

**ANALYTICAL REPORT**

Lot #: D9I020332  
Project: Vaughn & Calvin Wells

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September 15, 2009

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### Total Number of Pages

#### ***Standard Deliverables***

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## **Case Narrative**

The results included in this report have been reviewed for compliance with TestAmerica Laboratories, Inc. Quality Assurance/Quality Control (QA/QC) plan. The test results relate only to the samples in this report and meet all requirements of NELAC with any exceptions noted below.

Dilution factors and footnotes have been provided to assist in the interpretation of the results. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interferences or analytes present at concentrations above the linear calibration curve, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Laboratories, Inc. utilizes USEPA approved methods in all analytical work. The sample presented in this report was analyzed for the parameters listed on the analytical methods summary page in accordance with the methods indicated. A summary of quality control parameters is provided below.

This report shall not be reproduced except in full, without the written approval of the laboratory.

### **Quality Control Summary for Lot D9I020332**

#### **Sample Receiving**

Two samples were received by TestAmerica Denver under chain of custody on September 2, 2009. The samples were received in good condition at a temperature of 2.4 °C.

The laboratory noted sample collection times were not listed on the chain of custody or on the bottle labels. The samples were logged in with times of 00:00.

All sample containers were received intact.

#### **Dissolved Methane Analysis by GC, Method RSK SOP-175**

Each sample is analyzed to achieve the lowest possible reporting limits within the constraints of the method. Due to high concentrations of target analytes, the samples had to be analyzed at dilutions. The reporting limits have been adjusted relative to the dilution required.

The method required MS/MSD could not be performed for QC batch 9246433, due to insufficient sample volume. Method precision and accuracy have been verified by the acceptable LCS/LCSD analysis data.

No other anomalies were observed.

#### **GC Volatiles, Method 8021B**

A Continuing Calibration Verification (CCV) standard exhibited the %Difference (%D) value >15% for benzene, biased high. This is an indicator that data may be biased high. As no detectable concentrations of benzene were present in the associated samples, corrective action was deemed unnecessary.

No other anomalies were observed.

#### **Total Metals Analysis, Method SW846 6010B**

The MS/MSD was performed on sample VAUGHN and could not be evaluated for Sodium, due to the sample amount being greater than four times the spike amounts. The acceptable LCS and Method Blank analyses data indicated the analytical system was within control; therefore corrective action was deemed unnecessary.

No other anomalies were observed.

#### **General Chemistry**

Each sample is analyzed to achieve the lowest possible reporting limits within the constraints of the methods. Due to high constituent concentrations, the Chloride analysis of the samples had to be performed at dilutions. The results in the analytical report have been flagged with a "Q", and the reporting limits have been adjusted relative to the dilutions required.

No other anomalies were observed.

# EXECUTIVE SUMMARY - Detection Highlights

D9I020332

| PARAMETER                        | RESULT | REPORTING<br>LIMIT | UNITS    | ANALYTICAL<br>METHOD |
|----------------------------------|--------|--------------------|----------|----------------------|
| <b>VAUGHN 09/02/09 11:25 001</b> |        |                    |          |                      |
| Methane                          | 13000  | 100                | ug/L     | RSK SOP-175          |
| Barium                           | 54     | 10                 | ug/L     | SW846 6010B          |
| Calcium                          | 2400   | 200                | ug/L     | SW846 6010B          |
| Iron                             | 230    | 100                | ug/L     | SW846 6010B          |
| Magnesium                        | 620    | 200                | ug/L     | SW846 6010B          |
| Sodium                           | 270000 | 1000               | ug/L     | SW846 6010B          |
| Bicarbonate                      | 500    | 5.0                | mg/L     | SM18 2320 B          |
| Alkalinity                       |        |                    |          |                      |
| Chloride                         | 55 Q   | 15                 | mg/L     | MCAWW 300.0A         |
| Fluoride                         | 2.7    | 0.50               | mg/L     | MCAWW 300.0A         |
| Bromide                          | 0.55   | 0.20               | mg/L     | MCAWW 300.0A         |
| Carbonate Alkalinity             | 30     | 5.0                | mg/L     | SM18 2320 B          |
| Specific Conductance             | 1100   | 2.0                | umhos/cm | SM18 2510 B          |
| Total Dissolved                  | 680    | 10                 | mg/L     | SM18 2540 C          |
| Solids                           |        |                    |          |                      |
| pH                               | 8.5    | 0.10               | No Units | SM18 4500-H B        |
| <b>CALVIN 09/02/09 12:55 002</b> |        |                    |          |                      |
| Methane                          | 16000  | 250                | ug/L     | RSK SOP-175          |
| Barium                           | 67     | 10                 | ug/L     | SW846 6010B          |
| Calcium                          | 2400   | 200                | ug/L     | SW846 6010B          |
| Iron                             | 110    | 100                | ug/L     | SW846 6010B          |
| Magnesium                        | 570    | 200                | ug/L     | SW846 6010B          |
| Sodium                           | 290000 | 1000               | ug/L     | SW846 6010B          |
| Bicarbonate                      | 480    | 5.0                | mg/L     | SM18 2320 B          |
| Alkalinity                       |        |                    |          |                      |
| Chloride                         | 79 Q   | 15                 | mg/L     | MCAWW 300.0A         |
| Fluoride                         | 2.4    | 0.50               | mg/L     | MCAWW 300.0A         |
| Bromide                          | 0.78   | 0.20               | mg/L     | MCAWW 300.0A         |
| Carbonate Alkalinity             | 58     | 5.0                | mg/L     | SM18 2320 B          |
| Specific Conductance             | 1200   | 2.0                | umhos/cm | SM18 2510 B          |
| Total Dissolved                  | 700    | 10                 | mg/L     | SM18 2540 C          |
| Solids                           |        |                    |          |                      |
| pH                               | 8.6    | 0.10               | No Units | SM18 4500-H B        |

