µg/L | 25 | 07/02/12 15:36 |
| 1,1,2,2-Tetrachloroethane | ND | | 12.5 | 2.50 | µg/L | 25 | 07/02/12 15:36 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 25.0 | | 12.5 | 2.50 | µg/L | 25 | 07/02/12 15:36 |
| 1,1,2-Trichloroethane | ND | | 12.5 | 4.00 | µg/L | 25 | 07/02/12 15:36 |
| 1,1-Dichloroethane | 454 | | 12.5 | 2.50 | µg/L | 25 | 07/02/12 15:36 |
| 1,1-Dichloroethene | 31.2 | | 12.5 | 4.00 | µg/L | 25 | 07/02/12 15:36 |
| 1,2,3-Trichloropropane | ND | | 50.0 | 8.25 | µg/L | 25 | 07/02/12 15:36 |
| 1,2,4-Trichlorobenzene | ND | | 25.0 | 2.50 | µg/L | 25 | 07/02/12 15:36 |
| 1,2,4-Trimethylbenzene | 112 | | 12.5 | 2.50 | µg/L | 25 | 07/02/12 15:36 |
| 1,2-Dibromo-3-chloropropane | ND | | 125 | 25.0 | µg/L | 25 | 07/02/12 15:36 |
| 1,2-Dibromoethane | ND | | 12.5 | 4.00 | µg/L | 25 | 07/02/12 15:36 |
| 1,2-Dichlorobenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 07/02/12 15:36 |
| 1,2-Dichloroethane | ND | | 12.5 | 4.00 | µg/L | 25 | 07/02/12 15:36 |
| 1,2-Dichloropropane | ND | | 12.5 | 4.00 | µg/L | 25 | 07/02/12 15:36 |
| 1,3,5-Trimethylbenzene | 20.2 | | 12.5 | 2.50 | µg/L | 25 | 07/02/12 15:36 |
| 1,3-Dichlorobenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 07/02/12 15:36 |
| 1,4-Dichlorobenzene | ND | | 12.5 | 4.00 | µg/L | 25 | 07/02/12 15:36 |
| 2-Butanone | 31.0 | J | 250 | 25.0 | µg/L | 25 | 07/02/12 15:36 |
| 2-Chloroethylvinyl ether | ND | | 125 | 62.5 | µg/L | 25 | 07/02/12 15:36 |
| 2-Hexanone | ND | | 125 | 25.0 | µg/L | 25 | 07/02/12 15:36 |
| 4-Chlorotoluene | ND | | 12.5 | 2.50 | µg/L | 25 | 07/02/12 15:36 |
| 4-Methyl-2-pentanone | ND | | 125 | 25.0 | µg/L | 25 | 07/02/12 15:36 |
| Acetone | 94.8 | J | 250 | 25.0 | µg/L | 25 | 07/02/12 15:36 |
| Benzene | ND | | 12.5 | 2.50 | µg/L | 25 | 07/02/12 15:36 |
| Bromobenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 07/02/12 15:36 |
| Bromochloromethane | ND | | 12.5 | 2.50 | µg/L | 25 | 07/02/12 15:36 |
| Bromodichloromethane | ND | | 12.5 | 2.50 | µg/L | 25 | 07/02/12 15:36 |
| Bromoform | ND | | 25.0 | 8.25 | µg/L | 25 | 07/02/12 15:36 |
| Bromomethane | ND | | 25.0 | 8.25 | µg/L | 25 | 07/02/12 15:36 |
| Carbon disulfide | ND | | 12.5 | 2.75 | µg/L | 25 | 07/02/12 15:36 |
| Carbon tetrachloride | ND | | 12.5 | 2.50 | µg/L | 25 | 07/02/12 15:36 |
| Chlorobenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 07/02/12 15:36 |

**Qualifiers:**

| | |
|---|---|
| * | Value exceeds Maximum Contaminant Level |
| E | Value exceeds the instrument calibration range |
| J | Analyte detected below the PQL |
| P | Prim./Conf. column %D or RPD exceeds limit |
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Practical Quantitation Limit (PQL) |
| S | Spike Recovery outside accepted recovery limits |

**Print Date:** 07/09/12 6:58 608060 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | | | |
|---|---|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | | | **Lab ID:** | **K1207002-003A** |
| **Project:** | 189-02 | | | **Client Sample ID:** | *189 - W3* |
| **W Order:** | K1207002 | | | **Collection Date:** | 06/30/12 16:10 |
| **Matrix:** | GROUNDWATER | | | **Date Received:** | 07/02/12 8:10 |
| **Inst. ID:** | MS01_11 | **Sample Size** | 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | | **BatchNo:** | R24262 |
| **Revision:** | 07/06/12 8:58 | **TestCode:** | 8260W_CAL | **FileID:** | 1-SAMP-T3476.D |
| **Col Type:** | | | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | 34.0 | | 25.0 | 8.25 | µg/L | 25 | 07/02/12 15:36 |
| Chloroform | ND | | 12.5 | 2.50 | µg/L | 25 | 07/02/12 15:36 |
| Chloromethane | ND | | 25.0 | 8.25 | µg/L | 25 | 07/02/12 15:36 |
| cis-1,2-Dichloroethene | 494 | | 12.5 | 2.50 | µg/L | 25 | 07/02/12 15:36 |
| cis-1,3-Dichloropropene | ND | | 12.5 | 4.00 | µg/L | 25 | 07/02/12 15:36 |
| Cyclohexane | ND | | 12.5 | 2.50 | µg/L | 25 | 07/02/12 15:36 |
| Dibromochloromethane | ND | | 12.5 | 2.50 | µg/L | 25 | 07/02/12 15:36 |
| Dibromomethane | ND | | 12.5 | 4.00 | µg/L | 25 | 07/02/12 15:36 |
| Dichlorodifluoromethane | ND | | 25.0 | 2.50 | µg/L | 25 | 07/02/12 15:36 |
| Ethylbenzene | 6.75 | J | 12.5 | 2.50 | µg/L | 25 | 07/02/12 15:36 |
| Hexachlorobutadiene | ND | | 25.0 | 2.50 | µg/L | 25 | 07/02/12 15:36 |
| Isopropylbenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 07/02/12 15:36 |
| Methyl tert-butyl ether | ND | | 25.0 | 4.00 | µg/L | 25 | 07/02/12 15:36 |
| Methylene chloride | 29.5 | J | 50.0 | 4.00 | µg/L | 25 | 07/02/12 15:36 |
| n-Propylbenzene | 4.00 | J | 12.5 | 2.50 | µg/L | 25 | 07/02/12 15:36 |
| Naphthalene | ND | | 25.0 | 2.50 | µg/L | 25 | 07/02/12 15:36 |
| o-Xylene | 20.0 | | 12.5 | 2.50 | µg/L | 25 | 07/02/12 15:36 |
| p-Isopropyltoluene | ND | | 12.5 | 4.00 | µg/L | 25 | 07/02/12 15:36 |
| sec-Butylbenzene | ND | | 12.5 | 4.00 | µg/L | 25 | 07/02/12 15:36 |
| Styrene | ND | | 12.5 | 2.50 | µg/L | 25 | 07/02/12 15:36 |
| Tetrachloroethene | 3.00 | J | 12.5 | 2.50 | µg/L | 25 | 07/02/12 15:36 |
| Toluene | 23.0 | | 12.5 | 2.50 | µg/L | 25 | 07/02/12 15:36 |
| trans-1,2-Dichloroethene | 4.50 | J | 12.5 | 2.50 | µg/L | 25 | 07/02/12 15:36 |
| trans-1,3-Dichloropropene | ND | | 12.5 | 4.00 | µg/L | 25 | 07/02/12 15:36 |
| Trichloroethene | 29.2 | | 12.5 | 2.50 | µg/L | 25 | 07/02/12 15:36 |
| Trichlorofluoromethane | ND | | 25.0 | 2.50 | µg/L | 25 | 07/02/12 15:36 |
| Vinyl acetate | ND | | 50.0 | 25.0 | µg/L | 25 | 07/02/12 15:36 |
| Vinyl chloride | 179 | | 25.0 | 8.25 | µg/L | 25 | 07/02/12 15:36 |
| Xylenes (total) | 36.5 | | 25.0 | 7.50 | µg/L | 25 | 07/02/12 15:36 |
| Surr: 1,2-Dichloroethane-d4 | 96 | | 75-130 | 4.00 | %REC | 25 | 07/02/12 15:36 |
| Surr: Toluene-d8 | 93 | | 75-125 | 2.50 | %REC | 25 | 07/02/12 15:36 |
| Surr: 4-Bromofluorobenzene | 99 | | 75-125 | 2.50 | %REC | 25 | 07/02/12 15:36 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 07/06/12 11:13 608060 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

**CLIENT** Ken W. Kloeber Consulting Engineers
**Project:** 189-02
**W Order:** K1207002
**Matrix:** GROUNDWATER
**Inst. ID:** MS01_11 **Sample Size** 10 mL
**ColumnID:** Rtx-VMS **%Moisture:**
**Revision:** 07/06/12 11:13 **TestCode:** 8260W_CAL
**Col Type:**

**Lab ID:** K1207002-004A
**Client Sample ID:** *189 - W4*
**Collection Date:** 06/24/12 15:30
**Date Received:** 07/02/12 8:10
**PrepDate:**
**BatchNo:** R24263
**FileID:** 1-SAMP-T3492.D

Total = 12.39

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 1.00 | 0.20 | µg/L | 1 | 07/05/12 12:13 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 12:13 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 12:13 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 12:13 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 12:13 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 12:13 |
| 1,1-Dichloroethane | 0.11 | J | 0.50 | 0.10 | µg/L | 1 | 07/05/12 12:13 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 12:13 |
| 1,2,3-Trichloropropane | ND | | 2.00 | 0.33 | µg/L | 1 | 07/05/12 12:13 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 0.10 | µg/L | 1 | 07/05/12 12:13 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 12:13 |
| 1,2-Dibromo-3-chloropropane | ND | | 5.00 | 1.00 | µg/L | 1 | 07/05/12 12:13 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 12:13 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 12:13 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 12:13 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 12:13 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 12:13 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 12:13 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 12:13 |
| 2-Butanone | 1.31 | J | 10.0 | 1.00 | µg/L | 1 | 07/05/12 12:13 |
| 2-Chloroethylvinyl ether | ND | | 5.00 | 2.50 | µg/L | 1 | 07/05/12 12:13 |
| 2-Hexanone | ND | | 5.00 | 1.00 | µg/L | 1 | 07/05/12 12:13 |
| 4-Chlorotoluene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 12:13 |
| 4-Methyl-2-pentanone | ND | | 5.00 | 1.00 | µg/L | 1 | 07/05/12 12:13 |
| Acetone | 8.99 | J | 10.0 | 1.00 | µg/L | 1 | 07/05/12 12:13 |
| Benzene | 0.87 | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 12:13 |
| Bromobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 12:13 |
| Bromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 12:13 |
| Bromodichloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 12:13 |
| Bromoform | ND | | 1.00 | 0.33 | µg/L | 1 | 07/05/12 12:13 |
| Bromomethane | ND | | 1.00 | 0.33 | µg/L | 1 | 07/05/12 12:13 |
| Carbon disulfide | ND | | 0.50 | 0.11 | µg/L | 1 | 07/05/12 12:13 |
| Carbon tetrachloride | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 12:13 |
| Chlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 12:13 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 07/06/12 11:13 608147 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

**CLIENT** Ken W. Kloeber Consulting Engineers
**Project:** 189-02
**W Order:** K1207002
**Matrix:** GROUNDWATER
**Inst. ID:** MS01_11 **Sample Size** 10 mL
**ColumnID:** Rtx-VMS **%Moisture:**
**Revision:** 07/06/12 11:13 **TestCode:** 8260W_CAL
**Col Type:**

**Lab ID:** K1207002-004A
**Client Sample ID:** *189 - W4*
**Collection Date:** 06/24/12 15:30
**Date Received:** 07/02/12 8:10
**PrepDate:**
**BatchNo:** R24263
**FileID:** 1-SAMP-T3492.D

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | ND | | 1.00 | 0.33 | µg/L | 1 | 07/05/12 12:13 |
| Chloroform | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 12:13 |
| Chloromethane | ND | | 1.00 | 0.33 | µg/L | 1 | 07/05/12 12:13 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 12:13 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 12:13 |
| Cyclohexane | 0.56 | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 12:13 |
| Dibromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 12:13 |
| Dibromomethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 12:13 |
| Dichlorodifluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 07/05/12 12:13 |
| Ethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 12:13 |
| Hexachlorobutadiene | ND | | 1.00 | 0.10 | µg/L | 1 | 07/05/12 12:13 |
| Isopropylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 12:13 |
| Methyl tert-butyl ether | 0.18 | J | 1.00 | 0.16 | µg/L | 1 | 07/05/12 12:13 |
| Methylene chloride | 0.37 | J | 2.00 | 0.16 | µg/L | 1 | 07/05/12 12:13 |
| n-Propylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 12:13 |
| Naphthalene | ND | | 1.00 | 0.10 | µg/L | 1 | 07/05/12 12:13 |
| o-Xylene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 12:13 |
| p-Isopropyltoluene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 12:13 |
| sec-Butylbenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 12:13 |
| Styrene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 12:13 |
| Tetrachloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 12:13 |
| Toluene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 12:13 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 12:13 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 12:13 |
| Trichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 12:13 |
| Trichlorofluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 07/05/12 12:13 |
| Vinyl acetate | ND | | 2.00 | 1.00 | µg/L | 1 | 07/05/12 12:13 |
| Vinyl chloride | ND | | 1.00 | 0.33 | µg/L | 1 | 07/05/12 12:13 |
| Xylenes (total) | ND | | 1.00 | 0.30 | µg/L | 1 | 07/05/12 12:13 |
| Surr: 1,2-Dichloroethane-d4 | 101 | | 75-130 | 0.16 | %REC | 1 | 07/05/12 12:13 |
| Surr: Toluene-d8 | 87 | | 75-125 | 0.10 | %REC | 1 | 07/05/12 12:13 |
| Surr: 4-Bromofluorobenzene | 101 | | 75-125 | 0.10 | %REC | 1 | 07/05/12 12:13 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 07/06/12 11:13 608147 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

**CLIENT** Ken W. Kloeber Consulting Engineers
**Project:** 189-02
**W Order:** K1207002
**Matrix:** GROUNDWATER
**Inst. ID:** MS01_11
**ColumnID:** Rtx-VMS
**Revision:** 07/06/12 11:13
**Col Type:**

**Sample Size** 10 mL
**%Moisture:**
**TestCode:** 8260W_CAL

**Lab ID:** K1207002-005A
**Client Sample ID:** *189 - W5*
**Collection Date:** 06/24/12 16:10
**Date Received:** 07/02/12 8:10
**PrepDate:**
**BatchNo:** R24263
**FileID:** 1-SAMP-T3493.D

Total = 1670.05

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| VOLATILE ORGANIC COMPOUNDS BY GC/MS | | | | | SW8260B | | |
| (m+p)-Xylene | ND | | 25.0 | 5.00 | µg/L | 25 | 07/05/12 12:59 |
| 1,1,1,2-Tetrachloroethane | ND | | 12.5 | 4.00 | µg/L | 25 | 07/05/12 12:59 |
| 1,1,1-Trichloroethane | ND | | 12.5 | 2.50 | µg/L | 25 | 07/05/12 12:59 |
| 1,1,2,2-Tetrachloroethane | ND | | 12.5 | 2.50 | µg/L | 25 | 07/05/12 12:59 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 12.5 | 2.50 | µg/L | 25 | 07/05/12 12:59 |
| 1,1,2-Trichloroethane | ND | | 12.5 | 4.00 | µg/L | 25 | 07/05/12 12:59 |
| 1,1-Dichloroethane | 870 | | 12.5 | 2.50 | µg/L | 25 | 07/05/12 12:59 |
| 1,1-Dichloroethene | 11.0 | J | 12.5 | 4.00 | µg/L | 25 | 07/05/12 12:59 |
| 1,2,3-Trichloropropane | ND | | 50.0 | 8.25 | µg/L | 25 | 07/05/12 12:59 |
| 1,2,4-Trichlorobenzene | ND | | 25.0 | 2.50 | µg/L | 25 | 07/05/12 12:59 |
| 1,2,4-Trimethylbenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 07/05/12 12:59 |
| 1,2-Dibromo-3-chloropropane | ND | | 125 | 25.0 | µg/L | 25 | 07/05/12 12:59 |
| 1,2-Dibromoethane | ND | | 12.5 | 4.00 | µg/L | 25 | 07/05/12 12:59 |
| 1,2-Dichlorobenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 07/05/12 12:59 |
| 1,2-Dichloroethane | 12.5 | | 12.5 | 4.00 | µg/L | 25 | 07/05/12 12:59 |
| 1,2-Dichloropropane | ND | | 12.5 | 4.00 | µg/L | 25 | 07/05/12 12:59 |
| 1,3,5-Trimethylbenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 07/05/12 12:59 |
| 1,3-Dichlorobenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 07/05/12 12:59 |
| 1,4-Dichlorobenzene | ND | | 12.5 | 4.00 | µg/L | 25 | 07/05/12 12:59 |
| 2-Butanone | ND | | 250 | 25.0 | µg/L | 25 | 07/05/12 12:59 |
| 2-Chloroethylvinyl ether | ND | | 125 | 62.5 | µg/L | 25 | 07/05/12 12:59 |
| 2-Hexanone | ND | | 125 | 25.0 | µg/L | 25 | 07/05/12 12:59 |
| 4-Chlorotoluene | ND | | 12.5 | 2.50 | µg/L | 25 | 07/05/12 12:59 |
| 4-Methyl-2-pentanone | ND | | 125 | 25.0 | µg/L | 25 | 07/05/12 12:59 |
| Acetone | 69.8 | J | 250 | 25.0 | µg/L | 25 | 07/05/12 12:59 |
| Benzene | 4.25 | J | 12.5 | 2.50 | µg/L | 25 | 07/05/12 12:59 |
| Bromobenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 07/05/12 12:59 |
| Bromochloromethane | ND | | 12.5 | 2.50 | µg/L | 25 | 07/05/12 12:59 |
| Bromodichloromethane | ND | | 12.5 | 2.50 | µg/L | 25 | 07/05/12 12:59 |
| Bromoform | ND | | 25.0 | 8.25 | µg/L | 25 | 07/05/12 12:59 |
| Bromomethane | ND | | 25.0 | 8.25 | µg/L | 25 | 07/05/12 12:59 |
| Carbon disulfide | ND | | 12.5 | 2.75 | µg/L | 25 | 07/05/12 12:59 |
| Carbon tetrachloride | ND | | 12.5 | 2.50 | µg/L | 25 | 07/05/12 12:59 |
| Chlorobenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 07/05/12 12:59 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 07/06/12 11:13 608148 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1207002-005A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W5* |
| **W Order:** | K1207002 | **Collection Date:** | 06/24/12 16:10 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 07/02/12 8:10 |
| **Inst. ID:** | MS01_11 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R24263 |
| **Revision:** | 07/06/12 11:13 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-T3493.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | 104 | | 25.0 | 8.25 | µg/L | 25 | 07/05/12 12:59 |
| Chloroform | ND | | 12.5 | 2.50 | µg/L | 25 | 07/05/12 12:59 |
| Chloromethane | ND | | 25.0 | 8.25 | µg/L | 25 | 07/05/12 12:59 |
| cis-1,2-Dichloroethene | 149 | | 12.5 | 2.50 | µg/L | 25 | 07/05/12 12:59 |
| cis-1,3-Dichloropropene | ND | | 12.5 | 4.00 | µg/L | 25 | 07/05/12 12:59 |
| Cyclohexane | 6.00 | J | 12.5 | 2.50 | µg/L | 25 | 07/05/12 12:59 |
| Dibromochloromethane | ND | | 12.5 | 2.50 | µg/L | 25 | 07/05/12 12:59 |
| Dibromomethane | ND | | 12.5 | 4.00 | µg/L | 25 | 07/05/12 12:59 |
| Dichlorodifluoromethane | ND | | 25.0 | 2.50 | µg/L | 25 | 07/05/12 12:59 |
| Ethylbenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 07/05/12 12:59 |
| Hexachlorobutadiene | ND | | 25.0 | 2.50 | µg/L | 25 | 07/05/12 12:59 |
| Isopropylbenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 07/05/12 12:59 |
| Methyl tert-butyl ether | ND | | 25.0 | 4.00 | µg/L | 25 | 07/05/12 12:59 |
| Methylene chloride | 27.0 | J | 50.0 | 4.00 | µg/L | 25 | 07/05/12 12:59 |
| n-Propylbenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 07/05/12 12:59 |
| Naphthalene | ND | | 25.0 | 2.50 | µg/L | 25 | 07/05/12 12:59 |
| o-Xylene | ND | | 12.5 | 2.50 | µg/L | 25 | 07/05/12 12:59 |
| p-Isopropyltoluene | ND | | 12.5 | 4.00 | µg/L | 25 | 07/05/12 12:59 |
| sec-Butylbenzene | ND | | 12.5 | 4.00 | µg/L | 25 | 07/05/12 12:59 |
| Styrene | ND | | 12.5 | 2.50 | µg/L | 25 | 07/05/12 12:59 |
| Tetrachloroethene | ND | | 12.5 | 2.50 | µg/L | 25 | 07/05/12 12:59 |
| Toluene | ND | | 12.5 | 2.50 | µg/L | 25 | 07/05/12 12:59 |
| trans-1,2-Dichloroethene | 4.25 | J | 12.5 | 2.50 | µg/L | 25 | 07/05/12 12:59 |
| trans-1,3-Dichloropropene | ND | | 12.5 | 4.00 | µg/L | 25 | 07/05/12 12:59 |
| Trichloroethene | 4.25 | J | 12.5 | 2.50 | µg/L | 25 | 07/05/12 12:59 |
| Trichlorofluoromethane | ND | | 25.0 | 2.50 | µg/L | 25 | 07/05/12 12:59 |
| Vinyl acetate | ND | | 50.0 | 25.0 | µg/L | 25 | 07/05/12 12:59 |
| Vinyl chloride | 408 | | 25.0 | 8.25 | µg/L | 25 | 07/05/12 12:59 |
| Xylenes (total) | ND | | 25.0 | 7.50 | µg/L | 25 | 07/05/12 12:59 |
| Surr: 1,2-Dichloroethane-d4 | 104 | | 75-130 | 4.00 | %REC | 25 | 07/05/12 12:59 |
| Surr: Toluene-d8 | 92 | | 75-125 | 2.50 | %REC | 25 | 07/05/12 12:59 |
| Surr: 4-Bromofluorobenzene | 102 | | 75-125 | 2.50 | %REC | 25 | 07/05/12 12:59 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 07/06/12 11:13 608148 **roject Supervisor:** Anthony Crescenzi

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5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | | | |
|---|---|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | | | **Lab ID:** | **K1207002-006A** |
| **Project:** | 189-02 | | | **Client Sample ID:** | ***189 - W6*** |
| **W Order:** | K1207002 | | | **Collection Date:** | 06/24/12 14:40 |
| **Matrix:** | GROUNDWATER | | | **Date Received:** | 07/02/12 8:10 |
| **Inst. ID:** | MS01_11 | **Sample Size** | 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | | **BatchNo:** | R24263 |
| **Revision:** | 07/06/12 11:13 | **TestCode:** | 8260W_CAL | **FileID:** | 1-SAMP-T3494.D |
| **Col Type:** | | | Total = 55.1 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | 1.30 | | 1.00 | 0.20 | µg/L | 1 | 07/05/12 13:33 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 13:33 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 13:33 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 13:33 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 13:33 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 13:33 |
| 1,1-Dichloroethane | 20.4 | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 13:33 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 13:33 |
| 1,2,3-Trichloropropane | ND | | 2.00 | 0.33 | µg/L | 1 | 07/05/12 13:33 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 0.10 | µg/L | 1 | 07/05/12 13:33 |
| 1,2,4-Trimethylbenzene | 0.93 | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 13:33 |
| 1,2-Dibromo-3-chloropropane | ND | | 5.00 | 1.00 | µg/L | 1 | 07/05/12 13:33 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 13:33 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 13:33 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 13:33 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 13:33 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 13:33 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 13:33 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 13:33 |
| 2-Butanone | ND | | 10.0 | 1.00 | µg/L | 1 | 07/05/12 13:33 |
| 2-Chloroethylvinyl ether | ND | | 5.00 | 2.50 | µg/L | 1 | 07/05/12 13:33 |
| 2-Hexanone | ND | | 5.00 | 1.00 | µg/L | 1 | 07/05/12 13:33 |
| 4-Chlorotoluene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 13:33 |
| 4-Methyl-2-pentanone | ND | | 5.00 | 1.00 | µg/L | 1 | 07/05/12 13:33 |
| Acetone | ND | | 10.0 | 1.00 | µg/L | 1 | 07/05/12 13:33 |
| Benzene | 16.1 | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 13:33 |
| Bromobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 13:33 |
| Bromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 13:33 |
| Bromodichloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 13:33 |
| Bromoform | ND | | 1.00 | 0.33 | µg/L | 1 | 07/05/12 13:33 |
| Bromomethane | ND | | 1.00 | 0.33 | µg/L | 1 | 07/05/12 13:33 |
| Carbon disulfide | ND | | 0.50 | 0.11 | µg/L | 1 | 07/05/12 13:33 |
| Carbon tetrachloride | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 13:33 |
| Chlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 13:33 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 07/06/12 11:13 608149 **roject Supervisor:** Anthony Crescenzi

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5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1207002-006A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W6* |
| **W Order:** | K1207002 | **Collection Date:** | 06/24/12 14:40 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 07/02/12 8:10 |
| **Inst. ID:** | MS01_11 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R24263 |
| **Revision:** | 07/06/12 11:13 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-T3494.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | ND | | 1.00 | 0.33 | µg/L | 1 | 07/05/12 13:33 |
| Chloroform | 0.14 | J | 0.50 | 0.10 | µg/L | 1 | 07/05/12 13:33 |
| Chloromethane | 2.12 | | 1.00 | 0.33 | µg/L | 1 | 07/05/12 13:33 |
| cis-1,2-Dichloroethene | 7.46 | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 13:33 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 13:33 |
| Cyclohexane | 2.18 | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 13:33 |
| Dibromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 13:33 |
| Dibromomethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 13:33 |
| Dichlorodifluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 07/05/12 13:33 |
| Ethylbenzene | 1.39 | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 13:33 |
| Hexachlorobutadiene | ND | | 1.00 | 0.10 | µg/L | 1 | 07/05/12 13:33 |
| Isopropylbenzene | 0.10 | J | 0.50 | 0.10 | µg/L | 1 | 07/05/12 13:33 |
| Methyl tert-butyl ether | ND | | 1.00 | 0.16 | µg/L | 1 | 07/05/12 13:33 |
| Methylene chloride | 0.26 | J | 2.00 | 0.16 | µg/L | 1 | 07/05/12 13:33 |
| n-Propylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 13:33 |
| Naphthalene | ND | | 1.00 | 0.10 | µg/L | 1 | 07/05/12 13:33 |
| o-Xylene | 2.19 | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 13:33 |
| p-Isopropyltoluene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 13:33 |
| sec-Butylbenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 13:33 |
| Styrene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 13:33 |
| Tetrachloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 13:33 |
| Toluene | 0.14 | J | 0.50 | 0.10 | µg/L | 1 | 07/05/12 13:33 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 13:33 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 13:33 |
| Trichloroethene | 0.39 | J | 0.50 | 0.10 | µg/L | 1 | 07/05/12 13:33 |
| Trichlorofluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 07/05/12 13:33 |
| Vinyl acetate | ND | | 2.00 | 1.00 | µg/L | 1 | 07/05/12 13:33 |
| Vinyl chloride | ND | | 1.00 | 0.33 | µg/L | 1 | 07/05/12 13:33 |
| Xylenes (total) | 3.49 | | 1.00 | 0.30 | µg/L | 1 | 07/05/12 13:33 |
| Surr: 1,2-Dichloroethane-d4 | 99 | | 75-130 | 0.16 | %REC | 1 | 07/05/12 13:33 |
| Surr: Toluene-d8 | 94 | | 75-125 | 0.10 | %REC | 1 | 07/05/12 13:33 |
| Surr: 4-Bromofluorobenzene | 100 | | 75-125 | 0.10 | %REC | 1 | 07/05/12 13:33 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 07/06/12 11:13 608149 **roject Supervisor:** Anthony Crescenzi

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5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1207002-007A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W7* |
| **W Order:** | K1207002 | **Collection Date:** | 06/24/12 14:00 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 07/02/12 8:10 |
| **Inst. ID:** | MS01_11 **Sample Size** 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS **%Moisture:** | **BatchNo:** | R24265 |
| **Revision:** | 07/06/12 11:11 **TestCode:** 8260W_CAL | **FileID:** | 1-SAMP-T3521.D |
| **Col Type:** | Total = 598.4 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 20.0 | 4.00 | µg/L | 20 | 07/06/12 9:24 |
| 1,1,1,2-Tetrachloroethane | ND | | 10.0 | 3.20 | µg/L | 20 | 07/06/12 9:24 |
| 1,1,1-Trichloroethane | ND | | 10.0 | 2.00 | µg/L | 20 | 07/06/12 9:24 |
| 1,1,2,2-Tetrachloroethane | ND | | 10.0 | 2.00 | µg/L | 20 | 07/06/12 9:24 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 2.60 | J | 10.0 | 2.00 | µg/L | 20 | 07/06/12 9:24 |
| 1,1,2-Trichloroethane | ND | | 10.0 | 3.20 | µg/L | 20 | 07/06/12 9:24 |
| 1,1-Dichloroethane | 449 | | 10.0 | 2.00 | µg/L | 20 | 07/06/12 9:24 |
| 1,1-Dichloroethene | ND | | 10.0 | 3.20 | µg/L | 20 | 07/06/12 9:24 |
| 1,2,3-Trichloropropane | ND | | 40.0 | 6.60 | µg/L | 20 | 07/06/12 9:24 |
| 1,2,4-Trichlorobenzene | ND | | 20.0 | 2.00 | µg/L | 20 | 07/06/12 9:24 |
| 1,2,4-Trimethylbenzene | ND | | 10.0 | 2.00 | µg/L | 20 | 07/06/12 9:24 |
| 1,2-Dibromo-3-chloropropane | ND | | 100 | 20.0 | µg/L | 20 | 07/06/12 9:24 |
| 1,2-Dibromoethane | ND | | 10.0 | 3.20 | µg/L | 20 | 07/06/12 9:24 |
| 1,2-Dichlorobenzene | ND | | 10.0 | 2.00 | µg/L | 20 | 07/06/12 9:24 |
| 1,2-Dichloroethane | 21.0 | | 10.0 | 3.20 | µg/L | 20 | 07/06/12 9:24 |
| 1,2-Dichloropropane | ND | | 10.0 | 3.20 | µg/L | 20 | 07/06/12 9:24 |
| 1,3,5-Trimethylbenzene | ND | | 10.0 | 2.00 | µg/L | 20 | 07/06/12 9:24 |
| 1,3-Dichlorobenzene | ND | | 10.0 | 2.00 | µg/L | 20 | 07/06/12 9:24 |
| 1,4-Dichlorobenzene | ND | | 10.0 | 3.20 | µg/L | 20 | 07/06/12 9:24 |
| 2-Butanone | ND | | 200 | 20.0 | µg/L | 20 | 07/06/12 9:24 |
| 2-Chloroethylvinyl ether | ND | | 100 | 50.0 | µg/L | 20 | 07/06/12 9:24 |
| 2-Hexanone | ND | | 100 | 20.0 | µg/L | 20 | 07/06/12 9:24 |
| 4-Chlorotoluene | ND | | 10.0 | 2.00 | µg/L | 20 | 07/06/12 9:24 |
| 4-Methyl-2-pentanone | ND | | 100 | 20.0 | µg/L | 20 | 07/06/12 9:24 |
| Acetone | 46.0 | J | 200 | 20.0 | µg/L | 20 | 07/06/12 9:24 |
| Benzene | 3.40 | J | 10.0 | 2.00 | µg/L | 20 | 07/06/12 9:24 |
| Bromobenzene | ND | | 10.0 | 2.00 | µg/L | 20 | 07/06/12 9:24 |
| Bromochloromethane | ND | | 10.0 | 2.00 | µg/L | 20 | 07/06/12 9:24 |
| Bromodichloromethane | ND | | 10.0 | 2.00 | µg/L | 20 | 07/06/12 9:24 |
| Bromoform | ND | | 20.0 | 6.60 | µg/L | 20 | 07/06/12 9:24 |
| Bromomethane | ND | | 20.0 | 6.60 | µg/L | 20 | 07/06/12 9:24 |
| Carbon disulfide | ND | | 10.0 | 2.20 | µg/L | 20 | 07/06/12 9:24 |
| Carbon tetrachloride | ND | | 10.0 | 2.00 | µg/L | 20 | 07/06/12 9:24 |
| Chlorobenzene | ND | | 10.0 | 2.00 | µg/L | 20 | 07/06/12 9:24 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 07/06/12 11:13 608185 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1207002-007A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W7*** |
| **W Order:** | K1207002 | **Collection Date:** | 06/24/12 14:00 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 07/02/12 8:10 |
| **Inst. ID:** | MS01_11 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R24265 |
| **Revision:** | 07/06/12 11:11 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-T3521.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | 13.8 | J | 20.0 | 6.60 | µg/L | 20 | 07/06/12 9:24 |
| Chloroform | ND | | 10.0 | 2.00 | µg/L | 20 | 07/06/12 9:24 |
| Chloromethane | ND | | 20.0 | 6.60 | µg/L | 20 | 07/06/12 9:24 |
| cis-1,2-Dichloroethene | 11.8 | | 10.0 | 2.00 | µg/L | 20 | 07/06/12 9:24 |
| cis-1,3-Dichloropropene | ND | | 10.0 | 3.20 | µg/L | 20 | 07/06/12 9:24 |
| Cyclohexane | 2.60 | J | 10.0 | 2.00 | µg/L | 20 | 07/06/12 9:24 |
| Dibromochloromethane | ND | | 10.0 | 2.00 | µg/L | 20 | 07/06/12 9:24 |
| Dibromomethane | ND | | 10.0 | 3.20 | µg/L | 20 | 07/06/12 9:24 |
| Dichlorodifluoromethane | ND | | 20.0 | 2.00 | µg/L | 20 | 07/06/12 9:24 |
| Ethylbenzene | ND | | 10.0 | 2.00 | µg/L | 20 | 07/06/12 9:24 |
| Hexachlorobutadiene | ND | | 20.0 | 2.00 | µg/L | 20 | 07/06/12 9:24 |
| Isopropylbenzene | ND | | 10.0 | 2.00 | µg/L | 20 | 07/06/12 9:24 |
| Methyl tert-butyl ether | ND | | 20.0 | 3.20 | µg/L | 20 | 07/06/12 9:24 |
| Methylene chloride | 11.0 | J | 40.0 | 3.20 | µg/L | 20 | 07/06/12 9:24 |
| n-Propylbenzene | ND | | 10.0 | 2.00 | µg/L | 20 | 07/06/12 9:24 |
| Naphthalene | ND | | 20.0 | 2.00 | µg/L | 20 | 07/06/12 9:24 |
| o-Xylene | ND | | 10.0 | 2.00 | µg/L | 20 | 07/06/12 9:24 |
| p-Isopropyltoluene | ND | | 10.0 | 3.20 | µg/L | 20 | 07/06/12 9:24 |
| sec-Butylbenzene | ND | | 10.0 | 3.20 | µg/L | 20 | 07/06/12 9:24 |
| Styrene | ND | | 10.0 | 2.00 | µg/L | 20 | 07/06/12 9:24 |
| Tetrachloroethene | ND | | 10.0 | 2.00 | µg/L | 20 | 07/06/12 9:24 |
| Toluene | ND | | 10.0 | 2.00 | µg/L | 20 | 07/06/12 9:24 |
| trans-1,2-Dichloroethene | ND | | 10.0 | 2.00 | µg/L | 20 | 07/06/12 9:24 |
| trans-1,3-Dichloropropene | ND | | 10.0 | 3.20 | µg/L | 20 | 07/06/12 9:24 |
| Trichloroethene | 16.6 | | 10.0 | 2.00 | µg/L | 20 | 07/06/12 9:24 |
| Trichlorofluoromethane | ND | | 20.0 | 2.00 | µg/L | 20 | 07/06/12 9:24 |
| Vinyl acetate | ND | | 40.0 | 20.0 | µg/L | 20 | 07/06/12 9:24 |
| Vinyl chloride | 20.6 | | 20.0 | 6.60 | µg/L | 20 | 07/06/12 9:24 |
| Xylenes (total) | ND | | 20.0 | 6.00 | µg/L | 20 | 07/06/12 9:24 |
| Surr: 1,2-Dichloroethane-d4 | 109 | | 75-130 | 3.20 | %REC | 20 | 07/06/12 9:24 |
| Surr: Toluene-d8 | 96 | | 75-125 | 2.00 | %REC | 20 | 07/06/12 9:24 |
| Surr: 4-Bromofluorobenzene | 102 | | 75-125 | 2.00 | %REC | 20 | 07/06/12 9:24 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 07/06/12 11:13 608185 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1207002-008A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W8* |
| **W Order:** | K1207002 | **Collection Date:** | 06/24/12 15:20 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 07/02/12 8:10 |
| **Inst. ID:** | MS01_11 | **Sample Size** NA | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R24263 |
| **Revision:** | 07/06/12 11:13 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-T3497.D |
| **Col Type:** | | Total = 134.67 | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 1.00 | 0.20 | µg/L | 1 | 07/05/12 15:13 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 15:13 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 15:13 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 15:13 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 15:13 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 15:13 |
| 1,1-Dichloroethane | 58.4 | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 15:13 |
| 1,1-Dichloroethene | 1.71 | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 15:13 |
| 1,2,3-Trichloropropane | ND | | 2.00 | 0.33 | µg/L | 1 | 07/05/12 15:13 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 0.10 | µg/L | 1 | 07/05/12 15:13 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 15:13 |
| 1,2-Dibromo-3-chloropropane | ND | | 5.00 | 1.00 | µg/L | 1 | 07/05/12 15:13 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 15:13 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 15:13 |
| 1,2-Dichloroethane | 1.19 | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 15:13 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 15:13 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 15:13 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 15:13 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 15:13 |
| 2-Butanone | ND | | 10.0 | 1.00 | µg/L | 1 | 07/05/12 15:13 |
| 2-Chloroethylvinyl ether | ND | | 5.00 | 2.50 | µg/L | 1 | 07/05/12 15:13 |
| 2-Hexanone | ND | | 5.00 | 1.00 | µg/L | 1 | 07/05/12 15:13 |
| 4-Chlorotoluene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 15:13 |
| 4-Methyl-2-pentanone | ND | | 5.00 | 1.00 | µg/L | 1 | 07/05/12 15:13 |
| Acetone | ND | | 10.0 | 1.00 | µg/L | 1 | 07/05/12 15:13 |
| Benzene | 0.85 | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 15:13 |
| Bromobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 15:13 |
| Bromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 15:13 |
| Bromodichloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 15:13 |
| Bromoform | ND | | 1.00 | 0.33 | µg/L | 1 | 07/05/12 15:13 |
| Bromomethane | ND | | 1.00 | 0.33 | µg/L | 1 | 07/05/12 15:13 |
| Carbon disulfide | ND | | 0.50 | 0.11 | µg/L | 1 | 07/05/12 15:13 |
| Carbon tetrachloride | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 15:13 |
| Chlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 15:13 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 07/06/12 11:13 608186 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1207002-008A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W8*** |
| **W Order:** | K1207002 | **Collection Date:** | 06/24/12 15:20 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 07/02/12 8:10 |
| **Inst. ID:** | MS01_11 | **Sample Size** NA | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R24263 |
| **Revision:** | 07/06/12 11:13 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-T3497.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | 0.62 | J | 1.00 | 0.33 | µg/L | 1 | 07/05/12 15:13 |
| Chloroform | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 15:13 |
| Chloromethane | ND | | 1.00 | 0.33 | µg/L | 1 | 07/05/12 15:13 |
| cis-1,2-Dichloroethene | 52.6 | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 15:13 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 15:13 |
| Cyclohexane | 0.65 | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 15:13 |
| Dibromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 15:13 |
| Dibromomethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 15:13 |
| Dichlorodifluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 07/05/12 15:13 |
| Ethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 15:13 |
| Hexachlorobutadiene | ND | | 1.00 | 0.10 | µg/L | 1 | 07/05/12 15:13 |
| Isopropylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 15:13 |
| Methyl tert-butyl ether | ND | | 1.00 | 0.16 | µg/L | 1 | 07/05/12 15:13 |
| Methylene chloride | 0.26 | J | 2.00 | 0.16 | µg/L | 1 | 07/05/12 15:13 |
| n-Propylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 15:13 |
| Naphthalene | ND | | 1.00 | 0.10 | µg/L | 1 | 07/05/12 15:13 |
| o-Xylene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 15:13 |
| p-Isopropyltoluene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 15:13 |
| sec-Butylbenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 15:13 |
| Styrene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 15:13 |
| Tetrachloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 15:13 |
| Toluene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 15:13 |
| trans-1,2-Dichloroethene | 0.47 | J | 0.50 | 0.10 | µg/L | 1 | 07/05/12 15:13 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 15:13 |
| Trichloroethene | 0.62 | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 15:13 |
| Trichlorofluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 07/05/12 15:13 |
| Vinyl acetate | ND | | 2.00 | 1.00 | µg/L | 1 | 07/05/12 15:13 |
| Vinyl chloride | 17.3 | | 1.00 | 0.33 | µg/L | 1 | 07/05/12 15:13 |
| Xylenes (total) | ND | | 1.00 | 0.30 | µg/L | 1 | 07/05/12 15:13 |
| Surr: 1,2-Dichloroethane-d4 | 99 | | 75-130 | 0.16 | %REC | 1 | 07/05/12 15:13 |
| Surr: Toluene-d8 | 93 | | 75-125 | 0.10 | %REC | 1 | 07/05/12 15:13 |
| Surr: 4-Bromofluorobenzene | 100 | | 75-125 | 0.10 | %REC | 1 | 07/05/12 15:13 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 07/06/12 11:13 608186 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1207002-009A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W9* |
| **W Order:** | K1207002 | **Collection Date:** | 06/30/12 15:40 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 07/02/12 8:10 |
| **Inst. ID:** | MS01_11 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R24263 |
| **Revision:** | 07/06/12 11:13 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-T3498.D |
| **Col Type:** | | Total = 1523.2 | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | 11.5 | J | 25.0 | 5.00 | µg/L | 25 | 07/05/12 15:46 |
| 1,1,1,2-Tetrachloroethane | ND | | 12.5 | 4.00 | µg/L | 25 | 07/05/12 15:46 |
| 1,1,1-Trichloroethane | 189 | | 12.5 | 2.50 | µg/L | 25 | 07/05/12 15:46 |
| 1,1,2,2-Tetrachloroethane | ND | | 12.5 | 2.50 | µg/L | 25 | 07/05/12 15:46 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 10.2 | J | 12.5 | 2.50 | µg/L | 25 | 07/05/12 15:46 |
| 1,1,2-Trichloroethane | ND | | 12.5 | 4.00 | µg/L | 25 | 07/05/12 15:46 |
| 1,1-Dichloroethane | 690 | | 12.5 | 2.50 | µg/L | 25 | 07/05/12 15:46 |
| 1,1-Dichloroethene | 13.2 | | 12.5 | 4.00 | µg/L | 25 | 07/05/12 15:46 |
| 1,2,3-Trichloropropane | ND | | 50.0 | 8.25 | µg/L | 25 | 07/05/12 15:46 |
| 1,2,4-Trichlorobenzene | ND | | 25.0 | 2.50 | µg/L | 25 | 07/05/12 15:46 |
| 1,2,4-Trimethylbenzene | 6.25 | J | 12.5 | 2.50 | µg/L | 25 | 07/05/12 15:46 |
| 1,2-Dibromo-3-chloropropane | ND | | 125 | 25.0 | µg/L | 25 | 07/05/12 15:46 |
| 1,2-Dibromoethane | ND | | 12.5 | 4.00 | µg/L | 25 | 07/05/12 15:46 |
| 1,2-Dichlorobenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 07/05/12 15:46 |
| 1,2-Dichloroethane | 5.00 | J | 12.5 | 4.00 | µg/L | 25 | 07/05/12 15:46 |
| 1,2-Dichloropropane | ND | | 12.5 | 4.00 | µg/L | 25 | 07/05/12 15:46 |
| 1,3,5-Trimethylbenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 07/05/12 15:46 |
| 1,3-Dichlorobenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 07/05/12 15:46 |
| 1,4-Dichlorobenzene | ND | | 12.5 | 4.00 | µg/L | 25 | 07/05/12 15:46 |
| 2-Butanone | ND | | 250 | 25.0 | µg/L | 25 | 07/05/12 15:46 |
| 2-Chloroethylvinyl ether | ND | | 125 | 62.5 | µg/L | 25 | 07/05/12 15:46 |
| 2-Hexanone | ND | | 125 | 25.0 | µg/L | 25 | 07/05/12 15:46 |
| 4-Chlorotoluene | ND | | 12.5 | 2.50 | µg/L | 25 | 07/05/12 15:46 |
| 4-Methyl-2-pentanone | ND | | 125 | 25.0 | µg/L | 25 | 07/05/12 15:46 |
| Acetone | 73.0 | J | 250 | 25.0 | µg/L | 25 | 07/05/12 15:46 |
| Benzene | 8.25 | J | 12.5 | 2.50 | µg/L | 25 | 07/05/12 15:46 |
| Bromobenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 07/05/12 15:46 |
| Bromochloromethane | ND | | 12.5 | 2.50 | µg/L | 25 | 07/05/12 15:46 |
| Bromodichloromethane | ND | | 12.5 | 2.50 | µg/L | 25 | 07/05/12 15:46 |
| Bromoform | ND | | 25.0 | 8.25 | µg/L | 25 | 07/05/12 15:46 |
| Bromomethane | ND | | 25.0 | 8.25 | µg/L | 25 | 07/05/12 15:46 |
| Carbon disulfide | ND | | 12.5 | 2.75 | µg/L | 25 | 07/05/12 15:46 |
| Carbon tetrachloride | ND | | 12.5 | 2.50 | µg/L | 25 | 07/05/12 15:46 |
| Chlorobenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 07/05/12 15:46 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 07/06/12 11:13 608151 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1207002-009A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W9*** |
| **W Order:** | K1207002 | **Collection Date:** | 06/30/12 15:40 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 07/02/12 8:10 |
| **Inst. ID:** | MS01_11 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R24263 |
| **Revision:** | 07/06/12 11:13 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-T3498.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | ND | | 25.0 | 8.25 | µg/L | 25 | 07/05/12 15:46 |
| Chloroform | ND | | 12.5 | 2.50 | µg/L | 25 | 07/05/12 15:46 |
| Chloromethane | ND | | 25.0 | 8.25 | µg/L | 25 | 07/05/12 15:46 |
| cis-1,2-Dichloroethene | 211 | | 12.5 | 2.50 | µg/L | 25 | 07/05/12 15:46 |
| cis-1,3-Dichloropropene | ND | | 12.5 | 4.00 | µg/L | 25 | 07/05/12 15:46 |
| Cyclohexane | 6.00 | J | 12.5 | 2.50 | µg/L | 25 | 07/05/12 15:46 |
| Dibromochloromethane | ND | | 12.5 | 2.50 | µg/L | 25 | 07/05/12 15:46 |
| Dibromomethane | ND | | 12.5 | 4.00 | µg/L | 25 | 07/05/12 15:46 |
| Dichlorodifluoromethane | ND | | 25.0 | 2.50 | µg/L | 25 | 07/05/12 15:46 |
| Ethylbenzene | 4.50 | J | 12.5 | 2.50 | µg/L | 25 | 07/05/12 15:46 |
| Hexachlorobutadiene | ND | | 25.0 | 2.50 | µg/L | 25 | 07/05/12 15:46 |
| Isopropylbenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 07/05/12 15:46 |
| Methyl tert-butyl ether | ND | | 25.0 | 4.00 | µg/L | 25 | 07/05/12 15:46 |
| Methylene chloride | 28.0 | J | 50.0 | 4.00 | µg/L | 25 | 07/05/12 15:46 |
| n-Propylbenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 07/05/12 15:46 |
| Naphthalene | ND | | 25.0 | 2.50 | µg/L | 25 | 07/05/12 15:46 |
| o-Xylene | 4.25 | J | 12.5 | 2.50 | µg/L | 25 | 07/05/12 15:46 |
| p-Isopropyltoluene | ND | | 12.5 | 4.00 | µg/L | 25 | 07/05/12 15:46 |
| sec-Butylbenzene | ND | | 12.5 | 4.00 | µg/L | 25 | 07/05/12 15:46 |
| Styrene | ND | | 12.5 | 2.50 | µg/L | 25 | 07/05/12 15:46 |
| Tetrachloroethene | ND | | 12.5 | 2.50 | µg/L | 25 | 07/05/12 15:46 |
| Toluene | 5.25 | J | 12.5 | 2.50 | µg/L | 25 | 07/05/12 15:46 |
| trans-1,2-Dichloroethene | 9.00 | J | 12.5 | 2.50 | µg/L | 25 | 07/05/12 15:46 |
| trans-1,3-Dichloropropene | ND | | 12.5 | 4.00 | µg/L | 25 | 07/05/12 15:46 |
| Trichloroethene | 56.8 | | 12.5 | 2.50 | µg/L | 25 | 07/05/12 15:46 |
| Trichlorofluoromethane | ND | | 25.0 | 2.50 | µg/L | 25 | 07/05/12 15:46 |
| Vinyl acetate | ND | | 50.0 | 25.0 | µg/L | 25 | 07/05/12 15:46 |
| Vinyl chloride | 192 | | 25.0 | 8.25 | µg/L | 25 | 07/05/12 15:46 |
| Xylenes (total) | 15.8 | J | 25.0 | 7.50 | µg/L | 25 | 07/05/12 15:46 |
| Surr: 1,2-Dichloroethane-d4 | 99 | | 75-130 | 4.00 | %REC | 25 | 07/05/12 15:46 |
| Surr: Toluene-d8 | 94 | | 75-125 | 2.50 | %REC | 25 | 07/05/12 15:46 |
| Surr: 4-Bromofluorobenzene | 101 | | 75-125 | 2.50 | %REC | 25 | 07/05/12 15:46 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