# METHODS SUMMARY

D9I020332

| PARAMETER                               | ANALYTICAL<br>METHOD | PREPARATION<br>METHOD |
|---|----------------------|-----------------------|
| pH (Electrometric)                      | SM18 4500-H B        | SM18 4500-H B         |
| Bicarbonate alkalinity                  | SM18 2320 B          | SM20 2320B            |
| Bromide                                 | MCAWW 300.0A         | MCAWW 300.0A          |
| Carbonate Alkalinity                    | SM18 2320 B          | SM20 2320B            |
| Chloride                                | MCAWW 300.0A         | MCAWW 300.0A          |
| Dissolved Gasses in Water               | RSK SOP-175          |                       |
| Fluoride                                | MCAWW 300.0A         | MCAWW 300.0A          |
| Inductively Coupled Plasma (ICP) Metals | SW846 6010B          | SW846 3010A           |
| Nitrate as N                            | MCAWW 300.0A         | MCAWW 300.0A          |
| Nitrite as N                            | MCAWW 300.0A         | MCAWW 300.0A          |
| Specific Conductance                    | SM18 2510 B          | MCAWW 2510B           |
| Sulfate                                 | MCAWW 300.0A         | MCAWW 300.0A          |
| Total Dissolved Solids                  | SM18 2540 C          | SM18 2540 C           |
| Volatiles by GC                         | SW846 8021B          | SW846 5030            |

## References:

- MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.
- RSK Sample Prep and Calculations for Dissolved Gas Analysis in Water Samples Using a GC Headspace Equilibration Technique, RSKSOP-175, REV. 0, 8/11/94, USEPA Research Lab
- SM18 "Standard Methods for the Examination of Water and Wastewater", 18th Edition, 1992.
- SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

## METHOD / ANALYST SUMMARY

D9I020332

| ANALYTICAL<br>METHOD | ANALYST            | ANALYST<br>ID |
|----------------------|--------------------|---------------|
| MCAWW 300.0A         | Ewa Kudla          | 001167        |
| RSK SOP-175          | Tegan Moore        | 004788        |
| SM18 2320 B          | Marcia DeRosia     | 002500        |
| SM18 2510 B          | Braden H. Peterson | 006733        |
| SM18 2540 C          | Brian E. Rothmeyer | 003345        |
| SM18 4500-H B        | Lara E. Jarusewic  | 004433        |
| SW846 6010B          | David Wells        | 5099          |
| SW846 8021B          | Brian Ream         | 000323        |

### References:

MCAWW "Methods for Chemical Analysis of Water and Wastes",  
EPA-600/4-79-020, March 1983 and subsequent revisions.

RSK Sample Prep and Calculations for Dissolved Gas Analysis  
in Water Samples Using a GC Headspace Equilibration  
Technique, RSKSOP-175, REV. 0, 8/11/94, USEPA Research Lab

SM18 "Standard Methods for the Examination of Water and  
Wastewater", 18th Edition, 1992.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical  
Methods", Third Edition, November 1986 and its updates.

# SAMPLE SUMMARY

D9I020332

| WO #  | SAMPLE# | CLIENT | SAMPLE ID | SAMPLED<br>DATE | SAMP<br>TIME |
|-------|---------|--------|-----------|-----------------|--------------|
| LJ8K9 | 001     | VAUGHN |           | 09/02/09        | 11:25        |
| LJ8LD | 002     | CALVIN |           | 09/02/09        | 12:55        |

## NOTE(S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.



Colorado Oil&Gas Conservation Commision

Client Sample ID: VAUGHN

GC Volatiles

Lot-Sample #...: D9I020332-001    Work Order #...: LJ8K91AA    Matrix.....: WATER  
Date Sampled...: 09/02/09 11:25    Date Received...: 09/02/09  
Prep Date.....: 09/03/09    Analysis Date...: 09/03/09  
Prep Batch #...: 9246433    Analysis Time...: 13:44  
Dilution Factor: 20  
Method.....: RSK SOP-175

| PARAMETER | RESULT | REPORTING<br>LIMIT | UNITS |
|-----------|--------|--------------------|-------|
| Methane   | 13000  | 100                | ug/L  |

TestAmerica

RSK-175 Dissolved Gasses in Water

Data file : \\DenSvr03\Public\chem\GCV\GC\_J.i\0903091.B\012F1201.D

Lab Smp Id: LJ8K91AA

Client Smp ID: VAUGHN

Inj Date : 03-SEP-2009 13:44

Operator : TM

Inst ID: GC\_J.i

Smp Info : LJ8K91AA,332-1

Misc Info : ICAL 11-MAY-2007

Comment : SOP: DV-GC-0025

Method : \\DenSvr03\Public\chem\GCV\GC\_J.i\0903091.B\RSK-1\_7PT.m

Meth Date : 03-Sep-2009 15:01 mooret

Quant Type: ESTD

Cal Date : 02-SEP-2009 11:54

Cal File: 009F0901.D

Als bottle: 12

Dil Factor: 20.00000

Integrator: Falcon

Compound Sublist: RSK175.01.sub

Target Version: 4.14

Processing Host: DENPC124

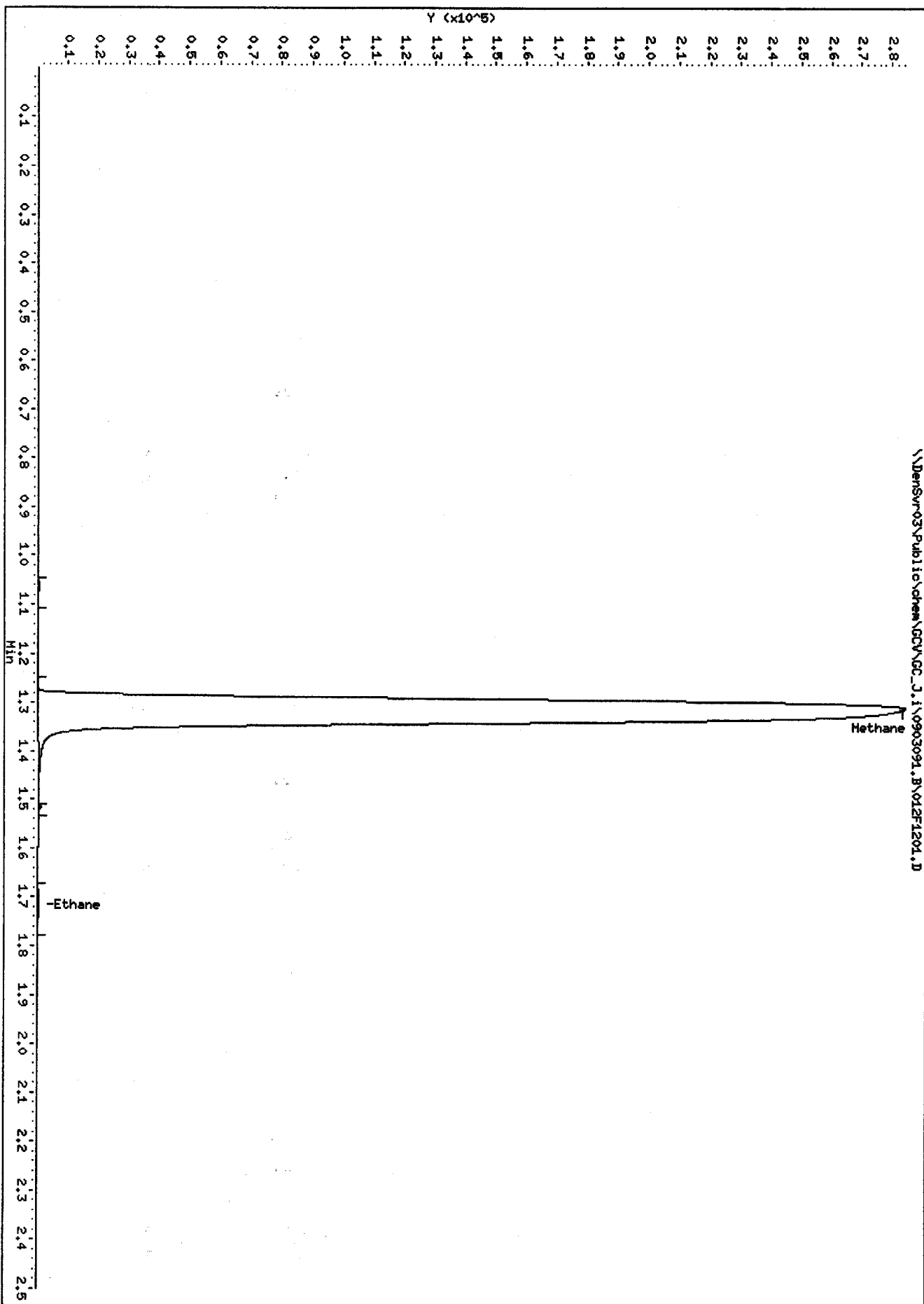
Concentration Formula: Amt \* DF \* 1 \* CpndVariable  
Cpnd Variable Local Compound Variable

| Compounds   | CONCENTRATIONS         |        |        |          |                      |                  |
|-------------|------------------------|--------|--------|----------|----------------------|------------------|
|             | RT                     | EXP RT | DLT RT | RESPONSE | ON-COLUMN<br>( ug/L) | FINAL<br>( ug/L) |
| 1 Methane   | 1.306                  | 1.309  | -0.003 | 869011   | 647.286              | 12940            |
| 2 Ethene    | Compound Not Detected. |        |        |          |                      |                  |
| 3 Ethane    | 1.717                  | 1.716  | 0.001  | 625      | 0.46889              | 9.378(a)         |
| 4 Acetylene | Compound Not Detected. |        |        |          |                      |                  |

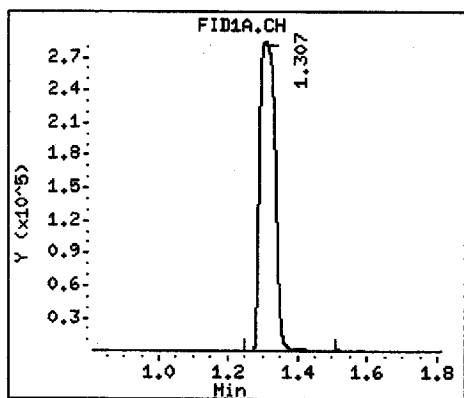
QC Flag Legend

a - Target compound detected but, quantitated amount  
Below Limit Of Quantitation(BLOQ).

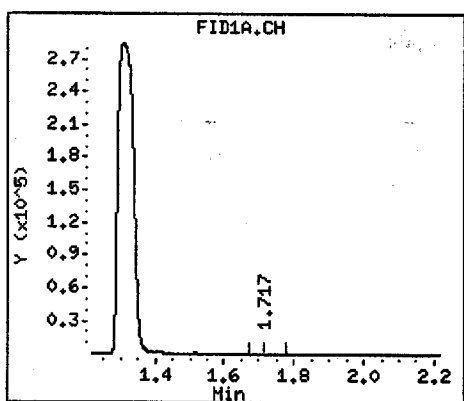
TM  
9/4/09



1 Methane



3 Ethane



Colorado Oil&Gas Conservation Commision

Client Sample ID: CALVIN

GC Volatiles

Lot-Sample #....: D9I020332-002    Work Order #....: LJ8LD1AH    Matrix.....: WATER  
Date Sampled....: 09/02/09 12:55    Date Received...: 09/02/09  
Prep Date.....: 09/03/09    Analysis Date...: 09/03/09  
Prep Batch #....: 9246433    Analysis Time...: 13:48  
Dilution Factor: 50  
Method.....: RSK SOP-175

| <u>PARAMETER</u> | <u>RESULT</u> | <u>REPORTING</u><br><u>LIMIT</u> | <u>UNITS</u> |
|------------------|---------------|----------------------------------|--------------|
| Methane          | 16000         | 250                              | ug/L         |

TestAmerica

RSK-175 Dissolved Gasses in Water

Data file : \\DenSvr03\Public\chem\GCV\GC\_J.i\0903091.B\013F1301.D  
 Lab Smp Id: LJ8LD1AH Client Smp ID: CALVIN  
 Inj Date : 03-SEP-2009 13:48  
 Operator : TM Inst ID: GC\_J.i  
 Smp Info : LJ8LD1AH,332-2  
 Misc Info : ICAL 11-MAY-2007  
 Comment : SOP: DV-GC-0025  
 Method : \\DenSvr03\Public\chem\GCV\GC\_J.i\0903091.B\RSK-1\_7PT.m  
 Meth Date : 03-Sep-2009 15:01 mooret Quant Type: ESTD  
 Cal Date : 02-SEP-2009 11:54 Cal File: 009F0901.D  
 Als bottle: 13  
 Dil Factor: 50.00000  
 Integrator: Falcon Compound Sublist: RSK175.01.sub  
 Target Version: 4.14  
 Processing Host: DENPC124