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East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1207002-010A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W10* |
| **W Order:** | K1207002 | **Collection Date:** | 06/24/12 14:30 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 07/02/12 8:10 |
| **Inst. ID:** | MS01_11 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R24263 |
| **Revision:** | 07/06/12 11:13 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-T3499.D |
| **Col Type:** | | Total = 4.2 | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 1.00 | 0.20 | µg/L | 1 | 07/05/12 16:19 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 16:19 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 16:19 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 16:19 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 16:19 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 16:19 |
| 1,1-Dichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 16:19 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 16:19 |
| 1,2,3-Trichloropropane | ND | | 2.00 | 0.33 | µg/L | 1 | 07/05/12 16:19 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 0.10 | µg/L | 1 | 07/05/12 16:19 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 16:19 |
| 1,2-Dibromo-3-chloropropane | ND | | 5.00 | 1.00 | µg/L | 1 | 07/05/12 16:19 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 16:19 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 16:19 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 16:19 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 16:19 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 16:19 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 16:19 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 16:19 |
| 2-Butanone | ND | | 10.0 | 1.00 | µg/L | 1 | 07/05/12 16:19 |
| 2-Chloroethylvinyl ether | ND | | 5.00 | 2.50 | µg/L | 1 | 07/05/12 16:19 |
| 2-Hexanone | ND | | 5.00 | 1.00 | µg/L | 1 | 07/05/12 16:19 |
| 4-Chlorotoluene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 16:19 |
| 4-Methyl-2-pentanone | ND | | 5.00 | 1.00 | µg/L | 1 | 07/05/12 16:19 |
| Acetone | 3.99 | J | 10.0 | 1.00 | µg/L | 1 | 07/05/12 16:19 |
| Benzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 16:19 |
| Bromobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 16:19 |
| Bromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 16:19 |
| Bromodichloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 16:19 |
| Bromoform | ND | | 1.00 | 0.33 | µg/L | 1 | 07/05/12 16:19 |
| Bromomethane | ND | | 1.00 | 0.33 | µg/L | 1 | 07/05/12 16:19 |
| Carbon disulfide | ND | | 0.50 | 0.11 | µg/L | 1 | 07/05/12 16:19 |
| Carbon tetrachloride | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 16:19 |
| Chlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 16:19 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 07/06/12 11:13 608152 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1207002-010A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W10*** |
| **W Order:** | K1207002 | **Collection Date:** | 06/24/12 14:30 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 07/02/12 8:10 |
| **Inst. ID:** | MS01_11 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R24263 |
| **Revision:** | 07/06/12 11:13 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-T3499.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | ND | | 1.00 | 0.33 | µg/L | 1 | 07/05/12 16:19 |
| Chloroform | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 16:19 |
| Chloromethane | ND | | 1.00 | 0.33 | µg/L | 1 | 07/05/12 16:19 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 16:19 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 16:19 |
| Cyclohexane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 16:19 |
| Dibromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 16:19 |
| Dibromomethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 16:19 |
| Dichlorodifluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 07/05/12 16:19 |
| Ethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 16:19 |
| Hexachlorobutadiene | ND | | 1.00 | 0.10 | µg/L | 1 | 07/05/12 16:19 |
| Isopropylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 16:19 |
| Methyl tert-butyl ether | ND | | 1.00 | 0.16 | µg/L | 1 | 07/05/12 16:19 |
| Methylene chloride | 0.21 | J | 2.00 | 0.16 | µg/L | 1 | 07/05/12 16:19 |
| n-Propylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 16:19 |
| Naphthalene | ND | | 1.00 | 0.10 | µg/L | 1 | 07/05/12 16:19 |
| o-Xylene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 16:19 |
| p-Isopropyltoluene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 16:19 |
| sec-Butylbenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 16:19 |
| Styrene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 16:19 |
| Tetrachloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 16:19 |
| Toluene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 16:19 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 16:19 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 16:19 |
| Trichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 16:19 |
| Trichlorofluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 07/05/12 16:19 |
| Vinyl acetate | ND | | 2.00 | 1.00 | µg/L | 1 | 07/05/12 16:19 |
| Vinyl chloride | ND | | 1.00 | 0.33 | µg/L | 1 | 07/05/12 16:19 |
| Xylenes (total) | ND | | 1.00 | 0.30 | µg/L | 1 | 07/05/12 16:19 |
| Surr: 1,2-Dichloroethane-d4 | 98 | | 75-130 | 0.16 | %REC | 1 | 07/05/12 16:19 |
| Surr: Toluene-d8 | 95 | | 75-125 | 0.10 | %REC | 1 | 07/05/12 16:19 |
| Surr: 4-Bromofluorobenzene | 102 | | 75-125 | 0.10 | %REC | 1 | 07/05/12 16:19 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 07/06/12 11:13 608152 **roject Supervisor:** Anthony Crescenzi

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5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1207002-011A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W11* |
| **W Order:** | K1207002 | **Collection Date:** | 06/24/12 14:50 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 07/02/12 8:10 |
| **Inst. ID:** | MS01_11 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R24263 |
| **Revision:** | 07/06/12 11:13 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-T3500.D |
| **Col Type:** | | Total = 3.29 | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 1.00 | 0.20 | µg/L | 1 | 07/05/12 16:52 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 16:52 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 16:52 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 16:52 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 16:52 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 16:52 |
| 1,1-Dichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 16:52 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 16:52 |
| 1,2,3-Trichloropropane | ND | | 2.00 | 0.33 | µg/L | 1 | 07/05/12 16:52 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 0.10 | µg/L | 1 | 07/05/12 16:52 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 16:52 |
| 1,2-Dibromo-3-chloropropane | ND | | 5.00 | 1.00 | µg/L | 1 | 07/05/12 16:52 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 16:52 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 16:52 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 16:52 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 16:52 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 16:52 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 16:52 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 16:52 |
| 2-Butanone | ND | | 10.0 | 1.00 | µg/L | 1 | 07/05/12 16:52 |
| 2-Chloroethylvinyl ether | ND | | 5.00 | 2.50 | µg/L | 1 | 07/05/12 16:52 |
| 2-Hexanone | ND | | 5.00 | 1.00 | µg/L | 1 | 07/05/12 16:52 |
| 4-Chlorotoluene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 16:52 |
| 4-Methyl-2-pentanone | ND | | 5.00 | 1.00 | µg/L | 1 | 07/05/12 16:52 |
| Acetone | 2.74 | J | 10.0 | 1.00 | µg/L | 1 | 07/05/12 16:52 |
| Benzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 16:52 |
| Bromobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 16:52 |
| Bromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 16:52 |
| Bromodichloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 16:52 |
| Bromoform | ND | | 1.00 | 0.33 | µg/L | 1 | 07/05/12 16:52 |
| Bromomethane | ND | | 1.00 | 0.33 | µg/L | 1 | 07/05/12 16:52 |
| Carbon disulfide | ND | | 0.50 | 0.11 | µg/L | 1 | 07/05/12 16:52 |
| Carbon tetrachloride | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 16:52 |
| Chlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 16:52 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 07/06/12 11:13 608153 **roject Supervisor:** Anthony Crescenzi

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5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1207002-011A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W11*** |
| **W Order:** | K1207002 | **Collection Date:** | 06/24/12 14:50 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 07/02/12 8:10 |
| **Inst. ID:** | MS01_11 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R24263 |
| **Revision:** | 07/06/12 11:13 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-T3500.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | ND | | 1.00 | 0.33 | µg/L | 1 | 07/05/12 16:52 |
| Chloroform | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 16:52 |
| Chloromethane | ND | | 1.00 | 0.33 | µg/L | 1 | 07/05/12 16:52 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 16:52 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 16:52 |
| Cyclohexane | 0.26 | J | 0.50 | 0.10 | µg/L | 1 | 07/05/12 16:52 |
| Dibromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 16:52 |
| Dibromomethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 16:52 |
| Dichlorodifluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 07/05/12 16:52 |
| Ethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 16:52 |
| Hexachlorobutadiene | ND | | 1.00 | 0.10 | µg/L | 1 | 07/05/12 16:52 |
| Isopropylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 16:52 |
| Methyl tert-butyl ether | ND | | 1.00 | 0.16 | µg/L | 1 | 07/05/12 16:52 |
| Methylene chloride | 0.29 | J | 2.00 | 0.16 | µg/L | 1 | 07/05/12 16:52 |
| n-Propylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 16:52 |
| Naphthalene | ND | | 1.00 | 0.10 | µg/L | 1 | 07/05/12 16:52 |
| o-Xylene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 16:52 |
| p-Isopropyltoluene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 16:52 |
| sec-Butylbenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 16:52 |
| Styrene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 16:52 |
| Tetrachloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 16:52 |
| Toluene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 16:52 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 16:52 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 16:52 |
| Trichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 16:52 |
| Trichlorofluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 07/05/12 16:52 |
| Vinyl acetate | ND | | 2.00 | 1.00 | µg/L | 1 | 07/05/12 16:52 |
| Vinyl chloride | ND | | 1.00 | 0.33 | µg/L | 1 | 07/05/12 16:52 |
| Xylenes (total) | ND | | 1.00 | 0.30 | µg/L | 1 | 07/05/12 16:52 |
| Surr: 1,2-Dichloroethane-d4 | 101 | | 75-130 | 0.16 | %REC | 1 | 07/05/12 16:52 |
| Surr: Toluene-d8 | 92 | | 75-125 | 0.10 | %REC | 1 | 07/05/12 16:52 |
| Surr: 4-Bromofluorobenzene | 100 | | 75-125 | 0.10 | %REC | 1 | 07/05/12 16:52 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 07/06/12 11:13 608153 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1207002-012A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W12* |
| **W Order:** | K1207002 | **Collection Date:** | 06/24/12 15:10 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 07/02/12 8:10 |
| **Inst. ID:** | MS01_11 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R24263 |
| **Revision:** | 07/06/12 11:13 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-T3501.D |
| **Col Type:** | | Total = 243 | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 5.00 | 1.00 | µg/L | 5 | 07/05/12 17:25 |
| 1,1,1,2-Tetrachloroethane | ND | | 2.50 | 0.80 | µg/L | 5 | 07/05/12 17:25 |
| 1,1,1-Trichloroethane | ND | | 2.50 | 0.50 | µg/L | 5 | 07/05/12 17:25 |
| 1,1,2,2-Tetrachloroethane | ND | | 2.50 | 0.50 | µg/L | 5 | 07/05/12 17:25 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 2.50 | 0.50 | µg/L | 5 | 07/05/12 17:25 |
| 1,1,2-Trichloroethane | ND | | 2.50 | 0.80 | µg/L | 5 | 07/05/12 17:25 |
| 1,1-Dichloroethane | 66.0 | | 2.50 | 0.50 | µg/L | 5 | 07/05/12 17:25 |
| 1,1-Dichloroethene | ND | | 2.50 | 0.80 | µg/L | 5 | 07/05/12 17:25 |
| 1,2,3-Trichloropropane | ND | | 10.0 | 1.65 | µg/L | 5 | 07/05/12 17:25 |
| 1,2,4-Trichlorobenzene | ND | | 5.00 | 0.50 | µg/L | 5 | 07/05/12 17:25 |
| 1,2,4-Trimethylbenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 07/05/12 17:25 |
| 1,2-Dibromo-3-chloropropane | ND | | 25.0 | 5.00 | µg/L | 5 | 07/05/12 17:25 |
| 1,2-Dibromoethane | ND | | 2.50 | 0.80 | µg/L | 5 | 07/05/12 17:25 |
| 1,2-Dichlorobenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 07/05/12 17:25 |
| 1,2-Dichloroethane | 3.35 | | 2.50 | 0.80 | µg/L | 5 | 07/05/12 17:25 |
| 1,2-Dichloropropane | ND | | 2.50 | 0.80 | µg/L | 5 | 07/05/12 17:25 |
| 1,3,5-Trimethylbenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 07/05/12 17:25 |
| 1,3-Dichlorobenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 07/05/12 17:25 |
| 1,4-Dichlorobenzene | ND | | 2.50 | 0.80 | µg/L | 5 | 07/05/12 17:25 |
| 2-Butanone | ND | | 50.0 | 5.00 | µg/L | 5 | 07/05/12 17:25 |
| 2-Chloroethylvinyl ether | ND | | 25.0 | 12.5 | µg/L | 5 | 07/05/12 17:25 |
| 2-Hexanone | ND | | 25.0 | 5.00 | µg/L | 5 | 07/05/12 17:25 |
| 4-Chlorotoluene | ND | | 2.50 | 0.50 | µg/L | 5 | 07/05/12 17:25 |
| 4-Methyl-2-pentanone | ND | | 25.0 | 5.00 | µg/L | 5 | 07/05/12 17:25 |
| Acetone | 14.0 | J | 50.0 | 5.00 | µg/L | 5 | 07/05/12 17:25 |
| Benzene | ND | | 2.50 | 0.50 | µg/L | 5 | 07/05/12 17:25 |
| Bromobenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 07/05/12 17:25 |
| Bromochloromethane | ND | | 2.50 | 0.50 | µg/L | 5 | 07/05/12 17:25 |
| Bromodichloromethane | ND | | 2.50 | 0.50 | µg/L | 5 | 07/05/12 17:25 |
| Bromoform | ND | | 5.00 | 1.65 | µg/L | 5 | 07/05/12 17:25 |
| Bromomethane | ND | | 5.00 | 1.65 | µg/L | 5 | 07/05/12 17:25 |
| Carbon disulfide | ND | | 2.50 | 0.55 | µg/L | 5 | 07/05/12 17:25 |
| Carbon tetrachloride | ND | | 2.50 | 0.50 | µg/L | 5 | 07/05/12 17:25 |
| Chlorobenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 07/05/12 17:25 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 07/06/12 11:13 608154 **roject Supervisor:** Anthony Crescenzi

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5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1207002-012A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W12*** |
| **W Order:** | K1207002 | **Collection Date:** | 06/24/12 15:10 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 07/02/12 8:10 |
| **Inst. ID:** | MS01_11 **Sample Size** 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS **%Moisture:** | **BatchNo:** | R24263 |
| **Revision:** | 07/06/12 11:13 **TestCode:** 8260W_CAL | **FileID:** | 1-SAMP-T3501.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | 90.8 | | 5.00 | 1.65 | µg/L | 5 | 07/05/12 17:25 |
| Chloroform | ND | | 2.50 | 0.50 | µg/L | 5 | 07/05/12 17:25 |
| Chloromethane | ND | | 5.00 | 1.65 | µg/L | 5 | 07/05/12 17:25 |
| cis-1,2-Dichloroethene | 9.05 | | 2.50 | 0.50 | µg/L | 5 | 07/05/12 17:25 |
| cis-1,3-Dichloropropene | ND | | 2.50 | 0.80 | µg/L | 5 | 07/05/12 17:25 |
| Cyclohexane | 1.70 | J | 2.50 | 0.50 | µg/L | 5 | 07/05/12 17:25 |
| Dibromochloromethane | ND | | 2.50 | 0.50 | µg/L | 5 | 07/05/12 17:25 |
| Dibromomethane | ND | | 2.50 | 0.80 | µg/L | 5 | 07/05/12 17:25 |
| Dichlorodifluoromethane | ND | | 5.00 | 0.50 | µg/L | 5 | 07/05/12 17:25 |
| Ethylbenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 07/05/12 17:25 |
| Hexachlorobutadiene | ND | | 5.00 | 0.50 | µg/L | 5 | 07/05/12 17:25 |
| Isopropylbenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 07/05/12 17:25 |
| Methyl tert-butyl ether | ND | | 5.00 | 0.80 | µg/L | 5 | 07/05/12 17:25 |
| Methylene chloride | 4.50 | J | 10.0 | 0.80 | µg/L | 5 | 07/05/12 17:25 |
| n-Propylbenzene | ND | | 2.50 | 0.50 | µg/L | 5 | 07/05/12 17:25 |
| Naphthalene | ND | | 5.00 | 0.50 | µg/L | 5 | 07/05/12 17:25 |
| o-Xylene | ND | | 2.50 | 0.50 | µg/L | 5 | 07/05/12 17:25 |
| p-Isopropyltoluene | ND | | 2.50 | 0.80 | µg/L | 5 | 07/05/12 17:25 |
| sec-Butylbenzene | ND | | 2.50 | 0.80 | µg/L | 5 | 07/05/12 17:25 |
| Styrene | ND | | 2.50 | 0.50 | µg/L | 5 | 07/05/12 17:25 |
| Tetrachloroethene | ND | | 2.50 | 0.50 | µg/L | 5 | 07/05/12 17:25 |
| Toluene | ND | | 2.50 | 0.50 | µg/L | 5 | 07/05/12 17:25 |
| trans-1,2-Dichloroethene | ND | | 2.50 | 0.50 | µg/L | 5 | 07/05/12 17:25 |
| trans-1,3-Dichloropropene | ND | | 2.50 | 0.80 | µg/L | 5 | 07/05/12 17:25 |
| Trichloroethene | ND | | 2.50 | 0.50 | µg/L | 5 | 07/05/12 17:25 |
| Trichlorofluoromethane | ND | | 5.00 | 0.50 | µg/L | 5 | 07/05/12 17:25 |
| Vinyl acetate | ND | | 10.0 | 5.00 | µg/L | 5 | 07/05/12 17:25 |
| Vinyl chloride | 53.6 | | 5.00 | 1.65 | µg/L | 5 | 07/05/12 17:25 |
| Xylenes (total) | ND | | 5.00 | 1.50 | µg/L | 5 | 07/05/12 17:25 |
| Surr: 1,2-Dichloroethane-d4 | 98 | | 75-130 | 0.80 | %REC | 5 | 07/05/12 17:25 |
| Surr: Toluene-d8 | 93 | | 75-125 | 0.50 | %REC | 5 | 07/05/12 17:25 |
| Surr: 4-Bromofluorobenzene | 100 | | 75-125 | 0.50 | %REC | 5 | 07/05/12 17:25 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 07/06/12 11:13 608154 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1207002-013A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W13* |
| **W Order:** | K1207002 | **Collection Date:** | 06/24/12 14:20 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 07/02/12 8:10 |
| **Inst. ID:** | MS01_11 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R24263 |
| **Revision:** | 07/06/12 11:13 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-T3502.D |
| **Col Type:** | | Total = 9.03 | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | 0.58 | J | 1.00 | 0.20 | µg/L | 1 | 07/05/12 17:57 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 17:57 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 17:57 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 17:57 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 17:57 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 17:57 |
| 1,1-Dichloroethane | 0.22 | J | 0.50 | 0.10 | µg/L | 1 | 07/05/12 17:57 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 17:57 |
| 1,2,3-Trichloropropane | ND | | 2.00 | 0.33 | µg/L | 1 | 07/05/12 17:57 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 0.10 | µg/L | 1 | 07/05/12 17:57 |
| 1,2,4-Trimethylbenzene | 0.48 | J | 0.50 | 0.10 | µg/L | 1 | 07/05/12 17:57 |
| 1,2-Dibromo-3-chloropropane | ND | | 5.00 | 1.00 | µg/L | 1 | 07/05/12 17:57 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 17:57 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 17:57 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 17:57 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 17:57 |
| 1,3,5-Trimethylbenzene | 0.33 | J | 0.50 | 0.10 | µg/L | 1 | 07/05/12 17:57 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 17:57 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 17:57 |
| 2-Butanone | ND | | 10.0 | 1.00 | µg/L | 1 | 07/05/12 17:57 |
| 2-Chloroethylvinyl ether | ND | | 5.00 | 2.50 | µg/L | 1 | 07/05/12 17:57 |
| 2-Hexanone | ND | | 5.00 | 1.00 | µg/L | 1 | 07/05/12 17:57 |
| 4-Chlorotoluene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 17:57 |
| 4-Methyl-2-pentanone | ND | | 5.00 | 1.00 | µg/L | 1 | 07/05/12 17:57 |
| Acetone | 4.57 | J | 10.0 | 1.00 | µg/L | 1 | 07/05/12 17:57 |
| Benzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 17:57 |
| Bromobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 17:57 |
| Bromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 17:57 |
| Bromodichloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 17:57 |
| Bromoform | ND | | 1.00 | 0.33 | µg/L | 1 | 07/05/12 17:57 |
| Bromomethane | ND | | 1.00 | 0.33 | µg/L | 1 | 07/05/12 17:57 |
| Carbon disulfide | 1.58 | | 0.50 | 0.11 | µg/L | 1 | 07/05/12 17:57 |
| Carbon tetrachloride | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 17:57 |
| Chlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 17:57 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 07/06/12 11:13 608155 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1207002-013A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W13*** |
| **W Order:** | K1207002 | **Collection Date:** | 06/24/12 14:20 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 07/02/12 8:10 |
| **Inst. ID:** | MS01_11 **Sample Size** 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS **%Moisture:** | **BatchNo:** | R24263 |
| **Revision:** | 07/06/12 11:13 **TestCode:** 8260W_CAL | **FileID:** | 1-SAMP-T3502.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | ND | | 1.00 | 0.33 | µg/L | 1 | 07/05/12 17:57 |
| Chloroform | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 17:57 |
| Chloromethane | ND | | 1.00 | 0.33 | µg/L | 1 | 07/05/12 17:57 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 17:57 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 17:57 |
| Cyclohexane | 0.89 | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 17:57 |
| Dibromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 17:57 |
| Dibromomethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 17:57 |
| Dichlorodifluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 07/05/12 17:57 |
| Ethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 17:57 |
| Hexachlorobutadiene | ND | | 1.00 | 0.10 | µg/L | 1 | 07/05/12 17:57 |
| Isopropylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 17:57 |
| Methyl tert-butyl ether | ND | | 1.00 | 0.16 | µg/L | 1 | 07/05/12 17:57 |
| Methylene chloride | 0.27 | J | 2.00 | 0.16 | µg/L | 1 | 07/05/12 17:57 |
| n-Propylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 17:57 |
| Naphthalene | ND | | 1.00 | 0.10 | µg/L | 1 | 07/05/12 17:57 |
| o-Xylene | 0.11 | J | 0.50 | 0.10 | µg/L | 1 | 07/05/12 17:57 |
| p-Isopropyltoluene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 17:57 |
| sec-Butylbenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 17:57 |
| Styrene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 17:57 |
| Tetrachloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 17:57 |
| Toluene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 17:57 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 17:57 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 17:57 |
| Trichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 17:57 |
| Trichlorofluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 07/05/12 17:57 |
| Vinyl acetate | ND | | 2.00 | 1.00 | µg/L | 1 | 07/05/12 17:57 |
| Vinyl chloride | ND | | 1.00 | 0.33 | µg/L | 1 | 07/05/12 17:57 |
| Xylenes (total) | 0.69 | J | 1.00 | 0.30 | µg/L | 1 | 07/05/12 17:57 |
| Surr: 1,2-Dichloroethane-d4 | 99 | | 75-130 | 0.16 | %REC | 1 | 07/05/12 17:57 |
| Surr: Toluene-d8 | 91 | | 75-125 | 0.10 | %REC | 1 | 07/05/12 17:57 |
| Surr: 4-Bromofluorobenzene | 97 | | 75-125 | 0.10 | %REC | 1 | 07/05/12 17:57 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 07/06/12 11:13 608155 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1207002-014A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W14* |
| **W Order:** | K1207002 | **Collection Date:** | 06/24/12 14:10 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 07/02/12 8:10 |
| **Inst. ID:** | MS01_11 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R24263 |
| **Revision:** | 07/06/12 11:13 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-T3503.D |
| **Col Type:** | | Total = 7970 | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 200 | 40.0 | µg/L | 200 | 07/05/12 18:30 |
| 1,1,1,2-Tetrachloroethane | ND | | 100 | 32.0 | µg/L | 200 | 07/05/12 18:30 |
| 1,1,1-Trichloroethane | 3380 | | 100 | 20.0 | µg/L | 200 | 07/05/12 18:30 |
| 1,1,2,2-Tetrachloroethane | ND | | 100 | 20.0 | µg/L | 200 | 07/05/12 18:30 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 618 | | 100 | 20.0 | µg/L | 200 | 07/05/12 18:30 |
| 1,1,2-Trichloroethane | ND | | 100 | 32.0 | µg/L | 200 | 07/05/12 18:30 |
| 1,1-Dichloroethane | 2610 | | 100 | 20.0 | µg/L | 200 | 07/05/12 18:30 |
| 1,1-Dichloroethene | 66.0 | J | 100 | 32.0 | µg/L | 200 | 07/05/12 18:30 |
| 1,2,3-Trichloropropane | ND | | 400 | 66.0 | µg/L | 200 | 07/05/12 18:30 |
| 1,2,4-Trichlorobenzene | ND | | 200 | 20.0 | µg/L | 200 | 07/05/12 18:30 |
| 1,2,4-Trimethylbenzene | ND | | 100 | 20.0 | µg/L | 200 | 07/05/12 18:30 |
| 1,2-Dibromo-3-chloropropane | ND | | 1000 | 200 | µg/L | 200 | 07/05/12 18:30 |
| 1,2-Dibromoethane | ND | | 100 | 32.0 | µg/L | 200 | 07/05/12 18:30 |
| 1,2-Dichlorobenzene | ND | | 100 | 20.0 | µg/L | 200 | 07/05/12 18:30 |
| 1,2-Dichloroethane | ND | | 100 | 32.0 | µg/L | 200 | 07/05/12 18:30 |
| 1,2-Dichloropropane | ND | | 100 | 32.0 | µg/L | 200 | 07/05/12 18:30 |
| 1,3,5-Trimethylbenzene | ND | | 100 | 20.0 | µg/L | 200 | 07/05/12 18:30 |
| 1,3-Dichlorobenzene | ND | | 100 | 20.0 | µg/L | 200 | 07/05/12 18:30 |
| 1,4-Dichlorobenzene | ND | | 100 | 32.0 | µg/L | 200 | 07/05/12 18:30 |
| 2-Butanone | ND | | 2000 | 200 | µg/L | 200 | 07/05/12 18:30 |
| 2-Chloroethylvinyl ether | ND | | 1000 | 500 | µg/L | 200 | 07/05/12 18:30 |
| 2-Hexanone | ND | | 1000 | 200 | µg/L | 200 | 07/05/12 18:30 |
| 4-Chlorotoluene | ND | | 100 | 20.0 | µg/L | 200 | 07/05/12 18:30 |
| 4-Methyl-2-pentanone | ND | | 1000 | 200 | µg/L | 200 | 07/05/12 18:30 |
| Acetone | 530 | J | 2000 | 200 | µg/L | 200 | 07/05/12 18:30 |
| Benzene | 20.0 | J | 100 | 20.0 | µg/L | 200 | 07/05/12 18:30 |
| Bromobenzene | ND | | 100 | 20.0 | µg/L | 200 | 07/05/12 18:30 |
| Bromochloromethane | ND | | 100 | 20.0 | µg/L | 200 | 07/05/12 18:30 |
| Bromodichloromethane | ND | | 100 | 20.0 | µg/L | 200 | 07/05/12 18:30 |
| Bromoform | ND | | 200 | 66.0 | µg/L | 200 | 07/05/12 18:30 |
| Bromomethane | ND | | 200 | 66.0 | µg/L | 200 | 07/05/12 18:30 |
| Carbon disulfide | 234 | | 100 | 22.0 | µg/L | 200 | 07/05/12 18:30 |
| Carbon tetrachloride | ND | | 100 | 20.0 | µg/L | 200 | 07/05/12 18:30 |
| Chlorobenzene | ND | | 100 | 20.0 | µg/L | 200 | 07/05/12 18:30 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 07/06/12 11:13 608156 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1207002-014A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W14*** |
| **W Order:** | K1207002 | **Collection Date:** | 06/24/12 14:10 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 07/02/12 8:10 |
| **Inst. ID:** | MS01_11 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R24263 |
| **Revision:** | 07/06/12 11:13 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-T3503.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | ND | | 200 | 66.0 | µg/L | 200 | 07/05/12 18:30 |
| Chloroform | ND | | 100 | 20.0 | µg/L | 200 | 07/05/12 18:30 |
| Chloromethane | ND | | 200 | 66.0 | µg/L | 200 | 07/05/12 18:30 |
| cis-1,2-Dichloroethene | 134 | | 100 | 20.0 | µg/L | 200 | 07/05/12 18:30 |
| cis-1,3-Dichloropropene | ND | | 100 | 32.0 | µg/L | 200 | 07/05/12 18:30 |
| Cyclohexane | 56.0 | J | 100 | 20.0 | µg/L | 200 | 07/05/12 18:30 |
| Dibromochloromethane | ND | | 100 | 20.0 | µg/L | 200 | 07/05/12 18:30 |
| Dibromomethane | ND | | 100 | 32.0 | µg/L | 200 | 07/05/12 18:30 |
| Dichlorodifluoromethane | ND | | 200 | 20.0 | µg/L | 200 | 07/05/12 18:30 |
| Ethylbenzene | ND | | 100 | 20.0 | µg/L | 200 | 07/05/12 18:30 |
| Hexachlorobutadiene | ND | | 200 | 20.0 | µg/L | 200 | 07/05/12 18:30 |
| Isopropylbenzene | ND | | 100 | 20.0 | µg/L | 200 | 07/05/12 18:30 |
| Methyl tert-butyl ether | ND | | 200 | 32.0 | µg/L | 200 | 07/05/12 18:30 |
| Methylene chloride | 176 | J | 400 | 32.0 | µg/L | 200 | 07/05/12 18:30 |
| n-Propylbenzene | ND | | 100 | 20.0 | µg/L | 200 | 07/05/12 18:30 |
| Naphthalene | ND | | 200 | 20.0 | µg/L | 200 | 07/05/12 18:30 |
| o-Xylene | ND | | 100 | 20.0 | µg/L | 200 | 07/05/12 18:30 |
| p-Isopropyltoluene | ND | | 100 | 32.0 | µg/L | 200 | 07/05/12 18:30 |
| sec-Butylbenzene | ND | | 100 | 32.0 | µg/L | 200 | 07/05/12 18:30 |
| Styrene | ND | | 100 | 20.0 | µg/L | 200 | 07/05/12 18:30 |
| Tetrachloroethene | 114 | | 100 | 20.0 | µg/L | 200 | 07/05/12 18:30 |
| Toluene | 32.0 | J | 100 | 20.0 | µg/L | 200 | 07/05/12 18:30 |
| trans-1,2-Dichloroethene | ND | | 100 | 20.0 | µg/L | 200 | 07/05/12 18:30 |
| trans-1,3-Dichloropropene | ND | | 100 | 32.0 | µg/L | 200 | 07/05/12 18:30 |
| Trichloroethene | ND | | 100 | 20.0 | µg/L | 200 | 07/05/12 18:30 |
| Trichlorofluoromethane | ND | | 200 | 20.0 | µg/L | 200 | 07/05/12 18:30 |
| Vinyl acetate | ND | | 400 | 200 | µg/L | 200 | 07/05/12 18:30 |
| Vinyl chloride | ND | | 200 | 66.0 | µg/L | 200 | 07/05/12 18:30 |
| Xylenes (total) | ND | | 200 | 60.0 | µg/L | 200 | 07/05/12 18:30 |
| Surr: 1,2-Dichloroethane-d4 | 96 | | 75-130 | 32.0 | %REC | 200 | 07/05/12 18:30 |
| Surr: Toluene-d8 | 93 | | 75-125 | 20.0 | %REC | 200 | 07/05/12 18:30 |
| Surr: 4-Bromofluorobenzene | 100 | | 75-125 | 20.0 | %REC | 200 | 07/05/12 18:30 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 07/06/12 11:13 608156 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1207002-016A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - TRIP*** |
| **W Order:** | K1207002 | **Collection Date:** | 06/30/12 0:00 |
| **Matrix:** | WATER Q | **Date Received:** | 07/02/12 8:10 |
| **Inst. ID:** | MS01_11 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R24263 |
| **Revision:** | 07/06/12 11:13 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-T3504.D |
| **Col Type:** | | Total = 3.06 | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 1.00 | 0.20 | µg/L | 1 | 07/05/12 19:03 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 19:03 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 19:03 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 19:03 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 19:03 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 19:03 |
| 1,1-Dichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 19:03 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 19:03 |
| 1,2,3-Trichloropropane | ND | | 2.00 | 0.33 | µg/L | 1 | 07/05/12 19:03 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 0.10 | µg/L | 1 | 07/05/12 19:03 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 19:03 |
| 1,2-Dibromo-3-chloropropane | ND | | 5.00 | 1.00 | µg/L | 1 | 07/05/12 19:03 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 19:03 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 19:03 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 19:03 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 19:03 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 19:03 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 19:03 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 19:03 |
| 2-Butanone | ND | | 10.0 | 1.00 | µg/L | 1 | 07/05/12 19:03 |
| 2-Chloroethylvinyl ether | ND | | 5.00 | 2.50 | µg/L | 1 | 07/05/12 19:03 |
| 2-Hexanone | ND | | 5.00 | 1.00 | µg/L | 1 | 07/05/12 19:03 |
| 4-Chlorotoluene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 19:03 |
| 4-Methyl-2-pentanone | ND | | 5.00 | 1.00 | µg/L | 1 | 07/05/12 19:03 |
| Acetone | 2.51 | J | 10.0 | 1.00 | µg/L | 1 | 07/05/12 19:03 |
| Benzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 19:03 |
| Bromobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 19:03 |
| Bromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 19:03 |
| Bromodichloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 19:03 |
| Bromoform | ND | | 1.00 | 0.33 | µg/L | 1 | 07/05/12 19:03 |
| Bromomethane | ND | | 1.00 | 0.33 | µg/L | 1 | 07/05/12 19:03 |
| Carbon disulfide | ND | | 0.50 | 0.11 | µg/L | 1 | 07/05/12 19:03 |
| Carbon tetrachloride | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 19:03 |
| Chlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 19:03 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 07/06/12 11:13 608157 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1207002-016A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - TRIP*** |
| **W Order:** | K1207002 | **Collection Date:** | 06/30/12 0:00 |
| **Matrix:** | WATER Q | **Date Received:** | 07/02/12 8:10 |
| **Inst. ID:** | MS01_11 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R24263 |
| **Revision:** | 07/06/12 11:13 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-T3504.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | ND | | 1.00 | 0.33 | µg/L | 1 | 07/05/12 19:03 |
| Chloroform | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 19:03 |
| Chloromethane | ND | | 1.00 | 0.33 | µg/L | 1 | 07/05/12 19:03 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 19:03 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 19:03 |
| Cyclohexane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 19:03 |
| Dibromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 19:03 |
| Dibromomethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 19:03 |
| Dichlorodifluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 07/05/12 19:03 |
| Ethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 19:03 |
| Hexachlorobutadiene | ND | | 1.00 | 0.10 | µg/L | 1 | 07/05/12 19:03 |
| Isopropylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 19:03 |
| Methyl tert-butyl ether | ND | | 1.00 | 0.16 | µg/L | 1 | 07/05/12 19:03 |
| Methylene chloride | 0.55 | J | 2.00 | 0.16 | µg/L | 1 | 07/05/12 19:03 |
| n-Propylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 19:03 |
| Naphthalene | ND | | 1.00 | 0.10 | µg/L | 1 | 07/05/12 19:03 |
| o-Xylene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 19:03 |
| p-Isopropyltoluene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 19:03 |
| sec-Butylbenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 19:03 |
| Styrene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 19:03 |
| Tetrachloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 19:03 |
| Toluene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 19:03 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 19:03 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 19:03 |
| Trichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 19:03 |
| Trichlorofluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 07/05/12 19:03 |
| Vinyl acetate | ND | | 2.00 | 1.00 | µg/L | 1 | 07/05/12 19:03 |
| Vinyl chloride | ND | | 1.00 | 0.33 | µg/L | 1 | 07/05/12 19:03 |
| Xylenes (total) | ND | | 1.00 | 0.30 | µg/L | 1 | 07/05/12 19:03 |
| Surr: 1,2-Dichloroethane-d4 | 97 | | 75-130 | 0.16 | %REC | 1 | 07/05/12 19:03 |
| Surr: Toluene-d8 | 93 | | 75-125 | 0.10 | %REC | 1 | 07/05/12 19:03 |
| Surr: 4-Bromofluorobenzene | 99 | | 75-125 | 0.10 | %REC | 1 | 07/05/12 19:03 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 07/06/12 11:13 608157 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1207002-017A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - Field*** |
| **W Order:** | K1207002 | **Collection Date:** | 06/30/12 15:00 |
| **Matrix:** | WATER Q | **Date Received:** | 07/02/12 8:10 |
| **Inst. ID:** | MS01_11 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R24263 |
| **Revision:** | 07/06/12 11:13 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-T3505.D |
| **Col Type:** | | Total = 3.34 | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 1.00 | 0.20 | µg/L | 1 | 07/05/12 19:35 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 19:35 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 19:35 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 19:35 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 19:35 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 19:35 |
| 1,1-Dichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 19:35 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 19:35 |
| 1,2,3-Trichloropropane | ND | | 2.00 | 0.33 | µg/L | 1 | 07/05/12 19:35 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 0.10 | µg/L | 1 | 07/05/12 19:35 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 19:35 |
| 1,2-Dibromo-3-chloropropane | ND | | 5.00 | 1.00 | µg/L | 1 | 07/05/12 19:35 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 19:35 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 19:35 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 19:35 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 19:35 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 19:35 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 19:35 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 19:35 |
| 2-Butanone | ND | | 10.0 | 1.00 | µg/L | 1 | 07/05/12 19:35 |
| 2-Chloroethylvinyl ether | ND | | 5.00 | 2.50 | µg/L | 1 | 07/05/12 19:35 |
| 2-Hexanone | ND | | 5.00 | 1.00 | µg/L | 1 | 07/05/12 19:35 |
| 4-Chlorotoluene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 19:35 |
| 4-Methyl-2-pentanone | ND | | 5.00 | 1.00 | µg/L | 1 | 07/05/12 19:35 |
| Acetone | 2.77 | J | 10.0 | 1.00 | µg/L | 1 | 07/05/12 19:35 |
| Benzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 19:35 |
| Bromobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 19:35 |
| Bromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 19:35 |
| Bromodichloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 19:35 |
| Bromoform | ND | | 1.00 | 0.33 | µg/L | 1 | 07/05/12 19:35 |
| Bromomethane | ND | | 1.00 | 0.33 | µg/L | 1 | 07/05/12 19:35 |
| Carbon disulfide | ND | | 0.50 | 0.11 | µg/L | 1 | 07/05/12 19:35 |
| Carbon tetrachloride | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 19:35 |
| Chlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 19:35 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1207002-017A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - Field*** |
| **W Order:** | K1207002 | **Collection Date:** | 06/30/12 15:00 |
| **Matrix:** | WATER Q | **Date Received:** | 07/02/12 8:10 |
| **Inst. ID:** | MS01_11 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R24263 |
| **Revision:** | 07/06/12 11:13 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-T3505.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | ND | | 1.00 | 0.33 | µg/L | 1 | 07/05/12 19:35 |
| Chloroform | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 19:35 |
| Chloromethane | ND | | 1.00 | 0.33 | µg/L | 1 | 07/05/12 19:35 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 19:35 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 19:35 |
| Cyclohexane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 19:35 |
| Dibromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 19:35 |
| Dibromomethane | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 19:35 |
| Dichlorodifluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 07/05/12 19:35 |
| Ethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 19:35 |
| Hexachlorobutadiene | ND | | 1.00 | 0.10 | µg/L | 1 | 07/05/12 19:35 |
| Isopropylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 19:35 |
| Methyl tert-butyl ether | ND | | 1.00 | 0.16 | µg/L | 1 | 07/05/12 19:35 |
| Methylene chloride | 0.57 | J | 2.00 | 0.16 | µg/L | 1 | 07/05/12 19:35 |
| n-Propylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 19:35 |
| Naphthalene | ND | | 1.00 | 0.10 | µg/L | 1 | 07/05/12 19:35 |
| o-Xylene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 19:35 |
| p-Isopropyltoluene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 19:35 |
| sec-Butylbenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 19:35 |
| Styrene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 19:35 |
| Tetrachloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 19:35 |
| Toluene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 19:35 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 19:35 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 07/05/12 19:35 |
| Trichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 07/05/12 19:35 |
| Trichlorofluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 07/05/12 19:35 |
| Vinyl acetate | ND | | 2.00 | 1.00 | µg/L | 1 | 07/05/12 19:35 |
| Vinyl chloride | ND | | 1.00 | 0.33 | µg/L | 1 | 07/05/12 19:35 |
| Xylenes (total) | ND | | 1.00 | 0.30 | µg/L | 1 | 07/05/12 19:35 |
| Surr: 1,2-Dichloroethane-d4 | 106 | | 75-130 | 0.16 | %REC | 1 | 07/05/12 19:35 |
| Surr: Toluene-d8 | 92 | | 75-125 | 0.10 | %REC | 1 | 07/05/12 19:35 |
| Surr: 4-Bromofluorobenzene | 98 | | 75-125 | 0.10 | %REC | 1 | 07/05/12 19:35 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Life Science Laboratories, Inc.**
**5854 Butternut Drive**
**East Syracuse, NY 13057** **(315) 445-1900**

Tuesday, April 03, 2012

Ken W. Kloeber
Ken W. Kloeber Consulting Engineers
PO Box 140
Boston, NY 14025

TEL: (716) 864-0012

Project: 189-02
RE: Analytical Results Order No.: K1203241

Dear Ken W. Kloeber:

Life Science Laboratories, Inc. received 18 sample(s) on 3/23/2012 for the analyses presented in the following report. Sample results relate only to the samples as received by the laboratory.