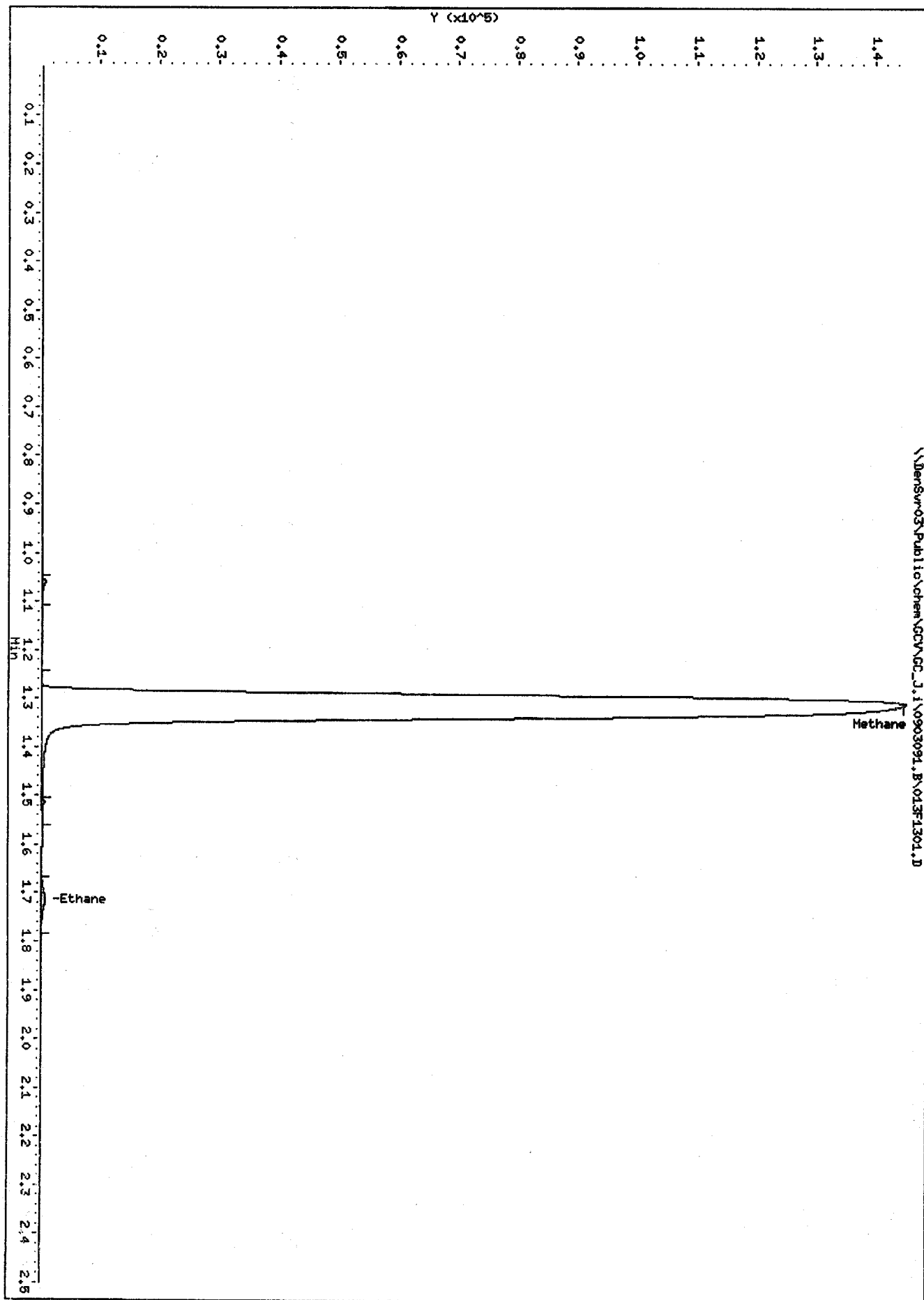
Concentration Formula: Amt \* DF \* 1 \* CpndVariable  
 Cpnd Variable Local Compound Variable

| Compounds   | CONCENTRATIONS         |        |        |          |                      |                  |
|-------------|------------------------|--------|--------|----------|----------------------|------------------|
|             | RT                     | EXP RT | DLT RT | RESPONSE | ON-COLUMN<br>( ug/L) | FINAL<br>( ug/L) |
| 1 Methane   | 1.307                  | 1.309  | -0.002 | 441283   | 328.349              | 16420            |
| 2 Ethene    | Compound Not Detected. |        |        |          |                      |                  |
| 3 Ethane    | 1.715                  | 1.716  | -0.001 | 1485     | 1.11409              | 55.70(a) 66      |
| 4 Acetylene | Compound Not Detected. |        |        |          |                      |                  |

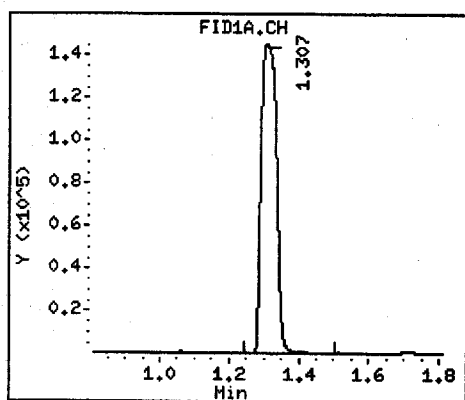
QC Flag Legend

a - Target compound detected but, quantitated amount  
 Below Limit Of Quantitation(BLOQ).

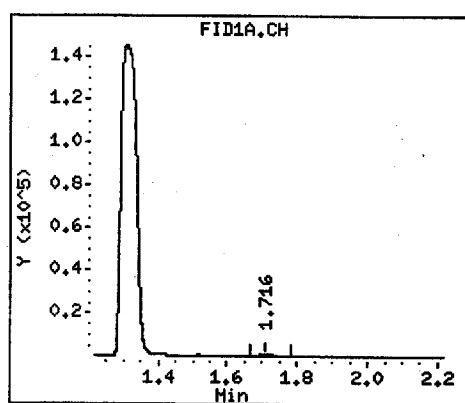
TM  
 9/4/09



1 Methane



3 Ethane





Colorado Oil&Gas Conservation Commision

Client Sample ID: VAUGHN

GC Volatiles

Lot-Sample #....: D9I020332-001    Work Order #....: LJ8K91AP    Matrix.....: WATER  
 Date Sampled...: 09/02/09 11:25    Date Received...: 09/02/09  
 Prep Date.....: 09/03/09    Analysis Date...: 09/03/09  
 Prep Batch #....: 9246504    Analysis Time...: 12:17  
 Dilution Factor: 1  
 Method.....: SW846 8021B

| PARAMETER       | RESULT | REPORTING<br>LIMIT | UNITS |
|-----------------|--------|--------------------|-------|
| Benzene         | ND     | 0.50               | ug/L  |
| Ethylbenzene    | ND     | 0.50               | ug/L  |
| Toluene         | ND     | 0.50               | ug/L  |
| Xylenes (total) | ND     | 0.50               | ug/L  |

| SURROGATE                    | PERCENT<br>RECOVERY | RECOVERY<br>LIMITS |
|------------------------------|---------------------|--------------------|
| a,a,a-Trifluorotoluene (TFT) | 98                  | (85 - 115)         |

TestAmerica

VOLATILE REPORT SOW 3/90

Data file : \\DenSvr03\Public\chem\GCV\GC\_H.i\0903091.B\108B0601.D  
 Lab Smp Id: LJ8K91AP Client Smp ID: VAUGHN  
 Inj Date : 03-SEP-2009 12:17  
 Operator : jmc/mpk Inst ID: GC\_H.i  
 Smp Info : LJ8K91AP,332-1  
 Misc Info :  
 Comment : REV. OLM01.1.1  
 Method : \\DenSvr03\Public\chem\GCV\GC\_H.i\0903091.B\H1.m  
 Meth Date : 03-Sep-2009 15:08 reamb Quant Type: ISTD  
 Cal Date : 12-JUN-2009 13:08 Cal File: 203B0801.D  
 Als bottle: 108  
 Dil Factor: 1.00000  
 Integrator: Falcon Compound Sublist: Arom.A.01.sub  
 Target Version: 4.14  
 Processing Host: DENPC252

Concentration Formula: Amt \* DF \* Vp/Vs \* CpndVariable

| Name          | Value | Description                              |
|---------------|-------|--|
| DF            | 1.000 | Dilution Factor                          |
| Vp            | 5.000 | final purge volume (ml)                  |
| Vs            | 5.000 | vlm of sample added to purge vessel (ml) |
| Cpnd Variable |       | Local Compound Variable                  |

| Compounds                    | RT     | EXP RT         | REL RT | RESPONSE               | CONCENTRATIONS       |                  |
|------------------------------|--------|----------------|--------|------------------------|----------------------|------------------|
|                              |        |                |        |                        | ON-COLUMN<br>( ug/l) | FINAL<br>( ug/L) |
| 1 Methyl tert-butylether     |        |                |        | Compound Not Detected. |                      |                  |
| 2 Benzene                    |        |                |        | Compound Not Detected. |                      |                  |
| \$ 3 Trifluorotoluene        | 7.266  | 7.256 (0.640)  |        | 126008                 | 29.4999              | 29.4999          |
| 4 Toluene                    |        |                |        | Compound Not Detected. |                      |                  |
| * 5 1-Chloro-4-fluorobenzene | 11.350 | 11.336 (1.000) |        | 207569                 | 30.0000              |                  |
| 6 Chlorobenzene              |        |                |        | Compound Not Detected. |                      |                  |
| 7 Ethylbenzene               |        |                |        | Compound Not Detected. |                      |                  |
| 8 m+p-Xylene                 |        |                |        | Compound Not Detected. |                      |                  |
| 9 o-Xylene                   |        |                |        | Compound Not Detected. |                      |                  |
| 11 1,3-Dichlorobenzene       |        |                |        | Compound Not Detected. |                      |                  |
| 12 1,4-Dichlorobenzene       |        |                |        | Compound Not Detected. |                      |                  |
| 13 1,2-Dichlorobenzene       |        |                |        | Compound Not Detected. |                      |                  |
| M 16 Total Xylene            |        |                |        | Compound Not Detected. |                      |                  |

3  
9/14

TestAmerica

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: GC\_H.i  
 Lab File ID: 108B0601.D  
 Lab Smp Id: LJ8K91AP  
 Analysis Type: VOA  
 Quant Type: ISTD  
 Operator: jmc/mpk  
 Method File: \\DenSvr03\Public\chem\GCV\GC\_H.i\0903091.B\H1.m  
 Misc Info:

Calibration Date: 03-SEP-2009  
 Calibration Time: 14:33  
 Client Smp ID: VAUGHN  
 Level: LOW  
 Sample Type: WATER

| COMPOUND            | STANDARD | AREA LIMIT |        | SAMPLE | %DIFF |
|---------------------|----------|------------|--------|--------|-------|
|                     |          | LOWER      | UPPER  |        |       |
| 5 1-Chloro-4-fluoro | 215995   | 107998     | 431990 | 207569 | -3.90 |

| COMPOUND            | STANDARD | RT LIMIT |       | SAMPLE | %DIFF |
|---------------------|----------|----------|-------|--------|-------|
|                     |          | LOWER    | UPPER |        |       |
| 5 1-Chloro-4-fluoro | 11.39    | 10.89    | 11.89 | 11.35  | -0.38 |

AREA UPPER LIMIT = +100% of internal standard area.  
 AREA LOWER LIMIT = - 50% of internal standard area.  
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT.  
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

TestAmerica

RECOVERY REPORT

Client Name: Colorado Oil&Gas Con02-SEP-2009 00:00 Client SDG: D9I0203  
 Sample Matrix: LIQUID Fraction: VOA  
 Lab Smp Id: LJ8K91AP Client Smp ID: VAUGHN  
 Level: LOW Operator: jmc/mpk  
 Data Type: GC DATA SampleType: SAMPLE  
 SpikeList File: Arom.A.01.spk Quant Type: ISTD  
 Sublist File: Arom.A.01.sub  
 Method File: \\DenSvr03\Public\chem\GCV\GC\_H.i\0903091.B\H1.m  
 Misc Info:

| SURROGATE COMPOUND    | CONC<br>ADDED<br>ug/L | CONC<br>RECOVERED<br>ug/L | %<br>RECOVERED | LIMITS |
|-----------------------|-----------------------|---------------------------|----------------|--------|
| \$ 3 Trifluorotoluene | 30.0000               | 29.4999                   | 98.33          | 85-115 |