Very truly yours,
Life Science Laboratories, Inc.

Anthony Crescenzi
Project Manager

## Life Science Laboratories, Inc.

### Sample Receipt Checklist

Client Name: **KLOEBERENG**

Date and Time Received: **3/23/2012 8:15:00 AM**

Work Order Number: **K1203241**

Received by: gis

Checklist completed by: BS 3-23-12 (Initials / Date)

Reviewed by: AC 3-23-12 (Initials / Date)

Delivery Method: FedEx

| | | | |
|---|---|---|---|
| Shipping container/cooler in good condition? | Yes ☑ | No ☐ | Not Present ☐ |
| Custody seals intact on shipping container/cooler? | Yes ☐ | No ☐ | Not Present ☑ |
| Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Applicable ☑ |
| Chain of custody present? | Yes ☑ | No ☐ | |
| Chain of custody signed when relinquished and received? | Yes ☑ | No ☐ | |
| Chain of custody agrees with sample labels? | Yes ☑ | No ☐ | |
| Samples in proper container/bottle? | Yes ☑ | No ☐ | |
| Sample containers intact? | Yes ☑ | No ☐ | |
| Sufficient sample volume for indicated test? | Yes ☑ | No ☐ | |
| All samples received within holding time? | Yes ☑ | No ☐ | |
| Container/Temp Blank temperature in compliance? | Yes ☑ | No ☐ | |
| Water - VOA vials have zero headspace? | Yes ☑ | No ☐ | No VOA vials submitted ☐ |
| Water - pH acceptable upon receipt? | Yes ☐ | No ☐ | Not Applicable ☑ |

Comments:

Corrective Action:

K1203241

# Ken W. Kloeber Consulting Engineers

(716) 864-0012 tel
(775) 860-3804 fax
KloeberEng@aol.com
PO Box 140 • Boston NY 14025

KWKCE Proj no. 189-02
Sampled by initials: KK
PO no.

For Lab use

## Environmental Sample Chain-of-Custody

[X] Analysis Requested

| | KWKCE Sample ID or Location | Date | Time | Type | Matrix | No. of containers | (1) VOC | (2) | (3) | (4) | (5) | (6) | TAT | Remarks / Instructions |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 001 | 189-W1 | 3/22/12 | 1715 | G C | GW | 2 | X | | | | | | | KEEP LIMITS AS LOW AS POSSIBLE; REPORT ALL RESULTS AND QC VALUES (QS, JS, ETC.) AND ALL DATA & QC QUALIFIERS. |
| 002 | 189-W2 | | 1730 | G C | | | | | | | | | | EMAIL REPORT & INVOICE; FOLLOW UP W/ EQUIS EDD |
| 003 | 189-W3 | | 1600 | G C | | | | | | | | | | USE EMAILED LIST |
| 004 | 189-W4 | | 1420 | G C | | | | | | | | | | OF EXPANDED |
| 005 | 189-W5 | | 1250 | G C | | | | | | | | | | 8260 LIST |
| 006 | 189-W6 | | 1420 | G C | | | | | | | | | | |
| 007 | 189-W7 | | 1500 | G C | | | | | | | | | | NO TICS |
| 008 | 189-W8 | | 1400 | G C | | | | | | | | | | |
| 009 | 189-W9 | | 1645 | G C | | | | | | | | | | |
| 010 | 189-W10 | | 1445 | G C | | | | | | | | | | |
| 011 | 189-W11 | | 1610 | G C | | | | | | | | | | |
| 012 | 189-W12 | | 1620 | G C | | | | | | | | | | |
| 013 | 189-W13 | | 1430 | G C | | | | | | | | | | |
| 014 | 189-W14 | | 1545 | G C | ↓ | | | | | | | | | |
| 015 | 189-TL | | 1200 | G C | GW | | ↓ | | | | | | | |
| 016 | 189-CARB | ↓ | 1630 | G C | WW | ↓ | X | | | | | | | |
| | | | | G C | | | | | | | | | | |

| Signature of person sampling | Courier | Picked-up or dropped-off location |
|---|---|---|
| K Kloeber | FedEx GR | WALDEN |

| Relinquished-by signature | Date | Time | Received-by signature |
|---|---|---|---|
| K Kloeber | 3/22 | 1800 | |
| Relinquished-by signature | Date | Time | Received-by signature |
| | | | |
| Relinquished-by signature | Date | Time | Received-at-Lab-by signature |
| | 3-23-12 | 08:15 | |

| Analysis requested above / Test Method | Sample Container(s) Type | Size | Preservative(s) |
|---|---|---|---|
| (1) VOC 8260 | VOA | 40 | HCL, 40 |
| (2) | | | |
| (3) | | | |
| (4) | | | |
| (5) | | | |
| (6) | | | |

Lab use

K1203241

# Ken W. Kloeber Consulting Engineers

(716) 864-0012 tel
(775) 860-3804 fax
KloeberEng@aol.com
PO Box 140 • Boston NY 14025

KWKCE Proj no. 189-02
PO no.
Sampled by initials: KK

For Lab use

## Environmental Sample Chain-of-Custody

| KWKCE Sample ID or Location | Date | Time | Type | Matrix | No. of containers | (1) VOCs | (2) | (3) | (4) | (5) | (6) | TAT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 017 189-TRIP | 3/22/12 | — | G C | DI | 2 | X | | | | | | |
| 018 189-FIELD | 3/22/12 | 1200 | G C | DI | 2 | X | | | | | | |
| | | | G C | | | | | | | | | |
| | | | G C | | | | | | | | | |
| | | | G C | | | | | | | | | |
| | | | G C | | | | | | | | | |
| | | | G C | | | | | | | | | |
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| | | | G C | | | | | | | | | |
| | | | G C | | | | | | | | | |
| | | | G C | | | | | | | | | |
| | | | G C | | | | | | | | | |

Remarks / Instructions:

KEEP LIMITS AS LOW AS POSSIBLE.; REPORT ALL RESULTS AND QC VALUES (QS, JS, ETC.) AND ALL DATA & QC QUALIFIERS.

EMAIL REPORT & INVOICE; FOLLOW UP W/ EQUIS EDD.

USE EMAILED LIST OF EXPANDED 8260 LIST

NO TICS

| Signature of person sampling | Courier | Picked-up or dropped-off location |
|---|---|---|
| KKloeber | FEDEX COR | WALDEN |

| Relinquished-by signature | Date | Time | Received-by signature |
|---|---|---|---|
| KKloeber | 3/22 | 1800 | |
| Relinquished-by signature | Date | Time | Received-by signature |
| | | | |
| Relinquished-by signature | Date | Time | Received-at-Lab-by signature |
| | 3-23-12 | 0815 | |

| Analysis requested above / Test Method | Sample Container(s) Type | Size | Preservative(s) |
|---|---|---|---|
| (1) VOC 8260 | 40A | 40 | HCl, 4° |
| (2) | | | |
| (3) | | | |
| (4) | | | |
| (5) | | | |
| (6) | | | |

Lab use

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1203241-001A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W1*** |
| **W Order:** | K1203241 | **Collection Date:** | 03/22/12 17:15 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 03/23/12 8:15 |
| **Inst. ID:** | MS01_11 **Sample Size** 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS **%Moisture:** | **BatchNo:** | R23816 |
| **Revision:** | 03/30/12 15:21 **TestCode:** 8260W_CAL | **FileID:** | 1-SAMP-T2977.D |
| **Col Type:** | Total 2938.20 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | 13.2 | J | 25.0 | 5.00 | µg/L | 25 | 03/29/12 13:48 |
| 1,1,1,2-Tetrachloroethane | ND | | 12.5 | 4.00 | µg/L | 25 | 03/29/12 13:48 |
| 1,1,1-Trichloroethane | 606 | | 12.5 | 2.50 | µg/L | 25 | 03/29/12 13:48 |
| 1,1,2,2-Tetrachloroethane | ND | | 12.5 | 2.50 | µg/L | 25 | 03/29/12 13:48 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 10.0 | J | 12.5 | 2.50 | µg/L | 25 | 03/29/12 13:48 |
| 1,1,2-Trichloroethane | ND | | 12.5 | 4.00 | µg/L | 25 | 03/29/12 13:48 |
| 1,1-Dichloroethane | 1480 | | 12.5 | 2.50 | µg/L | 25 | 03/29/12 13:48 |
| 1,1-Dichloroethene | 39.8 | | 12.5 | 4.00 | µg/L | 25 | 03/29/12 13:48 |
| 1,2,3-Trichloropropane | ND | | 50.0 | 8.25 | µg/L | 25 | 03/29/12 13:48 |
| 1,2,4-Trichlorobenzene | ND | | 25.0 | 2.50 | µg/L | 25 | 03/29/12 13:48 |
| 1,2,4-Trimethylbenzene | 69.2 | | 12.5 | 2.50 | µg/L | 25 | 03/29/12 13:48 |
| 1,2-Dibromo-3-chloropropane | ND | | 125 | 25.0 | µg/L | 25 | 03/29/12 13:48 |
| 1,2-Dibromoethane | ND | | 12.5 | 4.00 | µg/L | 25 | 03/29/12 13:48 |
| 1,2-Dichlorobenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/29/12 13:48 |
| 1,2-Dichloroethane | ND | | 12.5 | 4.00 | µg/L | 25 | 03/29/12 13:48 |
| 1,2-Dichloropropane | ND | | 12.5 | 4.00 | µg/L | 25 | 03/29/12 13:48 |
| 1,3,5-Trimethylbenzene | 17.8 | | 12.5 | 2.50 | µg/L | 25 | 03/29/12 13:48 |
| 1,3-Dichlorobenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/29/12 13:48 |
| 1,4-Dichlorobenzene | ND | | 12.5 | 4.00 | µg/L | 25 | 03/29/12 13:48 |
| 2-Butanone | ND | | 250 | 25.0 | µg/L | 25 | 03/29/12 13:48 |
| 2-Chloroethylvinyl ether | ND | | 125 | 62.5 | µg/L | 25 | 03/29/12 13:48 |
| 2-Hexanone | ND | | 125 | 25.0 | µg/L | 25 | 03/29/12 13:48 |
| 4-Chlorotoluene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/29/12 13:48 |
| 4-Methyl-2-pentanone | ND | | 125 | 25.0 | µg/L | 25 | 03/29/12 13:48 |
| Acetone | ND | | 250 | 25.0 | µg/L | 25 | 03/29/12 13:48 |
| Benzene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/29/12 13:48 |
| Bromobenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/29/12 13:48 |
| Bromochloromethane | ND | | 12.5 | 2.50 | µg/L | 25 | 03/29/12 13:48 |
| Bromodichloromethane | ND | | 12.5 | 2.50 | µg/L | 25 | 03/29/12 13:48 |
| Bromoform | ND | | 25.0 | 8.25 | µg/L | 25 | 03/29/12 13:48 |
| Bromomethane | ND | | 25.0 | 8.25 | µg/L | 25 | 03/29/12 13:48 |
| Carbon disulfide | ND | | 12.5 | 2.75 | µg/L | 25 | 03/29/12 13:48 |
| Carbon tetrachloride | ND | | 12.5 | 2.50 | µg/L | 25 | 03/29/12 13:48 |
| Chlorobenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/29/12 13:48 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 04/03/12 6:25 597980 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1203241-001A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W1* |
| **W Order:** | K1203241 | **Collection Date:** | 03/22/12 17:15 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 03/23/12 8:15 |
| **Inst. ID:** | MS01_11 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R23816 |
| **Revision:** | 03/30/12 15:21 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-T2977.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| VOLATILE ORGANIC COMPOUNDS BY GC/MS | | | | | SW8260B | | |
| Chloroethane | 38.2 | | 25.0 | 8.25 | µg/L | 25 | 03/29/12 13:48 |
| Chloroform | ND | | 12.5 | 2.50 | µg/L | 25 | 03/29/12 13:48 |
| Chloromethane | ND | | 25.0 | 8.25 | µg/L | 25 | 03/29/12 13:48 |
| cis-1,2-Dichloroethene | 411 | | 12.5 | 2.50 | µg/L | 25 | 03/29/12 13:48 |
| cis-1,3-Dichloropropene | ND | | 12.5 | 4.00 | µg/L | 25 | 03/29/12 13:48 |
| Cyclohexane | 7.25 | J | 12.5 | 2.50 | µg/L | 25 | 03/29/12 13:48 |
| Dibromochloromethane | ND | | 12.5 | 2.50 | µg/L | 25 | 03/29/12 13:48 |
| Dibromomethane | ND | | 12.5 | 4.00 | µg/L | 25 | 03/29/12 13:48 |
| Dichlorodifluoromethane | ND | | 25.0 | 2.50 | µg/L | 25 | 03/29/12 13:48 |
| Ethylbenzene | 2.75 | J | 12.5 | 2.50 | µg/L | 25 | 03/29/12 13:48 |
| Hexachlorobutadiene | ND | | 25.0 | 2.50 | µg/L | 25 | 03/29/12 13:48 |
| Isopropylbenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/29/12 13:48 |
| Methyl tert-butyl ether | ND | | 25.0 | 4.00 | µg/L | 25 | 03/29/12 13:48 |
| Methylene chloride | 11.5 | J | 50.0 | 4.00 | µg/L | 25 | 03/29/12 13:48 |
| n-Propylbenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/29/12 13:48 |
| Naphthalene | ND | | 25.0 | 2.50 | µg/L | 25 | 03/29/12 13:48 |
| o-Xylene | 19.0 | | 12.5 | 2.50 | µg/L | 25 | 03/29/12 13:48 |
| p-Isopropyltoluene | 8.50 | J | 12.5 | 4.00 | µg/L | 25 | 03/29/12 13:48 |
| sec-Butylbenzene | ND | | 12.5 | 4.00 | µg/L | 25 | 03/29/12 13:48 |
| Styrene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/29/12 13:48 |
| Tetrachloroethene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/29/12 13:48 |
| Toluene | 9.00 | J | 12.5 | 2.50 | µg/L | 25 | 03/29/12 13:48 |
| trans-1,2-Dichloroethene | 2.50 | J | 12.5 | 2.50 | µg/L | 25 | 03/29/12 13:48 |
| trans-1,3-Dichloropropene | ND | | 12.5 | 4.00 | µg/L | 25 | 03/29/12 13:48 |
| Trichloroethene | 36.5 | | 12.5 | 2.50 | µg/L | 25 | 03/29/12 13:48 |
| Trichlorofluoromethane | ND | | 25.0 | 2.50 | µg/L | 25 | 03/29/12 13:48 |
| Vinyl acetate | ND | | 50.0 | 25.0 | µg/L | 25 | 03/29/12 13:48 |
| Vinyl chloride | 156 | | 25.0 | 8.25 | µg/L | 25 | 03/29/12 13:48 |
| Xylenes (total) | 32.2 | | 25.0 | 7.50 | µg/L | 25 | 03/29/12 13:48 |
| Surr: 1,2-Dichloroethane-d4 | 99 | | 75-128 | 4.00 | %REC | 25 | 03/29/12 13:48 |
| Surr: Toluene-d8 | 111 | | 75-125 | 2.50 | %REC | 25 | 03/29/12 13:48 |
| Surr: 4-Bromofluorobenzene | 101 | | 75-125 | 2.50 | %REC | 25 | 03/29/12 13:48 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 04/03/12 6:25 597980 **roject Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

**CLIENT** Ken W. Kloeber Consulting Engineers
**Project:** 189-02
**W Order:** K1203241
**Matrix:** GROUNDWATER
**Inst. ID:** MS01_11
**ColumnID:** Rtx-VMS
**Revision:** 03/30/12 15:21
**Col Type:**

**Sample Size** 10 mL
**%Moisture:**
**TestCode:** 8260W_CAL

**Lab ID:** K1203241-002A
**Client Sample ID:** 189 - W2
**Collection Date:** 03/22/12 17:30
**Date Received:** 03/23/12 8:15
**PrepDate:**
**BatchNo:** R23816
**FileID:** 1-SAMP-T2978.D

Total 5110

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| VOLATILE ORGANIC COMPOUNDS BY GC/MS | | | | | SW8260B | | |
| (m+p)-Xylene | 23.5 | J | 50.0 | 10.0 | µg/L | 50 | 03/29/12 14:20 |
| 1,1,1,2-Tetrachloroethane | ND | | 25.0 | 8.00 | µg/L | 50 | 03/29/12 14:20 |
| 1,1,1-Trichloroethane | 1730 | | 25.0 | 5.00 | µg/L | 50 | 03/29/12 14:20 |
| 1,1,2,2-Tetrachloroethane | ND | | 25.0 | 5.00 | µg/L | 50 | 03/29/12 14:20 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 36.0 | | 25.0 | 5.00 | µg/L | 50 | 03/29/12 14:20 |
| 1,1,2-Trichloroethane | ND | | 25.0 | 8.00 | µg/L | 50 | 03/29/12 14:20 |
| 1,1-Dichloroethane | 1570 | | 25.0 | 5.00 | µg/L | 50 | 03/29/12 14:20 |
| 1,1-Dichloroethene | 68.5 | | 25.0 | 8.00 | µg/L | 50 | 03/29/12 14:20 |
| 1,2,3-Trichloropropane | ND | | 100 | 16.5 | µg/L | 50 | 03/29/12 14:20 |
| 1,2,4-Trichlorobenzene | ND | | 50.0 | 5.00 | µg/L | 50 | 03/29/12 14:20 |
| 1,2,4-Trimethylbenzene | 89.0 | | 25.0 | 5.00 | µg/L | 50 | 03/29/12 14:20 |
| 1,2-Dibromo-3-chloropropane | ND | | 250 | 50.0 | µg/L | 50 | 03/29/12 14:20 |
| 1,2-Dibromoethane | ND | | 25.0 | 8.00 | µg/L | 50 | 03/29/12 14:20 |
| 1,2-Dichlorobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 03/29/12 14:20 |
| 1,2-Dichloroethane | ND | | 25.0 | 8.00 | µg/L | 50 | 03/29/12 14:20 |
| 1,2-Dichloropropane | ND | | 25.0 | 8.00 | µg/L | 50 | 03/29/12 14:20 |
| 1,3,5-Trimethylbenzene | 27.0 | | 25.0 | 5.00 | µg/L | 50 | 03/29/12 14:20 |
| 1,3-Dichlorobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 03/29/12 14:20 |
| 1,4-Dichlorobenzene | ND | | 25.0 | 8.00 | µg/L | 50 | 03/29/12 14:20 |
| 2-Butanone | ND | | 500 | 50.0 | µg/L | 50 | 03/29/12 14:20 |
| 2-Chloroethylvinyl ether | ND | | 250 | 125 | µg/L | 50 | 03/29/12 14:20 |
| 2-Hexanone | ND | | 250 | 50.0 | µg/L | 50 | 03/29/12 14:20 |
| 4-Chlorotoluene | ND | | 25.0 | 5.00 | µg/L | 50 | 03/29/12 14:20 |
| 4-Methyl-2-pentanone | ND | | 250 | 50.0 | µg/L | 50 | 03/29/12 14:20 |
| Acetone | ND | | 500 | 50.0 | µg/L | 50 | 03/29/12 14:20 |
| Benzene | ND | | 25.0 | 5.00 | µg/L | 50 | 03/29/12 14:20 |
| Bromobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 03/29/12 14:20 |
| Bromochloromethane | ND | | 25.0 | 5.00 | µg/L | 50 | 03/29/12 14:20 |
| Bromodichloromethane | ND | | 25.0 | 5.00 | µg/L | 50 | 03/29/12 14:20 |
| Bromoform | ND | | 50.0 | 16.5 | µg/L | 50 | 03/29/12 14:20 |
| Bromomethane | ND | | 50.0 | 16.5 | µg/L | 50 | 03/29/12 14:20 |
| Carbon disulfide | ND | | 25.0 | 5.50 | µg/L | 50 | 03/29/12 14:20 |
| Carbon tetrachloride | ND | | 25.0 | 5.00 | µg/L | 50 | 03/29/12 14:20 |
| Chlorobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 03/29/12 14:20 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 04/03/12 6:25 597981 **roject Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | | | |
|---|---|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | | | **Lab ID:** | **K1203241-002A** |
| **Project:** | 189-02 | | | **Client Sample ID:** | ***189 - W2*** |
| **W Order:** | K1203241 | | | **Collection Date:** | 03/22/12 17:30 |
| **Matrix:** | GROUNDWATER | | | **Date Received:** | 03/23/12 8:15 |
| **Inst. ID:** | MS01_11 | **Sample Size** | 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | | **BatchNo:** | R23816 |
| **Revision:** | 03/30/12 15:21 | **TestCode:** | 8260W_CAL | **FileID:** | 1-SAMP-T2978.D |
| **Col Type:** | | | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | 69.0 | | 50.0 | 16.5 | µg/L | 50 | 03/29/12 14:20 |
| Chloroform | ND | | 25.0 | 5.00 | µg/L | 50 | 03/29/12 14:20 |
| Chloromethane | ND | | 50.0 | 16.5 | µg/L | 50 | 03/29/12 14:20 |
| cis-1,2-Dichloroethene | 1130 | | 25.0 | 5.00 | µg/L | 50 | 03/29/12 14:20 |
| cis-1,3-Dichloropropene | ND | | 25.0 | 8.00 | µg/L | 50 | 03/29/12 14:20 |
| Cyclohexane | ND | | 25.0 | 5.00 | µg/L | 50 | 03/29/12 14:20 |
| Dibromochloromethane | ND | | 25.0 | 5.00 | µg/L | 50 | 03/29/12 14:20 |
| Dibromomethane | ND | | 25.0 | 8.00 | µg/L | 50 | 03/29/12 14:20 |
| Dichlorodifluoromethane | ND | | 50.0 | 5.00 | µg/L | 50 | 03/29/12 14:20 |
| Ethylbenzene | 5.00 | J | 25.0 | 5.00 | µg/L | 50 | 03/29/12 14:20 |
| Hexachlorobutadiene | ND | | 50.0 | 5.00 | µg/L | 50 | 03/29/12 14:20 |
| Isopropylbenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 03/29/12 14:20 |
| Methyl tert-butyl ether | ND | | 50.0 | 8.00 | µg/L | 50 | 03/29/12 14:20 |
| Methylene chloride | 22.0 | J | 100 | 8.00 | µg/L | 50 | 03/29/12 14:20 |
| n-Propylbenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 03/29/12 14:20 |
| Naphthalene | ND | | 50.0 | 5.00 | µg/L | 50 | 03/29/12 14:20 |
| o-Xylene | 36.0 | | 25.0 | 5.00 | µg/L | 50 | 03/29/12 14:20 |
| p-Isopropyltoluene | 14.5 | J | 25.0 | 8.00 | µg/L | 50 | 03/29/12 14:20 |
| sec-Butylbenzene | ND | | 25.0 | 8.00 | µg/L | 50 | 03/29/12 14:20 |
| Styrene | ND | | 25.0 | 5.00 | µg/L | 50 | 03/29/12 14:20 |
| Tetrachloroethene | ND | | 25.0 | 5.00 | µg/L | 50 | 03/29/12 14:20 |
| Toluene | 19.5 | J | 25.0 | 5.00 | µg/L | 50 | 03/29/12 14:20 |
| trans-1,2-Dichloroethene | 6.00 | J | 25.0 | 5.00 | µg/L | 50 | 03/29/12 14:20 |
| trans-1,3-Dichloropropene | ND | | 25.0 | 8.00 | µg/L | 50 | 03/29/12 14:20 |
| Trichloroethene | 62.0 | | 25.0 | 5.00 | µg/L | 50 | 03/29/12 14:20 |
| Trichlorofluoromethane | ND | | 50.0 | 5.00 | µg/L | 50 | 03/29/12 14:20 |
| Vinyl acetate | ND | | 100 | 50.0 | µg/L | 50 | 03/29/12 14:20 |
| Vinyl chloride | 202 | | 50.0 | 16.5 | µg/L | 50 | 03/29/12 14:20 |
| Xylenes (total) | 59.5 | | 50.0 | 15.0 | µg/L | 50 | 03/29/12 14:20 |
| Surr: 1,2-Dichloroethane-d4 | 98 | | 75-128 | 8.00 | %REC | 50 | 03/29/12 14:20 |
| Surr: Toluene-d8 | 112 | | 75-125 | 5.00 | %REC | 50 | 03/29/12 14:20 |
| Surr: 4-Bromofluorobenzene | 103 | | 75-125 | 5.00 | %REC | 50 | 03/29/12 14:20 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 04/03/12 6:25 597981 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | | | |
|---|---|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | | | **Lab ID:** | **K1203241-003A** |
| **Project:** | 189-02 | | | **Client Sample ID:** | ***189 - W3*** |
| **W Order:** | K1203241 | | | **Collection Date:** | 03/22/12 16:00 |
| **Matrix:** | GROUNDWATER | | | **Date Received:** | 03/23/12 8:15 |
| **Inst. ID:** | MS01_11 | **Sample Size** | 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | | **BatchNo:** | R23817 |
| **Revision:** | 03/30/12 15:19 | **TestCode:** | 8260W_CAL | **FileID:** | 1-SAMP-T3001.D |
| **Col Type:** | | | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| VOLATILE ORGANIC COMPOUNDS BY GC/MS | | | | | SW8260B | | |
| (m+p)-Xylene | 12.8 | J | 25.0 | 5.00 | µg/L | 25 | 03/30/12 8:41 |
| 1,1,1,2-Tetrachloroethane | ND | | 12.5 | 4.00 | µg/L | 25 | 03/30/12 8:41 |
| 1,1,1-Trichloroethane | 593 | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 8:41 |
| 1,1,2,2-Tetrachloroethane | ND | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 8:41 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 17.0 | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 8:41 |
| 1,1,2-Trichloroethane | ND | | 12.5 | 4.00 | µg/L | 25 | 03/30/12 8:41 |
| 1,1-Dichloroethane | 366 | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 8:41 |
| 1,1-Dichloroethene | 26.0 | | 12.5 | 4.00 | µg/L | 25 | 03/30/12 8:41 |
| 1,2,3-Trichloropropane | ND | | 50.0 | 8.25 | µg/L | 25 | 03/30/12 8:41 |
| 1,2,4-Trichlorobenzene | ND | | 25.0 | 2.50 | µg/L | 25 | 03/30/12 8:41 |
| 1,2,4-Trimethylbenzene | 41.0 | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 8:41 |
| 1,2-Dibromo-3-chloropropane | ND | | 125 | 25.0 | µg/L | 25 | 03/30/12 8:41 |
| 1,2-Dibromoethane | ND | | 12.5 | 4.00 | µg/L | 25 | 03/30/12 8:41 |
| 1,2-Dichlorobenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 8:41 |
| 1,2-Dichloroethane | ND | | 12.5 | 4.00 | µg/L | 25 | 03/30/12 8:41 |
| 1,2-Dichloropropane | ND | | 12.5 | 4.00 | µg/L | 25 | 03/30/12 8:41 |
| 1,3,5-Trimethylbenzene | 11.2 | J | 12.5 | 2.50 | µg/L | 25 | 03/30/12 8:41 |
| 1,3-Dichlorobenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 8:41 |
| 1,4-Dichlorobenzene | ND | | 12.5 | 4.00 | µg/L | 25 | 03/30/12 8:41 |
| 2-Butanone | ND | | 250 | 25.0 | µg/L | 25 | 03/30/12 8:41 |
| 2-Chloroethylvinyl ether | ND | | 125 | 62.5 | µg/L | 25 | 03/30/12 8:41 |
| 2-Hexanone | ND | | 125 | 25.0 | µg/L | 25 | 03/30/12 8:41 |
| 4-Chlorotoluene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 8:41 |
| 4-Methyl-2-pentanone | ND | | 125 | 25.0 | µg/L | 25 | 03/30/12 8:41 |
| Acetone | ND | | 250 | 25.0 | µg/L | 25 | 03/30/12 8:41 |
| Benzene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 8:41 |
| Bromobenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 8:41 |
| Bromochloromethane | ND | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 8:41 |
| Bromodichloromethane | ND | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 8:41 |
| Bromoform | ND | | 25.0 | 8.25 | µg/L | 25 | 03/30/12 8:41 |
| Bromomethane | ND | | 25.0 | 8.25 | µg/L | 25 | 03/30/12 8:41 |
| Carbon disulfide | ND | | 12.5 | 2.75 | µg/L | 25 | 03/30/12 8:41 |
| Carbon tetrachloride | ND | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 8:41 |
| Chlorobenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 8:41 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 04/03/12 6:25 597995 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | | | |
|---|---|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | | | **Lab ID:** | **K1203241-003A** |
| **Project:** | 189-02 | | | **Client Sample ID:** | ***189 - W3*** |
| **W Order:** | K1203241 | | | **Collection Date:** | 03/22/12 16:00 |
| **Matrix:** | GROUNDWATER | | | **Date Received:** | 03/23/12 8:15 |
| **Inst. ID:** | MS01_11 | **Sample Size** | 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | | **BatchNo:** | R23817 |
| **Revision:** | 03/30/12 15:19 | **TestCode:** | 8260W_CAL | **FileID:** | 1-SAMP-T3001.D |
| **Col Type:** | | | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | 45.2 | | 25.0 | 8.25 | µg/L | 25 | 03/30/12 8:41 |
| Chloroform | ND | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 8:41 |
| Chloromethane | ND | | 25.0 | 8.25 | µg/L | 25 | 03/30/12 8:41 |
| cis-1,2-Dichloroethene | 432 | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 8:41 |
| cis-1,3-Dichloropropene | ND | | 12.5 | 4.00 | µg/L | 25 | 03/30/12 8:41 |
| Cyclohexane | ND | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 8:41 |
| Dibromochloromethane | ND | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 8:41 |
| Dibromomethane | ND | | 12.5 | 4.00 | µg/L | 25 | 03/30/12 8:41 |
| Dichlorodifluoromethane | ND | | 25.0 | 2.50 | µg/L | 25 | 03/30/12 8:41 |
| Ethylbenzene | 3.00 | J | 12.5 | 2.50 | µg/L | 25 | 03/30/12 8:41 |
| Hexachlorobutadiene | ND | | 25.0 | 2.50 | µg/L | 25 | 03/30/12 8:41 |
| Isopropylbenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 8:41 |
| Methyl tert-butyl ether | ND | | 25.0 | 4.00 | µg/L | 25 | 03/30/12 8:41 |
| Methylene chloride | ND | | 50.0 | 4.00 | µg/L | 25 | 03/30/12 8:41 |
| n-Propylbenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 8:41 |
| Naphthalene | ND | | 25.0 | 2.50 | µg/L | 25 | 03/30/12 8:41 |
| o-Xylene | 17.8 | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 8:41 |
| p-Isopropyltoluene | ND | | 12.5 | 4.00 | µg/L | 25 | 03/30/12 8:41 |
| sec-Butylbenzene | ND | | 12.5 | 4.00 | µg/L | 25 | 03/30/12 8:41 |
| Styrene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 8:41 |
| Tetrachloroethene | 5.25 | J | 12.5 | 2.50 | µg/L | 25 | 03/30/12 8:41 |
| Toluene | 9.50 | J | 12.5 | 2.50 | µg/L | 25 | 03/30/12 8:41 |
| trans-1,2-Dichloroethene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 8:41 |
| trans-1,3-Dichloropropene | ND | | 12.5 | 4.00 | µg/L | 25 | 03/30/12 8:41 |
| Trichloroethene | 14.0 | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 8:41 |
| Trichlorofluoromethane | ND | | 25.0 | 2.50 | µg/L | 25 | 03/30/12 8:41 |
| Vinyl acetate | ND | | 50.0 | 25.0 | µg/L | 25 | 03/30/12 8:41 |
| Vinyl chloride | 38.2 | | 25.0 | 8.25 | µg/L | 25 | 03/30/12 8:41 |
| Xylenes (total) | 30.5 | | 25.0 | 7.50 | µg/L | 25 | 03/30/12 8:41 |
| Surr: 1,2-Dichloroethane-d4 | 105 | | 75-128 | 4.00 | %REC | 25 | 03/30/12 8:41 |
| Surr: Toluene-d8 | 110 | | 75-125 | 2.50 | %REC | 25 | 03/30/12 8:41 |
| Surr: 4-Bromofluorobenzene | 101 | | 75-125 | 2.50 | %REC | 25 | 03/30/12 8:41 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 04/03/12 6:25 597995 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | | | |
|---|---|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | | | **Lab ID:** | **K1203241-004A** |
| **Project:** | 189-02 | | | **Client Sample ID:** | ***189 - W4*** |
| **W Order:** | K1203241 | | | **Collection Date:** | 03/22/12 14:20 |
| **Matrix:** | GROUNDWATER | | | **Date Received:** | 03/23/12 8:15 |
| **Inst. ID:** | MS01_11 | **Sample Size** | 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | | **BatchNo:** | R23816 |
| **Revision:** | 03/30/12 15:21 | **TestCode:** | 8260W_CAL | **FileID:** | 1-SAMP-T2982.D |
| **Col Type:** | | | Total 51.53 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | 3.63 | | 1.00 | 0.20 | µg/L | 1 | 03/29/12 16:32 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 03/29/12 16:32 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 16:32 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 16:32 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 16:32 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 03/29/12 16:32 |
| 1,1-Dichloroethane | 0.24 | J | 0.50 | 0.10 | µg/L | 1 | 03/29/12 16:32 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.16 | µg/L | 1 | 03/29/12 16:32 |
| 1,2,3-Trichloropropane | ND | | 2.00 | 0.33 | µg/L | 1 | 03/29/12 16:32 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 0.10 | µg/L | 1 | 03/29/12 16:32 |
| 1,2,4-Trimethylbenzene | 2.43 | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 16:32 |
| 1,2-Dibromo-3-chloropropane | ND | | 5.00 | 1.00 | µg/L | 1 | 03/29/12 16:32 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.16 | µg/L | 1 | 03/29/12 16:32 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 16:32 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 03/29/12 16:32 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.16 | µg/L | 1 | 03/29/12 16:32 |
| 1,3,5-Trimethylbenzene | 0.58 | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 16:32 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 16:32 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 03/29/12 16:32 |
| 2-Butanone | ND | | 10.0 | 1.00 | µg/L | 1 | 03/29/12 16:32 |
| 2-Chloroethylvinyl ether | ND | | 5.00 | 2.50 | µg/L | 1 | 03/29/12 16:32 |
| 2-Hexanone | ND | | 5.00 | 1.00 | µg/L | 1 | 03/29/12 16:32 |
| 4-Chlorotoluene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 16:32 |
| 4-Methyl-2-pentanone | ND | | 5.00 | 1.00 | µg/L | 1 | 03/29/12 16:32 |
| Acetone | 18.7 | | 10.0 | 1.00 | µg/L | 1 | 03/29/12 16:32 |
| Benzene | 13.1 | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 16:32 |
| Bromobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 16:32 |
| Bromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 16:32 |
| Bromodichloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 16:32 |
| Bromoform | ND | | 1.00 | 0.33 | µg/L | 1 | 03/29/12 16:32 |
| Bromomethane | ND | | 1.00 | 0.33 | µg/L | 1 | 03/29/12 16:32 |
| Carbon disulfide | ND | | 0.50 | 0.11 | µg/L | 1 | 03/29/12 16:32 |
| Carbon tetrachloride | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 16:32 |
| Chlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 16:32 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 04/03/12 6:25 597982 **roject Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1203241-004A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W4*** |
| **W Order:** | K1203241 | **Collection Date:** | 03/22/12 14:20 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 03/23/12 8:15 |
| **Inst. ID:** | MS01_11 **Sample Size** 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS **%Moisture:** | **BatchNo:** | R23816 |
| **Revision:** | 03/30/12 15:21 **TestCode:** 8260W_CAL | **FileID:** | 1-SAMP-T2982.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | ND | | 1.00 | 0.33 | µg/L | 1 | 03/29/12 16:32 |
| Chloroform | 0.20 | J | 0.50 | 0.10 | µg/L | 1 | 03/29/12 16:32 |
| Chloromethane | ND | | 1.00 | 0.33 | µg/L | 1 | 03/29/12 16:32 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 16:32 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 03/29/12 16:32 |
| Cyclohexane | 3.49 | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 16:32 |
| Dibromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 16:32 |
| Dibromomethane | ND | | 0.50 | 0.16 | µg/L | 1 | 03/29/12 16:32 |
| Dichlorodifluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 03/29/12 16:32 |
| Ethylbenzene | 1.49 | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 16:32 |
| Hexachlorobutadiene | ND | | 1.00 | 0.10 | µg/L | 1 | 03/29/12 16:32 |
| Isopropylbenzene | 0.14 | J | 0.50 | 0.10 | µg/L | 1 | 03/29/12 16:32 |
| Methyl tert-butyl ether | 0.98 | J | 1.00 | 0.16 | µg/L | 1 | 03/29/12 16:32 |
| Methylene chloride | ND | | 2.00 | 0.16 | µg/L | 1 | 03/29/12 16:32 |
| n-Propylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 16:32 |
| Naphthalene | ND | | 1.00 | 0.10 | µg/L | 1 | 03/29/12 16:32 |
| o-Xylene | 1.79 | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 16:32 |
| p-Isopropyltoluene | ND | | 0.50 | 0.16 | µg/L | 1 | 03/29/12 16:32 |
| sec-Butylbenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 03/29/12 16:32 |
| Styrene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 16:32 |
| Tetrachloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 16:32 |
| Toluene | 4.90 | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 16:32 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 16:32 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 03/29/12 16:32 |
| Trichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 16:32 |
| Trichlorofluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 03/29/12 16:32 |
| Vinyl acetate | ND | | 2.00 | 1.00 | µg/L | 1 | 03/29/12 16:32 |
| Vinyl chloride | ND | | 1.00 | 0.33 | µg/L | 1 | 03/29/12 16:32 |
| Xylenes (total) | 5.42 | | 1.00 | 0.30 | µg/L | 1 | 03/29/12 16:32 |
| Surr: 1,2-Dichloroethane-d4 | 102 | | 75-128 | 0.16 | %REC | 1 | 03/29/12 16:32 |
| Surr: Toluene-d8 | 111 | | 75-125 | 0.10 | %REC | 1 | 03/29/12 16:32 |
| Surr: 4-Bromofluorobenzene | 104 | | 75-125 | 0.10 | %REC | 1 | 03/29/12 16:32 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 04/03/12 6:25 597982 **roject Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

**CLIENT** Ken W. Kloeber Consulting Engineers
**Project:** 189-02
**W Order:** K1203241
**Matrix:** GROUNDWATER
**Inst. ID:** MS01_11 **Sample Size** 10 mL
**ColumnID:** Rtx-VMS **%Moisture:**
**Revision:** 03/30/12 15:19 **TestCode:** 8260W_CAL
**Col Type:**

**Lab ID:** K1203241-005A
**Client Sample ID:** *189 - W5*
**Collection Date:** 03/22/12 12:50
**Date Received:** 03/23/12 8:15
**PrepDate:**
**BatchNo:** R23817
**FileID:** 1-SAMP-T3002.D