Data File: \\Densvr03\Public\chem\GC\GC\_H.1\0903091.B\108B0601.D

Date : 03-SEP-2009 12:17

Client ID: WUJGH

Sample Info: LJBK91AP,332-1

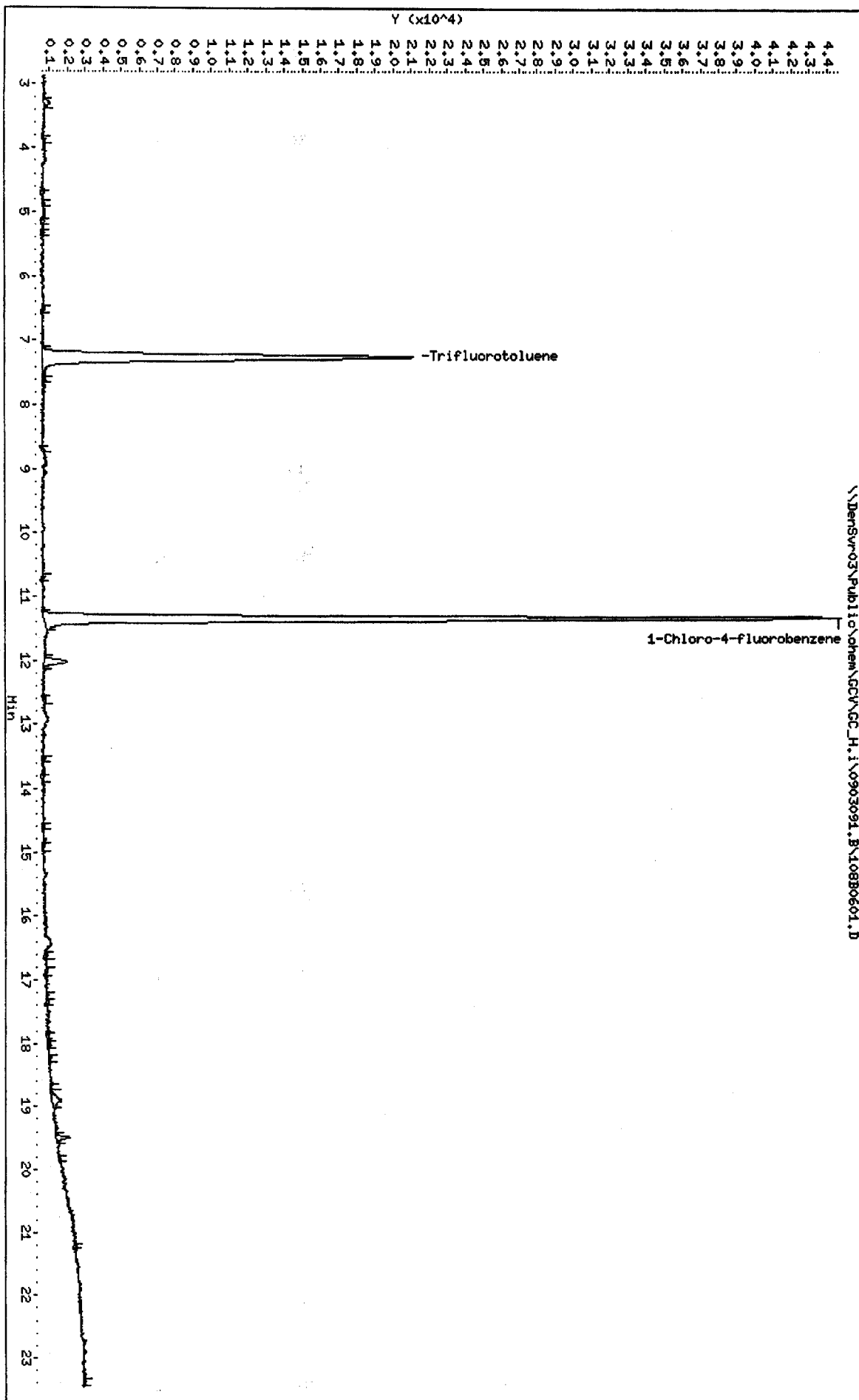
Column phase: RTx1

Instrument: GC\_H.1

Operator: jmc/mpk

Column diameter: 0.53

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Colorado Oil&Gas Conservation Commision

Client Sample ID: CALVIN

GC Volatiles

Lot-Sample #....: D9I020332-002    Work Order #....: LJ8LD1AW    Matrix.....: WATER  
 Date Sampled....: 09/02/09 12:55    Date Received...: 09/02/09  
 Prep Date.....: 09/03/09    Analysis Date...: 09/03/09  
 Prep Batch #....: 9246504    Analysis Time...: 12:49  
 Dilution Factor: 1  
 Method.....: SW846 8021B

| <u>PARAMETER</u> | <u>RESULT</u> | <u>REPORTING</u> |              |
|------------------|---------------|------------------|--------------|
|                  |               | <u>LIMIT</u>     | <u>UNITS</u> |
| Benzene          | ND            | 0.50             | ug/L         |
| Ethylbenzene     | ND            | 0.50             | ug/L         |
| Toluene          | ND            | 0.50             | ug/L         |
| Xylenes (total)  | ND            | 0.50             | ug/L         |

| <u>SURROGATE</u>             | <u>PERCENT</u>  | <u>RECOVERY</u> |
|------------------------------|-----------------|-----------------|
|                              | <u>RECOVERY</u> | <u>LIMITS</u>   |
| a,a,a-Trifluorotoluene (TFT) | 102             | (85 - 115)      |

TestAmerica

VOLATILE REPORT SOW 3/90

Data file : \\DenSvr03\Public\chem\GCV\GC\_H.i\0903091.B\109B0701.D  
 Lab Smp Id: LJ8LD1AW Client Smp ID: CALVIN  
 Inj Date : 03-SEP-2009 12:49  
 Operator : jmc/mpk Inst ID: GC\_H.i  
 Smp Info : LJ8LD1AW, 332-2  
 Misc Info :  
 Comment : REV. OLMO1.1.1  
 Method : \\DenSvr03\Public\chem\GCV\GC\_H.i\0903091.B\H1.m  
 Meth Date : 03-Sep-2009 15:08 reamb Quant Type: ISTD  
 Cal Date : 12-JUN-2009 13:08 Cal File: 203B0801.D  
 Als bottle: 109  
 Dil Factor: 1.00000  
 Integrator: Falcon Compound Sublist: Arom.A.01.sub  
 Target Version: 4.14  
 Processing Host: DENPC252