Total 1,195.7

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| VOLATILE ORGANIC COMPOUNDS BY GC/MS | | | | | SW8260B | | |
| (m+p)-Xylene | ND | | 25.0 | 5.00 | µg/L | 25 | 03/30/12 9:14 |
| 1,1,1,2-Tetrachloroethane | ND | | 12.5 | 4.00 | µg/L | 25 | 03/30/12 9:14 |
| 1,1,1-Trichloroethane | ND | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 9:14 |
| 1,1,2,2-Tetrachloroethane | ND | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 9:14 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 9:14 |
| 1,1,2-Trichloroethane | ND | | 12.5 | 4.00 | µg/L | 25 | 03/30/12 9:14 |
| 1,1-Dichloroethane | 716 | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 9:14 |
| 1,1-Dichloroethene | 25.5 | | 12.5 | 4.00 | µg/L | 25 | 03/30/12 9:14 |
| 1,2,3-Trichloropropane | ND | | 50.0 | 8.25 | µg/L | 25 | 03/30/12 9:14 |
| 1,2,4-Trichlorobenzene | ND | | 25.0 | 2.50 | µg/L | 25 | 03/30/12 9:14 |
| 1,2,4-Trimethylbenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 9:14 |
| 1,2-Dibromo-3-chloropropane | ND | | 125 | 25.0 | µg/L | 25 | 03/30/12 9:14 |
| 1,2-Dibromoethane | ND | | 12.5 | 4.00 | µg/L | 25 | 03/30/12 9:14 |
| 1,2-Dichlorobenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 9:14 |
| 1,2-Dichloroethane | 9.50 | J | 12.5 | 4.00 | µg/L | 25 | 03/30/12 9:14 |
| 1,2-Dichloropropane | ND | | 12.5 | 4.00 | µg/L | 25 | 03/30/12 9:14 |
| 1,3,5-Trimethylbenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 9:14 |
| 1,3-Dichlorobenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 9:14 |
| 1,4-Dichlorobenzene | ND | | 12.5 | 4.00 | µg/L | 25 | 03/30/12 9:14 |
| 2-Butanone | ND | | 250 | 25.0 | µg/L | 25 | 03/30/12 9:14 |
| 2-Chloroethylvinyl ether | ND | | 125 | 62.5 | µg/L | 25 | 03/30/12 9:14 |
| 2-Hexanone | ND | | 125 | 25.0 | µg/L | 25 | 03/30/12 9:14 |
| 4-Chlorotoluene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 9:14 |
| 4-Methyl-2-pentanone | ND | | 125 | 25.0 | µg/L | 25 | 03/30/12 9:14 |
| Acetone | ND | | 250 | 25.0 | µg/L | 25 | 03/30/12 9:14 |
| Benzene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 9:14 |
| Bromobenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 9:14 |
| Bromochloromethane | ND | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 9:14 |
| Bromodichloromethane | ND | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 9:14 |
| Bromoform | ND | | 25.0 | 8.25 | µg/L | 25 | 03/30/12 9:14 |
| Bromomethane | ND | | 25.0 | 8.25 | µg/L | 25 | 03/30/12 9:14 |
| Carbon disulfide | ND | | 12.5 | 2.75 | µg/L | 25 | 03/30/12 9:14 |
| Carbon tetrachloride | ND | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 9:14 |
| Chlorobenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 9:14 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 04/03/12 6:25 597996 **roject Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | | | |
|---|---|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | | | **Lab ID:** | **K1203241-005A** |
| **Project:** | 189-02 | | | **Client Sample ID:** | ***189 - W5*** |
| **W Order:** | K1203241 | | | **Collection Date:** | 03/22/12 12:50 |
| **Matrix:** | GROUNDWATER | | | **Date Received:** | 03/23/12 8:15 |
| **Inst. ID:** | MS01_11 | **Sample Size** | 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | | **BatchNo:** | R23817 |
| **Revision:** | 03/30/12 15:19 | **TestCode:** | 8260W_CAL | **FileID:** | 1-SAMP-T3002.D |
| **Col Type:** | | | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | 41.2 | | 25.0 | 8.25 | µg/L | 25 | 03/30/12 9:14 |
| Chloroform | ND | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 9:14 |
| Chloromethane | ND | | 25.0 | 8.25 | µg/L | 25 | 03/30/12 9:14 |
| cis-1,2-Dichloroethene | 125 | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 9:14 |
| cis-1,3-Dichloropropene | ND | | 12.5 | 4.00 | µg/L | 25 | 03/30/12 9:14 |
| Cyclohexane | 6.50 | J | 12.5 | 2.50 | µg/L | 25 | 03/30/12 9:14 |
| Dibromochloromethane | ND | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 9:14 |
| Dibromomethane | ND | | 12.5 | 4.00 | µg/L | 25 | 03/30/12 9:14 |
| Dichlorodifluoromethane | ND | | 25.0 | 2.50 | µg/L | 25 | 03/30/12 9:14 |
| Ethylbenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 9:14 |
| Hexachlorobutadiene | ND | | 25.0 | 2.50 | µg/L | 25 | 03/30/12 9:14 |
| Isopropylbenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 9:14 |
| Methyl tert-butyl ether | ND | | 25.0 | 4.00 | µg/L | 25 | 03/30/12 9:14 |
| Methylene chloride | ND | | 50.0 | 4.00 | µg/L | 25 | 03/30/12 9:14 |
| n-Propylbenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 9:14 |
| Naphthalene | ND | | 25.0 | 2.50 | µg/L | 25 | 03/30/12 9:14 |
| o-Xylene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 9:14 |
| p-Isopropyltoluene | ND | | 12.5 | 4.00 | µg/L | 25 | 03/30/12 9:14 |
| sec-Butylbenzene | ND | | 12.5 | 4.00 | µg/L | 25 | 03/30/12 9:14 |
| Styrene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 9:14 |
| Tetrachloroethene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 9:14 |
| Toluene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 9:14 |
| trans-1,2-Dichloroethene | 2.50 | J | 12.5 | 2.50 | µg/L | 25 | 03/30/12 9:14 |
| trans-1,3-Dichloropropene | ND | | 12.5 | 4.00 | µg/L | 25 | 03/30/12 9:14 |
| Trichloroethene | 25.5 | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 9:14 |
| Trichlorofluoromethane | ND | | 25.0 | 2.50 | µg/L | 25 | 03/30/12 9:14 |
| Vinyl acetate | ND | | 50.0 | 25.0 | µg/L | 25 | 03/30/12 9:14 |
| Vinyl chloride | 244 | | 25.0 | 8.25 | µg/L | 25 | 03/30/12 9:14 |
| Xylenes (total) | ND | | 25.0 | 7.50 | µg/L | 25 | 03/30/12 9:14 |
| Surr: 1,2-Dichloroethane-d4 | 105 | | 75-128 | 4.00 | %REC | 25 | 03/30/12 9:14 |
| Surr: Toluene-d8 | 111 | | 75-125 | 2.50 | %REC | 25 | 03/30/12 9:14 |
| Surr: 4-Bromofluorobenzene | 104 | | 75-125 | 2.50 | %REC | 25 | 03/30/12 9:14 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 04/03/12 6:25 597996 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | | | |
|---|---|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | | | **Lab ID:** | K1203241-006A |
| **Project:** | 189-02 | | | **Client Sample ID:** | *189 - W6* |
| **W Order:** | K1203241 | | | **Collection Date:** | 03/22/12 14:20 |
| **Matrix:** | GROUNDWATER | | | **Date Received:** | 03/23/12 8:15 |
| **Inst. ID:** | MS01_11 | **Sample Size** | 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | | **BatchNo:** | R23816 |
| **Revision:** | 03/30/12 15:21 | **TestCode:** | 8260W_CAL | **FileID:** | 1-SAMP-T2984.D |
| **Col Type:** | | | Total 44.91 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 1.00 | 0.20 | µg/L | 1 | 03/29/12 17:37 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 03/29/12 17:37 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 17:37 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 17:37 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 17:37 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 03/29/12 17:37 |
| 1,1-Dichloroethane | 24.6 | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 17:37 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.16 | µg/L | 1 | 03/29/12 17:37 |
| 1,2,3-Trichloropropane | ND | | 2.00 | 0.33 | µg/L | 1 | 03/29/12 17:37 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 0.10 | µg/L | 1 | 03/29/12 17:37 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 17:37 |
| 1,2-Dibromo-3-chloropropane | ND | | 5.00 | 1.00 | µg/L | 1 | 03/29/12 17:37 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.16 | µg/L | 1 | 03/29/12 17:37 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 17:37 |
| 1,2-Dichloroethane | 0.16 | J | 0.50 | 0.16 | µg/L | 1 | 03/29/12 17:37 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.16 | µg/L | 1 | 03/29/12 17:37 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 17:37 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 17:37 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 03/29/12 17:37 |
| 2-Butanone | ND | | 10.0 | 1.00 | µg/L | 1 | 03/29/12 17:37 |
| 2-Chloroethylvinyl ether | ND | | 5.00 | 2.50 | µg/L | 1 | 03/29/12 17:37 |
| 2-Hexanone | ND | | 5.00 | 1.00 | µg/L | 1 | 03/29/12 17:37 |
| 4-Chlorotoluene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 17:37 |
| 4-Methyl-2-pentanone | ND | | 5.00 | 1.00 | µg/L | 1 | 03/29/12 17:37 |
| Acetone | ND | | 10.0 | 1.00 | µg/L | 1 | 03/29/12 17:37 |
| Benzene | 8.67 | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 17:37 |
| Bromobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 17:37 |
| Bromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 17:37 |
| Bromodichloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 17:37 |
| Bromoform | ND | | 1.00 | 0.33 | µg/L | 1 | 03/29/12 17:37 |
| Bromomethane | ND | | 1.00 | 0.33 | µg/L | 1 | 03/29/12 17:37 |
| Carbon disulfide | ND | | 0.50 | 0.11 | µg/L | 1 | 03/29/12 17:37 |
| Carbon tetrachloride | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 17:37 |
| Chlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 17:37 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 04/03/12 6:25 597983 **roject Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | | | |
|---|---|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | | | **Lab ID:** | **K1203241-006A** |
| **Project:** | 189-02 | | | **Client Sample ID:** | ***189 - W6*** |
| **W Order:** | K1203241 | | | **Collection Date:** | 03/22/12 14:20 |
| **Matrix:** | GROUNDWATER | | | **Date Received:** | 03/23/12 8:15 |
| **Inst. ID:** | MS01_11 | **Sample Size** | 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | | **BatchNo:** | R23816 |
| **Revision:** | 03/30/12 15:21 | **TestCode:** | 8260W_CAL | **FileID:** | 1-SAMP-T2984.D |
| **Col Type:** | | | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | 0.53 | J | 1.00 | 0.33 | µg/L | 1 | 03/29/12 17:37 |
| Chloroform | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 17:37 |
| Chloromethane | ND | | 1.00 | 0.33 | µg/L | 1 | 03/29/12 17:37 |
| cis-1,2-Dichloroethene | 9.29 | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 17:37 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 03/29/12 17:37 |
| Cyclohexane | 0.75 | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 17:37 |
| Dibromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 17:37 |
| Dibromomethane | ND | | 0.50 | 0.16 | µg/L | 1 | 03/29/12 17:37 |
| Dichlorodifluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 03/29/12 17:37 |
| Ethylbenzene | 0.54 | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 17:37 |
| Hexachlorobutadiene | ND | | 1.00 | 0.10 | µg/L | 1 | 03/29/12 17:37 |
| Isopropylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 17:37 |
| Methyl tert-butyl ether | ND | | 1.00 | 0.16 | µg/L | 1 | 03/29/12 17:37 |
| Methylene chloride | ND | | 2.00 | 0.16 | µg/L | 1 | 03/29/12 17:37 |
| n-Propylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 17:37 |
| Naphthalene | ND | | 1.00 | 0.10 | µg/L | 1 | 03/29/12 17:37 |
| o-Xylene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 17:37 |
| p-Isopropyltoluene | ND | | 0.50 | 0.16 | µg/L | 1 | 03/29/12 17:37 |
| sec-Butylbenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 03/29/12 17:37 |
| Styrene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 17:37 |
| Tetrachloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 17:37 |
| Toluene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 17:37 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 17:37 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 03/29/12 17:37 |
| Trichloroethene | 0.37 | J | 0.50 | 0.10 | µg/L | 1 | 03/29/12 17:37 |
| Trichlorofluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 03/29/12 17:37 |
| Vinyl acetate | ND | | 2.00 | 1.00 | µg/L | 1 | 03/29/12 17:37 |
| Vinyl chloride | ND | | 1.00 | 0.33 | µg/L | 1 | 03/29/12 17:37 |
| Xylenes (total) | ND | | 1.00 | 0.30 | µg/L | 1 | 03/29/12 17:37 |
| Surr: 1,2-Dichloroethane-d4 | 104 | | 75-128 | 0.16 | %REC | 1 | 03/29/12 17:37 |
| Surr: Toluene-d8 | 110 | | 75-125 | 0.10 | %REC | 1 | 03/29/12 17:37 |
| Surr: 4-Bromofluorobenzene | 104 | | 75-125 | 0.10 | %REC | 1 | 03/29/12 17:37 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 04/03/12 6:25 597983 **roject Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

**CLIENT** Ken W. Kloeber Consulting Engineers
**Project:** 189-02
**W Order:** K1203241
**Matrix:** GROUNDWATER
**Inst. ID:** MS01_11 **Sample Size** 10 mL
**ColumnID:** Rtx-VMS **%Moisture:**
**Revision:** 03/30/12 15:21 **TestCode:** 8260W_CAL
**Col Type:** Total 1315.35

**Lab ID:** K1203241-007A
**Client Sample ID:** 189 - W7
**Collection Date:** 03/22/12 15:00
**Date Received:** 03/23/12 8:15
**PrepDate:**
**BatchNo:** R23816
**FileID:** 1-SAMP-T2985.D

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| VOLATILE ORGANIC COMPOUNDS BY GC/MS | | | | | SW8260B | | |
| (m+p)-Xylene | ND | | 25.0 | 5.00 | µg/L | 25 | 03/29/12 18:10 |
| 1,1,1,2-Tetrachloroethane | ND | | 12.5 | 4.00 | µg/L | 25 | 03/29/12 18:10 |
| 1,1,1-Trichloroethane | ND | | 12.5 | 2.50 | µg/L | 25 | 03/29/12 18:10 |
| 1,1,2,2-Tetrachloroethane | ND | | 12.5 | 2.50 | µg/L | 25 | 03/29/12 18:10 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 2.75 | J | 12.5 | 2.50 | µg/L | 25 | 03/29/12 18:10 |
| 1,1,2-Trichloroethane | ND | | 12.5 | 4.00 | µg/L | 25 | 03/29/12 18:10 |
| 1,1-Dichloroethane | 1080 | | 12.5 | 2.50 | µg/L | 25 | 03/29/12 18:10 |
| 1,1-Dichloroethene | 20.0 | | 12.5 | 4.00 | µg/L | 25 | 03/29/12 18:10 |
| 1,2,3-Trichloropropane | ND | | 50.0 | 8.25 | µg/L | 25 | 03/29/12 18:10 |
| 1,2,4-Trichlorobenzene | ND | | 25.0 | 2.50 | µg/L | 25 | 03/29/12 18:10 |
| 1,2,4-Trimethylbenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/29/12 18:10 |
| 1,2-Dibromo-3-chloropropane | ND | | 125 | 25.0 | µg/L | 25 | 03/29/12 18:10 |
| 1,2-Dibromoethane | ND | | 12.5 | 4.00 | µg/L | 25 | 03/29/12 18:10 |
| 1,2-Dichlorobenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/29/12 18:10 |
| 1,2-Dichloroethane | 67.2 | | 12.5 | 4.00 | µg/L | 25 | 03/29/12 18:10 |
| 1,2-Dichloropropane | ND | | 12.5 | 4.00 | µg/L | 25 | 03/29/12 18:10 |
| 1,3,5-Trimethylbenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/29/12 18:10 |
| 1,3-Dichlorobenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/29/12 18:10 |
| 1,4-Dichlorobenzene | ND | | 12.5 | 4.00 | µg/L | 25 | 03/29/12 18:10 |
| 2-Butanone | ND | | 250 | 25.0 | µg/L | 25 | 03/29/12 18:10 |
| 2-Chloroethylvinyl ether | ND | | 125 | 62.5 | µg/L | 25 | 03/29/12 18:10 |
| 2-Hexanone | ND | | 125 | 25.0 | µg/L | 25 | 03/29/12 18:10 |
| 4-Chlorotoluene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/29/12 18:10 |
| 4-Methyl-2-pentanone | ND | | 125 | 25.0 | µg/L | 25 | 03/29/12 18:10 |
| Acetone | ND | | 250 | 25.0 | µg/L | 25 | 03/29/12 18:10 |
| Benzene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/29/12 18:10 |
| Bromobenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/29/12 18:10 |
| Bromochloromethane | ND | | 12.5 | 2.50 | µg/L | 25 | 03/29/12 18:10 |
| Bromodichloromethane | ND | | 12.5 | 2.50 | µg/L | 25 | 03/29/12 18:10 |
| Bromoform | ND | | 25.0 | 8.25 | µg/L | 25 | 03/29/12 18:10 |
| Bromomethane | ND | | 25.0 | 8.25 | µg/L | 25 | 03/29/12 18:10 |
| Carbon disulfide | ND | | 12.5 | 2.75 | µg/L | 25 | 03/29/12 18:10 |
| Carbon tetrachloride | ND | | 12.5 | 2.50 | µg/L | 25 | 03/29/12 18:10 |
| Chlorobenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/29/12 18:10 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 04/03/12 6:25 597984 **roject Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | | | |
|---|---|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | | | **Lab ID:** | **K1203241-007A** |
| **Project:** | 189-02 | | | **Client Sample ID:** | ***189 - W7*** |
| **W Order:** | K1203241 | | | **Collection Date:** | 03/22/12 15:00 |
| **Matrix:** | GROUNDWATER | | | **Date Received:** | 03/23/12 8:15 |
| **Inst. ID:** | MS01_11 | **Sample Size** | 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | | **BatchNo:** | R23816 |
| **Revision:** | 03/30/12 15:21 | **TestCode:** | 8260W_CAL | **FileID:** | 1-SAMP-T2985.D |
| **Col Type:** | | | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | ND | | 25.0 | 8.25 | µg/L | 25 | 03/29/12 18:10 |
| Chloroform | ND | | 12.5 | 2.50 | µg/L | 25 | 03/29/12 18:10 |
| Chloromethane | ND | | 25.0 | 8.25 | µg/L | 25 | 03/29/12 18:10 |
| cis-1,2-Dichloroethene | 34.8 | | 12.5 | 2.50 | µg/L | 25 | 03/29/12 18:10 |
| cis-1,3-Dichloropropene | ND | | 12.5 | 4.00 | µg/L | 25 | 03/29/12 18:10 |
| Cyclohexane | ND | | 12.5 | 2.50 | µg/L | 25 | 03/29/12 18:10 |
| Dibromochloromethane | ND | | 12.5 | 2.50 | µg/L | 25 | 03/29/12 18:10 |
| Dibromomethane | ND | | 12.5 | 4.00 | µg/L | 25 | 03/29/12 18:10 |
| Dichlorodifluoromethane | ND | | 25.0 | 2.50 | µg/L | 25 | 03/29/12 18:10 |
| Ethylbenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/29/12 18:10 |
| Hexachlorobutadiene | ND | | 25.0 | 2.50 | µg/L | 25 | 03/29/12 18:10 |
| Isopropylbenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/29/12 18:10 |
| Methyl tert-butyl ether | ND | | 25.0 | 4.00 | µg/L | 25 | 03/29/12 18:10 |
| Methylene chloride | 24.2 | J | 50.0 | 4.00 | µg/L | 25 | 03/29/12 18:10 |
| n-Propylbenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/29/12 18:10 |
| Naphthalene | ND | | 25.0 | 2.50 | µg/L | 25 | 03/29/12 18:10 |
| o-Xylene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/29/12 18:10 |
| p-Isopropyltoluene | ND | | 12.5 | 4.00 | µg/L | 25 | 03/29/12 18:10 |
| sec-Butylbenzene | ND | | 12.5 | 4.00 | µg/L | 25 | 03/29/12 18:10 |
| Styrene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/29/12 18:10 |
| Tetrachloroethene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/29/12 18:10 |
| Toluene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/29/12 18:10 |
| trans-1,2-Dichloroethene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/29/12 18:10 |
| trans-1,3-Dichloropropene | ND | | 12.5 | 4.00 | µg/L | 25 | 03/29/12 18:10 |
| Trichloroethene | 39.2 | | 12.5 | 2.50 | µg/L | 25 | 03/29/12 18:10 |
| Trichlorofluoromethane | ND | | 25.0 | 2.50 | µg/L | 25 | 03/29/12 18:10 |
| Vinyl acetate | ND | | 50.0 | 25.0 | µg/L | 25 | 03/29/12 18:10 |
| Vinyl chloride | 47.2 | | 25.0 | 8.25 | µg/L | 25 | 03/29/12 18:10 |
| Xylenes (total) | ND | | 25.0 | 7.50 | µg/L | 25 | 03/29/12 18:10 |
| Surr: 1,2-Dichloroethane-d4 | 104 | | 75-128 | 4.00 | %REC | 25 | 03/29/12 18:10 |
| Surr: Toluene-d8 | 111 | | 75-125 | 2.50 | %REC | 25 | 03/29/12 18:10 |
| Surr: 4-Bromofluorobenzene | 104 | | 75-125 | 2.50 | %REC | 25 | 03/29/12 18:10 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 04/03/12 6:25 597984 **roject Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | | | |
|---|---|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | | | **Lab ID:** | K1203241-008A |
| **Project:** | 189-02 | | | **Client Sample ID:** | *189 - W8* |
| **W Order:** | K1203241 | | | **Collection Date:** | 03/22/12 14:00 |
| **Matrix:** | GROUNDWATER | | | **Date Received:** | 03/23/12 8:15 |
| **Inst. ID:** | MS01_11 | **Sample Size** | 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | | **BatchNo:** | R23816 |
| **Revision:** | 03/30/12 15:21 | **TestCode:** | 8260W_CAL | **FileID:** | 1-SAMP-T2986.D |
| **Col Type:** | | | Total 67.11 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 1.00 | 0.20 | µg/L | 1 | 03/29/12 18:43 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 03/29/12 18:43 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 18:43 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 18:43 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 18:43 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 03/29/12 18:43 |
| 1,1-Dichloroethane | 29.2 | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 18:43 |
| 1,1-Dichloroethene | 1.31 | | 0.50 | 0.16 | µg/L | 1 | 03/29/12 18:43 |
| 1,2,3-Trichloropropane | ND | | 2.00 | 0.33 | µg/L | 1 | 03/29/12 18:43 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 0.10 | µg/L | 1 | 03/29/12 18:43 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 18:43 |
| 1,2-Dibromo-3-chloropropane | ND | | 5.00 | 1.00 | µg/L | 1 | 03/29/12 18:43 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.16 | µg/L | 1 | 03/29/12 18:43 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 18:43 |
| 1,2-Dichloroethane | 0.49 | J | 0.50 | 0.16 | µg/L | 1 | 03/29/12 18:43 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.16 | µg/L | 1 | 03/29/12 18:43 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 18:43 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 18:43 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 03/29/12 18:43 |
| 2-Butanone | ND | | 10.0 | 1.00 | µg/L | 1 | 03/29/12 18:43 |
| 2-Chloroethylvinyl ether | ND | | 5.00 | 2.50 | µg/L | 1 | 03/29/12 18:43 |
| 2-Hexanone | ND | | 5.00 | 1.00 | µg/L | 1 | 03/29/12 18:43 |
| 4-Chlorotoluene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 18:43 |
| 4-Methyl-2-pentanone | ND | | 5.00 | 1.00 | µg/L | 1 | 03/29/12 18:43 |
| Acetone | ND | | 10.0 | 1.00 | µg/L | 1 | 03/29/12 18:43 |
| Benzene | 0.17 | J | 0.50 | 0.10 | µg/L | 1 | 03/29/12 18:43 |
| Bromobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 18:43 |
| Bromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 18:43 |
| Bromodichloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 18:43 |
| Bromoform | ND | | 1.00 | 0.33 | µg/L | 1 | 03/29/12 18:43 |
| Bromomethane | ND | | 1.00 | 0.33 | µg/L | 1 | 03/29/12 18:43 |
| Carbon disulfide | ND | | 0.50 | 0.11 | µg/L | 1 | 03/29/12 18:43 |
| Carbon tetrachloride | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 18:43 |
| Chlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 18:43 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 04/03/12 6:25 597985 **roject Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1203241-008A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W8*** |
| **W Order:** | K1203241 | **Collection Date:** | 03/22/12 14:00 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 03/23/12 8:15 |
| **Inst. ID:** | MS01_11 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R23816 |
| **Revision:** | 03/30/12 15:21 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-T2986.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| VOLATILE ORGANIC COMPOUNDS BY GC/MS | | | | | SW8260B | | |
| Chloroethane | ND | | 1.00 | 0.33 | µg/L | 1 | 03/29/12 18:43 |
| Chloroform | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 18:43 |
| Chloromethane | ND | | 1.00 | 0.33 | µg/L | 1 | 03/29/12 18:43 |
| cis-1,2-Dichloroethene | 30.2 | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 18:43 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 03/29/12 18:43 |
| Cyclohexane | 0.42 | J | 0.50 | 0.10 | µg/L | 1 | 03/29/12 18:43 |
| Dibromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 18:43 |
| Dibromomethane | ND | | 0.50 | 0.16 | µg/L | 1 | 03/29/12 18:43 |
| Dichlorodifluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 03/29/12 18:43 |
| Ethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 18:43 |
| Hexachlorobutadiene | ND | | 1.00 | 0.10 | µg/L | 1 | 03/29/12 18:43 |
| Isopropylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 18:43 |
| Methyl tert-butyl ether | 0.52 | J | 1.00 | 0.16 | µg/L | 1 | 03/29/12 18:43 |
| Methylene chloride | ND | | 2.00 | 0.16 | µg/L | 1 | 03/29/12 18:43 |
| n-Propylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 18:43 |
| Naphthalene | ND | | 1.00 | 0.10 | µg/L | 1 | 03/29/12 18:43 |
| o-Xylene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 18:43 |
| p-Isopropyltoluene | ND | | 0.50 | 0.16 | µg/L | 1 | 03/29/12 18:43 |
| sec-Butylbenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 03/29/12 18:43 |
| Styrene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 18:43 |
| Tetrachloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 18:43 |
| Toluene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 18:43 |
| trans-1,2-Dichloroethene | 0.24 | J | 0.50 | 0.10 | µg/L | 1 | 03/29/12 18:43 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 03/29/12 18:43 |
| Trichloroethene | 0.68 | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 18:43 |
| Trichlorofluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 03/29/12 18:43 |
| Vinyl acetate | ND | | 2.00 | 1.00 | µg/L | 1 | 03/29/12 18:43 |
| Vinyl chloride | 5.19 | | 1.00 | 0.33 | µg/L | 1 | 03/29/12 18:43 |
| Xylenes (total) | ND | | 1.00 | 0.30 | µg/L | 1 | 03/29/12 18:43 |
| Surr: 1,2-Dichloroethane-d4 | 106 | | 75-128 | 0.16 | %REC | 1 | 03/29/12 18:43 |
| Surr: Toluene-d8 | 112 | | 75-125 | 0.10 | %REC | 1 | 03/29/12 18:43 |
| Surr: 4-Bromofluorobenzene | 103 | | 75-125 | 0.10 | %REC | 1 | 03/29/12 18:43 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 04/03/12 6:25 597985 **roject Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | | | |
|---|---|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | | | **Lab ID:** | K1203241-009A |
| **Project:** | 189-02 | | | **Client Sample ID:** | *189 - W9* |
| **W Order:** | K1203241 | | | **Collection Date:** | 03/22/12 16:45 |
| **Matrix:** | GROUNDWATER | | | **Date Received:** | 03/23/12 8:15 |
| **Inst. ID:** | MS01_11 | **Sample Size** | 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | | **BatchNo:** | R23817 |
| **Revision:** | 03/30/12 15:19 | **TestCode:** | 8260W_CAL | **FileID:** | L-SAMP-T3003.D |
| **Col Type:** | | | Total 1136.8 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 25.0 | 5.00 | µg/L | 25 | 03/30/12 9:46 |
| 1,1,1,2-Tetrachloroethane | ND | | 12.5 | 4.00 | µg/L | 25 | 03/30/12 9:46 |
| 1,1,1-Trichloroethane | 138 | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 9:46 |
| 1,1,2,2-Tetrachloroethane | ND | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 9:46 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 9:46 |
| 1,1,2-Trichloroethane | ND | | 12.5 | 4.00 | µg/L | 25 | 03/30/12 9:46 |
| 1,1-Dichloroethane | 516 | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 9:46 |
| 1,1-Dichloroethene | 24.5 | | 12.5 | 4.00 | µg/L | 25 | 03/30/12 9:46 |
| 1,2,3-Trichloropropane | ND | | 50.0 | 8.25 | µg/L | 25 | 03/30/12 9:46 |
| 1,2,4-Trichlorobenzene | ND | | 25.0 | 2.50 | µg/L | 25 | 03/30/12 9:46 |
| 1,2,4-Trimethylbenzene | 13.0 | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 9:46 |
| 1,2-Dibromo-3-chloropropane | ND | | 125 | 25.0 | µg/L | 25 | 03/30/12 9:46 |
| 1,2-Dibromoethane | ND | | 12.5 | 4.00 | µg/L | 25 | 03/30/12 9:46 |
| 1,2-Dichlorobenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 9:46 |
| 1,2-Dichloroethane | 4.00 | J | 12.5 | 4.00 | µg/L | 25 | 03/30/12 9:46 |
| 1,2-Dichloropropane | ND | | 12.5 | 4.00 | µg/L | 25 | 03/30/12 9:46 |
| 1,3,5-Trimethylbenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 9:46 |
| 1,3-Dichlorobenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 9:46 |
| 1,4-Dichlorobenzene | ND | | 12.5 | 4.00 | µg/L | 25 | 03/30/12 9:46 |
| 2-Butanone | ND | | 250 | 25.0 | µg/L | 25 | 03/30/12 9:46 |
| 2-Chloroethylvinyl ether | ND | | 125 | 62.5 | µg/L | 25 | 03/30/12 9:46 |
| 2-Hexanone | ND | | 125 | 25.0 | µg/L | 25 | 03/30/12 9:46 |
| 4-Chlorotoluene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 9:46 |
| 4-Methyl-2-pentanone | ND | | 125 | 25.0 | µg/L | 25 | 03/30/12 9:46 |
| Acetone | ND | | 250 | 25.0 | µg/L | 25 | 03/30/12 9:46 |
| Benzene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 9:46 |
| Bromobenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 9:46 |
| Bromochloromethane | ND | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 9:46 |
| Bromodichloromethane | ND | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 9:46 |
| Bromoform | ND | | 25.0 | 8.25 | µg/L | 25 | 03/30/12 9:46 |
| Bromomethane | ND | | 25.0 | 8.25 | µg/L | 25 | 03/30/12 9:46 |
| Carbon disulfide | ND | | 12.5 | 2.75 | µg/L | 25 | 03/30/12 9:46 |
| Carbon tetrachloride | ND | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 9:46 |
| Chlorobenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 9:46 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 04/03/12 6:25 597997 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1203241-009A |
| **Project:** | 189-02 | **Client Sample ID:** | *189 - W9* |
| **W Order:** | K1203241 | **Collection Date:** | 03/22/12 16:45 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 03/23/12 8:15 |
| **Inst. ID:** | MS01_11 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R23817 |
| **Revision:** | 03/30/12 15:19 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-T3003.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | ND | | 25.0 | 8.25 | µg/L | 25 | 03/30/12 9:46 |
| Chloroform | ND | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 9:46 |
| Chloromethane | ND | | 25.0 | 8.25 | µg/L | 25 | 03/30/12 9:46 |
| cis-1,2-Dichloroethene | 242 | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 9:46 |
| cis-1,3-Dichloropropene | ND | | 12.5 | 4.00 | µg/L | 25 | 03/30/12 9:46 |
| Cyclohexane | ND | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 9:46 |
| Dibromochloromethane | ND | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 9:46 |
| Dibromomethane | ND | | 12.5 | 4.00 | µg/L | 25 | 03/30/12 9:46 |
| Dichlorodifluoromethane | ND | | 25.0 | 2.50 | µg/L | 25 | 03/30/12 9:46 |
| Ethylbenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 9:46 |
| Hexachlorobutadiene | ND | | 25.0 | 2.50 | µg/L | 25 | 03/30/12 9:46 |
| Isopropylbenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 9:46 |
| Methyl tert-butyl ether | ND | | 25.0 | 4.00 | µg/L | 25 | 03/30/12 9:46 |
| Methylene chloride | ND | | 50.0 | 4.00 | µg/L | 25 | 03/30/12 9:46 |
| n-Propylbenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 9:46 |
| Naphthalene | ND | | 25.0 | 2.50 | µg/L | 25 | 03/30/12 9:46 |
| o-Xylene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 9:46 |
| p-Isopropyltoluene | ND | | 12.5 | 4.00 | µg/L | 25 | 03/30/12 9:46 |
| sec-Butylbenzene | ND | | 12.5 | 4.00 | µg/L | 25 | 03/30/12 9:46 |
| Styrene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 9:46 |
| Tetrachloroethene | 5.00 | J | 12.5 | 2.50 | µg/L | 25 | 03/30/12 9:46 |
| Toluene | 6.50 | J | 12.5 | 2.50 | µg/L | 25 | 03/30/12 9:46 |
| trans-1,2-Dichloroethene | ND | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 9:46 |
| trans-1,3-Dichloropropene | ND | | 12.5 | 4.00 | µg/L | 25 | 03/30/12 9:46 |
| Trichloroethene | 114 | | 12.5 | 2.50 | µg/L | 25 | 03/30/12 9:46 |
| Trichlorofluoromethane | ND | | 25.0 | 2.50 | µg/L | 25 | 03/30/12 9:46 |
| Vinyl acetate | ND | | 50.0 | 25.0 | µg/L | 25 | 03/30/12 9:46 |
| Vinyl chloride | 72.8 | | 25.0 | 8.25 | µg/L | 25 | 03/30/12 9:46 |
| Xylenes (total) | ND | | 25.0 | 7.50 | µg/L | 25 | 03/30/12 9:46 |
| Surr: 1,2-Dichloroethane-d4 | 108 | | 75-128 | 4.00 | %REC | 25 | 03/30/12 9:46 |
| Surr: Toluene-d8 | 110 | | 75-125 | 2.50 | %REC | 25 | 03/30/12 9:46 |
| Surr: 4-Bromofluorobenzene | 101 | | 75-125 | 2.50 | %REC | 25 | 03/30/12 9:46 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 04/03/12 6:25 597997 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | | | |
|---|---|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | | | **Lab ID:** | K1203241-010A |
| **Project:** | 189-02 | | | **Client Sample ID:** | *189 - W10* |
| **W Order:** | K1203241 | | | **Collection Date:** | 03/22/12 14:45 |
| **Matrix:** | GROUNDWATER | | | **Date Received:** | 03/23/12 8:15 |
| **Inst. ID:** | MS01_11 | **Sample Size** | 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | | **BatchNo:** | R23816 |
| **Revision:** | 03/30/12 15:21 | **TestCode:** | 8260W_CAL | **FileID:** | 1-SAMP-T2988.D |
| **Col Type:** | | | Total ND | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 1.00 | 0.20 | µg/L | 1 | 03/29/12 19:49 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 03/29/12 19:49 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 19:49 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 19:49 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 19:49 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 03/29/12 19:49 |
| 1,1-Dichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 19:49 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.16 | µg/L | 1 | 03/29/12 19:49 |
| 1,2,3-Trichloropropane | ND | | 2.00 | 0.33 | µg/L | 1 | 03/29/12 19:49 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 0.10 | µg/L | 1 | 03/29/12 19:49 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 19:49 |
| 1,2-Dibromo-3-chloropropane | ND | | 5.00 | 1.00 | µg/L | 1 | 03/29/12 19:49 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.16 | µg/L | 1 | 03/29/12 19:49 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 19:49 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 03/29/12 19:49 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.16 | µg/L | 1 | 03/29/12 19:49 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 19:49 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 19:49 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 03/29/12 19:49 |
| 2-Butanone | ND | | 10.0 | 1.00 | µg/L | 1 | 03/29/12 19:49 |
| 2-Chloroethylvinyl ether | ND | | 5.00 | 2.50 | µg/L | 1 | 03/29/12 19:49 |
| 2-Hexanone | ND | | 5.00 | 1.00 | µg/L | 1 | 03/29/12 19:49 |
| 4-Chlorotoluene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 19:49 |
| 4-Methyl-2-pentanone | ND | | 5.00 | 1.00 | µg/L | 1 | 03/29/12 19:49 |
| Acetone | ND | | 10.0 | 1.00 | µg/L | 1 | 03/29/12 19:49 |
| Benzene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 19:49 |
| Bromobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 19:49 |
| Bromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 19:49 |
| Bromodichloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 19:49 |
| Bromoform | ND | | 1.00 | 0.33 | µg/L | 1 | 03/29/12 19:49 |
| Bromomethane | ND | | 1.00 | 0.33 | µg/L | 1 | 03/29/12 19:49 |
| Carbon disulfide | ND | | 0.50 | 0.11 | µg/L | 1 | 03/29/12 19:49 |
| Carbon tetrachloride | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 19:49 |
| Chlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 19:49 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 04/03/12 6:25 597986 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

**CLIENT** Ken W. Kloeber Consulting Engineers
**Project:** 189-02
**W Order:** K1203241
**Matrix:** GROUNDWATER
**Inst. ID:** MS01_11 **Sample Size** 10 mL
**ColumnID:** Rtx-VMS **%Moisture:**
**Revision:** 03/30/12 15:21 **TestCode:** 8260W_CAL
**Col Type:**

**Lab ID:** K1203241-010A
**Client Sample ID:** *189 - W10*
**Collection Date:** 03/22/12 14:45
**Date Received:** 03/23/12 8:15
**PrepDate:**
**BatchNo:** R23816
**FileID:** 1-SAMP-T2988.D

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| VOLATILE ORGANIC COMPOUNDS BY GC/MS | | | | | SW8260B | | |
| Chloroethane | ND | | 1.00 | 0.33 | µg/L | 1 | 03/29/12 19:49 |
| Chloroform | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 19:49 |
| Chloromethane | ND | | 1.00 | 0.33 | µg/L | 1 | 03/29/12 19:49 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 19:49 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 03/29/12 19:49 |
| Cyclohexane | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 19:49 |
| Dibromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 19:49 |
| Dibromomethane | ND | | 0.50 | 0.16 | µg/L | 1 | 03/29/12 19:49 |
| Dichlorodifluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 03/29/12 19:49 |
| Ethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 19:49 |
| Hexachlorobutadiene | ND | | 1.00 | 0.10 | µg/L | 1 | 03/29/12 19:49 |
| Isopropylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 19:49 |
| Methyl tert-butyl ether | ND | | 1.00 | 0.16 | µg/L | 1 | 03/29/12 19:49 |
| Methylene chloride | ND | | 2.00 | 0.16 | µg/L | 1 | 03/29/12 19:49 |
| n-Propylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 19:49 |
| Naphthalene | ND | | 1.00 | 0.10 | µg/L | 1 | 03/29/12 19:49 |
| o-Xylene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 19:49 |
| p-Isopropyltoluene | ND | | 0.50 | 0.16 | µg/L | 1 | 03/29/12 19:49 |
| sec-Butylbenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 03/29/12 19:49 |
| Styrene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 19:49 |
| Tetrachloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 19:49 |
| Toluene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 19:49 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 19:49 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 03/29/12 19:49 |
| Trichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 19:49 |
| Trichlorofluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 03/29/12 19:49 |
| Vinyl acetate | ND | | 2.00 | 1.00 | µg/L | 1 | 03/29/12 19:49 |
| Vinyl chloride | ND | | 1.00 | 0.33 | µg/L | 1 | 03/29/12 19:49 |
| Xylenes (total) | ND | | 1.00 | 0.30 | µg/L | 1 | 03/29/12 19:49 |
| Surr: 1,2-Dichloroethane-d4 | 108 | | 75-128 | 0.16 | %REC | 1 | 03/29/12 19:49 |
| Surr: Toluene-d8 | 112 | | 75-125 | 0.10 | %REC | 1 | 03/29/12 19:49 |
| Surr: 4-Bromofluorobenzene | 103 | | 75-125 | 0.10 | %REC | 1 | 03/29/12 19:49 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 04/03/12 6:25 597986 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | | | |
|---|---|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | | | **Lab ID:** | K1203241-011A |
| **Project:** | 189-02 | | | **Client Sample ID:** | *189 - W11* |
| **W Order:** | K1203241 | | | **Collection Date:** | 03/22/12 16:10 |
| **Matrix:** | GROUNDWATER | | | **Date Received:** | 03/23/12 8:15 |
| **Inst. ID:** | MS01_11 | **Sample Size** | 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | | **BatchNo:** | R23816 |
| **Revision:** | 03/30/12 15:21 | **TestCode:** | 8260W_CAL | **FileID:** | 1-SAMP-T2989.D |
| **Col Type:** | | | Total 1.29 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 1.00 | 0.20 | µg/L | 1 | 03/29/12 20:21 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 03/29/12 20:21 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 20:21 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 20:21 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 20:21 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 03/29/12 20:21 |
| 1,1-Dichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 20:21 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.16 | µg/L | 1 | 03/29/12 20:21 |
| 1,2,3-Trichloropropane | ND | | 2.00 | 0.33 | µg/L | 1 | 03/29/12 20:21 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 0.10 | µg/L | 1 | 03/29/12 20:21 |
| 1,2,4-Trimethylbenzene | 0.47 | J | 0.50 | 0.10 | µg/L | 1 | 03/29/12 20:21 |
| 1,2-Dibromo-3-chloropropane | ND | | 5.00 | 1.00 | µg/L | 1 | 03/29/12 20:21 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.16 | µg/L | 1 | 03/29/12 20:21 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 20:21 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 03/29/12 20:21 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.16 | µg/L | 1 | 03/29/12 20:21 |
| 1,3,5-Trimethylbenzene | 0.36 | J | 0.50 | 0.10 | µg/L | 1 | 03/29/12 20:21 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 20:21 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 03/29/12 20:21 |
| 2-Butanone | ND | | 10.0 | 1.00 | µg/L | 1 | 03/29/12 20:21 |
| 2-Chloroethylvinyl ether | ND | | 5.00 | 2.50 | µg/L | 1 | 03/29/12 20:21 |
| 2-Hexanone | ND | | 5.00 | 1.00 | µg/L | 1 | 03/29/12 20:21 |
| 4-Chlorotoluene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 20:21 |
| 4-Methyl-2-pentanone | ND | | 5.00 | 1.00 | µg/L | 1 | 03/29/12 20:21 |
| Acetone | ND | | 10.0 | 1.00 | µg/L | 1 | 03/29/12 20:21 |
| Benzene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 20:21 |
| Bromobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 20:21 |
| Bromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 20:21 |
| Bromodichloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 20:21 |
| Bromoform | ND | | 1.00 | 0.33 | µg/L | 1 | 03/29/12 20:21 |
| Bromomethane | ND | | 1.00 | 0.33 | µg/L | 1 | 03/29/12 20:21 |
| Carbon disulfide | ND | | 0.50 | 0.11 | µg/L | 1 | 03/29/12 20:21 |
| Carbon tetrachloride | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 20:21 |
| Chlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 20:21 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 04/03/12 6:25 597987 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | | | |
|---|---|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | | | **Lab ID:** | **K1203241-011A** |
| **Project:** | 189-02 | | | **Client Sample ID:** | ***189 - W11*** |
| **W Order:** | K1203241 | | | **Collection Date:** | 03/22/12 16:10 |
| **Matrix:** | GROUNDWATER | | | **Date Received:** | 03/23/12 8:15 |
| **Inst. ID:** | MS01_11 | **Sample Size** | 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | | **BatchNo:** | R23816 |
| **Revision:** | 03/30/12 15:21 | **TestCode:** | 8260W_CAL | **FileID:** | 1-SAMP-T2989.D |
| **Col Type:** | | | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | ND | | 1.00 | 0.33 | µg/L | 1 | 03/29/12 20:21 |
| Chloroform | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 20:21 |
| Chloromethane | ND | | 1.00 | 0.33 | µg/L | 1 | 03/29/12 20:21 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 20:21 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 03/29/12 20:21 |
| Cyclohexane | 0.46 | J | 0.50 | 0.10 | µg/L | 1 | 03/29/12 20:21 |
| Dibromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 20:21 |
| Dibromomethane | ND | | 0.50 | 0.16 | µg/L | 1 | 03/29/12 20:21 |
| Dichlorodifluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 03/29/12 20:21 |
| Ethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 20:21 |
| Hexachlorobutadiene | ND | | 1.00 | 0.10 | µg/L | 1 | 03/29/12 20:21 |
| Isopropylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 20:21 |
| Methyl tert-butyl ether | ND | | 1.00 | 0.16 | µg/L | 1 | 03/29/12 20:21 |
| Methylene chloride | ND | | 2.00 | 0.16 | µg/L | 1 | 03/29/12 20:21 |
| n-Propylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 20:21 |
| Naphthalene | ND | | 1.00 | 0.10 | µg/L | 1 | 03/29/12 20:21 |
| o-Xylene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 20:21 |
| p-Isopropyltoluene | ND | | 0.50 | 0.16 | µg/L | 1 | 03/29/12 20:21 |
| sec-Butylbenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 03/29/12 20:21 |
| Styrene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 20:21 |
| Tetrachloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 20:21 |
| Toluene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 20:21 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 20:21 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 03/29/12 20:21 |
| Trichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/29/12 20:21 |
| Trichlorofluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 03/29/12 20:21 |
| Vinyl acetate | ND | | 2.00 | 1.00 | µg/L | 1 | 03/29/12 20:21 |
| Vinyl chloride | ND | | 1.00 | 0.33 | µg/L | 1 | 03/29/12 20:21 |
| Xylenes (total) | ND | | 1.00 | 0.30 | µg/L | 1 | 03/29/12 20:21 |
| Surr: 1,2-Dichloroethane-d4 | 107 | | 75-128 | 0.16 | %REC | 1 | 03/29/12 20:21 |
| Surr: Toluene-d8 | 110 | | 75-125 | 0.10 | %REC | 1 | 03/29/12 20:21 |
| Surr: 4-Bromofluorobenzene | 100 | | 75-125 | 0.10 | %REC | 1 | 03/29/12 20:21 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 04/03/12 6:25 597987 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | | | |
|---|---|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | | | **Lab ID:** | K1203241-012A |
| **Project:** | 189-02 | | | **Client Sample ID:** | *189 - W12* |
| **W Order:** | K1203241 | | | **Collection Date:** | 03/22/12 16:20 |
| **Matrix:** | GROUNDWATER | | | **Date Received:** | 03/23/12 8:15 |
| **Inst. ID:** | MS01_11 | **Sample Size** | 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | | **BatchNo:** | R23816 |
| **Revision:** | 03/30/12 15:21 | **TestCode:** | 8260W_CAL | **FileID:** | 1-SAMP-T2990.D |
| **Col Type:** | | | Total 369.7 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 10.0 | 2.00 | µg/L | 10 | 03/29/12 20:54 |
| 1,1,1,2-Tetrachloroethane | ND | | 5.00 | 1.60 | µg/L | 10 | 03/29/12 20:54 |
| 1,1,1-Trichloroethane | ND | | 5.00 | 1.00 | µg/L | 10 | 03/29/12 20:54 |
| 1,1,2,2-Tetrachloroethane | ND | | 5.00 | 1.00 | µg/L | 10 | 03/29/12 20:54 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 5.00 | 1.00 | µg/L | 10 | 03/29/12 20:54 |
| 1,1,2-Trichloroethane | ND | | 5.00 | 1.60 | µg/L | 10 | 03/29/12 20:54 |
| 1,1-Dichloroethane | 168 | | 5.00 | 1.00 | µg/L | 10 | 03/29/12 20:54 |
| 1,1-Dichloroethene | ND | | 5.00 | 1.60 | µg/L | 10 | 03/29/12 20:54 |
| 1,2,3-Trichloropropane | ND | | 20.0 | 3.30 | µg/L | 10 | 03/29/12 20:54 |
| 1,2,4-Trichlorobenzene | ND | | 10.0 | 1.00 | µg/L | 10 | 03/29/12 20:54 |
| 1,2,4-Trimethylbenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 03/29/12 20:54 |
| 1,2-Dibromo-3-chloropropane | ND | | 50.0 | 10.0 | µg/L | 10 | 03/29/12 20:54 |
| 1,2-Dibromoethane | ND | | 5.00 | 1.60 | µg/L | 10 | 03/29/12 20:54 |
| 1,2-Dichlorobenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 03/29/12 20:54 |
| 1,2-Dichloroethane | 4.20 | J | 5.00 | 1.60 | µg/L | 10 | 03/29/12 20:54 |
| 1,2-Dichloropropane | ND | | 5.00 | 1.60 | µg/L | 10 | 03/29/12 20:54 |
| 1,3,5-Trimethylbenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 03/29/12 20:54 |
| 1,3-Dichlorobenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 03/29/12 20:54 |
| 1,4-Dichlorobenzene | ND | | 5.00 | 1.60 | µg/L | 10 | 03/29/12 20:54 |
| 2-Butanone | ND | | 100 | 10.0 | µg/L | 10 | 03/29/12 20:54 |
| 2-Chloroethylvinyl ether | ND | | 50.0 | 25.0 | µg/L | 10 | 03/29/12 20:54 |
| 2-Hexanone | ND | | 50.0 | 10.0 | µg/L | 10 | 03/29/12 20:54 |
| 4-Chlorotoluene | ND | | 5.00 | 1.00 | µg/L | 10 | 03/29/12 20:54 |
| 4-Methyl-2-pentanone | ND | | 50.0 | 10.0 | µg/L | 10 | 03/29/12 20:54 |
| Acetone | ND | | 100 | 10.0 | µg/L | 10 | 03/29/12 20:54 |
| Benzene | ND | | 5.00 | 1.00 | µg/L | 10 | 03/29/12 20:54 |
| Bromobenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 03/29/12 20:54 |
| Bromochloromethane | ND | | 5.00 | 1.00 | µg/L | 10 | 03/29/12 20:54 |
| Bromodichloromethane | ND | | 5.00 | 1.00 | µg/L | 10 | 03/29/12 20:54 |
| Bromoform | ND | | 10.0 | 3.30 | µg/L | 10 | 03/29/12 20:54 |
| Bromomethane | ND | | 10.0 | 3.30 | µg/L | 10 | 03/29/12 20:54 |
| Carbon disulfide | ND | | 5.00 | 1.10 | µg/L | 10 | 03/29/12 20:54 |
| Carbon tetrachloride | ND | | 5.00 | 1.00 | µg/L | 10 | 03/29/12 20:54 |
| Chlorobenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 03/29/12 20:54 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 04/03/12 6:25 597988 **roject Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

**CLIENT** Ken W. Kloeber Consulting Engineers
**Project:** 189-02
**W Order:** K1203241
**Matrix:** GROUNDWATER
**Inst. ID:** MS01_11 **Sample Size** 10 mL
**ColumnID:** Rtx-VMS **%Moisture:**
**Revision:** 03/30/12 15:21 **TestCode:** 8260W_CAL
**Col Type:**

**Lab ID:** K1203241-012A
**Client Sample ID:** *189 - W12*
**Collection Date:** 03/22/12 16:20
**Date Received:** 03/23/12 8:15
**PrepDate:**
**BatchNo:** R23816
**FileID:** 1-SAMP-T2990.D

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| VOLATILE ORGANIC COMPOUNDS BY GC/MS | | | | | SW8260B | | |
| Chloroethane | 32.0 | | 10.0 | 3.30 | µg/L | 10 | 03/29/12 20:54 |
| Chloroform | ND | | 5.00 | 1.00 | µg/L | 10 | 03/29/12 20:54 |
| Chloromethane | ND | | 10.0 | 3.30 | µg/L | 10 | 03/29/12 20:54 |
| cis-1,2-Dichloroethene | 23.5 | | 5.00 | 1.00 | µg/L | 10 | 03/29/12 20:54 |
| cis-1,3-Dichloropropene | ND | | 5.00 | 1.60 | µg/L | 10 | 03/29/12 20:54 |
| Cyclohexane | 2.20 | J | 5.00 | 1.00 | µg/L | 10 | 03/29/12 20:54 |
| Dibromochloromethane | ND | | 5.00 | 1.00 | µg/L | 10 | 03/29/12 20:54 |
| Dibromomethane | ND | | 5.00 | 1.60 | µg/L | 10 | 03/29/12 20:54 |
| Dichlorodifluoromethane | ND | | 10.0 | 1.00 | µg/L | 10 | 03/29/12 20:54 |
| Ethylbenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 03/29/12 20:54 |
| Hexachlorobutadiene | ND | | 10.0 | 1.00 | µg/L | 10 | 03/29/12 20:54 |
| Isopropylbenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 03/29/12 20:54 |
| Methyl tert-butyl ether | ND | | 10.0 | 1.60 | µg/L | 10 | 03/29/12 20:54 |
| Methylene chloride | 11.8 | J | 20.0 | 1.60 | µg/L | 10 | 03/29/12 20:54 |
| n-Propylbenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 03/29/12 20:54 |
| Naphthalene | ND | | 10.0 | 1.00 | µg/L | 10 | 03/29/12 20:54 |
| o-Xylene | ND | | 5.00 | 1.00 | µg/L | 10 | 03/29/12 20:54 |
| p-Isopropyltoluene | ND | | 5.00 | 1.60 | µg/L | 10 | 03/29/12 20:54 |
| sec-Butylbenzene | ND | | 5.00 | 1.60 | µg/L | 10 | 03/29/12 20:54 |
| Styrene | ND | | 5.00 | 1.00 | µg/L | 10 | 03/29/12 20:54 |
| Tetrachloroethene | ND | | 5.00 | 1.00 | µg/L | 10 | 03/29/12 20:54 |
| Toluene | ND | | 5.00 | 1.00 | µg/L | 10 | 03/29/12 20:54 |
| trans-1,2-Dichloroethene | ND | | 5.00 | 1.00 | µg/L | 10 | 03/29/12 20:54 |
| trans-1,3-Dichloropropene | ND | | 5.00 | 1.60 | µg/L | 10 | 03/29/12 20:54 |
| Trichloroethene | ND | | 5.00 | 1.00 | µg/L | 10 | 03/29/12 20:54 |
| Trichlorofluoromethane | ND | | 10.0 | 1.00 | µg/L | 10 | 03/29/12 20:54 |
| Vinyl acetate | ND | | 20.0 | 10.0 | µg/L | 10 | 03/29/12 20:54 |
| Vinyl chloride | 128 | | 10.0 | 3.30 | µg/L | 10 | 03/29/12 20:54 |
| Xylenes (total) | ND | | 10.0 | 3.00 | µg/L | 10 | 03/29/12 20:54 |
| Surr: 1,2-Dichloroethane-d4 | 109 | | 75-128 | 1.60 | %REC | 10 | 03/29/12 20:54 |
| Surr: Toluene-d8 | 112 | | 75-125 | 1.00 | %REC | 10 | 03/29/12 20:54 |
| Surr: 4-Bromofluorobenzene | 103 | | 75-125 | 1.00 | %REC | 10 | 03/29/12 20:54 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 04/03/12 6:25 597988 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | | | |
|---|---|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | | | **Lab ID:** | K1203241-013A |
| **Project:** | 189-02 | | | **Client Sample ID:** | *189 - W13* |
| **W Order:** | K1203241 | | | **Collection Date:** | 03/22/12 14:30 |
| **Matrix:** | GROUNDWATER | | | **Date Received:** | 03/23/12 8:15 |
| **Inst. ID:** | MS01_11 | **Sample Size** | 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | | **BatchNo:** | R23816 |
| **Revision:** | 03/30/12 15:21 | **TestCode:** | 8260W_CAL | **FileID:** | 1-SAMP-T2991.D |
| **Col Type:** | | | Total 10.4 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | 1.34 | | 1.00 | 0.20 | µg/L | 2 | 03/29/12 21:27 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.16 | µg/L | 2 | 03/29/12 21:27 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.10 | µg/L | 2 | 03/29/12 21:27 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.10 | µg/L | 2 | 03/29/12 21:27 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.10 | µg/L | 2 | 03/29/12 21:27 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.16 | µg/L | 2 | 03/29/12 21:27 |
| 1,1-Dichloroethane | ND | | 0.50 | 0.10 | µg/L | 2 | 03/29/12 21:27 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.16 | µg/L | 2 | 03/29/12 21:27 |
| 1,2,3-Trichloropropane | ND | | 2.00 | 0.33 | µg/L | 2 | 03/29/12 21:27 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 0.10 | µg/L | 2 | 03/29/12 21:27 |
| 1,2,4-Trimethylbenzene | 1.40 | | 0.50 | 0.10 | µg/L | 2 | 03/29/12 21:27 |
| 1,2-Dibromo-3-chloropropane | ND | | 5.00 | 1.00 | µg/L | 2 | 03/29/12 21:27 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.16 | µg/L | 2 | 03/29/12 21:27 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 2 | 03/29/12 21:27 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.16 | µg/L | 2 | 03/29/12 21:27 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.16 | µg/L | 2 | 03/29/12 21:27 |
| 1,3,5-Trimethylbenzene | 1.56 | | 0.50 | 0.10 | µg/L | 2 | 03/29/12 21:27 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 2 | 03/29/12 21:27 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.16 | µg/L | 2 | 03/29/12 21:27 |
| 2-Butanone | ND | | 10.0 | 1.00 | µg/L | 2 | 03/29/12 21:27 |
| 2-Chloroethylvinyl ether | ND | | 5.00 | 2.50 | µg/L | 2 | 03/29/12 21:27 |
| 2-Hexanone | ND | | 5.00 | 1.00 | µg/L | 2 | 03/29/12 21:27 |
| 4-Chlorotoluene | ND | | 0.50 | 0.10 | µg/L | 2 | 03/29/12 21:27 |
| 4-Methyl-2-pentanone | ND | | 5.00 | 1.00 | µg/L | 2 | 03/29/12 21:27 |
| Acetone | ND | | 10.0 | 1.00 | µg/L | 2 | 03/29/12 21:27 |
| Benzene | ND | | 0.50 | 0.10 | µg/L | 2 | 03/29/12 21:27 |
| Bromobenzene | ND | | 0.50 | 0.10 | µg/L | 2 | 03/29/12 21:27 |
| Bromochloromethane | ND | | 0.50 | 0.10 | µg/L | 2 | 03/29/12 21:27 |
| Bromodichloromethane | ND | | 0.50 | 0.10 | µg/L | 2 | 03/29/12 21:27 |
| Bromoform | ND | | 1.00 | 0.33 | µg/L | 2 | 03/29/12 21:27 |
| Bromomethane | ND | | 1.00 | 0.33 | µg/L | 2 | 03/29/12 21:27 |
| Carbon disulfide | ND | | 0.50 | 0.11 | µg/L | 2 | 03/29/12 21:27 |
| Carbon tetrachloride | ND | | 0.50 | 0.10 | µg/L | 2 | 03/29/12 21:27 |
| Chlorobenzene | ND | | 0.50 | 0.10 | µg/L | 2 | 03/29/12 21:27 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 04/03/12 6:25 598002 **roject Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

**CLIENT** Ken W. Kloeber Consulting Engineers
**Project:** 189-02
**W Order:** K1203241
**Matrix:** GROUNDWATER
**Inst. ID:** MS01_11 **Sample Size** 10 mL
**ColumnID:** Rtx-VMS **%Moisture:**
**Revision:** 03/30/12 15:21 **TestCode:** 8260W_CAL
**Col Type:**

**Lab ID:** K1203241-013A
**Client Sample ID:** *189 - W13*
**Collection Date:** 03/22/12 14:30
**Date Received:** 03/23/12 8:15
**PrepDate:**
**BatchNo:** R23816
**FileID:** 1-SAMP-T2991.D

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| VOLATILE ORGANIC COMPOUNDS BY GC/MS | | | | | SW8260B | | |
| Chloroethane | ND | | 1.00 | 0.33 | µg/L | 2 | 03/29/12 21:27 |
| Chloroform | ND | | 0.50 | 0.10 | µg/L | 2 | 03/29/12 21:27 |
| Chloromethane | ND | | 1.00 | 0.33 | µg/L | 2 | 03/29/12 21:27 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 2 | 03/29/12 21:27 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 2 | 03/29/12 21:27 |
| Cyclohexane | 2.60 | | 0.50 | 0.10 | µg/L | 2 | 03/29/12 21:27 |
| Dibromochloromethane | ND | | 0.50 | 0.10 | µg/L | 2 | 03/29/12 21:27 |
| Dibromomethane | ND | | 0.50 | 0.16 | µg/L | 2 | 03/29/12 21:27 |
| Dichlorodifluoromethane | ND | | 1.00 | 0.10 | µg/L | 2 | 03/29/12 21:27 |
| Ethylbenzene | ND | | 0.50 | 0.10 | µg/L | 2 | 03/29/12 21:27 |
| Hexachlorobutadiene | ND | | 1.00 | 0.10 | µg/L | 2 | 03/29/12 21:27 |
| Isopropylbenzene | ND | | 0.50 | 0.10 | µg/L | 2 | 03/29/12 21:27 |
| Methyl tert-butyl ether | ND | | 1.00 | 0.16 | µg/L | 2 | 03/29/12 21:27 |
| Methylene chloride | 1.50 | J | 2.00 | 0.16 | µg/L | 2 | 03/29/12 21:27 |
| n-Propylbenzene | ND | | 0.50 | 0.10 | µg/L | 2 | 03/29/12 21:27 |
| Naphthalene | ND | | 1.00 | 0.10 | µg/L | 2 | 03/29/12 21:27 |
| o-Xylene | 1.42 | | 0.50 | 0.10 | µg/L | 2 | 03/29/12 21:27 |
| p-Isopropyltoluene | 0.58 | | 0.50 | 0.16 | µg/L | 2 | 03/29/12 21:27 |
| sec-Butylbenzene | ND | | 0.50 | 0.16 | µg/L | 2 | 03/29/12 21:27 |
| Styrene | ND | | 0.50 | 0.10 | µg/L | 2 | 03/29/12 21:27 |
| Tetrachloroethene | ND | | 0.50 | 0.10 | µg/L | 2 | 03/29/12 21:27 |
| Toluene | ND | | 0.50 | 0.10 | µg/L | 2 | 03/29/12 21:27 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 2 | 03/29/12 21:27 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 2 | 03/29/12 21:27 |
| Trichloroethene | ND | | 0.50 | 0.10 | µg/L | 2 | 03/29/12 21:27 |
| Trichlorofluoromethane | ND | | 1.00 | 0.10 | µg/L | 2 | 03/29/12 21:27 |
| Vinyl acetate | ND | | 2.00 | 1.00 | µg/L | 2 | 03/29/12 21:27 |
| Vinyl chloride | ND | | 1.00 | 0.33 | µg/L | 2 | 03/29/12 21:27 |
| Xylenes (total) | 2.76 | | 1.00 | 0.30 | µg/L | 2 | 03/29/12 21:27 |
| Surr: 1,2-Dichloroethane-d4 | 107 | | 75-128 | 0.16 | %REC | 2 | 03/29/12 21:27 |
| Surr: Toluene-d8 | 112 | | 75-125 | 0.10 | %REC | 2 | 03/29/12 21:27 |
| Surr: 4-Bromofluorobenzene | 101 | | 75-125 | 0.10 | %REC | 2 | 03/29/12 21:27 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 04/03/12 6:25 598002 **roject Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

**CLIENT** Ken W. Kloeber Consulting Engineers
**Project:** 189-02
**W Order:** K1203241
**Matrix:** GROUNDWATER
**Inst. ID:** MS01_11 **Sample Size** 10 mL
**ColumnID:** Rtx-VMS **%Moisture:**
**Revision:** 03/30/12 15:21 **TestCode:** 8260W_CAL
**Col Type:** Total 7922

**Lab ID:** K1203241-014A
**Client Sample ID:** *189 - W14*
**Collection Date:** 03/22/12 15:45
**Date Received:** 03/23/12 8:15
**PrepDate:**
**BatchNo:** R23816
**FileID:** 1-SAMP-T2992.D

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| VOLATILE ORGANIC COMPOUNDS BY GC/MS | | | | | SW8260B | | |
| (m+p)-Xylene | ND | | 200 | 40.0 | µg/L | 200 | 03/29/12 22:00 |
| 1,1,1,2-Tetrachloroethane | ND | | 100 | 32.0 | µg/L | 200 | 03/29/12 22:00 |
| 1,1,1-Trichloroethane | 4190 | | 100 | 20.0 | µg/L | 200 | 03/29/12 22:00 |
| 1,1,2,2-Tetrachloroethane | ND | | 100 | 20.0 | µg/L | 200 | 03/29/12 22:00 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 644 | | 100 | 20.0 | µg/L | 200 | 03/29/12 22:00 |
| 1,1,2-Trichloroethane | ND | | 100 | 32.0 | µg/L | 200 | 03/29/12 22:00 |
| 1,1-Dichloroethane | 3100 | | 100 | 20.0 | µg/L | 200 | 03/29/12 22:00 |
| 1,1-Dichloroethene | 170 | | 100 | 32.0 | µg/L | 200 | 03/29/12 22:00 |
| 1,2,3-Trichloropropane | ND | | 400 | 66.0 | µg/L | 200 | 03/29/12 22:00 |
| 1,2,4-Trichlorobenzene | ND | | 200 | 20.0 | µg/L | 200 | 03/29/12 22:00 |
| 1,2,4-Trimethylbenzene | ND | | 100 | 20.0 | µg/L | 200 | 03/29/12 22:00 |
| 1,2-Dibromo-3-chloropropane | ND | | 1000 | 200 | µg/L | 200 | 03/29/12 22:00 |
| 1,2-Dibromoethane | ND | | 100 | 32.0 | µg/L | 200 | 03/29/12 22:00 |
| 1,2-Dichlorobenzene | ND | | 100 | 20.0 | µg/L | 200 | 03/29/12 22:00 |
| 1,2-Dichloroethane | ND | | 100 | 32.0 | µg/L | 200 | 03/29/12 22:00 |
| 1,2-Dichloropropane | ND | | 100 | 32.0 | µg/L | 200 | 03/29/12 22:00 |
| 1,3,5-Trimethylbenzene | ND | | 100 | 20.0 | µg/L | 200 | 03/29/12 22:00 |
| 1,3-Dichlorobenzene | ND | | 100 | 20.0 | µg/L | 200 | 03/29/12 22:00 |
| 1,4-Dichlorobenzene | ND | | 100 | 32.0 | µg/L | 200 | 03/29/12 22:00 |
| 2-Butanone | ND | | 2000 | 200 | µg/L | 200 | 03/29/12 22:00 |
| 2-Chloroethylvinyl ether | ND | | 1000 | 500 | µg/L | 200 | 03/29/12 22:00 |
| 2-Hexanone | ND | | 1000 | 200 | µg/L | 200 | 03/29/12 22:00 |
| 4-Chlorotoluene | ND | | 100 | 20.0 | µg/L | 200 | 03/29/12 22:00 |
| 4-Methyl-2-pentanone | ND | | 1000 | 200 | µg/L | 200 | 03/29/12 22:00 |
| Acetone | ND | | 2000 | 200 | µg/L | 200 | 03/29/12 22:00 |
| Benzene | ND | | 100 | 20.0 | µg/L | 200 | 03/29/12 22:00 |
| Bromobenzene | ND | | 100 | 20.0 | µg/L | 200 | 03/29/12 22:00 |
| Bromochloromethane | ND | | 100 | 20.0 | µg/L | 200 | 03/29/12 22:00 |
| Bromodichloromethane | ND | | 100 | 20.0 | µg/L | 200 | 03/29/12 22:00 |
| Bromoform | ND | | 200 | 66.0 | µg/L | 200 | 03/29/12 22:00 |
| Bromomethane | ND | | 200 | 66.0 | µg/L | 200 | 03/29/12 22:00 |
| Carbon disulfide | ND | | 100 | 22.0 | µg/L | 200 | 03/29/12 22:00 |
| Carbon tetrachloride | ND | | 100 | 20.0 | µg/L | 200 | 03/29/12 22:00 |
| Chlorobenzene | ND | | 100 | 20.0 | µg/L | 200 | 03/29/12 22:00 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 04/03/12 6:25 597989 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1203241-014A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - W14*** |
| **W Order:** | K1203241 | **Collection Date:** | 03/22/12 15:45 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 03/23/12 8:15 |
| **Inst. ID:** | MS01_11 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R23816 |
| **Revision:** | 03/30/12 15:21 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-T2992.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | ND | | 200 | 66.0 | µg/L | 200 | 03/29/12 22:00 |
| Chloroform | ND | | 100 | 20.0 | µg/L | 200 | 03/29/12 22:00 |
| Chloromethane | ND | | 200 | 66.0 | µg/L | 200 | 03/29/12 22:00 |
| cis-1,2-Dichloroethene | 206 | | 100 | 20.0 | µg/L | 200 | 03/29/12 22:00 |
| cis-1,3-Dichloropropene | ND | | 100 | 32.0 | µg/L | 200 | 03/29/12 22:00 |
| Cyclohexane | 56.0 | J | 100 | 20.0 | µg/L | 200 | 03/29/12 22:00 |
| Dibromochloromethane | ND | | 100 | 20.0 | µg/L | 200 | 03/29/12 22:00 |
| Dibromomethane | ND | | 100 | 32.0 | µg/L | 200 | 03/29/12 22:00 |
| Dichlorodifluoromethane | ND | | 200 | 20.0 | µg/L | 200 | 03/29/12 22:00 |
| Ethylbenzene | ND | | 100 | 20.0 | µg/L | 200 | 03/29/12 22:00 |
| Hexachlorobutadiene | ND | | 200 | 20.0 | µg/L | 200 | 03/29/12 22:00 |
| Isopropylbenzene | ND | | 100 | 20.0 | µg/L | 200 | 03/29/12 22:00 |
| Methyl tert-butyl ether | ND | | 200 | 32.0 | µg/L | 200 | 03/29/12 22:00 |
| Methylene chloride | 146 | J | 400 | 32.0 | µg/L | 200 | 03/29/12 22:00 |
| n-Propylbenzene | ND | | 100 | 20.0 | µg/L | 200 | 03/29/12 22:00 |
| Naphthalene | ND | | 200 | 20.0 | µg/L | 200 | 03/29/12 22:00 |
| o-Xylene | ND | | 100 | 20.0 | µg/L | 200 | 03/29/12 22:00 |
| p-Isopropyltoluene | ND | | 100 | 32.0 | µg/L | 200 | 03/29/12 22:00 |
| sec-Butylbenzene | ND | | 100 | 32.0 | µg/L | 200 | 03/29/12 22:00 |
| Styrene | ND | | 100 | 20.0 | µg/L | 200 | 03/29/12 22:00 |
| Tetrachloroethene | 116 | | 100 | 20.0 | µg/L | 200 | 03/29/12 22:00 |
| Toluene | 54.0 | J | 100 | 20.0 | µg/L | 200 | 03/29/12 22:00 |
| trans-1,2-Dichloroethene | ND | | 100 | 20.0 | µg/L | 200 | 03/29/12 22:00 |
| trans-1,3-Dichloropropene | ND | | 100 | 32.0 | µg/L | 200 | 03/29/12 22:00 |
| Trichloroethene | ND | | 100 | 20.0 | µg/L | 200 | 03/29/12 22:00 |
| Trichlorofluoromethane | ND | | 200 | 20.0 | µg/L | 200 | 03/29/12 22:00 |
| Vinyl acetate | ND | | 400 | 200 | µg/L | 200 | 03/29/12 22:00 |
| Vinyl chloride | ND | | 200 | 66.0 | µg/L | 200 | 03/29/12 22:00 |
| Xylenes (total) | ND | | 200 | 60.0 | µg/L | 200 | 03/29/12 22:00 |
| Surr: 1,2-Dichloroethane-d4 | 108 | | 75-128 | 32.0 | %REC | 200 | 03/29/12 22:00 |
| Surr: Toluene-d8 | 111 | | 75-125 | 20.0 | %REC | 200 | 03/29/12 22:00 |
| Surr: 4-Bromofluorobenzene | 104 | | 75-125 | 20.0 | %REC | 200 | 03/29/12 22:00 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | | | |
|---|---|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | | | **Lab ID:** | **K1203241-015A** |
| **Project:** | 189-02 | | | **Client Sample ID:** | ***189 - BL*** |
| **W Order:** | K1203241 | | | **Collection Date:** | 03/22/12 12:00 |
| **Matrix:** | GROUNDWATER | | | **Date Received:** | 03/23/12 8:15 |
| **Inst. ID:** | MS01_11 | **Sample Size** | 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | | **BatchNo:** | R23817 |
| **Revision:** | 03/30/12 15:19 | **TestCode:** | 8260W_CAL | **FileID:** | 1-SAMP-T3004.D |
| **Col Type:** | | | Total 6712 MW-14 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 200 | 40.0 | µg/L | 200 | 03/30/12 10:19 |
| 1,1,1,2-Tetrachloroethane | ND | | 100 | 32.0 | µg/L | 200 | 03/30/12 10:19 |
| 1,1,1-Trichloroethane | 3090 | | 100 | 20.0 | µg/L | 200 | 03/30/12 10:19 |
| 1,1,2,2-Tetrachloroethane | ND | | 100 | 20.0 | µg/L | 200 | 03/30/12 10:19 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 598 | | 100 | 20.0 | µg/L | 200 | 03/30/12 10:19 |
| 1,1,2-Trichloroethane | ND | | 100 | 32.0 | µg/L | 200 | 03/30/12 10:19 |
| 1,1-Dichloroethane | 2490 | | 100 | 20.0 | µg/L | 200 | 03/30/12 10:19 |
| 1,1-Dichloroethene | 156 | | 100 | 32.0 | µg/L | 200 | 03/30/12 10:19 |
| 1,2,3-Trichloropropane | ND | | 400 | 66.0 | µg/L | 200 | 03/30/12 10:19 |
| 1,2,4-Trichlorobenzene | ND | | 200 | 20.0 | µg/L | 200 | 03/30/12 10:19 |
| 1,2,4-Trimethylbenzene | ND | | 100 | 20.0 | µg/L | 200 | 03/30/12 10:19 |
| 1,2-Dibromo-3-chloropropane | ND | | 1000 | 200 | µg/L | 200 | 03/30/12 10:19 |
| 1,2-Dibromoethane | ND | | 100 | 32.0 | µg/L | 200 | 03/30/12 10:19 |
| 1,2-Dichlorobenzene | ND | | 100 | 20.0 | µg/L | 200 | 03/30/12 10:19 |
| 1,2-Dichloroethane | ND | | 100 | 32.0 | µg/L | 200 | 03/30/12 10:19 |
| 1,2-Dichloropropane | ND | | 100 | 32.0 | µg/L | 200 | 03/30/12 10:19 |
| 1,3,5-Trimethylbenzene | ND | | 100 | 20.0 | µg/L | 200 | 03/30/12 10:19 |
| 1,3-Dichlorobenzene | ND | | 100 | 20.0 | µg/L | 200 | 03/30/12 10:19 |
| 1,4-Dichlorobenzene | ND | | 100 | 32.0 | µg/L | 200 | 03/30/12 10:19 |
| 2-Butanone | ND | | 2000 | 200 | µg/L | 200 | 03/30/12 10:19 |
| 2-Chloroethylvinyl ether | ND | | 1000 | 500 | µg/L | 200 | 03/30/12 10:19 |
| 2-Hexanone | ND | | 1000 | 200 | µg/L | 200 | 03/30/12 10:19 |
| 4-Chlorotoluene | ND | | 100 | 20.0 | µg/L | 200 | 03/30/12 10:19 |
| 4-Methyl-2-pentanone | ND | | 1000 | 200 | µg/L | 200 | 03/30/12 10:19 |
| Acetone | ND | | 2000 | 200 | µg/L | 200 | 03/30/12 10:19 |
| Benzene | ND | | 100 | 20.0 | µg/L | 200 | 03/30/12 10:19 |
| Bromobenzene | ND | | 100 | 20.0 | µg/L | 200 | 03/30/12 10:19 |
| Bromochloromethane | ND | | 100 | 20.0 | µg/L | 200 | 03/30/12 10:19 |
| Bromodichloromethane | ND | | 100 | 20.0 | µg/L | 200 | 03/30/12 10:19 |
| Bromoform | ND | | 200 | 66.0 | µg/L | 200 | 03/30/12 10:19 |
| Bromomethane | ND | | 200 | 66.0 | µg/L | 200 | 03/30/12 10:19 |
| Carbon disulfide | ND | | 100 | 22.0 | µg/L | 200 | 03/30/12 10:19 |
| Carbon tetrachloride | ND | | 100 | 20.0 | µg/L | 200 | 03/30/12 10:19 |
| Chlorobenzene | ND | | 100 | 20.0 | µg/L | 200 | 03/30/12 10:19 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 04/03/12 6:29 597998 **roject Supervisor:** Anthony Crescenzi

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5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | | | |
|---|---|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | | | **Lab ID:** | **K1203241-015A** |
| **Project:** | 189-02 | | | **Client Sample ID:** | ***189 - BL*** |
| **W Order:** | K1203241 | | | **Collection Date:** | 03/22/12 12:00 |
| **Matrix:** | GROUNDWATER | | | **Date Received:** | 03/23/12 8:15 |
| **Inst. ID:** | MS01_11 | **Sample Size** | 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | | **BatchNo:** | R23817 |
| **Revision:** | 03/30/12 15:19 | **TestCode:** | 8260W_CAL | **FileID:** | 1-SAMP-T3004.D |
| **Col Type:** | | | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | ND | | 200 | 66.0 | µg/L | 200 | 03/30/12 10:19 |
| Chloroform | ND | | 100 | 20.0 | µg/L | 200 | 03/30/12 10:19 |
| Chloromethane | ND | | 200 | 66.0 | µg/L | 200 | 03/30/12 10:19 |
| cis-1,2-Dichloroethene | 184 | | 100 | 20.0 | µg/L | 200 | 03/30/12 10:19 |
| cis-1,3-Dichloropropene | ND | | 100 | 32.0 | µg/L | 200 | 03/30/12 10:19 |
| Cyclohexane | 56.0 | J | 100 | 20.0 | µg/L | 200 | 03/30/12 10:19 |
| Dibromochloromethane | ND | | 100 | 20.0 | µg/L | 200 | 03/30/12 10:19 |
| Dibromomethane | ND | | 100 | 32.0 | µg/L | 200 | 03/30/12 10:19 |
| Dichlorodifluoromethane | ND | | 200 | 20.0 | µg/L | 200 | 03/30/12 10:19 |
| Ethylbenzene | ND | | 100 | 20.0 | µg/L | 200 | 03/30/12 10:19 |
| Hexachlorobutadiene | ND | | 200 | 20.0 | µg/L | 200 | 03/30/12 10:19 |
| Isopropylbenzene | ND | | 100 | 20.0 | µg/L | 200 | 03/30/12 10:19 |
| Methyl tert-butyl ether | ND | | 200 | 32.0 | µg/L | 200 | 03/30/12 10:19 |
| Methylene chloride | ND | | 400 | 32.0 | µg/L | 200 | 03/30/12 10:19 |
| n-Propylbenzene | ND | | 100 | 20.0 | µg/L | 200 | 03/30/12 10:19 |
| Naphthalene | ND | | 200 | 20.0 | µg/L | 200 | 03/30/12 10:19 |
| o-Xylene | ND | | 100 | 20.0 | µg/L | 200 | 03/30/12 10:19 |
| p-Isopropyltoluene | ND | | 100 | 32.0 | µg/L | 200 | 03/30/12 10:19 |
| sec-Butylbenzene | ND | | 100 | 32.0 | µg/L | 200 | 03/30/12 10:19 |
| Styrene | ND | | 100 | 20.0 | µg/L | 200 | 03/30/12 10:19 |
| Tetrachloroethene | 80.0 | J | 100 | 20.0 | µg/L | 200 | 03/30/12 10:19 |
| Toluene | 58.0 | J | 100 | 20.0 | µg/L | 200 | 03/30/12 10:19 |
| trans-1,2-Dichloroethene | ND | | 100 | 20.0 | µg/L | 200 | 03/30/12 10:19 |
| trans-1,3-Dichloropropene | ND | | 100 | 32.0 | µg/L | 200 | 03/30/12 10:19 |
| Trichloroethene | ND | | 100 | 20.0 | µg/L | 200 | 03/30/12 10:19 |
| Trichlorofluoromethane | ND | | 200 | 20.0 | µg/L | 200 | 03/30/12 10:19 |
| Vinyl acetate | ND | | 400 | 200 | µg/L | 200 | 03/30/12 10:19 |
| Vinyl chloride | ND | | 200 | 66.0 | µg/L | 200 | 03/30/12 10:19 |
| Xylenes (total) | ND | | 200 | 60.0 | µg/L | 200 | 03/30/12 10:19 |
| Surr: 1,2-Dichloroethane-d4 | 105 | | 75-128 | 32.0 | %REC | 200 | 03/30/12 10:19 |
| Surr: Toluene-d8 | 112 | | 75-125 | 20.0 | %REC | 200 | 03/30/12 10:19 |
| Surr: 4-Bromofluorobenzene | 102 | | 75-125 | 20.0 | %REC | 200 | 03/30/12 10:19 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 04/03/12 6:29 597998 **roject Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | | | |
|---|---|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | | | **Lab ID:** | **K1203241-016A** |
| **Project:** | 189-02 | | | **Client Sample ID:** | ***189 - CARB*** |
| **W Order:** | K1203241 | | | **Collection Date:** | 03/22/12 16:30 |
| **Matrix:** | WASTE WATER | | | **Date Received:** | 03/23/12 8:15 |
| **Inst. ID:** | MS01_11 | **Sample Size** | 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | | **BatchNo:** | R23817 |
| **Revision:** | 04/03/12 6:22 | **TestCode:** | 8260W_CAL | **FileID:** | 1-SAMP-T3012.D |
| **Col Type:** | | Total 323 | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 10.0 | 2.00 | µg/L | 10 | 03/30/12 14:42 |
| 1,1,1,2-Tetrachloroethane | ND | | 5.00 | 1.60 | µg/L | 10 | 03/30/12 14:42 |
| 1,1,1-Trichloroethane | 39.5 | | 5.00 | 1.00 | µg/L | 10 | 03/30/12 14:42 |
| 1,1,2,2-Tetrachloroethane | ND | | 5.00 | 1.00 | µg/L | 10 | 03/30/12 14:42 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 5.00 | 1.00 | µg/L | 10 | 03/30/12 14:42 |
| 1,1,2-Trichloroethane | ND | | 5.00 | 1.60 | µg/L | 10 | 03/30/12 14:42 |
| 1,1-Dichloroethane | 158 | | 5.00 | 1.00 | µg/L | 10 | 03/30/12 14:42 |
| 1,1-Dichloroethene | ND | | 5.00 | 1.60 | µg/L | 10 | 03/30/12 14:42 |
| 1,2,3-Trichloropropane | ND | | 20.0 | 3.30 | µg/L | 10 | 03/30/12 14:42 |
| 1,2,4-Trichlorobenzene | ND | | 10.0 | 1.00 | µg/L | 10 | 03/30/12 14:42 |
| 1,2,4-Trimethylbenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 03/30/12 14:42 |
| 1,2-Dibromo-3-chloropropane | ND | | 50.0 | 10.0 | µg/L | 10 | 03/30/12 14:42 |
| 1,2-Dibromoethane | ND | | 5.00 | 1.60 | µg/L | 10 | 03/30/12 14:42 |
| 1,2-Dichlorobenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 03/30/12 14:42 |
| 1,2-Dichloroethane | 2.20 | J | 5.00 | 1.60 | µg/L | 10 | 03/30/12 14:42 |
| 1,2-Dichloropropane | ND | | 5.00 | 1.60 | µg/L | 10 | 03/30/12 14:42 |
| 1,3,5-Trimethylbenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 03/30/12 14:42 |
| 1,3-Dichlorobenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 03/30/12 14:42 |
| 1,4-Dichlorobenzene | ND | | 5.00 | 1.60 | µg/L | 10 | 03/30/12 14:42 |
| 2-Butanone | ND | | 100 | 10.0 | µg/L | 10 | 03/30/12 14:42 |
| 2-Chloroethylvinyl ether | ND | | 50.0 | 25.0 | µg/L | 10 | 03/30/12 14:42 |
| 2-Hexanone | ND | | 50.0 | 10.0 | µg/L | 10 | 03/30/12 14:42 |
| 4-Chlorotoluene | ND | | 5.00 | 1.00 | µg/L | 10 | 03/30/12 14:42 |
| 4-Methyl-2-pentanone | ND | | 50.0 | 10.0 | µg/L | 10 | 03/30/12 14:42 |
| Acetone | ND | | 100 | 10.0 | µg/L | 10 | 03/30/12 14:42 |
| Benzene | ND | | 5.00 | 1.00 | µg/L | 10 | 03/30/12 14:42 |
| Bromobenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 03/30/12 14:42 |
| Bromochloromethane | ND | | 5.00 | 1.00 | µg/L | 10 | 03/30/12 14:42 |
| Bromodichloromethane | ND | | 5.00 | 1.00 | µg/L | 10 | 03/30/12 14:42 |
| Bromoform | ND | | 10.0 | 3.30 | µg/L | 10 | 03/30/12 14:42 |
| Bromomethane | ND | | 10.0 | 3.30 | µg/L | 10 | 03/30/12 14:42 |
| Carbon disulfide | ND | | 5.00 | 1.10 | µg/L | 10 | 03/30/12 14:42 |
| Carbon tetrachloride | ND | | 5.00 | 1.00 | µg/L | 10 | 03/30/12 14:42 |
| Chlorobenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 03/30/12 14:42 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 04/03/12 6:29 598157 **roject Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

**CLIENT** Ken W. Kloeber Consulting Engineers
**Project:** 189-02
**W Order:** K1203241
**Matrix:** WASTE WATER
**Inst. ID:** MS01_11 **Sample Size** 10 mL
**ColumnID:** Rtx-VMS **%Moisture:**
**Revision:** 04/03/12 6:22 **TestCode:** 8260W_CAL
**Col Type:**

**Lab ID:** K1203241-016A
**Client Sample ID:** *189 - CARB*
**Collection Date:** 03/22/12 16:30
**Date Received:** 03/23/12 8:15
**PrepDate:**
**BatchNo:** R23817
**FileID:** 1-SAMP-T3012.D

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| VOLATILE ORGANIC COMPOUNDS BY GC/MS | | | | | SW8260B | | |
| Chloroethane | ND | | 10.0 | 3.30 | µg/L | 10 | 03/30/12 14:42 |
| Chloroform | ND | | 5.00 | 1.00 | µg/L | 10 | 03/30/12 14:42 |
| Chloromethane | ND | | 10.0 | 3.30 | µg/L | 10 | 03/30/12 14:42 |
| cis-1,2-Dichloroethene | 100 | | 5.00 | 1.00 | µg/L | 10 | 03/30/12 14:42 |
| cis-1,3-Dichloropropene | ND | | 5.00 | 1.60 | µg/L | 10 | 03/30/12 14:42 |
| Cyclohexane | ND | | 5.00 | 1.00 | µg/L | 10 | 03/30/12 14:42 |
| Dibromochloromethane | ND | | 5.00 | 1.00 | µg/L | 10 | 03/30/12 14:42 |
| Dibromomethane | ND | | 5.00 | 1.60 | µg/L | 10 | 03/30/12 14:42 |
| Dichlorodifluoromethane | ND | | 10.0 | 1.00 | µg/L | 10 | 03/30/12 14:42 |
| Ethylbenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 03/30/12 14:42 |
| Hexachlorobutadiene | ND | | 10.0 | 1.00 | µg/L | 10 | 03/30/12 14:42 |
| Isopropylbenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 03/30/12 14:42 |
| Methyl tert-butyl ether | ND | | 10.0 | 1.60 | µg/L | 10 | 03/30/12 14:42 |
| Methylene chloride | 2.20 | J | 20.0 | 1.60 | µg/L | 10 | 03/30/12 14:42 |
| n-Propylbenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 03/30/12 14:42 |
| Naphthalene | ND | | 10.0 | 1.00 | µg/L | 10 | 03/30/12 14:42 |
| o-Xylene | ND | | 5.00 | 1.00 | µg/L | 10 | 03/30/12 14:42 |
| p-Isopropyltoluene | ND | | 5.00 | 1.60 | µg/L | 10 | 03/30/12 14:42 |
| sec-Butylbenzene | ND | | 5.00 | 1.60 | µg/L | 10 | 03/30/12 14:42 |
| Styrene | ND | | 5.00 | 1.00 | µg/L | 10 | 03/30/12 14:42 |
| Tetrachloroethene | ND | | 5.00 | 1.00 | µg/L | 10 | 03/30/12 14:42 |
| Toluene | ND | | 5.00 | 1.00 | µg/L | 10 | 03/30/12 14:42 |
| trans-1,2-Dichloroethene | ND | | 5.00 | 1.00 | µg/L | 10 | 03/30/12 14:42 |
| trans-1,3-Dichloropropene | ND | | 5.00 | 1.60 | µg/L | 10 | 03/30/12 14:42 |
| Trichloroethene | 14.2 | | 5.00 | 1.00 | µg/L | 10 | 03/30/12 14:42 |
| Trichlorofluoromethane | ND | | 10.0 | 1.00 | µg/L | 10 | 03/30/12 14:42 |
| Vinyl acetate | ND | | 20.0 | 10.0 | µg/L | 10 | 03/30/12 14:42 |
| Vinyl chloride | 6.90 | J | 10.0 | 3.30 | µg/L | 10 | 03/30/12 14:42 |
| Xylenes (total) | ND | | 10.0 | 3.00 | µg/L | 10 | 03/30/12 14:42 |
| Surr: 1,2-Dichloroethane-d4 | 107 | | 75-128 | 1.60 | %REC | 10 | 03/30/12 14:42 |
| Surr: Toluene-d8 | 114 | | 75-125 | 1.00 | %REC | 10 | 03/30/12 14:42 |
| Surr: 4-Bromofluorobenzene | 100 | | 75-125 | 1.00 | %REC | 10 | 03/30/12 14:42 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 04/03/12 6:29 598157 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1203241-017A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - TRIP*** |
| **W Order:** | K1203241 | **Collection Date:** | 03/22/12 0:00 |
| **Matrix:** | WATER Q | **Date Received:** | 03/23/12 8:15 |
| **Inst. ID:** | MS01_11 **Sample Size** 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS **%Moisture:** | **BatchNo:** | R23817 |
| **Revision:** | 03/30/12 15:19 **TestCode:** 8260W_CAL | **FileID:** | 1-SAMP-T3006.D |
| **Col Type:** | Total 0.22 (Lab contamination) | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 1.00 | 0.20 | µg/L | 1 | 03/30/12 11:25 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 03/30/12 11:25 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 03/30/12 11:25 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 03/30/12 11:25 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 03/30/12 11:25 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 03/30/12 11:25 |
| 1,1-Dichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 03/30/12 11:25 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.16 | µg/L | 1 | 03/30/12 11:25 |
| 1,2,3-Trichloropropane | ND | | 2.00 | 0.33 | µg/L | 1 | 03/30/12 11:25 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 0.10 | µg/L | 1 | 03/30/12 11:25 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/30/12 11:25 |
| 1,2-Dibromo-3-chloropropane | ND | | 5.00 | 1.00 | µg/L | 1 | 03/30/12 11:25 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.16 | µg/L | 1 | 03/30/12 11:25 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/30/12 11:25 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 03/30/12 11:25 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.16 | µg/L | 1 | 03/30/12 11:25 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/30/12 11:25 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/30/12 11:25 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 03/30/12 11:25 |
| 2-Butanone | ND | | 10.0 | 1.00 | µg/L | 1 | 03/30/12 11:25 |
| 2-Chloroethylvinyl ether | ND | | 5.00 | 2.50 | µg/L | 1 | 03/30/12 11:25 |
| 2-Hexanone | ND | | 5.00 | 1.00 | µg/L | 1 | 03/30/12 11:25 |
| 4-Chlorotoluene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/30/12 11:25 |
| 4-Methyl-2-pentanone | ND | | 5.00 | 1.00 | µg/L | 1 | 03/30/12 11:25 |
| Acetone | ND | | 10.0 | 1.00 | µg/L | 1 | 03/30/12 11:25 |
| Benzene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/30/12 11:25 |
| Bromobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/30/12 11:25 |
| Bromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 03/30/12 11:25 |
| Bromodichloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 03/30/12 11:25 |
| Bromoform | ND | | 1.00 | 0.33 | µg/L | 1 | 03/30/12 11:25 |
| Bromomethane | ND | | 1.00 | 0.33 | µg/L | 1 | 03/30/12 11:25 |
| Carbon disulfide | ND | | 0.50 | 0.11 | µg/L | 1 | 03/30/12 11:25 |
| Carbon tetrachloride | ND | | 0.50 | 0.10 | µg/L | 1 | 03/30/12 11:25 |
| Chlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/30/12 11:25 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | | | |
|---|---|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | | | **Lab ID:** | **K1203241-017A** |
| **Project:** | 189-02 | | | **Client Sample ID:** | ***189 - TRIP*** |
| **W Order:** | K1203241 | | | **Collection Date:** | 03/22/12 0:00 |
| **Matrix:** | WATER Q | | | **Date Received:** | 03/23/12 8:15 |
| **Inst. ID:** | MS01_11 | **Sample Size** | 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | | **BatchNo:** | R23817 |
| **Revision:** | 03/30/12 15:19 | **TestCode:** | 8260W_CAL | **FileID:** | 1-SAMP-T3006.D |
| **Col Type:** | | | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | ND | | 1.00 | 0.33 | µg/L | 1 | 03/30/12 11:25 |
| Chloroform | ND | | 0.50 | 0.10 | µg/L | 1 | 03/30/12 11:25 |
| Chloromethane | ND | | 1.00 | 0.33 | µg/L | 1 | 03/30/12 11:25 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/30/12 11:25 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 03/30/12 11:25 |
| Cyclohexane | ND | | 0.50 | 0.10 | µg/L | 1 | 03/30/12 11:25 |
| Dibromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 03/30/12 11:25 |
| Dibromomethane | ND | | 0.50 | 0.16 | µg/L | 1 | 03/30/12 11:25 |
| Dichlorodifluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 03/30/12 11:25 |
| Ethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/30/12 11:25 |
| Hexachlorobutadiene | ND | | 1.00 | 0.10 | µg/L | 1 | 03/30/12 11:25 |
| Isopropylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/30/12 11:25 |
| Methyl tert-butyl ether | ND | | 1.00 | 0.16 | µg/L | 1 | 03/30/12 11:25 |
| Methylene chloride | 0.22 | J | 2.00 | 0.16 | µg/L | 1 | 03/30/12 11:25 |
| n-Propylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/30/12 11:25 |
| Naphthalene | ND | | 1.00 | 0.10 | µg/L | 1 | 03/30/12 11:25 |
| o-Xylene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/30/12 11:25 |
| p-Isopropyltoluene | ND | | 0.50 | 0.16 | µg/L | 1 | 03/30/12 11:25 |
| sec-Butylbenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 03/30/12 11:25 |
| Styrene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/30/12 11:25 |
| Tetrachloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/30/12 11:25 |
| Toluene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/30/12 11:25 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/30/12 11:25 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 03/30/12 11:25 |
| Trichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/30/12 11:25 |
| Trichlorofluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 03/30/12 11:25 |
| Vinyl acetate | ND | | 2.00 | 1.00 | µg/L | 1 | 03/30/12 11:25 |
| Vinyl chloride | ND | | 1.00 | 0.33 | µg/L | 1 | 03/30/12 11:25 |
| Xylenes (total) | ND | | 1.00 | 0.30 | µg/L | 1 | 03/30/12 11:25 |
| Surr: 1,2-Dichloroethane-d4 | 106 | | 75-128 | 0.16 | %REC | 1 | 03/30/12 11:25 |
| Surr: Toluene-d8 | 113 | | 75-125 | 0.10 | %REC | 1 | 03/30/12 11:25 |
| Surr: 4-Bromofluorobenzene | 104 | | 75-125 | 0.10 | %REC | 1 | 03/30/12 11:25 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 04/03/12 6:29 598000 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | | | |
|---|---|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | | | **Lab ID:** | **K1203241-018A** |
| **Project:** | 189-02 | | | **Client Sample ID:** | ***189 - Field*** |
| **W Order:** | K1203241 | | | **Collection Date:** | 03/22/12 12:00 |
| **Matrix:** | WATER Q | | | **Date Received:** | 03/23/12 8:15 |
| **Inst. ID:** | MS01_11 | **Sample Size** | 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | | **BatchNo:** | R23817 |
| **Revision:** | 03/30/12 15:19 | **TestCode:** | 8260W_CAL | **FileID:** | 1-SAMP-T3007.D |
| **Col Type:** | | Total 0.39 (lab contamination) | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 1.00 | 0.20 | µg/L | 1 | 03/30/12 11:58 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 03/30/12 11:58 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 03/30/12 11:58 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 03/30/12 11:58 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 03/30/12 11:58 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 03/30/12 11:58 |
| 1,1-Dichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 03/30/12 11:58 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.16 | µg/L | 1 | 03/30/12 11:58 |
| 1,2,3-Trichloropropane | ND | | 2.00 | 0.33 | µg/L | 1 | 03/30/12 11:58 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 0.10 | µg/L | 1 | 03/30/12 11:58 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/30/12 11:58 |
| 1,2-Dibromo-3-chloropropane | ND | | 5.00 | 1.00 | µg/L | 1 | 03/30/12 11:58 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.16 | µg/L | 1 | 03/30/12 11:58 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/30/12 11:58 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 03/30/12 11:58 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.16 | µg/L | 1 | 03/30/12 11:58 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/30/12 11:58 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/30/12 11:58 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 03/30/12 11:58 |
| 2-Butanone | ND | | 10.0 | 1.00 | µg/L | 1 | 03/30/12 11:58 |
| 2-Chloroethylvinyl ether | ND | | 5.00 | 2.50 | µg/L | 1 | 03/30/12 11:58 |
| 2-Hexanone | ND | | 5.00 | 1.00 | µg/L | 1 | 03/30/12 11:58 |
| 4-Chlorotoluene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/30/12 11:58 |
| 4-Methyl-2-pentanone | ND | | 5.00 | 1.00 | µg/L | 1 | 03/30/12 11:58 |
| Acetone | ND | | 10.0 | 1.00 | µg/L | 1 | 03/30/12 11:58 |
| Benzene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/30/12 11:58 |
| Bromobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/30/12 11:58 |
| Bromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 03/30/12 11:58 |
| Bromodichloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 03/30/12 11:58 |
| Bromoform | ND | | 1.00 | 0.33 | µg/L | 1 | 03/30/12 11:58 |
| Bromomethane | ND | | 1.00 | 0.33 | µg/L | 1 | 03/30/12 11:58 |
| Carbon disulfide | ND | | 0.50 | 0.11 | µg/L | 1 | 03/30/12 11:58 |
| Carbon tetrachloride | ND | | 0.50 | 0.10 | µg/L | 1 | 03/30/12 11:58 |
| Chlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/30/12 11:58 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 04/03/12 6:29 598001 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1203241-018A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***189 - Field*** |
| **W Order:** | K1203241 | **Collection Date:** | 03/22/12 12:00 |
| **Matrix:** | WATER Q | **Date Received:** | 03/23/12 8:15 |
| **Inst. ID:** | MS01_11 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R23817 |
| **Revision:** | 03/30/12 15:19 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-T3007.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | ND | | 1.00 | 0.33 | µg/L | 1 | 03/30/12 11:58 |
| Chloroform | ND | | 0.50 | 0.10 | µg/L | 1 | 03/30/12 11:58 |
| Chloromethane | ND | | 1.00 | 0.33 | µg/L | 1 | 03/30/12 11:58 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/30/12 11:58 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 03/30/12 11:58 |
| Cyclohexane | ND | | 0.50 | 0.10 | µg/L | 1 | 03/30/12 11:58 |
| Dibromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 03/30/12 11:58 |
| Dibromomethane | ND | | 0.50 | 0.16 | µg/L | 1 | 03/30/12 11:58 |
| Dichlorodifluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 03/30/12 11:58 |
| Ethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/30/12 11:58 |
| Hexachlorobutadiene | ND | | 1.00 | 0.10 | µg/L | 1 | 03/30/12 11:58 |
| Isopropylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/30/12 11:58 |
| Methyl tert-butyl ether | ND | | 1.00 | 0.16 | µg/L | 1 | 03/30/12 11:58 |
| Methylene chloride | 0.39 | J | 2.00 | 0.16 | µg/L | 1 | 03/30/12 11:58 |
| n-Propylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/30/12 11:58 |
| Naphthalene | ND | | 1.00 | 0.10 | µg/L | 1 | 03/30/12 11:58 |
| o-Xylene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/30/12 11:58 |
| p-Isopropyltoluene | ND | | 0.50 | 0.16 | µg/L | 1 | 03/30/12 11:58 |
| sec-Butylbenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 03/30/12 11:58 |
| Styrene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/30/12 11:58 |
| Tetrachloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/30/12 11:58 |
| Toluene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/30/12 11:58 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/30/12 11:58 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 03/30/12 11:58 |
| Trichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 03/30/12 11:58 |
| Trichlorofluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 03/30/12 11:58 |
| Vinyl acetate | ND | | 2.00 | 1.00 | µg/L | 1 | 03/30/12 11:58 |
| Vinyl chloride | ND | | 1.00 | 0.33 | µg/L | 1 | 03/30/12 11:58 |
| Xylenes (total) | ND | | 1.00 | 0.30 | µg/L | 1 | 03/30/12 11:58 |
| Surr: 1,2-Dichloroethane-d4 | 107 | | 75-128 | 0.16 | %REC | 1 | 03/30/12 11:58 |
| Surr: Toluene-d8 | 114 | | 75-125 | 0.10 | %REC | 1 | 03/30/12 11:58 |
| Surr: 4-Bromofluorobenzene | 100 | | 75-125 | 0.10 | %REC | 1 | 03/30/12 11:58 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 04/03/12 6:29 598001 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
**5854 Butternut Drive**
**East Syracuse, NY 13057** **(315) 445-1900**

Wednesday, February 15, 2012

Ken W. Kloebler
Ken W. Kloeber Consulting Engineers
PO Box 140
Boston, NY 14025

TEL: (716) 864-0012

Project: 189-02
RE: Analytical Results Order No.: K1202001

Dear Ken W. Kloebler:

Life Science Laboratories, Inc. received 14 sample(s) on 2/1/2012 for the analyses presented in the following report. Sample results relate only to the samples as received by the laboratory.