Concentration Formula: Amt \* DF \* Vp/Vs \* CpndVariable

| Name          | Value | Description                              |
|---------------|-------|--|
| DF            | 1.000 | Dilution Factor                          |
| Vp            | 5.000 | final purge volume (ml)                  |
| Vs            | 5.000 | vlm of sample added to purge vessel (ml) |
| Cpnd Variable |       | Local Compound Variable                  |

| Compounds                    |        |        |         |                        |  | CONCENTRATIONS       |                  |
|------------------------------|--------|--------|---------|------------------------|--|----------------------|------------------|
|                              | RT     | EXP RT | REL RT  | RESPONSE               |  | ON-COLUMN<br>( ug/l) | FINAL<br>( ug/L) |
| 1 Methyl tert-butylether     |        |        |         | Compound Not Detected. |  |                      |                  |
| 2 Benzene                    |        |        |         | Compound Not Detected. |  |                      |                  |
| \$ 3 Trifluorotoluene        | 7.270  | 7.256  | (0.641) | 131321                 |  | 30.5678              | 30.5678          |
| 4 Toluene                    |        |        |         | Compound Not Detected. |  |                      |                  |
| * 5 1-Chloro-4-fluorobenzene | 11.340 | 11.336 | (1.000) | 208764                 |  | 30.0000              |                  |
| 6 Chlorobenzene              |        |        |         | Compound Not Detected. |  |                      |                  |
| 7 Ethylbenzene               |        |        |         | Compound Not Detected. |  |                      |                  |
| 8 m-p-Xylene                 |        |        |         | Compound Not Detected. |  |                      |                  |
| 9 o-Xylene                   |        |        |         | Compound Not Detected. |  |                      |                  |
| 11 1,3-Dichlorobenzene       |        |        |         | Compound Not Detected. |  |                      |                  |
| 12 1,4-Dichlorobenzene       |        |        |         | Compound Not Detected. |  |                      |                  |
| 13 1,2-Dichlorobenzene       |        |        |         | Compound Not Detected. |  |                      |                  |
| M 16 Total Xylene            |        |        |         | Compound Not Detected. |  |                      |                  |

B  
9/4

TestAmerica

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

|   |                               |
|---|-------------------------------|
| Instrument ID: GC H.i   | Calibration Date: 03-SEP-2009 |
| Lab File ID: 109B0701.D                                       | Calibration Time: 14:33       |
| Lab Smp Id: LJ8LD1AW  | Client Smp ID: CALVIN         |
| Analysis Type: VOA  | Level: LOW                    |
| Quant Type: ISTD  | Sample Type: WATER            |
| Operator: jmc/mpk   |                               |
| Method File: \\DenSvr03\Public\chem\GCV\GC_H.i\0903091.B\H1.m |                               |
| Misc Info:  |                               |

| COMPOUND<br>=====   | STANDARD<br>===== | AREA LIMIT     |                | SAMPLE<br>===== | %DIFF<br>===== |
|---------------------|-------------------|----------------|----------------|-----------------|----------------|
|                     |                   | LOWER<br>===== | UPPER<br>===== |                 |                |
| 5 1-Chloro-4-fluoro | 215995            | 107998         | 431990         | 208764          | -3.35          |

| COMPOUND<br>=====   | STANDARD<br>===== | RT LIMIT       |                | SAMPLE<br>===== | %DIFF<br>===== |
|---------------------|-------------------|----------------|----------------|-----------------|----------------|
|                     |                   | LOWER<br>===== | UPPER<br>===== |                 |                |
| 5 1-Chloro-4-fluoro | 11.39             | 10.89          | 11.89          | 11.34           | -0.47          |

AREA UPPER LIMIT = +100% of internal standard area.  
 AREA LOWER LIMIT = - 50% of internal standard area.  
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT.  
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT.