Very truly yours,
Life Science Laboratories, Inc.

Anthony Crescenzi
Project Manager

# Ken W. Kloeber Consulting Engineers

(716) 864-0012 tel
(775) 860-3804 fax
KloeberEng@aol.com
PO Box 140 Boston NY 14025

KWKCE Proj. no. 189-02

Sampled by: MF P.O. N/A

Lab use

## Environmental Sample Chain of Custody

☒ Analysis Requested | Remarks / Instructions

| KWKCE Sample ID | Date | Time | Type | Matrix | No. of containers | (1) VOCs | (2) | (3) | (4) | (5) | (6) | TAT | REPORT ALL RESULTS AND QC VALUES (E.G. QS, JS); AND ALL DATA & QC QUALIFIERS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Well # 5 | 1/31/12 | 1040 | G C | GW | 2 | X | | | | | | | KEEP LIMITS LOW AS POSSIBLE |
| Well # 12 | | 1120 | G C | | 2 | | | | | | | | NON-ASP; EMAIL PDF REPORT, |
| Well # 6 | | 1130 | G C | | 2 | | | | | | | | CHAIN, & INVOICE; |
| Well # 13 | | 1150 | G C | | 2 | | | | | | | | FOLLOW UP W/ EQUIS EDD. |
| Well # 7 | | 1155 | G C | | 2 | | | | | | | | |
| Well # 14 | | 1205 | G C | | 2 | | | | | | | | |
| Well # 4 | | 1215 | G C | | 2 | | | | | | | | |
| Well # 8 | | 1210 | G C | | 2 | | | | | | | | |
| Well # 1 | | 1250 | G C | | 2 | | | | | | | | |
| Well # 2 | | 1300 | G C | | 2 | | | | | | | | |
| Well # 3 | | 1310 | G C | | 2 | | | | | | | | |
| Well # 9 | | 1320 | G C | ↓ | 2 | | | | | | | | |
| (CCT) Control | | 1340 | G C | WW | 2 | ↓ | | | | | | | |
| BLANK | ↓ | 1440 | G C | GW | 2 | X | | | | | | | |
| | | | G C | | | | | | | | | | *** USE EMAILED LIST OF |
| | | | G C | | | | | | | | | | 8260 COMPOUNDS + |
| | | | G C | | | | | | | | | | EXPANDED. + TICS. |

| Sampler signature | Courier | Picked up / dropped off location |
|---|---|---|
| MF | FEDEX | AIRPORT LOC. |

| Relinquished by signature | Date | Time | Received by signature |
|---|---|---|---|
| MF | 1/31/12 | 1530 | |
| | | | |
| | | | |

Relinquished by signature — Date — Time — Received at Lab by signature

Analysis requested above / Test Method

| | | Sample Container Type | Size | Preservative |
|---|---|---|---|---|
| (1) | VOCS / EPA 8260 *** | VOA | 40 ML | HCL, ICE |
| (2) | | | | |
| (3) | | | | |
| (4) | | | | |
| (5) | | | | |
| (6) | | | | |

Lab use

K1202001

# Ken W. Kloeber Consulting Engineers

(716) 864-0012 tel
(775) 860-3804 fax
KloeberEng@aol.com
PO Box 140 Boston NY 14025

KWKCE Proj. no.

Sampled by:

P.O.

Lab use

## Environmental Sample Chain of Custody

| KWKCE Sample ID | Date | Time | Type | Matrix | No. of containers | (1) | (2) | (3) | (4) | (5) | (6) | TAT | Analysis Requested / Remarks / Instructions |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 001 | Well # 5 | 1/31/12 | 1020 Am | G C W | 2 | | | | | | | | REPORT ALL RESULTS AND QC VALUES (E.G. QS, JS); AND ALL DATA & QC QUALIFIERS. |
| 002 | Well # 12 | 1/31/12 | 1035 | G C W | 2 | | | | | | | | KEEP LIMITS LOW AS POSSIBLE |
| 003 | Well # 6 | 1/31/12 | 1040 | G C W | 2 | | | | | | | | NON-ASP; EMAIL PDF REPORT, |
| 004 | Well # 13 | 1/31/12 | 1055 | G C W | 2 | | | | | | | | CHAIN, & INVOICE; |
| 005 | Well # 7 | 1/31/12 | 1105 | G C W | 2 | | | | | | | | FOLLOW UP W/ EQUIS EDD. |
| 006 | Well # [illegible] | [illegible] | [illegible] | G C W | 2 | | | | | | | | (Do not use this coc per client) |
| 007 | Well # 4 | 1/31/12 | 1130 | G C W | 2 | | | | | | | | |
| 008 | Well # 8 | 1/31/12 | 1140 Am | G C W | 2 | | | | | | | | |
| 009 | Well # [illegible] | 1/31/12 | 1200 Pm | G C W | 2 | | | | | | | | |
| 010 | [illegible] | [illegible]/12 | 1215 | G C W | 2 | | | | | | | | |
| 011 | [illegible] | [illegible] | 1230 | G C W | 2 | | | | | | | | |
| 012 | [illegible] | | | G C W | 2 | | | | | | | | |
| 013 | | | | G C W | 2 | | | | | | | | |
| 014 | Blank | | | G C | | | | | | | | | |
| | | | | G C | | | | | | | | | *** USE EMAILED LIST OF |
| | | | | G C | | | | | | | | | 8260 COMPOUNDS + |
| | | | | G C | | | | | | | | | EXPANDED. [redacted] TICS. |

| Sampler signature | Courier | Picked up / dropped off location |
|---|---|---|
| Michael Farnsworth | FED EX | dropped off AT Fed Ex |

| Relinquished by signature | Date | Time | Received by signature |
|---|---|---|---|
| | | | |
| Relinquished by signature | Date | Time | Received by signature |
| | | | |
| Relinquished by signature | Date | Time | Received at Lab by signature |
| | 2-1-12 | 08:30 | |

| Analysis requested above / Test Method | Sample Container Type | Size | Preservative |
|---|---|---|---|
| (1) VOCS / EPA 8260 *** | VOA | 40 ML | HCL, ICE |
| (2) | | | |
| (3) | | | |
| (4) | | | |
| (5) | | | |
| (6) | | | |

Lab use

15.0 c via FedEx

## Life Science Laboratories, Inc.

### Sample Receipt Checklist

Client Name: **KLOEBERENG**

Date and Time Received: **2/1/2012 8:30:00 AM**

Work Order Number: **K1202001**

Received by: gis

Checklist completed by: GS (Initials) 2-1-12 (Date)

Reviewed by: AC (Initials) 2-1-12 (Date)

Delivery Method: FedEx

| | | | |
|---|---|---|---|
| Shipping container/cooler in good condition? | Yes ☑ | No ☐ | Not Present ☐ |
| Custody seals intact on shipping container/cooler? | Yes ☐ | No ☐ | Not Present ☑ |
| Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Applicable ☑ |
| Chain of custody present? | Yes ☑ | No ☐ | |
| Chain of custody signed when relinquished and received? | Yes ☑ | No ☐ | |
| Chain of custody agrees with sample labels? | Yes ☐ | No ☑ | |
| Samples in proper container/bottle? | Yes ☑ | No ☐ | |
| Sample containers intact? | Yes ☑ | No ☐ | |
| Sufficient sample volume for indicated test? | Yes ☑ | No ☐ | |
| All samples received within holding time? | Yes ☑ | No ☐ | |
| Container/Temp Blank temperature in compliance? | Yes ☐ | No ☑ | |
| Water - VOA vials have zero headspace? | Yes ☑ | No ☐ | No VOA vials submitted ☐ |
| Water - pH acceptable upon receipt? | Yes ☐ | No ☐ | Not Applicable ☑ |

Comments:

Samplle ID's were on bubble wrap around each set of vials. Last ID on COC ilegible. Added Blank to COC.
Blank is a Dup per client e-mail of 2-2-12

Corrective Action:

Tansfered ID's on bubble wrap to vials. Asked for clarification on last ID.

## Anthony Crescenzi

**From:** Hugh Guider
**Sent:** Thursday, February 02, 2012 12:07 PM
**To:** Greg Smith; Anthony Crescenzi
**Subject:** Kloeber

Hugh Guider, Director
Client Services
Life Science Laboratories, Inc.
315-445-1900
315-445-1104 Fax
guiderhm@lsl-inc.com

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---

**From:** Ken Kloeber PE [mailto:Kloebereng@aol.com]
**Sent:** Thursday, February 02, 2012 11:42 AM
**To:** Hugh Guider
**Subject:** RE: Proj 189-02

Hugh,

Go with the chain that I emailed last night. Those times are correct.

Thanks for checkig!

ken

---

**From:** Hugh Guider [mailto:guiderhm@lsl-inc.com]
**Sent:** Thu Feb 2, 2012 9:10 AM
**To:** Ken Kloeber PE
**Subject:** FW: Proj 189-02

**Hey Ken:**

**Here are the two cocs with the different times**

Hugh Guider, Director
Client Services
Life Science Laboratories, Inc.
315-445-1900
315-445-1104 Fax
guiderhm@lsl-inc.com

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---

**From:** Anthony Crescenzi
**Sent:** Thursday, February 02, 2012 8:46 AM
**To:** Hugh Guider
**Subject:** RE: Proj 189-02

Hugh,

Attached are the 2 COCs if you need to forward to Ken.

Tony

---

**From:** Hugh Guider
**Sent:** Thursday, February 02, 2012 8:34 AM
**To:** Ken Kloeber PE
**Cc:** Greg Smith; Anthony Crescenzi
**Subject:** RE: Proj 189-02

**Hey Ken:**

**Times on this COC are different than what is on COC we received with the samples. Which should we use, and should we be calling the "blank" a field Duplicate like we talked about yesterday?**

**Thanks**

**Hugh**

Hugh Guider, Director
Client Services
Life Science Laboratories, Inc.
315-445-1900
315-445-1104 Fax
guiderhm@lsl-inc.com

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---

**From:** Ken Kloeber PE [mailto:KloeberEng@aol.com]
**Sent:** Wednesday, February 01, 2012 9:24 PM
**To:** Hugh Guider
**Subject:** Proj 189-02

Hi Hugh,

See attached chain prepared from the copy Mike kept.

Thanks,

Ken

==========
Ken W. Kloeber Consulting Engineers
NY
PO Box 140
Boston NY 14025

NC & SC
221 S Lafayette St
Suite 15
Shelby NC 28150

direct voice - 716-864-0012
direct fax - 775-860-3804
==========

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | | | |
|---|---|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | | | **Lab ID:** | K1202001-009A |
| **Project:** | 189-02 | | | **Client Sample ID:** | *Well #1* |
| **W Order:** | K1202001 | | | **Collection Date:** | 01/31/12 12:50 |
| **Matrix:** | GROUNDWATER | | | **Date Received:** | 02/01/12 8:30 |
| **Inst. ID:** | MSK_75 | **Sample Size** | 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | | **BatchNo:** | R23591 |
| **Revision:** | 02/15/12 14:47 | **TestCode:** | 8260W_CAL | **FileID:** | 1-SAMP-K8252.D |
| **Col Type:** | | | Total 47.21 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 1.00 | 0.20 | µg/L | 1 | 02/15/12 12:45 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 02/15/12 12:45 |
| 1,1,1-Trichloroethane | 14.9 | | 0.50 | 0.10 | µg/L | 1 | 02/15/12 12:45 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 02/15/12 12:45 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 0.14 | J | 0.50 | 0.10 | µg/L | 1 | 02/15/12 12:45 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 02/15/12 12:45 |
| 1,1-Dichloroethane | 16.4 | | 0.50 | 0.10 | µg/L | 1 | 02/15/12 12:45 |
| 1,1-Dichloroethene | 0.32 | J | 0.50 | 0.16 | µg/L | 1 | 02/15/12 12:45 |
| 1,2,3-Trichloropropane | ND | | 2.00 | 0.33 | µg/L | 1 | 02/15/12 12:45 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 0.10 | µg/L | 1 | 02/15/12 12:45 |
| 1,2,4-Trimethylbenzene | 0.48 | J | 0.50 | 0.10 | µg/L | 1 | 02/15/12 12:45 |
| 1,2-Dibromo-3-chloropropane | ND | | 5.00 | 1.00 | µg/L | 1 | 02/15/12 12:45 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.16 | µg/L | 1 | 02/15/12 12:45 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/15/12 12:45 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 02/15/12 12:45 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.16 | µg/L | 1 | 02/15/12 12:45 |
| 1,3,5-Trimethylbenzene | 0.11 | J | 0.50 | 0.10 | µg/L | 1 | 02/15/12 12:45 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/15/12 12:45 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 02/15/12 12:45 |
| 2-Butanone | ND | | 10.0 | 1.00 | µg/L | 1 | 02/15/12 12:45 |
| 2-Chloroethylvinyl ether | ND | | 5.00 | 2.50 | µg/L | 1 | 02/15/12 12:45 |
| 2-Hexanone | ND | | 5.00 | 1.00 | µg/L | 1 | 02/15/12 12:45 |
| 4-Chlorotoluene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/15/12 12:45 |
| 4-Methyl-2-pentanone | ND | | 5.00 | 1.00 | µg/L | 1 | 02/15/12 12:45 |
| Acetone | 3.75 | J | 10.0 | 1.00 | µg/L | 1 | 02/15/12 12:45 |
| Benzene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/15/12 12:45 |
| Bromobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/15/12 12:45 |
| Bromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 02/15/12 12:45 |
| Bromodichloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 02/15/12 12:45 |
| Bromoform | ND | | 1.00 | 0.33 | µg/L | 1 | 02/15/12 12:45 |
| Bromomethane | ND | | 1.00 | 0.33 | µg/L | 1 | 02/15/12 12:45 |
| Carbon disulfide | 0.11 | J | 0.50 | 0.11 | µg/L | 1 | 02/15/12 12:45 |
| Carbon tetrachloride | ND | | 0.50 | 0.10 | µg/L | 1 | 02/15/12 12:45 |
| Chlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/15/12 12:45 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 02/15/12 14:49 593012 **roject Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1202001-009A |
| **Project:** | 189-02 | **Client Sample ID:** | *Well #1* |
| **W Order:** | K1202001 | **Collection Date:** | 01/31/12 12:50 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 02/01/12 8:30 |
| **Inst. ID:** | MSK_75 **Sample Size** 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS **%Moisture:** | **BatchNo:** | R23591 |
| **Revision:** | 02/15/12 14:47 **TestCode:** 8260W_CAL | **FileID:** | 1-SAMP-K8252.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | ND | | 1.00 | 0.33 | µg/L | 1 | 02/15/12 12:45 |
| Chloroform | ND | | 0.50 | 0.10 | µg/L | 1 | 02/15/12 12:45 |
| Chloromethane | ND | | 1.00 | 0.33 | µg/L | 1 | 02/15/12 12:45 |
| cis-1,2-Dichloroethene | 5.54 | | 0.50 | 0.10 | µg/L | 1 | 02/15/12 12:45 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 02/15/12 12:45 |
| Cyclohexane | ND | | 0.50 | 0.10 | µg/L | 1 | 02/15/12 12:45 |
| Dibromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 02/15/12 12:45 |
| Dibromomethane | ND | | 0.50 | 0.16 | µg/L | 1 | 02/15/12 12:45 |
| Dichlorodifluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 02/15/12 12:45 |
| Ethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/15/12 12:45 |
| Hexachlorobutadiene | ND | | 1.00 | 0.10 | µg/L | 1 | 02/15/12 12:45 |
| Isopropylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/15/12 12:45 |
| Methyl tert-butyl ether | ND | | 1.00 | 0.16 | µg/L | 1 | 02/15/12 12:45 |
| Methylene chloride | ND | | 2.00 | 0.16 | µg/L | 1 | 02/15/12 12:45 |
| n-Propylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/15/12 12:45 |
| Naphthalene | ND | | 1.00 | 0.10 | µg/L | 1 | 02/15/12 12:45 |
| o-Xylene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/15/12 12:45 |
| p-Isopropyltoluene | ND | | 0.50 | 0.16 | µg/L | 1 | 02/15/12 12:45 |
| sec-Butylbenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 02/15/12 12:45 |
| Styrene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/15/12 12:45 |
| Tetrachloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/15/12 12:45 |
| Toluene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/15/12 12:45 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/15/12 12:45 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 02/15/12 12:45 |
| Trichloroethene | 1.47 | | 0.50 | 0.10 | µg/L | 1 | 02/15/12 12:45 |
| Trichlorofluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 02/15/12 12:45 |
| Vinyl acetate | ND | | 2.00 | 1.00 | µg/L | 1 | 02/15/12 12:45 |
| Vinyl chloride | 3.99 | | 1.00 | 0.33 | µg/L | 1 | 02/15/12 12:45 |
| Xylenes (total) | ND | | 1.00 | 0.30 | µg/L | 1 | 02/15/12 12:45 |
| Surr: 1,2-Dichloroethane-d4 | 120 | | 75-128 | 0.16 | %REC | 1 | 02/15/12 12:45 |
| Surr: Toluene-d8 | 103 | | 75-125 | 0.10 | %REC | 1 | 02/15/12 12:45 |
| Surr: 4-Bromofluorobenzene | 111 | | 75-125 | 0.10 | %REC | 1 | 02/15/12 12:45 |
| TIC: Propane 4.19 | 3.75 J | | 0 | 0 | µg/L | 1 | 02/15/12 12:45 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 02/15/12 14:49 593012 **roject Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | | | |
|---|---|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | | | **Lab ID:** | **K1202001-009A** |
| **Project:** | 189-02 | | | **Client Sample ID:** | ***Well #1*** |
| **W Order:** | K1202001 | | | **Collection Date:** | 01/31/12 12:50 |
| **Matrix:** | GROUNDWATER | | | **Date Received:** | 02/01/12 8:30 |
| **Inst. ID:** | MSK_75 | **Sample Size** | 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | | **BatchNo:** | R23591 |
| **Revision:** | 02/15/12 14:47 | **TestCode:** | 8260W_CAL | **FileID:** | 1-SAMP-K8252.D |
| **Col Type:** | | | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |

**NOTES:**

TIC: Tentatively Identified Compound; concentration is estimated (J).

| | | | | | |
|---|---|---|---|---|---|
| **Qualifiers:** | * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| | E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| | J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| | P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

**CLIENT** Ken W. Kloeber Consulting Engineers
**Project:** 189-02
**W Order:** K1202001
**Matrix:** GROUNDWATER
**Inst. ID:** MSK_75 **Sample Size** 10 mL
**ColumnID:** Rtx-VMS **%Moisture:**
**Revision:** 02/13/12 15:29 **TestCode:** 8260W_CAL
**Col Type:** Total 2886

**Lab ID:** K1202001-010A
**Client Sample ID:** *Well #2*
**Collection Date:** 01/31/12 13:00
**Date Received:** 02/01/12 8:30
**PrepDate:**
**BatchNo:** R23543
**FileID:** 1-SAMP-K8083.D

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 50.0 | 10.0 | µg/L | 50 | 02/02/12 12:56 |
| 1,1,1,2-Tetrachloroethane | ND | | 25.0 | 8.00 | µg/L | 50 | 02/02/12 12:56 |
| 1,1,1-Trichloroethane | 698 | | 25.0 | 5.00 | µg/L | 50 | 02/02/12 12:56 |
| 1,1,2,2-Tetrachloroethane | ND | | 25.0 | 5.00 | µg/L | 50 | 02/02/12 12:56 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 13.0 | J | 25.0 | 5.00 | µg/L | 50 | 02/02/12 12:56 |
| 1,1,2-Trichloroethane | ND | | 25.0 | 8.00 | µg/L | 50 | 02/02/12 12:56 |
| 1,1-Dichloroethane | 1130 | | 25.0 | 5.00 | µg/L | 50 | 02/02/12 12:56 |
| 1,1-Dichloroethene | 14.5 | J | 25.0 | 8.00 | µg/L | 50 | 02/02/12 12:56 |
| 1,2,3-Trichloropropane | ND | | 100 | 16.5 | µg/L | 50 | 02/02/12 12:56 |
| 1,2,4-Trichlorobenzene | ND | | 50.0 | 5.00 | µg/L | 50 | 02/02/12 12:56 |
| 1,2,4-Trimethylbenzene | 25.5 | | 25.0 | 5.00 | µg/L | 50 | 02/02/12 12:56 |
| 1,2-Dibromo-3-chloropropane | ND | | 250 | 50.0 | µg/L | 50 | 02/02/12 12:56 |
| 1,2-Dibromoethane | ND | | 25.0 | 8.00 | µg/L | 50 | 02/02/12 12:56 |
| 1,2-Dichlorobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 02/02/12 12:56 |
| 1,2-Dichloroethane | ND | | 25.0 | 8.00 | µg/L | 50 | 02/02/12 12:56 |
| 1,2-Dichloropropane | ND | | 25.0 | 8.00 | µg/L | 50 | 02/02/12 12:56 |
| 1,3,5-Trimethylbenzene | 5.50 | J | 25.0 | 5.00 | µg/L | 50 | 02/02/12 12:56 |
| 1,3-Dichlorobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 02/02/12 12:56 |
| 1,4-Dichlorobenzene | ND | | 25.0 | 8.00 | µg/L | 50 | 02/02/12 12:56 |
| 2-Butanone | ND | | 500 | 50.0 | µg/L | 50 | 02/02/12 12:56 |
| 2-Chloroethylvinyl ether | ND | | 250 | 125 | µg/L | 50 | 02/02/12 12:56 |
| 2-Hexanone | ND | | 250 | 50.0 | µg/L | 50 | 02/02/12 12:56 |
| 4-Chlorotoluene | ND | | 25.0 | 5.00 | µg/L | 50 | 02/02/12 12:56 |
| 4-Methyl-2-pentanone | ND | | 250 | 50.0 | µg/L | 50 | 02/02/12 12:56 |
| Acetone | ND | | 500 | 50.0 | µg/L | 50 | 02/02/12 12:56 |
| Benzene | ND | | 25.0 | 5.00 | µg/L | 50 | 02/02/12 12:56 |
| Bromobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 02/02/12 12:56 |
| Bromochloromethane | ND | | 25.0 | 5.00 | µg/L | 50 | 02/02/12 12:56 |
| Bromodichloromethane | ND | | 25.0 | 5.00 | µg/L | 50 | 02/02/12 12:56 |
| Bromoform | ND | | 50.0 | 16.5 | µg/L | 50 | 02/02/12 12:56 |
| Bromomethane | ND | | 50.0 | 16.5 | µg/L | 50 | 02/02/12 12:56 |
| Carbon disulfide | ND | | 25.0 | 5.50 | µg/L | 50 | 02/02/12 12:56 |
| Carbon tetrachloride | ND | | 25.0 | 5.00 | µg/L | 50 | 02/02/12 12:56 |
| Chlorobenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 02/02/12 12:56 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 02/13/12 15:42 591982 **roject Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1202001-010A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***Well #2*** |
| **W Order:** | K1202001 | **Collection Date:** | 01/31/12 13:00 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 02/01/12 8:30 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R23543 |
| **Revision:** | 02/13/12 15:29 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K8083.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | 36.5 | J | 50.0 | 16.5 | µg/L | 50 | 02/02/12 12:56 |
| Chloroform | ND | | 25.0 | 5.00 | µg/L | 50 | 02/02/12 12:56 |
| Chloromethane | ND | | 50.0 | 16.5 | µg/L | 50 | 02/02/12 12:56 |
| cis-1,2-Dichloroethene | 508 | | 25.0 | 5.00 | µg/L | 50 | 02/02/12 12:56 |
| cis-1,3-Dichloropropene | ND | | 25.0 | 8.00 | µg/L | 50 | 02/02/12 12:56 |
| Cyclohexane | ND | | 25.0 | 5.00 | µg/L | 50 | 02/02/12 12:56 |
| Dibromochloromethane | ND | | 25.0 | 5.00 | µg/L | 50 | 02/02/12 12:56 |
| Dibromomethane | ND | | 25.0 | 8.00 | µg/L | 50 | 02/02/12 12:56 |
| Dichlorodifluoromethane | ND | | 50.0 | 5.00 | µg/L | 50 | 02/02/12 12:56 |
| Ethylbenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 02/02/12 12:56 |
| Hexachlorobutadiene | ND | | 50.0 | 5.00 | µg/L | 50 | 02/02/12 12:56 |
| Isopropylbenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 02/02/12 12:56 |
| Methyl tert-butyl ether | ND | | 50.0 | 8.00 | µg/L | 50 | 02/02/12 12:56 |
| Methylene chloride | ND | | 100 | 8.00 | µg/L | 50 | 02/02/12 12:56 |
| n-Propylbenzene | ND | | 25.0 | 5.00 | µg/L | 50 | 02/02/12 12:56 |
| Naphthalene | ND | | 50.0 | 5.00 | µg/L | 50 | 02/02/12 12:56 |
| o-Xylene | ND | | 25.0 | 5.00 | µg/L | 50 | 02/02/12 12:56 |
| p-Isopropyltoluene | ND | | 25.0 | 8.00 | µg/L | 50 | 02/02/12 12:56 |
| sec-Butylbenzene | ND | | 25.0 | 8.00 | µg/L | 50 | 02/02/12 12:56 |
| Styrene | ND | | 25.0 | 5.00 | µg/L | 50 | 02/02/12 12:56 |
| Tetrachloroethene | ND | | 25.0 | 5.00 | µg/L | 50 | 02/02/12 12:56 |
| Toluene | 6.00 | J | 25.0 | 5.00 | µg/L | 50 | 02/02/12 12:56 |
| trans-1,2-Dichloroethene | ND | | 25.0 | 5.00 | µg/L | 50 | 02/02/12 12:56 |
| trans-1,3-Dichloropropene | ND | | 25.0 | 8.00 | µg/L | 50 | 02/02/12 12:56 |
| Trichloroethene | 14.0 | J | 25.0 | 5.00 | µg/L | 50 | 02/02/12 12:56 |
| Trichlorofluoromethane | ND | | 50.0 | 5.00 | µg/L | 50 | 02/02/12 12:56 |
| Vinyl acetate | ND | | 100 | 50.0 | µg/L | 50 | 02/02/12 12:56 |
| Vinyl chloride | 435 | | 50.0 | 16.5 | µg/L | 50 | 02/02/12 12:56 |
| Xylenes (total) | ND | | 50.0 | 15.0 | µg/L | 50 | 02/02/12 12:56 |
| Surr: 1,2-Dichloroethane-d4 | 96 | | 75-128 | 8.00 | %REC | 50 | 02/02/12 12:56 |
| Surr: Toluene-d8 | 102 | | 75-125 | 5.00 | %REC | 50 | 02/02/12 12:56 |
| Surr: 4-Bromofluorobenzene | 116 | | 75-125 | 5.00 | %REC | 50 | 02/02/12 12:56 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 02/13/12 15:42 591982 **roject Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | | | |
|---|---|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | | | **Lab ID:** | K1202001-011A |
| **Project:** | 189-02 | | | **Client Sample ID:** | *Well #3* ✓ |
| **W Order:** | K1202001 | | | **Collection Date:** | 01/31/12 13:10 |
| **Matrix:** | GROUNDWATER | | | **Date Received:** | 02/01/12 8:30 |
| **Inst. ID:** | MSK_75 | **Sample Size** | 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | | **BatchNo:** | R23543 |
| **Revision:** | 02/13/12 15:29 | **TestCode:** | 8260W_CAL | **FileID:** | 1-SAMP-K8090.D ✓ |
| **Col Type:** | | | Total 1,753 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | 2.00 | J | 10.0 | 2.00 | µg/L | 10 | 02/02/12 16:39 |
| 1,1,1,2-Tetrachloroethane | ND | | 5.00 | 1.60 | µg/L | 10 | 02/02/12 16:39 |
| 1,1,1-Trichloroethane | 798 | | 5.00 | 1.00 | µg/L | 10 | 02/02/12 16:39 |
| 1,1,2,2-Tetrachloroethane | ND | | 5.00 | 1.00 | µg/L | 10 | 02/02/12 16:39 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 13.0 | | 5.00 | 1.00 | µg/L | 10 | 02/02/12 16:39 |
| 1,1,2-Trichloroethane | ND | | 5.00 | 1.60 | µg/L | 10 | 02/02/12 16:39 |
| 1,1-Dichloroethane | 380 | | 5.00 | 1.00 | µg/L | 10 | 02/02/12 16:39 |
| 1,1-Dichloroethene | 16.5 | | 5.00 | 1.60 | µg/L | 10 | 02/02/12 16:39 |
| 1,2,3-Trichloropropane | ND | | 20.0 | 3.30 | µg/L | 10 | 02/02/12 16:39 |
| 1,2,4-Trichlorobenzene | ND | | 10.0 | 1.00 | µg/L | 10 | 02/02/12 16:39 |
| 1,2,4-Trimethylbenzene | 13.1 | | 5.00 | 1.00 | µg/L | 10 | 02/02/12 16:39 |
| 1,2-Dibromo-3-chloropropane | ND | | 50.0 | 10.0 | µg/L | 10 | 02/02/12 16:39 |
| 1,2-Dibromoethane | ND | | 5.00 | 1.60 | µg/L | 10 | 02/02/12 16:39 |
| 1,2-Dichlorobenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 02/02/12 16:39 |
| 1,2-Dichloroethane | ND | | 5.00 | 1.60 | µg/L | 10 | 02/02/12 16:39 |
| 1,2-Dichloropropane | ND | | 5.00 | 1.60 | µg/L | 10 | 02/02/12 16:39 |
| 1,3,5-Trimethylbenzene | 1.30 | J | 5.00 | 1.00 | µg/L | 10 | 02/02/12 16:39 |
| 1,3-Dichlorobenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 02/02/12 16:39 |
| 1,4-Dichlorobenzene | ND | | 5.00 | 1.60 | µg/L | 10 | 02/02/12 16:39 |
| 2-Butanone | ND | | 100 | 10.0 | µg/L | 10 | 02/02/12 16:39 |
| 2-Chloroethylvinyl ether | ND | | 50.0 | 25.0 | µg/L | 10 | 02/02/12 16:39 |
| 2-Hexanone | ND | | 50.0 | 10.0 | µg/L | 10 | 02/02/12 16:39 |
| 4-Chlorotoluene | ND | | 5.00 | 1.00 | µg/L | 10 | 02/02/12 16:39 |
| 4-Methyl-2-pentanone | ND | | 50.0 | 10.0 | µg/L | 10 | 02/02/12 16:39 |
| Acetone | ND | | 100 | 10.0 | µg/L | 10 | 02/02/12 16:39 |
| Benzene | ND | | 5.00 | 1.00 | µg/L | 10 | 02/02/12 16:39 |
| Bromobenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 02/02/12 16:39 |
| Bromochloromethane | ND | | 5.00 | 1.00 | µg/L | 10 | 02/02/12 16:39 |
| Bromodichloromethane | ND | | 5.00 | 1.00 | µg/L | 10 | 02/02/12 16:39 |
| Bromoform | ND | | 10.0 | 3.30 | µg/L | 10 | 02/02/12 16:39 |
| Bromomethane | ND | | 10.0 | 3.30 | µg/L | 10 | 02/02/12 16:39 |
| Carbon disulfide | ND | | 5.00 | 1.10 | µg/L | 10 | 02/02/12 16:39 |
| Carbon tetrachloride | ND | | 5.00 | 1.00 | µg/L | 10 | 02/02/12 16:39 |
| Chlorobenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 02/02/12 16:39 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 02/14/12 6:00 591985 **roject Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1202001-011A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***Well #3*** |
| **W Order:** | K1202001 | **Collection Date:** | 01/31/12 13:10 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 02/01/12 8:30 |
| **Inst. ID:** | MSK_75 **Sample Size** 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS **%Moisture:** | **BatchNo:** | R23543 |
| **Revision:** | 02/13/12 15:29 **TestCode:** 8260W_CAL | **FileID:** | 1-SAMP-K8090.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | 8.40 | J | 10.0 | 3.30 | µg/L | 10 | 02/02/12 16:39 |
| Chloroform | ND | | 5.00 | 1.00 | µg/L | 10 | 02/02/12 16:39 |
| Chloromethane | ND | | 10.0 | 3.30 | µg/L | 10 | 02/02/12 16:39 |
| cis-1,2-Dichloroethene | 435 | | 5.00 | 1.00 | µg/L | 10 | 02/02/12 16:39 |
| cis-1,3-Dichloropropene | ND | | 5.00 | 1.60 | µg/L | 10 | 02/02/12 16:39 |
| Cyclohexane | ND | | 5.00 | 1.00 | µg/L | 10 | 02/02/12 16:39 |
| Dibromochloromethane | ND | | 5.00 | 1.00 | µg/L | 10 | 02/02/12 16:39 |
| Dibromomethane | ND | | 5.00 | 1.60 | µg/L | 10 | 02/02/12 16:39 |
| Dichlorodifluoromethane | ND | | 10.0 | 1.00 | µg/L | 10 | 02/02/12 16:39 |
| Ethylbenzene | 1.30 | J | 5.00 | 1.00 | µg/L | 10 | 02/02/12 16:39 |
| Hexachlorobutadiene | ND | | 10.0 | 1.00 | µg/L | 10 | 02/02/12 16:39 |
| Isopropylbenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 02/02/12 16:39 |
| Methyl tert-butyl ether | ND | | 10.0 | 1.60 | µg/L | 10 | 02/02/12 16:39 |
| Methylene chloride | ND | | 20.0 | 1.60 | µg/L | 10 | 02/02/12 16:39 |
| n-Propylbenzene | 1.00 | J | 5.00 | 1.00 | µg/L | 10 | 02/02/12 16:39 |
| Naphthalene | ND | | 10.0 | 1.00 | µg/L | 10 | 02/02/12 16:39 |
| o-Xylene | 2.20 | J | 5.00 | 1.00 | µg/L | 10 | 02/02/12 16:39 |
| p-Isopropyltoluene | ND | | 5.00 | 1.60 | µg/L | 10 | 02/02/12 16:39 |
| sec-Butylbenzene | ND | | 5.00 | 1.60 | µg/L | 10 | 02/02/12 16:39 |
| Styrene | ND | | 5.00 | 1.00 | µg/L | 10 | 02/02/12 16:39 |
| Tetrachloroethene | 1.40 | J | 5.00 | 1.00 | µg/L | 10 | 02/02/12 16:39 |
| Toluene | 6.80 | | 5.00 | 1.00 | µg/L | 10 | 02/02/12 16:39 |
| trans-1,2-Dichloroethene | 2.10 | J | 5.00 | 1.00 | µg/L | 10 | 02/02/12 16:39 |
| trans-1,3-Dichloropropene | ND | | 5.00 | 1.60 | µg/L | 10 | 02/02/12 16:39 |
| Trichloroethene | 17.9 | | 5.00 | 1.00 | µg/L | 10 | 02/02/12 16:39 |
| Trichlorofluoromethane | ND | | 10.0 | 1.00 | µg/L | 10 | 02/02/12 16:39 |
| Vinyl acetate | ND | | 20.0 | 10.0 | µg/L | 10 | 02/02/12 16:39 |
| Vinyl chloride | 59.8 | | 10.0 | 3.30 | µg/L | 10 | 02/02/12 16:39 |
| Xylenes (total) | 4.20 | J | 10.0 | 3.00 | µg/L | 10 | 02/02/12 16:39 |
| Surr: 1,2-Dichloroethane-d4 | 99 | | 75-128 | 1.60 | %REC | 10 | 02/02/12 16:39 |
| Surr: Toluene-d8 | 100 | | 75-125 | 1.00 | %REC | 10 | 02/02/12 16:39 |
| Surr: 4-Bromofluorobenzene | 114 | | 75-125 | 1.00 | %REC | 10 | 02/02/12 16:39 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 02/14/12 6:00 591985 **roject Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | | | |
|---|---|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | | | **Lab ID:** | **K1202001-007A** |
| **Project:** | 189-02 | | | **Client Sample ID:** | *Well #4* |
| **W Order:** | K1202001 | | | **Collection Date:** | 01/31/12 12:15 |
| **Matrix:** | GROUNDWATER | | | **Date Received:** | 02/01/12 8:30 |
| **Inst. ID:** | MSK_75 | **Sample Size** | 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | | **BatchNo:** | R23542 |
| **Revision:** | 02/13/12 15:40 | **TestCode:** | 8260W_CAL | **FileID:** | 1-SAMP-K8061.D |
| **Col Type:** | | | | Total 26.71 | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | ND | | 1.00 | 0.33 | µg/L | 1 | 02/01/12 17:00 |
| Chloroform | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 17:00 |
| Chloromethane | ND | | 1.00 | 0.33 | µg/L | 1 | 02/01/12 17:00 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 17:00 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 02/01/12 17:00 |
| Cyclohexane | 0.26 | J | 0.50 | 0.10 | µg/L | 1 | 02/01/12 17:00 |
| Dibromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 17:00 |
| Dibromomethane | ND | | 0.50 | 0.16 | µg/L | 1 | 02/01/12 17:00 |
| Dichlorodifluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 02/01/12 17:00 |
| Ethylbenzene | 0.72 | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 17:00 |
| Hexachlorobutadiene | ND | | 1.00 | 0.10 | µg/L | 1 | 02/01/12 17:00 |
| Isopropylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 17:00 |
| Methyl tert-butyl ether | 1.49 | | 1.00 | 0.16 | µg/L | 1 | 02/01/12 17:00 |
| Methylene chloride | ND | | 2.00 | 0.16 | µg/L | 1 | 02/01/12 17:00 |
| n-Propylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 17:00 |
| Naphthalene | ND | | 1.00 | 0.10 | µg/L | 1 | 02/01/12 17:00 |
| o-Xylene | 0.82 | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 17:00 |
| p-Isopropyltoluene | ND | | 0.50 | 0.16 | µg/L | 1 | 02/01/12 17:00 |
| sec-Butylbenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 02/01/12 17:00 |
| Styrene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 17:00 |
| Tetrachloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 17:00 |
| Toluene | 1.01 | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 17:00 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 17:00 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 02/01/12 17:00 |
| Trichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 17:00 |
| Trichlorofluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 02/01/12 17:00 |
| Vinyl acetate | ND | | 2.00 | 1.00 | µg/L | 1 | 02/01/12 17:00 |
| Vinyl chloride | ND | | 1.00 | 0.33 | µg/L | 1 | 02/01/12 17:00 |
| Xylenes (total) | 0.82 | J | 1.00 | 0.30 | µg/L | 1 | 02/01/12 17:00 |
| Surr: 1,2-Dichloroethane-d4 | 96 | | 75-128 | 0.16 | %REC | 1 | 02/01/12 17:00 |
| Surr: Toluene-d8 | 101 | | 75-125 | 0.10 | %REC | 1 | 02/01/12 17:00 |
| Surr: 4-Bromofluorobenzene | 114 | | 75-125 | 0.10 | %REC | 1 | 02/01/12 17:00 |
| TIC: Butane 4.905 | 136 | J | 0 | 0 | µg/L | 1 | 02/01/12 17:00 |
| TIC: Butane, 2-methyl- 5.929 | 46.1 | J | 0 | 0 | µg/L | 1 | 02/01/12 17:00 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 02/13/12 15:42 591971 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | | | |
|---|---|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | | | **Lab ID:** | **K1202001-007A** |
| **Project:** | 189-02 | | | **Client Sample ID:** | ***Well #4*** |
| **W Order:** | K1202001 | | | **Collection Date:** | 01/31/12 12:15 |
| **Matrix:** | GROUNDWATER | | | **Date Received:** | 02/01/12 8:30 |
| **Inst. ID:** | MSK_75 | **Sample Size** | 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | | **BatchNo:** | R23542 |
| **Revision:** | 02/13/12 15:40 | **TestCode:** | 8260W_CAL | **FileID:** | 1-SAMP-K8061.D |
| **Col Type:** | | | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| TIC: Cyclopentane 7.986 | 5.69 J | | 0 | 0 | µg/L | 1 | 02/01/12 17:00 |
| TIC: Cyclopentane, methyl- 9.580 | 4.92 J | | 0 | 0 | µg/L | 1 | 02/01/12 17:00 |
| TIC: Isobutane 4.631 | 97.4 J | | 0 | 0 | µg/L | 1 | 02/01/12 17:00 |
| TIC: Pentane 6.351 | 3.06 J | | 0 | 0 | µg/L | 1 | 02/01/12 17:00 |
| TIC: Propane 4.210 | 298 J | | 0 | 0 | µg/L | 1 | 02/01/12 17:00 |

**NOTES:**
TIC: Tentatively Identified Compound; concentration is estimated (J).

| **Qualifiers:** | | | | |
|---|---|---|---|---|
| | * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| | E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| | J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| | P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 02/13/12 15:42 591971 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1202001-007A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***Well #4*** |
| **W Order:** | K1202001 | **Collection Date:** | 01/31/12 12:15 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 02/01/12 8:30 |
| **Inst. ID:** | MSK_75 **Sample Size** 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS **%Moisture:** | **BatchNo:** | R23542 |
| **Revision:** | 02/13/12 15:40 **TestCode:** 8260W_CAL | **FileID:** | 1-SAMP-K8061.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 1.00 | 0.20 | µg/L | 1 | 02/01/12 17:00 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 02/01/12 17:00 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 17:00 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 17:00 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 17:00 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 02/01/12 17:00 |
| 1,1-Dichloroethane | 0.30 | J | 0.50 | 0.10 | µg/L | 1 | 02/01/12 17:00 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.16 | µg/L | 1 | 02/01/12 17:00 |
| 1,2,3-Trichloropropane | ND | | 2.00 | 0.33 | µg/L | 1 | 02/01/12 17:00 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 0.10 | µg/L | 1 | 02/01/12 17:00 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 17:00 |
| 1,2-Dibromo-3-chloropropane | ND | | 5.00 | 1.00 | µg/L | 1 | 02/01/12 17:00 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.16 | µg/L | 1 | 02/01/12 17:00 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 17:00 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 02/01/12 17:00 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.16 | µg/L | 1 | 02/01/12 17:00 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 17:00 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 17:00 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 02/01/12 17:00 |
| 2-Butanone | ND | | 10.0 | 1.00 | µg/L | 1 | 02/01/12 17:00 |
| 2-Chloroethylvinyl ether | ND | | 5.00 | 2.50 | µg/L | 1 | 02/01/12 17:00 |
| 2-Hexanone | ND | | 5.00 | 1.00 | µg/L | 1 | 02/01/12 17:00 |
| 4-Chlorotoluene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 17:00 |
| 4-Methyl-2-pentanone | ND | | 5.00 | 1.00 | µg/L | 1 | 02/01/12 17:00 |
| Acetone | 18.3 | | 10.0 | 1.00 | µg/L | 1 | 02/01/12 17:00 |
| Benzene | 3.81 | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 17:00 |
| Bromobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 17:00 |
| Bromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 17:00 |
| Bromodichloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 17:00 |
| Bromoform | ND | | 1.00 | 0.33 | µg/L | 1 | 02/01/12 17:00 |
| Bromomethane | ND | | 1.00 | 0.33 | µg/L | 1 | 02/01/12 17:00 |
| Carbon disulfide | ND | | 0.50 | 0.11 | µg/L | 1 | 02/01/12 17:00 |
| Carbon tetrachloride | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 17:00 |
| Chlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 17:00 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 02/13/12 15:42 591971 **roject Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | | | |
|---|---|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | | | **Lab ID:** | K1202001-001A |
| **Project:** | 189-02 | | | **Client Sample ID:** | *Well #5* ✓ |
| **W Order:** | K1202001 | | | **Collection Date:** | 01/31/12 10:40 |
| **Matrix:** | GROUNDWATER | | | **Date Received:** | 02/01/12 8:30 |
| **Inst. ID:** | MSK_75 | **Sample Size** | 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | | **BatchNo:** | R23542 |
| **Revision:** | 02/13/12 15:40 | **TestCode:** | 8260W_CAL | **FileID:** | 1-SAMP-K8065.D |
| **Col Type:** | | | Total 536.8 ✓ | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 10.0 | 2.00 | µg/L | 10 | 02/01/12 19:08 |
| 1,1,1,2-Tetrachloroethane | ND | | 5.00 | 1.60 | µg/L | 10 | 02/01/12 19:08 |
| 1,1,1-Trichloroethane | 7.20 | | 5.00 | 1.00 | µg/L | 10 | 02/01/12 19:08 |
| 1,1,2,2-Tetrachloroethane | ND | | 5.00 | 1.00 | µg/L | 10 | 02/01/12 19:08 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 5.00 | 1.00 | µg/L | 10 | 02/01/12 19:08 |
| 1,1,2-Trichloroethane | ND | | 5.00 | 1.60 | µg/L | 10 | 02/01/12 19:08 |
| 1,1-Dichloroethane | 265 | | 5.00 | 1.00 | µg/L | 10 | 02/01/12 19:08 |
| 1,1-Dichloroethene | 6.20 | | 5.00 | 1.60 | µg/L | 10 | 02/01/12 19:08 |
| 1,2,3-Trichloropropane | ND | | 20.0 | 3.30 | µg/L | 10 | 02/01/12 19:08 |
| 1,2,4-Trichlorobenzene | ND | | 10.0 | 1.00 | µg/L | 10 | 02/01/12 19:08 |
| 1,2,4-Trimethylbenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 02/01/12 19:08 |
| 1,2-Dibromo-3-chloropropane | ND | | 50.0 | 10.0 | µg/L | 10 | 02/01/12 19:08 |
| 1,2-Dibromoethane | ND | | 5.00 | 1.60 | µg/L | 10 | 02/01/12 19:08 |
| 1,2-Dichlorobenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 02/01/12 19:08 |
| 1,2-Dichloroethane | 4.80 | J | 5.00 | 1.60 | µg/L | 10 | 02/01/12 19:08 |
| 1,2-Dichloropropane | ND | | 5.00 | 1.60 | µg/L | 10 | 02/01/12 19:08 |
| 1,3,5-Trimethylbenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 02/01/12 19:08 |
| 1,3-Dichlorobenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 02/01/12 19:08 |
| 1,4-Dichlorobenzene | ND | | 5.00 | 1.60 | µg/L | 10 | 02/01/12 19:08 |
| 2-Butanone | ND | | 100 | 10.0 | µg/L | 10 | 02/01/12 19:08 |
| 2-Chloroethylvinyl ether | ND | | 50.0 | 25.0 | µg/L | 10 | 02/01/12 19:08 |
| 2-Hexanone | ND | | 50.0 | 10.0 | µg/L | 10 | 02/01/12 19:08 |
| 4-Chlorotoluene | ND | | 5.00 | 1.00 | µg/L | 10 | 02/01/12 19:08 |
| 4-Methyl-2-pentanone | ND | | 50.0 | 10.0 | µg/L | 10 | 02/01/12 19:08 |
| Acetone | ND | | 100 | 10.0 | µg/L | 10 | 02/01/12 19:08 |
| Benzene | ND | | 5.00 | 1.00 | µg/L | 10 | 02/01/12 19:08 |
| Bromobenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 02/01/12 19:08 |
| Bromochloromethane | ND | | 5.00 | 1.00 | µg/L | 10 | 02/01/12 19:08 |
| Bromodichloromethane | ND | | 5.00 | 1.00 | µg/L | 10 | 02/01/12 19:08 |
| Bromoform | ND | | 10.0 | 3.30 | µg/L | 10 | 02/01/12 19:08 |
| Bromomethane | ND | | 10.0 | 3.30 | µg/L | 10 | 02/01/12 19:08 |
| Carbon disulfide | ND | | 5.00 | 1.10 | µg/L | 10 | 02/01/12 19:08 |
| Carbon tetrachloride | ND | | 5.00 | 1.00 | µg/L | 10 | 02/01/12 19:08 |
| Chlorobenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 02/01/12 19:08 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 02/13/12 15:42 591973 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1202001-001A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***Well #5*** |
| **W Order:** | K1202001 | **Collection Date:** | 01/31/12 10:40 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 02/01/12 8:30 |
| **Inst. ID:** | MSK_75 **Sample Size** 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS **%Moisture:** | **BatchNo:** | R23542 |
| **Revision:** | 02/13/12 15:40 **TestCode:** 8260W_CAL | **FileID:** | 1-SAMP-K8065.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | 59.4 | | 10.0 | 3.30 | µg/L | 10 | 02/01/12 19:08 |
| Chloroform | ND | | 5.00 | 1.00 | µg/L | 10 | 02/01/12 19:08 |
| Chloromethane | ND | | 10.0 | 3.30 | µg/L | 10 | 02/01/12 19:08 |
| cis-1,2-Dichloroethene | 57.8 | | 5.00 | 1.00 | µg/L | 10 | 02/01/12 19:08 |
| cis-1,3-Dichloropropene | ND | | 5.00 | 1.60 | µg/L | 10 | 02/01/12 19:08 |
| Cyclohexane | 1.60 | J | 5.00 | 1.00 | µg/L | 10 | 02/01/12 19:08 |
| Dibromochloromethane | ND | | 5.00 | 1.00 | µg/L | 10 | 02/01/12 19:08 |
| Dibromomethane | ND | | 5.00 | 1.60 | µg/L | 10 | 02/01/12 19:08 |
| Dichlorodifluoromethane | ND | | 10.0 | 1.00 | µg/L | 10 | 02/01/12 19:08 |
| Ethylbenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 02/01/12 19:08 |
| Hexachlorobutadiene | ND | | 10.0 | 1.00 | µg/L | 10 | 02/01/12 19:08 |
| Isopropylbenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 02/01/12 19:08 |
| Methyl tert-butyl ether | ND | | 10.0 | 1.60 | µg/L | 10 | 02/01/12 19:08 |
| Methylene chloride | ND | | 20.0 | 1.60 | µg/L | 10 | 02/01/12 19:08 |
| n-Propylbenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 02/01/12 19:08 |
| Naphthalene | ND | | 10.0 | 1.00 | µg/L | 10 | 02/01/12 19:08 |
| o-Xylene | ND | | 5.00 | 1.00 | µg/L | 10 | 02/01/12 19:08 |
| p-Isopropyltoluene | ND | | 5.00 | 1.60 | µg/L | 10 | 02/01/12 19:08 |
| sec-Butylbenzene | ND | | 5.00 | 1.60 | µg/L | 10 | 02/01/12 19:08 |
| Styrene | ND | | 5.00 | 1.00 | µg/L | 10 | 02/01/12 19:08 |
| Tetrachloroethene | ND | | 5.00 | 1.00 | µg/L | 10 | 02/01/12 19:08 |
| Toluene | ND | | 5.00 | 1.00 | µg/L | 10 | 02/01/12 19:08 |
| trans-1,2-Dichloroethene | 2.10 | J | 5.00 | 1.00 | µg/L | 10 | 02/01/12 19:08 |
| trans-1,3-Dichloropropene | ND | | 5.00 | 1.60 | µg/L | 10 | 02/01/12 19:08 |
| Trichloroethene | 12.7 | | 5.00 | 1.00 | µg/L | 10 | 02/01/12 19:08 |
| Trichlorofluoromethane | ND | | 10.0 | 1.00 | µg/L | 10 | 02/01/12 19:08 |
| Vinyl acetate | ND | | 20.0 | 10.0 | µg/L | 10 | 02/01/12 19:08 |
| Vinyl chloride | 120 | | 10.0 | 3.30 | µg/L | 10 | 02/01/12 19:08 |
| Xylenes (total) | ND | | 10.0 | 3.00 | µg/L | 10 | 02/01/12 19:08 |
| Surr: 1,2-Dichloroethane-d4 | 99 | | 75-128 | 1.60 | %REC | 10 | 02/01/12 19:08 |
| Surr: Toluene-d8 | 102 | | 75-125 | 1.00 | %REC | 10 | 02/01/12 19:08 |
| Surr: 4-Bromofluorobenzene | 115 | | 75-125 | 1.00 | %REC | 10 | 02/01/12 19:08 |
| TIC: Propane 4.210 | 13.1 | J | 0 | 0 | µg/L | 10 | 02/01/12 19:08 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

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5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | | | |
|---|---|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | | | **Lab ID:** | **K1202001-001A** |
| **Project:** | 189-02 | | | **Client Sample ID:** | ***Well #5*** |
| **W Order:** | K1202001 | | | **Collection Date:** | 01/31/12 10:40 |
| **Matrix:** | GROUNDWATER | | | **Date Received:** | 02/01/12 8:30 |
| **Inst. ID:** | MSK_75 | **Sample Size** | 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | | **BatchNo:** | R23542 |
| **Revision:** | 02/13/12 15:40 | **TestCode:** | 8260W_CAL | **FileID:** | 1-SAMP-K8065.D |
| **Col Type:** | | | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |

**NOTES:**

TIC: Tentatively Identified Compound; concentration is estimated (J).

| | | | | | |
|---|---|---|---|---|---|
| **Qualifiers:** | * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| | E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| | J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| | P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 02/13/12 15:42 591973 **roject Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

**CLIENT** Ken W. Kloeber Consulting Engineers
**Project:** 189-02
**W Order:** K1202001
**Matrix:** GROUNDWATER
**Inst. ID:** MSK_75 **Sample Size** 10 mL
**ColumnID:** Rtx-VMS **%Moisture:**
**Revision:** 02/13/12 15:40 **TestCode:** 8260W_CAL
**Col Type:** Total 50.9

**Lab ID:** K1202001-003A
**Client Sample ID:** *Well #6*
**Collection Date:** 01/31/12 11:30
**Date Received:** 02/01/12 8:30
**PrepDate:**
**BatchNo:** R23542
**FileID:** 1-SAMP-K8059.D

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 1.00 | 0.20 | µg/L | 1 | 02/01/12 15:57 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 02/01/12 15:57 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 15:57 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 15:57 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 15:57 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 02/01/12 15:57 |
| 1,1-Dichloroethane | 30.2 | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 15:57 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.16 | µg/L | 1 | 02/01/12 15:57 |
| 1,2,3-Trichloropropane | ND | | 2.00 | 0.33 | µg/L | 1 | 02/01/12 15:57 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 0.10 | µg/L | 1 | 02/01/12 15:57 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 15:57 |
| 1,2-Dibromo-3-chloropropane | ND | | 5.00 | 1.00 | µg/L | 1 | 02/01/12 15:57 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.16 | µg/L | 1 | 02/01/12 15:57 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 15:57 |
| 1,2-Dichloroethane | 0.22 | J | 0.50 | 0.16 | µg/L | 1 | 02/01/12 15:57 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.16 | µg/L | 1 | 02/01/12 15:57 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 15:57 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 15:57 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 02/01/12 15:57 |
| 2-Butanone | ND | | 10.0 | 1.00 | µg/L | 1 | 02/01/12 15:57 |
| 2-Chloroethylvinyl ether | ND | | 5.00 | 2.50 | µg/L | 1 | 02/01/12 15:57 |
| 2-Hexanone | ND | | 5.00 | 1.00 | µg/L | 1 | 02/01/12 15:57 |
| 4-Chlorotoluene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 15:57 |
| 4-Methyl-2-pentanone | ND | | 5.00 | 1.00 | µg/L | 1 | 02/01/12 15:57 |
| Acetone | 4.57 | J | 10.0 | 1.00 | µg/L | 1 | 02/01/12 15:57 |
| Benzene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 15:57 |
| Bromobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 15:57 |
| Bromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 15:57 |
| Bromodichloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 15:57 |
| Bromoform | ND | | 1.00 | 0.33 | µg/L | 1 | 02/01/12 15:57 |
| Bromomethane | ND | | 1.00 | 0.33 | µg/L | 1 | 02/01/12 15:57 |
| Carbon disulfide | ND | | 0.50 | 0.11 | µg/L | 1 | 02/01/12 15:57 |
| Carbon tetrachloride | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 15:57 |
| Chlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 15:57 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 02/13/12 15:42 591969 **roject Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | | | |
|---|---|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | | | **Lab ID:** | **K1202001-003A** |
| **Project:** | 189-02 | | | **Client Sample ID:** | ***Well #6*** |
| **W Order:** | K1202001 | | | **Collection Date:** | 01/31/12 11:30 |
| **Matrix:** | GROUNDWATER | | | **Date Received:** | 02/01/12 8:30 |
| **Inst. ID:** | MSK_75 | **Sample Size** | 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | | **BatchNo:** | R23542 |
| **Revision:** | 02/13/12 15:40 | **TestCode:** | 8260W_CAL | **FileID:** | 1-SAMP-K8059.D |
| **Col Type:** | | | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | 1.18 | | 1.00 | 0.33 | µg/L | 1 | 02/01/12 15:57 |
| Chloroform | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 15:57 |
| Chloromethane | ND | | 1.00 | 0.33 | µg/L | 1 | 02/01/12 15:57 |
| cis-1,2-Dichloroethene | 13.6 | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 15:57 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 02/01/12 15:57 |
| Cyclohexane | 0.63 | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 15:57 |
| Dibromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 15:57 |
| Dibromomethane | ND | | 0.50 | 0.16 | µg/L | 1 | 02/01/12 15:57 |
| Dichlorodifluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 02/01/12 15:57 |
| Ethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 15:57 |
| Hexachlorobutadiene | ND | | 1.00 | 0.10 | µg/L | 1 | 02/01/12 15:57 |
| Isopropylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 15:57 |
| Methyl tert-butyl ether | ND | | 1.00 | 0.16 | µg/L | 1 | 02/01/12 15:57 |
| Methylene chloride | ND | | 2.00 | 0.16 | µg/L | 1 | 02/01/12 15:57 |
| n-Propylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 15:57 |
| Naphthalene | ND | | 1.00 | 0.10 | µg/L | 1 | 02/01/12 15:57 |
| o-Xylene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 15:57 |
| p-Isopropyltoluene | ND | | 0.50 | 0.16 | µg/L | 1 | 02/01/12 15:57 |
| sec-Butylbenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 02/01/12 15:57 |
| Styrene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 15:57 |
| Tetrachloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 15:57 |
| Toluene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 15:57 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 15:57 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 02/01/12 15:57 |
| Trichloroethene | 0.50 | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 15:57 |
| Trichlorofluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 02/01/12 15:57 |
| Vinyl acetate | ND | | 2.00 | 1.00 | µg/L | 1 | 02/01/12 15:57 |
| Vinyl chloride | ND | | 1.00 | 0.33 | µg/L | 1 | 02/01/12 15:57 |
| Xylenes (total) | ND | | 1.00 | 0.30 | µg/L | 1 | 02/01/12 15:57 |
| Surr: 1,2-Dichloroethane-d4 | 96 | | 75-128 | 0.16 | %REC | 1 | 02/01/12 15:57 |
| Surr: Toluene-d8 | 101 | | 75-125 | 0.10 | %REC | 1 | 02/01/12 15:57 |
| Surr: 4-Bromofluorobenzene | 111 | | 75-125 | 0.10 | %REC | 1 | 02/01/12 15:57 |
| TIC: Isobutane 4.570 | 3.58 | J | 0 | 0 | µg/L | 1 | 02/01/12 15:57 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 02/13/12 15:42 591969 **roject Supervisor:** Anthony Crescenzi

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East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1202001-003A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***Well #6*** |
| **W Order:** | K1202001 | **Collection Date:** | 01/31/12 11:30 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 02/01/12 8:30 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R23542 |
| **Revision:** | 02/13/12 15:40 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K8059.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |

**NOTES:**
TIC: Tentatively Identified Compound; concentration is estimated (J).

| | | | | | |
|---|---|---|---|---|---|
| **Qualifiers:** | * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| | E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| | J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| | P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 02/13/12 15:42 591969 **roject Supervisor:** Anthony Crescenzi

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East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1202001-005A |
| **Project:** | 189-02 | **Client Sample ID:** | *Well #7* |
| **W Order:** | K1202001 | **Collection Date:** | 01/31/12 11:55 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 02/01/12 8:30 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R23543 |
| **Revision:** | 02/13/12 15:29 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K8091.D |
| **Col Type:** | | Total 125.25 | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 25.0 | 5.00 | µg/L | 25 | 02/02/12 17:10 |
| 1,1,1,2-Tetrachloroethane | ND | | 12.5 | 4.00 | µg/L | 25 | 02/02/12 17:10 |
| 1,1,1-Trichloroethane | ND | | 12.5 | 2.50 | µg/L | 25 | 02/02/12 17:10 |
| 1,1,2,2-Tetrachloroethane | ND | | 12.5 | 2.50 | µg/L | 25 | 02/02/12 17:10 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 8.00 | J | 12.5 | 2.50 | µg/L | 25 | 02/02/12 17:10 |
| 1,1,2-Trichloroethane | ND | | 12.5 | 4.00 | µg/L | 25 | 02/02/12 17:10 |
| 1,1-Dichloroethane | 637 | | 12.5 | 2.50 | µg/L | 25 | 02/02/12 17:10 |
| 1,1-Dichloroethene | ND | | 12.5 | 4.00 | µg/L | 25 | 02/02/12 17:10 |
| 1,2,3-Trichloropropane | ND | | 50.0 | 8.25 | µg/L | 25 | 02/02/12 17:10 |
| 1,2,4-Trichlorobenzene | ND | | 25.0 | 2.50 | µg/L | 25 | 02/02/12 17:10 |
| 1,2,4-Trimethylbenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 02/02/12 17:10 |
| 1,2-Dibromo-3-chloropropane | ND | | 125 | 25.0 | µg/L | 25 | 02/02/12 17:10 |
| 1,2-Dibromoethane | ND | | 12.5 | 4.00 | µg/L | 25 | 02/02/12 17:10 |
| 1,2-Dichlorobenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 02/02/12 17:10 |
| 1,2-Dichloroethane | 41.8 | | 12.5 | 4.00 | µg/L | 25 | 02/02/12 17:10 |
| 1,2-Dichloropropane | ND | | 12.5 | 4.00 | µg/L | 25 | 02/02/12 17:10 |
| 1,3,5-Trimethylbenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 02/02/12 17:10 |
| 1,3-Dichlorobenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 02/02/12 17:10 |
| 1,4-Dichlorobenzene | ND | | 12.5 | 4.00 | µg/L | 25 | 02/02/12 17:10 |
| 2-Butanone | ND | | 250 | 25.0 | µg/L | 25 | 02/02/12 17:10 |
| 2-Chloroethylvinyl ether | ND | | 125 | 62.5 | µg/L | 25 | 02/02/12 17:10 |
| 2-Hexanone | ND | | 125 | 25.0 | µg/L | 25 | 02/02/12 17:10 |
| 4-Chlorotoluene | ND | | 12.5 | 2.50 | µg/L | 25 | 02/02/12 17:10 |
| 4-Methyl-2-pentanone | ND | | 125 | 25.0 | µg/L | 25 | 02/02/12 17:10 |
| Acetone | ND | | 250 | 25.0 | µg/L | 25 | 02/02/12 17:10 |
| Benzene | 6.25 | J | 12.5 | 2.50 | µg/L | 25 | 02/02/12 17:10 |
| Bromobenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 02/02/12 17:10 |
| Bromochloromethane | ND | | 12.5 | 2.50 | µg/L | 25 | 02/02/12 17:10 |
| Bromodichloromethane | ND | | 12.5 | 2.50 | µg/L | 25 | 02/02/12 17:10 |
| Bromoform | ND | | 25.0 | 8.25 | µg/L | 25 | 02/02/12 17:10 |
| Bromomethane | ND | | 25.0 | 8.25 | µg/L | 25 | 02/02/12 17:10 |
| Carbon disulfide | ND | | 12.5 | 2.75 | µg/L | 25 | 02/02/12 17:10 |
| Carbon tetrachloride | ND | | 12.5 | 2.50 | µg/L | 25 | 02/02/12 17:10 |
| Chlorobenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 02/02/12 17:10 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 02/13/12 15:42 591986 **roject Supervisor:** Anthony Crescenzi

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East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1202001-005A** |
| **Project:** | 189-02 | **Client Sample ID:** | *Well #7* |
| **W Order:** | K1202001 | **Collection Date:** | 01/31/12 11:55 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 02/01/12 8:30 |
| **Inst. ID:** | MSK_75 **Sample Size** 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS **%Moisture:** | **BatchNo:** | R23543 |
| **Revision:** | 02/13/12 15:29 **TestCode:** 8260W_CAL | **FileID:** | 1-SAMP-K8091.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | ND | | 25.0 | 8.25 | µg/L | 25 | 02/02/12 17:10 |
| Chloroform | ND | | 12.5 | 2.50 | µg/L | 25 | 02/02/12 17:10 |
| Chloromethane | ND | | 25.0 | 8.25 | µg/L | 25 | 02/02/12 17:10 |
| cis-1,2-Dichloroethene | 23.2 | | 12.5 | 2.50 | µg/L | 25 | 02/02/12 17:10 |
| cis-1,3-Dichloropropene | ND | | 12.5 | 4.00 | µg/L | 25 | 02/02/12 17:10 |
| Cyclohexane | ND | | 12.5 | 2.50 | µg/L | 25 | 02/02/12 17:10 |
| Dibromochloromethane | ND | | 12.5 | 2.50 | µg/L | 25 | 02/02/12 17:10 |
| Dibromomethane | ND | | 12.5 | 4.00 | µg/L | 25 | 02/02/12 17:10 |
| Dichlorodifluoromethane | ND | | 25.0 | 2.50 | µg/L | 25 | 02/02/12 17:10 |
| Ethylbenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 02/02/12 17:10 |
| Hexachlorobutadiene | ND | | 25.0 | 2.50 | µg/L | 25 | 02/02/12 17:10 |
| Isopropylbenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 02/02/12 17:10 |
| Methyl tert-butyl ether | ND | | 25.0 | 4.00 | µg/L | 25 | 02/02/12 17:10 |
| Methylene chloride | ND | | 50.0 | 4.00 | µg/L | 25 | 02/02/12 17:10 |
| n-Propylbenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 02/02/12 17:10 |
| Naphthalene | ND | | 25.0 | 2.50 | µg/L | 25 | 02/02/12 17:10 |
| o-Xylene | ND | | 12.5 | 2.50 | µg/L | 25 | 02/02/12 17:10 |
| p-Isopropyltoluene | ND | | 12.5 | 4.00 | µg/L | 25 | 02/02/12 17:10 |
| sec-Butylbenzene | ND | | 12.5 | 4.00 | µg/L | 25 | 02/02/12 17:10 |
| Styrene | ND | | 12.5 | 2.50 | µg/L | 25 | 02/02/12 17:10 |
| Tetrachloroethene | ND | | 12.5 | 2.50 | µg/L | 25 | 02/02/12 17:10 |
| Toluene | ND | | 12.5 | 2.50 | µg/L | 25 | 02/02/12 17:10 |
| trans-1,2-Dichloroethene | ND | | 12.5 | 2.50 | µg/L | 25 | 02/02/12 17:10 |
| trans-1,3-Dichloropropene | ND | | 12.5 | 4.00 | µg/L | 25 | 02/02/12 17:10 |
| Trichloroethene | 10.2 | J | 12.5 | 2.50 | µg/L | 25 | 02/02/12 17:10 |
| Trichlorofluoromethane | ND | | 25.0 | 2.50 | µg/L | 25 | 02/02/12 17:10 |
| Vinyl acetate | ND | | 50.0 | 25.0 | µg/L | 25 | 02/02/12 17:10 |
| Vinyl chloride | 35.8 | | 25.0 | 8.25 | µg/L | 25 | 02/02/12 17:10 |
| Xylenes (total) | ND | | 25.0 | 7.50 | µg/L | 25 | 02/02/12 17:10 |
| Surr: 1,2-Dichloroethane-d4 | 100 | | 75-128 | 4.00 | %REC | 25 | 02/02/12 17:10 |
| Surr: Toluene-d8 | 102 | | 75-125 | 2.50 | %REC | 25 | 02/02/12 17:10 |
| Surr: 4-Bromofluorobenzene | 117 | | 75-125 | 2.50 | %REC | 25 | 02/02/12 17:10 |
| TIC: Isobutane 4.606 | 44.0 | J | 0 | 0 | µg/L | 25 | 02/02/12 17:10 |
| TIC: Propane 4.210 | 236 | J | 0 | 0 | µg/L | 25 | 02/02/12 17:10 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 02/13/12 15:42 591986 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1202001-005A** |
| **Project:** | 189-02 | **Client Sample ID:** | *Well #7* |
| **W Order:** | K1202001 | **Collection Date:** | 01/31/12 11:55 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 02/01/12 8:30 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R23543 |
| **Revision:** | 02/13/12 15:29 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K8091.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |

**NOTES:**
TIC: Tentatively Identified Compound; concentration is estimated (J).

| | | | | | |
|---|---|---|---|---|---|
| **Qualifiers:** | * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| | E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| | J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| | P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 02/13/12 15:42 591986 **roject Supervisor:** Anthony Crescenzi

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# Analytical Results

StateCertNo: 10248

**CLIENT** Ken W. Kloeber Consulting Engineers
**Project:** 189-02
**W Order:** K1202001
**Matrix:** GROUNDWATER
**Inst. ID:** MSK_75
**ColumnID:** Rtx-VMS
**Revision:** 02/13/12 15:40
**Col Type:**

**Sample Size** 10 mL
**%Moisture:**
**TestCode:** 8260W_CAL

**Lab ID:** K1202001-008A
**Client Sample ID:** *Well #8*
**Collection Date:** 01/31/12 12:10
**Date Received:** 02/01/12 8:30
**PrepDate:**
**BatchNo:** R23542
**FileID:** 1-SAMP-K8062.D

Total 80.89

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 1.00 | 0.20 | µg/L | 1 | 02/01/12 17:32 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 02/01/12 17:32 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 17:32 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 17:32 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 17:32 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 02/01/12 17:32 |
| 1,1-Dichloroethane | 43.8 | E | 0.50 | 0.10 | µg/L | 1 | 02/01/12 17:32 |
| 1,1-Dichloroethene | 0.54 | | 0.50 | 0.16 | µg/L | 1 | 02/01/12 17:32 |
| 1,2,3-Trichloropropane | ND | | 2.00 | 0.33 | µg/L | 1 | 02/01/12 17:32 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 0.10 | µg/L | 1 | 02/01/12 17:32 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 17:32 |
| 1,2-Dibromo-3-chloropropane | ND | | 5.00 | 1.00 | µg/L | 1 | 02/01/12 17:32 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.16 | µg/L | 1 | 02/01/12 17:32 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 17:32 |
| 1,2-Dichloroethane | 0.48 | J | 0.50 | 0.16 | µg/L | 1 | 02/01/12 17:32 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.16 | µg/L | 1 | 02/01/12 17:32 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 17:32 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 17:32 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 02/01/12 17:32 |
| 2-Butanone | ND | | 10.0 | 1.00 | µg/L | 1 | 02/01/12 17:32 |
| 2-Chloroethylvinyl ether | ND | | 5.00 | 2.50 | µg/L | 1 | 02/01/12 17:32 |
| 2-Hexanone | ND | | 5.00 | 1.00 | µg/L | 1 | 02/01/12 17:32 |
| 4-Chlorotoluene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 17:32 |
| 4-Methyl-2-pentanone | ND | | 5.00 | 1.00 | µg/L | 1 | 02/01/12 17:32 |
| Acetone | ND | | 10.0 | 1.00 | µg/L | 1 | 02/01/12 17:32 |
| Benzene | 0.78 | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 17:32 |
| Bromobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 17:32 |
| Bromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 17:32 |
| Bromodichloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 17:32 |
| Bromoform | ND | | 1.00 | 0.33 | µg/L | 1 | 02/01/12 17:32 |
| Bromomethane | ND | | 1.00 | 0.33 | µg/L | 1 | 02/01/12 17:32 |
| Carbon disulfide | ND | | 0.50 | 0.11 | µg/L | 1 | 02/01/12 17:32 |
| Carbon tetrachloride | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 17:32 |
| Chlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 17:32 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 02/13/12 15:42 591972 **roject Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1202001-008A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***Well #8*** |
| **W Order:** | K1202001 | **Collection Date:** | 01/31/12 12:10 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 02/01/12 8:30 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R23542 |
| **Revision:** | 02/13/12 15:40 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K8062.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | ND | | 1.00 | 0.33 | µg/L | 1 | 02/01/12 17:32 |
| Chloroform | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 17:32 |
| Chloromethane | ND | | 1.00 | 0.33 | µg/L | 1 | 02/01/12 17:32 |
| cis-1,2-Dichloroethene | 32.2 | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 17:32 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 02/01/12 17:32 |
| Cyclohexane | 1.20 | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 17:32 |
| Dibromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 17:32 |
| Dibromomethane | ND | | 0.50 | 0.16 | µg/L | 1 | 02/01/12 17:32 |
| Dichlorodifluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 02/01/12 17:32 |
| Ethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 17:32 |
| Hexachlorobutadiene | ND | | 1.00 | 0.10 | µg/L | 1 | 02/01/12 17:32 |
| Isopropylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 17:32 |
| Methyl tert-butyl ether | 0.19 | J | 1.00 | 0.16 | µg/L | 1 | 02/01/12 17:32 |
| Methylene chloride | ND | | 2.00 | 0.16 | µg/L | 1 | 02/01/12 17:32 |
| n-Propylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 17:32 |
| Naphthalene | ND | | 1.00 | 0.10 | µg/L | 1 | 02/01/12 17:32 |
| o-Xylene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 17:32 |
| p-Isopropyltoluene | ND | | 0.50 | 0.16 | µg/L | 1 | 02/01/12 17:32 |
| sec-Butylbenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 02/01/12 17:32 |
| Styrene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 17:32 |
| Tetrachloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 17:32 |
| Toluene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 17:32 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 17:32 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 02/01/12 17:32 |
| Trichloroethene | 0.52 | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 17:32 |
| Trichlorofluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 02/01/12 17:32 |
| Vinyl acetate | ND | | 2.00 | 1.00 | µg/L | 1 | 02/01/12 17:32 |
| Vinyl chloride | 1.18 | | 1.00 | 0.33 | µg/L | 1 | 02/01/12 17:32 |
| Xylenes (total) | ND | | 1.00 | 0.30 | µg/L | 1 | 02/01/12 17:32 |
| Surr: 1,2-Dichloroethane-d4 | 97 | | 75-128 | 0.16 | %REC | 1 | 02/01/12 17:32 |
| Surr: Toluene-d8 | 100 | | 75-125 | 0.10 | %REC | 1 | 02/01/12 17:32 |
| Surr: 4-Bromofluorobenzene | 113 | | 75-125 | 0.10 | %REC | 1 | 02/01/12 17:32 |
| TIC: Butane 4.894 | 14.9 | J | 0 | 0 | µg/L | 1 | 02/01/12 17:32 |
| TIC: Butane, 2-methyl- 5.928 | 9.37 | J | 0 | 0 | µg/L | 1 | 02/01/12 17:32 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 02/13/12 15:42 591972 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1202001-008A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***Well #8*** |
| **W Order:** | K1202001 | **Collection Date:** | 01/31/12 12:10 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 02/01/12 8:30 |
| **Inst. ID:** | MSK_75 **Sample Size** 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS **%Moisture:** | **BatchNo:** | R23542 |
| **Revision:** | 02/13/12 15:40 **TestCode:** 8260W_CAL | **FileID:** | 1-SAMP-K8062.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| TIC: Cyclopentane 7.986 | 1.64 | J | 0 | 0 | µg/L | 1 | 02/01/12 17:32 |
| TIC: Cyclopentane, methyl 9.579 | 1.12 | J | 0 | 0 | µg/L | 1 | 02/01/12 17:32 |
| TIC: Isobutane 4.630 | 9.90 | J | 0 | 0 | µg/L | 1 | 02/01/12 17:32 |
| TIC: Pentane 6.36 | 6.02 | J | 0 | 0 | µg/L | 1 | 02/01/12 17:32 |
| TIC: Pentane, 2-methyl 7.901 | 1.03 | J | 0 | 0 | µg/L | 1 | 02/01/12 17:32 |
| TIC: Pentane, 3-methyl 8.292 | 1.14 | J | 0 | 0 | µg/L | 1 | 02/01/12 17:32 |
| TIC: Propane 4.200 | 16.1 | J | 0 | 0 | µg/L | 1 | 02/01/12 17:32 |

**NOTES:**
TIC: Tentatively Identified Compound; concentration is estimated (J).

| **Qualifiers:** | | | | | |
|---|---|---|---|---|---|
| | * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| | E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| | J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| | P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 02/13/12 15:42 591972 **roject Supervisor:** Anthony Crescenzi

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East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

**CLIENT** Ken W. Kloeber Consulting Engineers
**Project:** 189-02
**W Order:** K1202001
**Matrix:** GROUNDWATER
**Inst. ID:** MSK_75 **Sample Size** 10 mL
**ColumnID:** Rtx-VMS **%Moisture:**
**Revision:** 02/13/12 15:29 **TestCode:** 8260W_CAL
**Col Type:**

**Lab ID:** K1202001-012A
**Client Sample ID:** *Well #9*
**Collection Date:** 01/31/12 1:20
**Date Received:** 02/01/12 8:30
**PrepDate:**
**BatchNo:** R23543
**FileID:** 1-SAMP-K8092.D

Total 1395

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| VOLATILE ORGANIC COMPOUNDS BY GC/MS | | | | | SW8260B | | |
| (m+p)-Xylene | ND | | 25.0 | 5.00 | µg/L | 25 | 02/02/12 17:42 |
| 1,1,1,2-Tetrachloroethane | ND | | 12.5 | 4.00 | µg/L | 25 | 02/02/12 17:42 |
| 1,1,1-Trichloroethane | 229 | | 12.5 | 2.50 | µg/L | 25 | 02/02/12 17:42 |
| 1,1,2,2-Tetrachloroethane | ND | | 12.5 | 2.50 | µg/L | 25 | 02/02/12 17:42 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 3.75 | J | 12.5 | 2.50 | µg/L | 25 | 02/02/12 17:42 |
| 1,1,2-Trichloroethane | ND | | 12.5 | 4.00 | µg/L | 25 | 02/02/12 17:42 |
| 1,1-Dichloroethane | 581 | | 12.5 | 2.50 | µg/L | 25 | 02/02/12 17:42 |
| 1,1-Dichloroethene | 16.2 | | 12.5 | 4.00 | µg/L | 25 | 02/02/12 17:42 |
| 1,2,3-Trichloropropane | ND | | 50.0 | 8.25 | µg/L | 25 | 02/02/12 17:42 |
| 1,2,4-Trichlorobenzene | ND | | 25.0 | 2.50 | µg/L | 25 | 02/02/12 17:42 |
| 1,2,4-Trimethylbenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 02/02/12 17:42 |
| 1,2-Dibromo-3-chloropropane | ND | | 125 | 25.0 | µg/L | 25 | 02/02/12 17:42 |
| 1,2-Dibromoethane | ND | | 12.5 | 4.00 | µg/L | 25 | 02/02/12 17:42 |
| 1,2-Dichlorobenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 02/02/12 17:42 |
| 1,2-Dichloroethane | ND | | 12.5 | 4.00 | µg/L | 25 | 02/02/12 17:42 |
| 1,2-Dichloropropane | ND | | 12.5 | 4.00 | µg/L | 25 | 02/02/12 17:42 |
| 1,3,5-Trimethylbenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 02/02/12 17:42 |
| 1,3-Dichlorobenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 02/02/12 17:42 |
| 1,4-Dichlorobenzene | ND | | 12.5 | 4.00 | µg/L | 25 | 02/02/12 17:42 |
| 2-Butanone | ND | | 250 | 25.0 | µg/L | 25 | 02/02/12 17:42 |
| 2-Chloroethylvinyl ether | ND | | 125 | 62.5 | µg/L | 25 | 02/02/12 17:42 |
| 2-Hexanone | ND | | 125 | 25.0 | µg/L | 25 | 02/02/12 17:42 |
| 4-Chlorotoluene | ND | | 12.5 | 2.50 | µg/L | 25 | 02/02/12 17:42 |
| 4-Methyl-2-pentanone | ND | | 125 | 25.0 | µg/L | 25 | 02/02/12 17:42 |
| Acetone | ND | | 250 | 25.0 | µg/L | 25 | 02/02/12 17:42 |
| Benzene | ND | | 12.5 | 2.50 | µg/L | 25 | 02/02/12 17:42 |
| Bromobenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 02/02/12 17:42 |
| Bromochloromethane | ND | | 12.5 | 2.50 | µg/L | 25 | 02/02/12 17:42 |
| Bromodichloromethane | ND | | 12.5 | 2.50 | µg/L | 25 | 02/02/12 17:42 |
| Bromoform | ND | | 25.0 | 8.25 | µg/L | 25 | 02/02/12 17:42 |
| Bromomethane | ND | | 25.0 | 8.25 | µg/L | 25 | 02/02/12 17:42 |
| Carbon disulfide | ND | | 12.5 | 2.75 | µg/L | 25 | 02/02/12 17:42 |
| Carbon tetrachloride | ND | | 12.5 | 2.50 | µg/L | 25 | 02/02/12 17:42 |
| Chlorobenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 02/02/12 17:42 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 02/13/12 15:42 591987 **roject Supervisor:** Anthony Crescenzi

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East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1202001-012A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***Well #9*** |
| **W Order:** | K1202001 | **Collection Date:** | 01/31/12 1:20 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 02/01/12 8:30 |
| **Inst. ID:** | MSK_75 **Sample Size** 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS **%Moisture:** | **BatchNo:** | R23543 |
| **Revision:** | 02/13/12 15:29 **TestCode:** 8260W_CAL | **FileID:** | 1-SAMP-K8092.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | ND | | 25.0 | 8.25 | µg/L | 25 | 02/02/12 17:42 |
| Chloroform | ND | | 12.5 | 2.50 | µg/L | 25 | 02/02/12 17:42 |
| Chloromethane | ND | | 25.0 | 8.25 | µg/L | 25 | 02/02/12 17:42 |
| cis-1,2-Dichloroethene | 324 | | 12.5 | 2.50 | µg/L | 25 | 02/02/12 17:42 |
| cis-1,3-Dichloropropene | ND | | 12.5 | 4.00 | µg/L | 25 | 02/02/12 17:42 |
| Cyclohexane | ND | | 12.5 | 2.50 | µg/L | 25 | 02/02/12 17:42 |
| Dibromochloromethane | ND | | 12.5 | 2.50 | µg/L | 25 | 02/02/12 17:42 |
| Dibromomethane | ND | | 12.5 | 4.00 | µg/L | 25 | 02/02/12 17:42 |
| Dichlorodifluoromethane | ND | | 25.0 | 2.50 | µg/L | 25 | 02/02/12 17:42 |
| Ethylbenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 02/02/12 17:42 |
| Hexachlorobutadiene | ND | | 25.0 | 2.50 | µg/L | 25 | 02/02/12 17:42 |
| Isopropylbenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 02/02/12 17:42 |
| Methyl tert-butyl ether | ND | | 25.0 | 4.00 | µg/L | 25 | 02/02/12 17:42 |
| Methylene chloride | ND | | 50.0 | 4.00 | µg/L | 25 | 02/02/12 17:42 |
| n-Propylbenzene | ND | | 12.5 | 2.50 | µg/L | 25 | 02/02/12 17:42 |
| Naphthalene | ND | | 25.0 | 2.50 | µg/L | 25 | 02/02/12 17:42 |
| o-Xylene | ND | | 12.5 | 2.50 | µg/L | 25 | 02/02/12 17:42 |
| p-Isopropyltoluene | ND | | 12.5 | 4.00 | µg/L | 25 | 02/02/12 17:42 |
| sec-Butylbenzene | ND | | 12.5 | 4.00 | µg/L | 25 | 02/02/12 17:42 |
| Styrene | ND | | 12.5 | 2.50 | µg/L | 25 | 02/02/12 17:42 |
| Tetrachloroethene | 5.25 | J | 12.5 | 2.50 | µg/L | 25 | 02/02/12 17:42 |
| Toluene | ND | | 12.5 | 2.50 | µg/L | 25 | 02/02/12 17:42 |
| trans-1,2-Dichloroethene | ND | | 12.5 | 2.50 | µg/L | 25 | 02/02/12 17:42 |
| trans-1,3-Dichloropropene | ND | | 12.5 | 4.00 | µg/L | 25 | 02/02/12 17:42 |
| Trichloroethene | 92.8 | | 12.5 | 2.50 | µg/L | 25 | 02/02/12 17:42 |
| Trichlorofluoromethane | ND | | 25.0 | 2.50 | µg/L | 25 | 02/02/12 17:42 |
| Vinyl acetate | ND | | 50.0 | 25.0 | µg/L | 25 | 02/02/12 17:42 |
| Vinyl chloride | 143 | | 25.0 | 8.25 | µg/L | 25 | 02/02/12 17:42 |
| Xylenes (total) | ND | | 25.0 | 7.50 | µg/L | 25 | 02/02/12 17:42 |
| Surr: 1,2-Dichloroethane-d4 | 100 | | 75-128 | 4.00 | %REC | 25 | 02/02/12 17:42 |
| Surr: Toluene-d8 | 99 | | 75-125 | 2.50 | %REC | 25 | 02/02/12 17:42 |
| Surr: 4-Bromofluorobenzene | 114 | | 75-125 | 2.50 | %REC | 25 | 02/02/12 17:42 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 02/13/12 15:42 591987 **roject Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

**CLIENT** Ken W. Kloeber Consulting Engineers
**Project:** 189-02
**W Order:** K1202001
**Matrix:** GROUNDWATER
**Inst. ID:** MSK_75 **Sample Size** 10 mL
**ColumnID:** Rtx-VMS **%Moisture:**
**Revision:** 02/13/12 15:29 **TestCode:** 8260W_CAL
**Col Type:** Total 337.8

**Lab ID:** K1202001-002A
**Client Sample ID:** *Well #12*
**Collection Date:** 01/31/12 11:20
**Date Received:** 02/01/12 8:30
**PrepDate:**
**BatchNo:** R23543
**FileID:** 1-SAMP-K8079.D

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| VOLATILE ORGANIC COMPOUNDS BY GC/MS | | | | | SW8260B | | |
| (m+p)-Xylene | ND | | 10.0 | 2.00 | µg/L | 10 | 02/02/12 10:48 |
| 1,1,1,2-Tetrachloroethane | ND | | 5.00 | 1.60 | µg/L | 10 | 02/02/12 10:48 |
| 1,1,1-Trichloroethane | ND | | 5.00 | 1.00 | µg/L | 10 | 02/02/12 10:48 |
| 1,1,2,2-Tetrachloroethane | ND | | 5.00 | 1.00 | µg/L | 10 | 02/02/12 10:48 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 5.00 | 1.00 | µg/L | 10 | 02/02/12 10:48 |
| 1,1,2-Trichloroethane | ND | | 5.00 | 1.60 | µg/L | 10 | 02/02/12 10:48 |
| 1,1-Dichloroethane | 175 | | 5.00 | 1.00 | µg/L | 10 | 02/02/12 10:48 |
| 1,1-Dichloroethene | ND | | 5.00 | 1.60 | µg/L | 10 | 02/02/12 10:48 |
| 1,2,3-Trichloropropane | ND | | 20.0 | 3.30 | µg/L | 10 | 02/02/12 10:48 |
| 1,2,4-Trichlorobenzene | ND | | 10.0 | 1.00 | µg/L | 10 | 02/02/12 10:48 |
| 1,2,4-Trimethylbenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 02/02/12 10:48 |
| 1,2-Dibromo-3-chloropropane | ND | | 50.0 | 10.0 | µg/L | 10 | 02/02/12 10:48 |
| 1,2-Dibromoethane | ND | | 5.00 | 1.60 | µg/L | 10 | 02/02/12 10:48 |
| 1,2-Dichlorobenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 02/02/12 10:48 |
| 1,2-Dichloroethane | 4.10 | J | 5.00 | 1.60 | µg/L | 10 | 02/02/12 10:48 |
| 1,2-Dichloropropane | ND | | 5.00 | 1.60 | µg/L | 10 | 02/02/12 10:48 |
| 1,3,5-Trimethylbenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 02/02/12 10:48 |
| 1,3-Dichlorobenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 02/02/12 10:48 |
| 1,4-Dichlorobenzene | ND | | 5.00 | 1.60 | µg/L | 10 | 02/02/12 10:48 |
| 2-Butanone | ND | | 100 | 10.0 | µg/L | 10 | 02/02/12 10:48 |
| 2-Chloroethylvinyl ether | ND | | 50.0 | 25.0 | µg/L | 10 | 02/02/12 10:48 |
| 2-Hexanone | ND | | 50.0 | 10.0 | µg/L | 10 | 02/02/12 10:48 |
| 4-Chlorotoluene | ND | | 5.00 | 1.00 | µg/L | 10 | 02/02/12 10:48 |
| 4-Methyl-2-pentanone | ND | | 50.0 | 10.0 | µg/L | 10 | 02/02/12 10:48 |
| Acetone | ND | | 100 | 10.0 | µg/L | 10 | 02/02/12 10:48 |
| Benzene | ND | | 5.00 | 1.00 | µg/L | 10 | 02/02/12 10:48 |
| Bromobenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 02/02/12 10:48 |
| Bromochloromethane | ND | | 5.00 | 1.00 | µg/L | 10 | 02/02/12 10:48 |
| Bromodichloromethane | ND | | 5.00 | 1.00 | µg/L | 10 | 02/02/12 10:48 |
| Bromoform | ND | | 10.0 | 3.30 | µg/L | 10 | 02/02/12 10:48 |
| Bromomethane | ND | | 10.0 | 3.30 | µg/L | 10 | 02/02/12 10:48 |
| Carbon disulfide | ND | | 5.00 | 1.10 | µg/L | 10 | 02/02/12 10:48 |
| Carbon tetrachloride | ND | | 5.00 | 1.00 | µg/L | 10 | 02/02/12 10:48 |
| Chlorobenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 02/02/12 10:48 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 02/13/12 15:42 591979 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1202001-002A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***Well #12*** |
| **W Order:** | K1202001 | **Collection Date:** | 01/31/12 11:20 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 02/01/12 8:30 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R23543 |
| **Revision:** | 02/13/12 15:29 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K8079.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | 19.4 | | 10.0 | 3.30 | µg/L | 10 | 02/02/12 10:48 |
| Chloroform | ND | | 5.00 | 1.00 | µg/L | 10 | 02/02/12 10:48 |
| Chloromethane | ND | | 10.0 | 3.30 | µg/L | 10 | 02/02/12 10:48 |
| cis-1,2-Dichloroethene | 20.3 | | 5.00 | 1.00 | µg/L | 10 | 02/02/12 10:48 |
| cis-1,3-Dichloropropene | ND | | 5.00 | 1.60 | µg/L | 10 | 02/02/12 10:48 |
| Cyclohexane | ND | | 5.00 | 1.00 | µg/L | 10 | 02/02/12 10:48 |
| Dibromochloromethane | ND | | 5.00 | 1.00 | µg/L | 10 | 02/02/12 10:48 |
| Dibromomethane | ND | | 5.00 | 1.60 | µg/L | 10 | 02/02/12 10:48 |
| Dichlorodifluoromethane | ND | | 10.0 | 1.00 | µg/L | 10 | 02/02/12 10:48 |
| Ethylbenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 02/02/12 10:48 |
| Hexachlorobutadiene | ND | | 10.0 | 1.00 | µg/L | 10 | 02/02/12 10:48 |
| Isopropylbenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 02/02/12 10:48 |
| Methyl tert-butyl ether | ND | | 10.0 | 1.60 | µg/L | 10 | 02/02/12 10:48 |
| Methylene chloride | ND | | 20.0 | 1.60 | µg/L | 10 | 02/02/12 10:48 |
| n-Propylbenzene | ND | | 5.00 | 1.00 | µg/L | 10 | 02/02/12 10:48 |
| Naphthalene | ND | | 10.0 | 1.00 | µg/L | 10 | 02/02/12 10:48 |
| o-Xylene | ND | | 5.00 | 1.00 | µg/L | 10 | 02/02/12 10:48 |
| p-Isopropyltoluene | ND | | 5.00 | 1.60 | µg/L | 10 | 02/02/12 10:48 |
| sec-Butylbenzene | ND | | 5.00 | 1.60 | µg/L | 10 | 02/02/12 10:48 |
| Styrene | ND | | 5.00 | 1.00 | µg/L | 10 | 02/02/12 10:48 |
| Tetrachloroethene | ND | | 5.00 | 1.00 | µg/L | 10 | 02/02/12 10:48 |
| Toluene | ND | | 5.00 | 1.00 | µg/L | 10 | 02/02/12 10:48 |
| trans-1,2-Dichloroethene | ND | | 5.00 | 1.00 | µg/L | 10 | 02/02/12 10:48 |
| trans-1,3-Dichloropropene | ND | | 5.00 | 1.60 | µg/L | 10 | 02/02/12 10:48 |
| Trichloroethene | ND | | 5.00 | 1.00 | µg/L | 10 | 02/02/12 10:48 |
| Trichlorofluoromethane | ND | | 10.0 | 1.00 | µg/L | 10 | 02/02/12 10:48 |
| Vinyl acetate | ND | | 20.0 | 10.0 | µg/L | 10 | 02/02/12 10:48 |
| Vinyl chloride | 119 | | 10.0 | 3.30 | µg/L | 10 | 02/02/12 10:48 |
| Xylenes (total) | ND | | 10.0 | 3.00 | µg/L | 10 | 02/02/12 10:48 |
| Surr: 1,2-Dichloroethane-d4 | 96 | | 75-128 | 1.60 | %REC | 10 | 02/02/12 10:48 |
| Surr: Toluene-d8 | 102 | | 75-125 | 1.00 | %REC | 10 | 02/02/12 10:48 |
| Surr: 4-Bromofluorobenzene | 114 | | 75-125 | 1.00 | %REC | 10 | 02/02/12 10:48 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | K1202001-004A |
| **Project:** | 189-02 | **Client Sample ID:** | *Well #13* ✓ |
| **W Order:** | K1202001 | **Collection Date:** | 01/31/12 11:50 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 02/01/12 8:30 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R23542 |
| **Revision:** | 02/13/12 15:40 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K8060.D ✓ |
| **Col Type:** | | Total 2.17 | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 1.00 | 0.20 | µg/L | 1 | 02/01/12 16:28 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 02/01/12 16:28 |
| 1,1,1-Trichloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 16:28 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 16:28 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 16:28 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 02/01/12 16:28 |
| 1,1-Dichloroethane | 0.19 | J | 0.50 | 0.10 | µg/L | 1 | 02/01/12 16:28 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.16 | µg/L | 1 | 02/01/12 16:28 |
| 1,2,3-Trichloropropane | ND | | 2.00 | 0.33 | µg/L | 1 | 02/01/12 16:28 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 0.10 | µg/L | 1 | 02/01/12 16:28 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 16:28 |
| 1,2-Dibromo-3-chloropropane | ND | | 5.00 | 1.00 | µg/L | 1 | 02/01/12 16:28 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.16 | µg/L | 1 | 02/01/12 16:28 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 16:28 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 02/01/12 16:28 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.16 | µg/L | 1 | 02/01/12 16:28 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 16:28 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 16:28 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 02/01/12 16:28 |
| 2-Butanone | ND | | 10.0 | 1.00 | µg/L | 1 | 02/01/12 16:28 |
| 2-Chloroethylvinyl ether | ND | | 5.00 | 2.50 | µg/L | 1 | 02/01/12 16:28 |
| 2-Hexanone | ND | | 5.00 | 1.00 | µg/L | 1 | 02/01/12 16:28 |
| 4-Chlorotoluene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 16:28 |
| 4-Methyl-2-pentanone | ND | | 5.00 | 1.00 | µg/L | 1 | 02/01/12 16:28 |
| Acetone | 1.85 | J | 10.0 | 1.00 | µg/L | 1 | 02/01/12 16:28 |
| Benzene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 16:28 |
| Bromobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 16:28 |
| Bromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 16:28 |
| Bromodichloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 16:28 |
| Bromoform | ND | | 1.00 | 0.33 | µg/L | 1 | 02/01/12 16:28 |
| Bromomethane | ND | | 1.00 | 0.33 | µg/L | 1 | 02/01/12 16:28 |
| Carbon disulfide | ND | | 0.50 | 0.11 | µg/L | 1 | 02/01/12 16:28 |
| Carbon tetrachloride | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 16:28 |
| Chlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 16:28 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 02/13/12 15:42 591970 **roject Supervisor:** Anthony Crescenzi

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East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

**CLIENT** Ken W. Kloeber Consulting Engineers
**Project:** 189-02
**W Order:** K1202001
**Matrix:** GROUNDWATER
**Inst. ID:** MSK_75 **Sample Size** 10 mL
**ColumnID:** Rtx-VMS **%Moisture:**
**Revision:** 02/13/12 15:40 **TestCode:** 8260W_CAL
**Col Type:**

**Lab ID:** K1202001-004A
**Client Sample ID:** *Well #13*
**Collection Date:** 01/31/12 11:50
**Date Received:** 02/01/12 8:30
**PrepDate:**
**BatchNo:** R23542
**FileID:** 1-SAMP-K8060.D

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | ND | | 1.00 | 0.33 | µg/L | 1 | 02/01/12 16:28 |
| Chloroform | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 16:28 |
| Chloromethane | ND | | 1.00 | 0.33 | µg/L | 1 | 02/01/12 16:28 |
| cis-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 16:28 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 02/01/12 16:28 |
| Cyclohexane | 0.13 | J | 0.50 | 0.10 | µg/L | 1 | 02/01/12 16:28 |
| Dibromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 16:28 |
| Dibromomethane | ND | | 0.50 | 0.16 | µg/L | 1 | 02/01/12 16:28 |
| Dichlorodifluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 02/01/12 16:28 |
| Ethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 16:28 |
| Hexachlorobutadiene | ND | | 1.00 | 0.10 | µg/L | 1 | 02/01/12 16:28 |
| Isopropylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 16:28 |
| Methyl tert-butyl ether | ND | | 1.00 | 0.16 | µg/L | 1 | 02/01/12 16:28 |
| Methylene chloride | ND | | 2.00 | 0.16 | µg/L | 1 | 02/01/12 16:28 |
| n-Propylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 16:28 |
| Naphthalene | ND | | 1.00 | 0.10 | µg/L | 1 | 02/01/12 16:28 |
| o-Xylene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 16:28 |
| p-Isopropyltoluene | ND | | 0.50 | 0.16 | µg/L | 1 | 02/01/12 16:28 |
| sec-Butylbenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 02/01/12 16:28 |
| Styrene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 16:28 |
| Tetrachloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 16:28 |
| Toluene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 16:28 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 16:28 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 02/01/12 16:28 |
| Trichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/01/12 16:28 |
| Trichlorofluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 02/01/12 16:28 |
| Vinyl acetate | ND | | 2.00 | 1.00 | µg/L | 1 | 02/01/12 16:28 |
| Vinyl chloride | ND | | 1.00 | 0.33 | µg/L | 1 | 02/01/12 16:28 |
| Xylenes (total) | ND | | 1.00 | 0.30 | µg/L | 1 | 02/01/12 16:28 |
| Surr: 1,2-Dichloroethane-d4 | 97 | | 75-128 | 0.16 | %REC | 1 | 02/01/12 16:28 |
| Surr: Toluene-d8 | 98 | | 75-125 | 0.10 | %REC | 1 | 02/01/12 16:28 |
| Surr: 4-Bromofluorobenzene | 114 | | 75-125 | 0.10 | %REC | 1 | 02/01/12 16:28 |
| TIC: unknown 5.040 | 1.04 | J | 0 | 0 | µg/L | 1 | 02/01/12 16:28 |

**Qualifiers:**

| | | | |
|---|---|---|---|
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| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 02/13/12 15:42 591970 **roject Supervisor:** Anthony Crescenzi

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East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1202001-004A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***Well #13*** |
| **W Order:** | K1202001 | **Collection Date:** | 01/31/12 11:50 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 02/01/12 8:30 |
| **Inst. ID:** | MSK_75 | **Sample Size** 10 mL | **PrepDate:** |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | **BatchNo:** R23542 |
| **Revision:** | 02/13/12 15:40 | **TestCode:** 8260W_CAL | **FileID:** 1-SAMP-K8060.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |

**NOTES:**
TIC: Tentatively Identified Compound; concentration is estimated (J).

| | | | | | |
|---|---|---|---|---|---|
| **Qualifiers:** | * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| | E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
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| | P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

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East Syracuse, NY 13057 (315) 445-1900

## Analytical Results

StateCertNo: 10248

| | | | | | |
|---|---|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | | | **Lab ID:** | K1202001-006A |
| **Project:** | 189-02 | | | **Client Sample ID:** | *Well #14* |
| **W Order:** | K1202001 | | | **Collection Date:** | 01/31/12 12:05 |
| **Matrix:** | GROUNDWATER | | | **Date Received:** | 02/01/12 8:30 |
| **Inst. ID:** | MSK_75 | **Sample Size** | 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | | **BatchNo:** | R23543 |
| **Revision:** | 02/13/12 15:29 | **TestCode:** | 8260W_CAL | **FileID:** | 1-SAMP-K8093.D |
| **Col Type:** | | | Total 8308 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | 29.0 | J | 100 | 20.0 | µg/L | 100 | 02/02/12 18:14 |
| 1,1,1,2-Tetrachloroethane | ND | | 50.0 | 16.0 | µg/L | 100 | 02/02/12 18:14 |
| 1,1,1-Trichloroethane | 3390 | | 50.0 | 10.0 | µg/L | 100 | 02/02/12 18:14 |
| 1,1,2,2-Tetrachloroethane | ND | | 50.0 | 10.0 | µg/L | 100 | 02/02/12 18:14 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 2580 | | 50.0 | 10.0 | µg/L | 100 | 02/02/12 18:14 |
| 1,1,2-Trichloroethane | ND | | 50.0 | 16.0 | µg/L | 100 | 02/02/12 18:14 |
| 1,1-Dichloroethane | 1970 | | 50.0 | 10.0 | µg/L | 100 | 02/02/12 18:14 |
| 1,1-Dichloroethene | 74.0 | | 50.0 | 16.0 | µg/L | 100 | 02/02/12 18:14 |
| 1,2,3-Trichloropropane | ND | | 200 | 33.0 | µg/L | 100 | 02/02/12 18:14 |
| 1,2,4-Trichlorobenzene | ND | | 100 | 10.0 | µg/L | 100 | 02/02/12 18:14 |
| 1,2,4-Trimethylbenzene | ND | | 50.0 | 10.0 | µg/L | 100 | 02/02/12 18:14 |
| 1,2-Dibromo-3-chloropropane | ND | | 500 | 100 | µg/L | 100 | 02/02/12 18:14 |
| 1,2-Dibromoethane | ND | | 50.0 | 16.0 | µg/L | 100 | 02/02/12 18:14 |
| 1,2-Dichlorobenzene | ND | | 50.0 | 10.0 | µg/L | 100 | 02/02/12 18:14 |
| 1,2-Dichloroethane | ND | | 50.0 | 16.0 | µg/L | 100 | 02/02/12 18:14 |
| 1,2-Dichloropropane | ND | | 50.0 | 16.0 | µg/L | 100 | 02/02/12 18:14 |
| 1,3,5-Trimethylbenzene | ND | | 50.0 | 10.0 | µg/L | 100 | 02/02/12 18:14 |
| 1,3-Dichlorobenzene | ND | | 50.0 | 10.0 | µg/L | 100 | 02/02/12 18:14 |
| 1,4-Dichlorobenzene | ND | | 50.0 | 16.0 | µg/L | 100 | 02/02/12 18:14 |
| 2-Butanone | ND | | 1000 | 100 | µg/L | 100 | 02/02/12 18:14 |
| 2-Chloroethylvinyl ether | ND | | 500 | 250 | µg/L | 100 | 02/02/12 18:14 |
| 2-Hexanone | ND | | 500 | 100 | µg/L | 100 | 02/02/12 18:14 |
| 4-Chlorotoluene | ND | | 50.0 | 10.0 | µg/L | 100 | 02/02/12 18:14 |
| 4-Methyl-2-pentanone | ND | | 500 | 100 | µg/L | 100 | 02/02/12 18:14 |
| Acetone | ND | | 1000 | 100 | µg/L | 100 | 02/02/12 18:14 |
| Benzene | 16.0 | J | 50.0 | 10.0 | µg/L | 100 | 02/02/12 18:14 |
| Bromobenzene | ND | | 50.0 | 10.0 | µg/L | 100 | 02/02/12 18:14 |
| Bromochloromethane | ND | | 50.0 | 10.0 | µg/L | 100 | 02/02/12 18:14 |
| Bromodichloromethane | ND | | 50.0 | 10.0 | µg/L | 100 | 02/02/12 18:14 |
| Bromoform | ND | | 100 | 33.0 | µg/L | 100 | 02/02/12 18:14 |
| Bromomethane | ND | | 100 | 33.0 | µg/L | 100 | 02/02/12 18:14 |
| Carbon disulfide | ND | | 50.0 | 11.0 | µg/L | 100 | 02/02/12 18:14 |
| Carbon tetrachloride | ND | | 50.0 | 10.0 | µg/L | 100 | 02/02/12 18:14 |
| Chlorobenzene | ND | | 50.0 | 10.0 | µg/L | 100 | 02/02/12 18:14 |

**Qualifiers:**

| | | | |
|---|---|---|---|
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| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
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**Print Date:** 02/13/12 15:42 591988 **roject Supervisor:** Anthony Crescenzi

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# Analytical Results

StateCertNo: 10248

| | | | | | |
|---|---|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | | | **Lab ID:** | **K1202001-006A** |
| **Project:** | 189-02 | | | **Client Sample ID:** | ***Well #14*** |
| **W Order:** | K1202001 | | | **Collection Date:** | 01/31/12 12:05 |
| **Matrix:** | GROUNDWATER | | | **Date Received:** | 02/01/12 8:30 |
| **Inst. ID:** | MSK_75 | **Sample Size** | 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | | **BatchNo:** | R23543 |
| **Revision:** | 02/13/12 15:29 | **TestCode:** | 8260W_CAL | **FileID:** | 1-SAMP-K8093.D |
| **Col Type:** | | | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | ND | | 100 | 33.0 | µg/L | 100 | 02/02/12 18:14 |
| Chloroform | ND | | 50.0 | 10.0 | µg/L | 100 | 02/02/12 18:14 |
| Chloromethane | ND | | 100 | 33.0 | µg/L | 100 | 02/02/12 18:14 |
| cis-1,2-Dichloroethene | 114 | | 50.0 | 10.0 | µg/L | 100 | 02/02/12 18:14 |
| cis-1,3-Dichloropropene | ND | | 50.0 | 16.0 | µg/L | 100 | 02/02/12 18:14 |
| Cyclohexane | 71.0 | | 50.0 | 10.0 | µg/L | 100 | 02/02/12 18:14 |
| Dibromochloromethane | ND | | 50.0 | 10.0 | µg/L | 100 | 02/02/12 18:14 |
| Dibromomethane | ND | | 50.0 | 16.0 | µg/L | 100 | 02/02/12 18:14 |
| Dichlorodifluoromethane | ND | | 100 | 10.0 | µg/L | 100 | 02/02/12 18:14 |
| Ethylbenzene | ND | | 50.0 | 10.0 | µg/L | 100 | 02/02/12 18:14 |
| Hexachlorobutadiene | ND | | 100 | 10.0 | µg/L | 100 | 02/02/12 18:14 |
| Isopropylbenzene | ND | | 50.0 | 10.0 | µg/L | 100 | 02/02/12 18:14 |
| Methyl tert-butyl ether | ND | | 100 | 16.0 | µg/L | 100 | 02/02/12 18:14 |
| Methylene chloride | ND | | 200 | 16.0 | µg/L | 100 | 02/02/12 18:14 |
| n-Propylbenzene | ND | | 50.0 | 10.0 | µg/L | 100 | 02/02/12 18:14 |
| Naphthalene | ND | | 100 | 10.0 | µg/L | 100 | 02/02/12 18:14 |
| o-Xylene | ND | | 50.0 | 10.0 | µg/L | 100 | 02/02/12 18:14 |
| p-Isopropyltoluene | ND | | 50.0 | 16.0 | µg/L | 100 | 02/02/12 18:14 |
| sec-Butylbenzene | ND | | 50.0 | 16.0 | µg/L | 100 | 02/02/12 18:14 |
| Styrene | ND | | 50.0 | 10.0 | µg/L | 100 | 02/02/12 18:14 |
| Tetrachloroethene | 140 | | 50.0 | 10.0 | µg/L | 100 | 02/02/12 18:14 |
| Toluene | 31.0 | J | 50.0 | 10.0 | µg/L | 100 | 02/02/12 18:14 |
| trans-1,2-Dichloroethene | ND | | 50.0 | 10.0 | µg/L | 100 | 02/02/12 18:14 |
| trans-1,3-Dichloropropene | ND | | 50.0 | 16.0 | µg/L | 100 | 02/02/12 18:14 |
| Trichloroethene | ND | | 50.0 | 10.0 | µg/L | 100 | 02/02/12 18:14 |
| Trichlorofluoromethane | ND | | 100 | 10.0 | µg/L | 100 | 02/02/12 18:14 |
| Vinyl acetate | ND | | 200 | 100 | µg/L | 100 | 02/02/12 18:14 |
| Vinyl chloride | 33.0 | J | 100 | 33.0 | µg/L | 100 | 02/02/12 18:14 |
| Xylenes (total) | ND | | 100 | 30.0 | µg/L | 100 | 02/02/12 18:14 |
| Surr: 1,2-Dichloroethane-d4 | 99 | | 75-128 | 16.0 | %REC | 100 | 02/02/12 18:14 |
| Surr: Toluene-d8 | 99 | | 75-125 | 10.0 | %REC | 100 | 02/02/12 18:14 |
| Surr: 4-Bromofluorobenzene | 114 | | 75-125 | 10.0 | %REC | 100 | 02/02/12 18:14 |
| TIC: Butane, 2-methyl- 5.915 | 147 | J | 0 | 0 | µg/L | 100 | 02/02/12 18:14 |
| TIC: Isobutane 4.586 | 132 | J | 0 | 0 | µg/L | 100 | 02/02/12 18:14 |

**Qualifiers:**

| | | | |
|---|---|---|---|
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| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 02/13/12 15:42 591988 **roject Supervisor:** Anthony Crescenzi

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# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1202001-006A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***Well #14*** |
| **W Order:** | K1202001 | **Collection Date:** | 01/31/12 12:05 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 02/01/12 8:30 |
| **Inst. ID:** | MSK_75 **Sample Size** 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS **%Moisture:** | **BatchNo:** | R23543 |
| **Revision:** | 02/13/12 15:29 **TestCode:** 8260W_CAL | **FileID:** | 1-SAMP-K8093.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| TIC: Pentane 6.337 | 171 J | | 0 | 0 | µg/L | 100 | 02/02/12 18:14 |
| TIC: Propane 4.200 | 369 J | | 0 | 0 | µg/L | 100 | 02/02/12 18:14 |

**NOTES:**
TIC: Tentatively Identified Compound; concentration is estimated (J).

| | | | | | |
|---|---|---|---|---|---|
| **Qualifiers:** | * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
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# Analytical Results

StateCertNo: 10248

| | | | | | |
|---|---|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | | | **Lab ID:** | K1202001-014A |
| **Project:** | 189-02 | | | **Client Sample ID:** | *Dup* |
| **W Order:** | K1202001 | | | **Collection Date:** | 01/31/12 14:40 |
| **Matrix:** | GROUNDWATER | | | **Date Received:** | 02/01/12 8:30 |
| **Inst. ID:** | MSK_75 | **Sample Size** | 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | | **BatchNo:** | R23543 |
| **Revision:** | 02/13/12 15:29 | **TestCode:** | 8260W_CAL | **FileID:** | 1-SAMP-K8085.D |
| **Col Type:** | | | Total 5321 MW-14 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 100 | 20.0 | µg/L | 100 | 02/02/12 13:59 |
| 1,1,1,2-Tetrachloroethane | ND | | 50.0 | 16.0 | µg/L | 100 | 02/02/12 13:59 |
| 1,1,1-Trichloroethane | 2510 | | 50.0 | 10.0 | µg/L | 100 | 02/02/12 13:59 |
| 1,1,2,2-Tetrachloroethane | ND | | 50.0 | 10.0 | µg/L | 100 | 02/02/12 13:59 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 1060 | | 50.0 | 10.0 | µg/L | 100 | 02/02/12 13:59 |
| 1,1,2-Trichloroethane | ND | | 50.0 | 16.0 | µg/L | 100 | 02/02/12 13:59 |
| 1,1-Dichloroethane | 1490 | | 50.0 | 10.0 | µg/L | 100 | 02/02/12 13:59 |
| 1,1-Dichloroethene | 46.0 | J | 50.0 | 16.0 | µg/L | 100 | 02/02/12 13:59 |
| 1,2,3-Trichloropropane | ND | | 200 | 33.0 | µg/L | 100 | 02/02/12 13:59 |
| 1,2,4-Trichlorobenzene | ND | | 100 | 10.0 | µg/L | 100 | 02/02/12 13:59 |
| 1,2,4-Trimethylbenzene | ND | | 50.0 | 10.0 | µg/L | 100 | 02/02/12 13:59 |
| 1,2-Dibromo-3-chloropropane | ND | | 500 | 100 | µg/L | 100 | 02/02/12 13:59 |
| 1,2-Dibromoethane | ND | | 50.0 | 16.0 | µg/L | 100 | 02/02/12 13:59 |
| 1,2-Dichlorobenzene | ND | | 50.0 | 10.0 | µg/L | 100 | 02/02/12 13:59 |
| 1,2-Dichloroethane | ND | | 50.0 | 16.0 | µg/L | 100 | 02/02/12 13:59 |
| 1,2-Dichloropropane | ND | | 50.0 | 16.0 | µg/L | 100 | 02/02/12 13:59 |
| 1,3,5-Trimethylbenzene | ND | | 50.0 | 10.0 | µg/L | 100 | 02/02/12 13:59 |
| 1,3-Dichlorobenzene | ND | | 50.0 | 10.0 | µg/L | 100 | 02/02/12 13:59 |
| 1,4-Dichlorobenzene | ND | | 50.0 | 16.0 | µg/L | 100 | 02/02/12 13:59 |
| 2-Butanone | ND | | 1000 | 100 | µg/L | 100 | 02/02/12 13:59 |
| 2-Chloroethylvinyl ether | ND | | 500 | 250 | µg/L | 100 | 02/02/12 13:59 |
| 2-Hexanone | ND | | 500 | 100 | µg/L | 100 | 02/02/12 13:59 |
| 4-Chlorotoluene | ND | | 50.0 | 10.0 | µg/L | 100 | 02/02/12 13:59 |
| 4-Methyl-2-pentanone | ND | | 500 | 100 | µg/L | 100 | 02/02/12 13:59 |
| Acetone | ND | | 1000 | 100 | µg/L | 100 | 02/02/12 13:59 |
| Benzene | 12.0 | J | 50.0 | 10.0 | µg/L | 100 | 02/02/12 13:59 |
| Bromobenzene | ND | | 50.0 | 10.0 | µg/L | 100 | 02/02/12 13:59 |
| Bromochloromethane | ND | | 50.0 | 10.0 | µg/L | 100 | 02/02/12 13:59 |
| Bromodichloromethane | ND | | 50.0 | 10.0 | µg/L | 100 | 02/02/12 13:59 |
| Bromoform | ND | | 100 | 33.0 | µg/L | 100 | 02/02/12 13:59 |
| Bromomethane | ND | | 100 | 33.0 | µg/L | 100 | 02/02/12 13:59 |
| Carbon disulfide | ND | | 50.0 | 11.0 | µg/L | 100 | 02/02/12 13:59 |
| Carbon tetrachloride | ND | | 50.0 | 10.0 | µg/L | 100 | 02/02/12 13:59 |
| Chlorobenzene | ND | | 50.0 | 10.0 | µg/L | 100 | 02/02/12 13:59 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 02/14/12 6:03 591983 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | |
|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | **Lab ID:** | **K1202001-014A** |
| **Project:** | 189-02 | **Client Sample ID:** | ***Dup*** |
| **W Order:** | K1202001 | **Collection Date:** | 01/31/12 14:40 |
| **Matrix:** | GROUNDWATER | **Date Received:** | 02/01/12 8:30 |
| **Inst. ID:** | MSK_75 **Sample Size** 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS **%Moisture:** | **BatchNo:** | R23543 |
| **Revision:** | 02/13/12 15:29 **TestCode:** 8260W_CAL | **FileID:** | 1-SAMP-K8085.D |
| **Col Type:** | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | ND | | 100 | 33.0 | µg/L | 100 | 02/02/12 13:59 |
| Chloroform | ND | | 50.0 | 10.0 | µg/L | 100 | 02/02/12 13:59 |
| Chloromethane | ND | | 100 | 33.0 | µg/L | 100 | 02/02/12 13:59 |
| cis-1,2-Dichloroethene | 85.0 | | 50.0 | 10.0 | µg/L | 100 | 02/02/12 13:59 |
| cis-1,3-Dichloropropene | ND | | 50.0 | 16.0 | µg/L | 100 | 02/02/12 13:59 |
| Cyclohexane | 40.0 | J | 50.0 | 10.0 | µg/L | 100 | 02/02/12 13:59 |
| Dibromochloromethane | ND | | 50.0 | 10.0 | µg/L | 100 | 02/02/12 13:59 |
| Dibromomethane | ND | | 50.0 | 16.0 | µg/L | 100 | 02/02/12 13:59 |
| Dichlorodifluoromethane | ND | | 100 | 10.0 | µg/L | 100 | 02/02/12 13:59 |
| Ethylbenzene | ND | | 50.0 | 10.0 | µg/L | 100 | 02/02/12 13:59 |
| Hexachlorobutadiene | ND | | 100 | 10.0 | µg/L | 100 | 02/02/12 13:59 |
| Isopropylbenzene | ND | | 50.0 | 10.0 | µg/L | 100 | 02/02/12 13:59 |
| Methyl tert-butyl ether | ND | | 100 | 16.0 | µg/L | 100 | 02/02/12 13:59 |
| Methylene chloride | ND | | 200 | 16.0 | µg/L | 100 | 02/02/12 13:59 |
| n-Propylbenzene | ND | | 50.0 | 10.0 | µg/L | 100 | 02/02/12 13:59 |
| Naphthalene | ND | | 100 | 10.0 | µg/L | 100 | 02/02/12 13:59 |
| o-Xylene | ND | | 50.0 | 10.0 | µg/L | 100 | 02/02/12 13:59 |
| p-Isopropyltoluene | ND | | 50.0 | 16.0 | µg/L | 100 | 02/02/12 13:59 |
| sec-Butylbenzene | ND | | 50.0 | 16.0 | µg/L | 100 | 02/02/12 13:59 |
| Styrene | ND | | 50.0 | 10.0 | µg/L | 100 | 02/02/12 13:59 |
| Tetrachloroethene | 57.0 | | 50.0 | 10.0 | µg/L | 100 | 02/02/12 13:59 |
| Toluene | 21.0 | J | 50.0 | 10.0 | µg/L | 100 | 02/02/12 13:59 |
| trans-1,2-Dichloroethene | ND | | 50.0 | 10.0 | µg/L | 100 | 02/02/12 13:59 |
| trans-1,3-Dichloropropene | ND | | 50.0 | 16.0 | µg/L | 100 | 02/02/12 13:59 |
| Trichloroethene | ND | | 50.0 | 10.0 | µg/L | 100 | 02/02/12 13:59 |
| Trichlorofluoromethane | ND | | 100 | 10.0 | µg/L | 100 | 02/02/12 13:59 |
| Vinyl acetate | ND | | 200 | 100 | µg/L | 100 | 02/02/12 13:59 |
| Vinyl chloride | ND | | 100 | 33.0 | µg/L | 100 | 02/02/12 13:59 |
| Xylenes (total) | ND | | 100 | 30.0 | µg/L | 100 | 02/02/12 13:59 |
| Surr: 1,2-Dichloroethane-d4 | 98 | | 75-128 | 16.0 | %REC | 100 | 02/02/12 13:59 |
| Surr: Toluene-d8 | 101 | | 75-125 | 10.0 | %REC | 100 | 02/02/12 13:59 |
| Surr: 4-Bromofluorobenzene | 122 | | 75-125 | 10.0 | %REC | 100 | 02/02/12 13:59 |
| TIC: Butane 4.895 | 156 | J | 0 | 0 | µg/L | 100 | 02/02/12 13:59 |
| TIC: Propane 4.209 | 191 | J | 0 | 0 | µg/L | 100 | 02/02/12 13:59 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 02/14/12 6:03 591983 **roject Supervisor:** Anthony Crescenzi

**Life Science Laboratories, Inc.**
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

# Analytical Results

StateCertNo: 10248

| | | | | | |
|---|---|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | | | **Lab ID:** | **K1202001-014A** |
| **Project:** | 189-02 | | | **Client Sample ID:** | ***Dup*** |
| **W Order:** | K1202001 | | | **Collection Date:** | 01/31/12 14:40 |
| **Matrix:** | GROUNDWATER | | | **Date Received:** | 02/01/12 8:30 |
| **Inst. ID:** | MSK_75 | **Sample Size** | 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | | **BatchNo:** | R23543 |
| **Revision:** | 02/13/12 15:29 | **TestCode:** | 8260W_CAL | **FileID:** | 1-SAMP-K8085.D |
| **Col Type:** | | | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |

**NOTES:**
TIC: Tentatively Identified Compound; concentration is estimated (J).

| | | | | | |
|---|---|---|---|---|---|
| **Qualifiers:** | * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| | E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| | J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| | P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 02/14/12 6:03 591983 **roject Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | | | |
|---|---|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | | | **Lab ID:** | K1202001-013A |
| **Project:** | 189-02 | | | **Client Sample ID:** | *(CT) Carbtrol* |
| **W Order:** | K1202001 | | | **Collection Date:** | 01/31/12 1:40 |
| **Matrix:** | WASTE WATER | | | **Date Received:** | 02/01/12 8:30 |
| **Inst. ID:** | MSK_75 | **Sample Size** | 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | | **BatchNo:** | R23543 |
| **Revision:** | 02/13/12 15:29 | **TestCode:** | 8260W_CAL | **FileID:** | 1-SAMP-K8089.D |
| **Col Type:** | | | Total 6.67 | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| (m+p)-Xylene | ND | | 1.00 | 0.20 | µg/L | 1 | 02/02/12 16:07 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 02/02/12 16:07 |
| 1,1,1-Trichloroethane | 0.11 | J | 0.50 | 0.10 | µg/L | 1 | 02/02/12 16:07 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 02/02/12 16:07 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 0.50 | 0.10 | µg/L | 1 | 02/02/12 16:07 |
| 1,1,2-Trichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 02/02/12 16:07 |
| 1,1-Dichloroethane | 0.35 | J | 0.50 | 0.10 | µg/L | 1 | 02/02/12 16:07 |
| 1,1-Dichloroethene | ND | | 0.50 | 0.16 | µg/L | 1 | 02/02/12 16:07 |
| 1,2,3-Trichloropropane | ND | | 2.00 | 0.33 | µg/L | 1 | 02/02/12 16:07 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 0.10 | µg/L | 1 | 02/02/12 16:07 |
| 1,2,4-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/02/12 16:07 |
| 1,2-Dibromo-3-chloropropane | ND | | 5.00 | 1.00 | µg/L | 1 | 02/02/12 16:07 |
| 1,2-Dibromoethane | ND | | 0.50 | 0.16 | µg/L | 1 | 02/02/12 16:07 |
| 1,2-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/02/12 16:07 |
| 1,2-Dichloroethane | ND | | 0.50 | 0.16 | µg/L | 1 | 02/02/12 16:07 |
| 1,2-Dichloropropane | ND | | 0.50 | 0.16 | µg/L | 1 | 02/02/12 16:07 |
| 1,3,5-Trimethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/02/12 16:07 |
| 1,3-Dichlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/02/12 16:07 |
| 1,4-Dichlorobenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 02/02/12 16:07 |
| 2-Butanone | 5.70 | J | 10.0 | 1.00 | µg/L | 1 | 02/02/12 16:07 |
| 2-Chloroethylvinyl ether | ND | | 5.00 | 2.50 | µg/L | 1 | 02/02/12 16:07 |
| 2-Hexanone | ND | | 5.00 | 1.00 | µg/L | 1 | 02/02/12 16:07 |
| 4-Chlorotoluene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/02/12 16:07 |
| 4-Methyl-2-pentanone | ND | | 5.00 | 1.00 | µg/L | 1 | 02/02/12 16:07 |
| Acetone | 10.7 | | 10.0 | 1.00 | µg/L | 1 | 02/02/12 16:07 |
| Benzene | 0.24 | J | 0.50 | 0.10 | µg/L | 1 | 02/02/12 16:07 |
| Bromobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/02/12 16:07 |
| Bromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 02/02/12 16:07 |
| Bromodichloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 02/02/12 16:07 |
| Bromoform | ND | | 1.00 | 0.33 | µg/L | 1 | 02/02/12 16:07 |
| Bromomethane | ND | | 1.00 | 0.33 | µg/L | 1 | 02/02/12 16:07 |
| Carbon disulfide | ND | | 0.50 | 0.11 | µg/L | 1 | 02/02/12 16:07 |
| Carbon tetrachloride | ND | | 0.50 | 0.10 | µg/L | 1 | 02/02/12 16:07 |
| Chlorobenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/02/12 16:07 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 02/13/12 15:42 591984 **roject Supervisor:** Anthony Crescenzi

# Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900


# Analytical Results

StateCertNo: 10248

| | | | | | |
|---|---|---|---|---|---|
| **CLIENT** | Ken W. Kloeber Consulting Engineers | | | **Lab ID:** | **K1202001-013A** |
| **Project:** | 189-02 | | | **Client Sample ID:** | ***(CT) Carbtrol*** |
| **W Order:** | K1202001 | | | **Collection Date:** | 01/31/12 1:40 |
| **Matrix:** | WASTE WATER | | | **Date Received:** | 02/01/12 8:30 |
| **Inst. ID:** | MSK_75 | **Sample Size** | 10 mL | **PrepDate:** | |
| **ColumnID:** | Rtx-VMS | **%Moisture:** | | **BatchNo:** | R23543 |
| **Revision:** | 02/13/12 15:29 | **TestCode:** | 8260W_CAL | **FileID:** | 1-SAMP-K8089.D |
| **Col Type:** | | | | | |

| Analyte | Result | Qual | PQL | MDL | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS BY GC/MS** | | | | | **SW8260B** | | |
| Chloroethane | ND | | 1.00 | 0.33 | µg/L | 1 | 02/02/12 16:07 |
| Chloroform | ND | | 0.50 | 0.10 | µg/L | 1 | 02/02/12 16:07 |
| Chloromethane | ND | | 1.00 | 0.33 | µg/L | 1 | 02/02/12 16:07 |
| cis-1,2-Dichloroethene | 0.27 | J | 0.50 | 0.10 | µg/L | 1 | 02/02/12 16:07 |
| cis-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 02/02/12 16:07 |
| Cyclohexane | ND | | 0.50 | 0.10 | µg/L | 1 | 02/02/12 16:07 |
| Dibromochloromethane | ND | | 0.50 | 0.10 | µg/L | 1 | 02/02/12 16:07 |
| Dibromomethane | ND | | 0.50 | 0.16 | µg/L | 1 | 02/02/12 16:07 |
| Dichlorodifluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 02/02/12 16:07 |
| Ethylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/02/12 16:07 |
| Hexachlorobutadiene | ND | | 1.00 | 0.10 | µg/L | 1 | 02/02/12 16:07 |
| Isopropylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/02/12 16:07 |
| Methyl tert-butyl ether | ND | | 1.00 | 0.16 | µg/L | 1 | 02/02/12 16:07 |
| Methylene chloride | ND | | 2.00 | 0.16 | µg/L | 1 | 02/02/12 16:07 |
| n-Propylbenzene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/02/12 16:07 |
| Naphthalene | ND | | 1.00 | 0.10 | µg/L | 1 | 02/02/12 16:07 |
| o-Xylene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/02/12 16:07 |
| p-Isopropyltoluene | ND | | 0.50 | 0.16 | µg/L | 1 | 02/02/12 16:07 |
| sec-Butylbenzene | ND | | 0.50 | 0.16 | µg/L | 1 | 02/02/12 16:07 |
| Styrene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/02/12 16:07 |
| Tetrachloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/02/12 16:07 |
| Toluene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/02/12 16:07 |
| trans-1,2-Dichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/02/12 16:07 |
| trans-1,3-Dichloropropene | ND | | 0.50 | 0.16 | µg/L | 1 | 02/02/12 16:07 |
| Trichloroethene | ND | | 0.50 | 0.10 | µg/L | 1 | 02/02/12 16:07 |
| Trichlorofluoromethane | ND | | 1.00 | 0.10 | µg/L | 1 | 02/02/12 16:07 |
| Vinyl acetate | ND | | 2.00 | 1.00 | µg/L | 1 | 02/02/12 16:07 |
| Vinyl chloride | ND | | 1.00 | 0.33 | µg/L | 1 | 02/02/12 16:07 |
| Xylenes (total) | ND | | 1.00 | 0.30 | µg/L | 1 | 02/02/12 16:07 |
| Surr: 1,2-Dichloroethane-d4 | 98 | | 75-128 | 0.16 | %REC | 1 | 02/02/12 16:07 |
| Surr: Toluene-d8 | 100 | | 75-125 | 0.10 | %REC | 1 | 02/02/12 16:07 |
| Surr: 4-Bromofluorobenzene | 110 | | 75-125 | 0.10 | %REC | 1 | 02/02/12 16:07 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value exceeds the instrument calibration range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below the PQL | ND | Not Detected at the Practical Quantitation Limit (PQL) |
| P | Prim./Conf. column %D or RPD exceeds limit | S | Spike Recovery outside accepted recovery limits |

**Print Date:** 02/13/12 15:42 591984 **roject Supervisor:** Anthony Crescenzi