TestAmerica

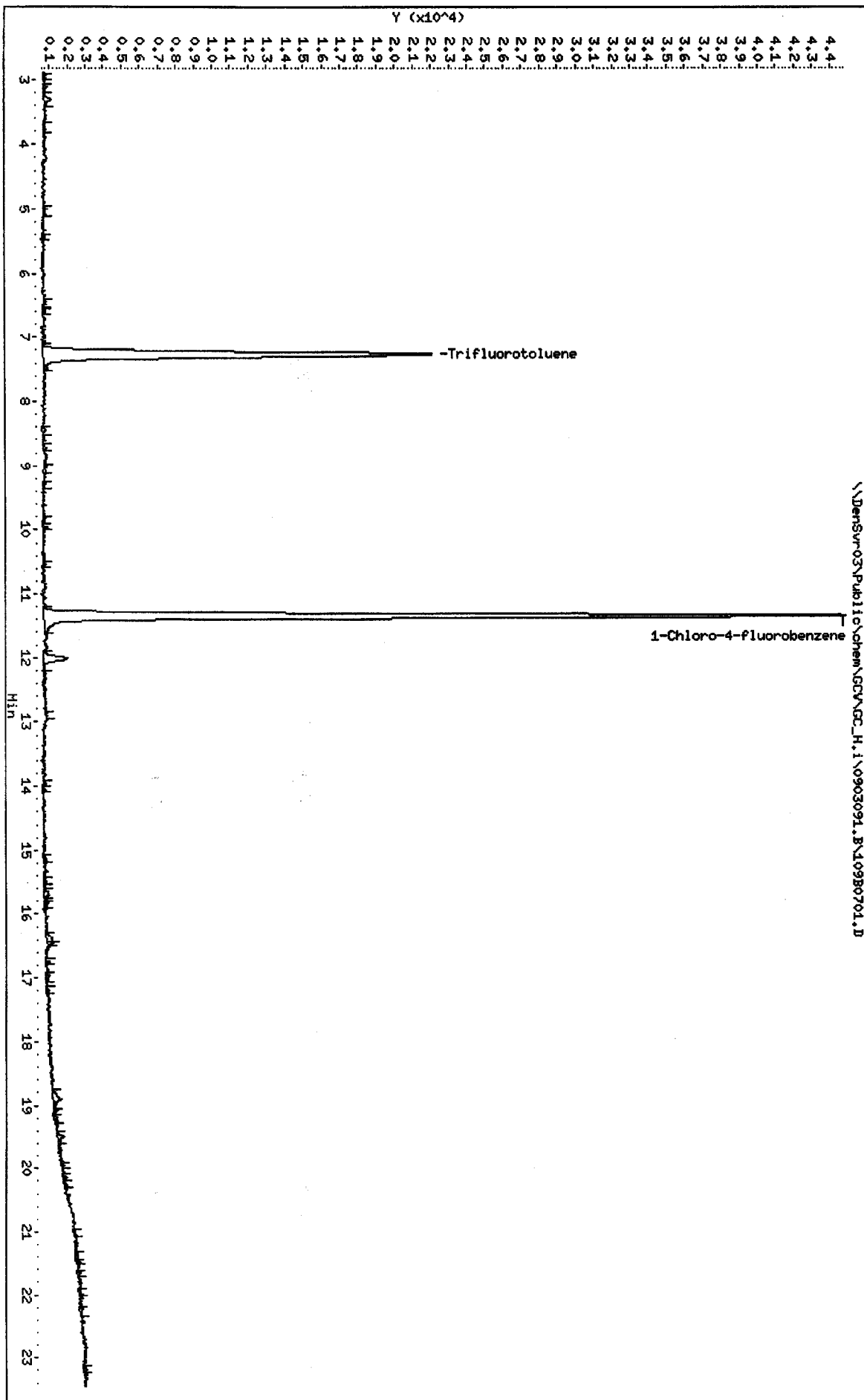
RECOVERY REPORT

Client Name: Colorado Oil&Gas Con02-SEP-2009 00:00 Client SDG: D9I0203  
 Sample Matrix: LIQUID Fraction: VOA  
 Lab Smp Id: LJ8LD1AW Client Smp ID: CALVIN  
 Level: LOW Operator: jmc/mpk  
 Data Type: GC DATA SampleType: SAMPLE  
 SpikeList File: Arom.A.01.spk Quant Type: ISTD  
 Sublist File: Arom.A.01.sub  
 Method File: \\DenSvr03\Public\chem\GCV\GC\_H.i\0903091.B\H1.m  
 Misc Info:

| SURROGATE COMPOUND    | CONC<br>ADDED<br>ug/L | CONC<br>RECOVERED<br>ug/L | %<br>RECOVERED | LIMITS |
|-----------------------|-----------------------|---------------------------|----------------|--------|
| \$ 3 Trifluorotoluene | 30.0000               | 30.5678                   | 101.89         | 85-115 |

Data File: \\Densvr03\Public\chem\GC\GC\_H.1\0903091.B\109B0701.D  
Date : 03-SEP-2009 12:49  
Client ID: CALVIN  
Sample Info: L38L D16M, 332-2  
Column phase: RTX1

Instrument: GC\_H.1  
Operator: jmc/mpk  
Column diameter: 0.53



**Colorado Oil&Gas Conservation Commission**

**Client Sample ID: VAUGHN**

**TOTAL Metals**

**Lot-Sample #...: D9I020332-001**

**Matrix.....: WATER**

**Date Sampled...: 09/02/09 11:25 Date Received...: 09/02/09**

| <u>PARAMETER</u>                | <u>RESULT</u> | <u>REPORTING<br/>LIMIT</u> | <u>UNITS</u> | <u>METHOD</u>           | <u>PREPARATION-<br/>ANALYSIS DATE</u> | <u>WORK<br/>ORDER #</u> |
|---------------------------------|---------------|----------------------------|--------------|-------------------------|---------------------------------------|-------------------------|
| <b>Prep Batch #...: 9246284</b> |               |                            |              |                         |                                       |                         |
| Silver                          | ND            | 10                         | ug/L         | SW846 6010B             | 09/04/09                              | LJ8K91A5                |
|                                 |               | Dilution Factor: 1         |              | Analysis Time...: 13:37 |                                       |                         |
| Arsenic                         | ND            | 15                         | ug/L         | SW846 6010B             | 09/04/09                              | LJ8K91AQ                |
|                                 |               | Dilution Factor: 1         |              | Analysis Time...: 13:37 |                                       |                         |
| Barium                          | 54            | 10                         | ug/L         | SW846 6010B             | 09/04/09                              | LJ8K91AR                |
|                                 |               | Dilution Factor: 1         |              | Analysis Time...: 13:37 |                                       |                         |
| Calcium                         | 2400          | 200                        | ug/L         | SW846 6010B             | 09/04/09                              | LJ8K91AT                |
|                                 |               | Dilution Factor: 1         |              | Analysis Time...: 13:37 |                                       |                         |
| Cadmium                         | ND            | 5.0                        | ug/L         | SW846 6010B             | 09/04/09                              | LJ8K91AU                |
|                                 |               | Dilution Factor: 1         |              | Analysis Time...: 13:37 |                                       |                         |
| Chromium                        | ND            | 10                         | ug/L         | SW846 6010B             | 09/04/09                              | LJ8K91AV                |
|                                 |               | Dilution Factor: 1         |              | Analysis Time...: 13:37 |                                       |                         |
| Iron                            | 230           | 100                        | ug/L         | SW846 6010B             | 09/04-09/08/09                        | LJ8K91AW                |
|                                 |               | Dilution Factor: 1         |              | Analysis Time...: 13:47 |                                       |                         |
| Potassium                       | ND            | 3000                       | ug/L         | SW846 6010B             | 09/04/09                              | LJ8K91AX                |
|                                 |               | Dilution Factor: 1         |              | Analysis Time...: 13:37 |                                       |                         |
| Magnesium                       | 620           | 200                        | ug/L         | SW846 6010B             | 09/04/09                              | LJ8K91A0                |
|                                 |               | Dilution Factor: 1         |              | Analysis Time...: 13:37 |                                       |                         |
| Manganese                       | ND            | 10                         | ug/L         | SW846 6010B             | 09/04/09                              | LJ8K91A1                |
|                                 |               | Dilution Factor: 1         |              | Analysis Time...: 13:37 |                                       |                         |
| Sodium                          | 270000        | 1000                       | ug/L         | SW846 6010B             | 09/04/09                              | LJ8K91A2                |
|                                 |               | Dilution Factor: 1         |              | Analysis Time...: 13:37 |                                       |                         |
| Lead                            | ND            | 9.0                        | ug/L         | SW846 6010B             | 09/04/09                              | LJ8K91A3                |
|                                 |               | Dilution Factor: 1         |              | Analysis Time...: 13:37 |                                       |                         |
| Selenium                        | ND            | 15                         | ug/L         | SW846 6010B             | 09/04-09/08/09                        | LJ8K91A4                |
|                                 |               | Dilution Factor: 1         |              | Analysis Time...: 13:47 |                                       |                         |

**Colorado Oil&Gas Conservation Commision**

**Client Sample ID: CALVIN**

**TOTAL Metals**

**Lot-Sample #...: D9I020332-002**

**Matrix.....: WATER**

**Date Sampled...: 09/02/09 12:55    Date Received...: 09/02/09**

| <u>PARAMETER</u>                | <u>RESULT</u> | <u>REPORTING<br/>LIMIT</u> | <u>UNITS</u> | <u>METHOD</u>           | <u>PREPARATION-<br/>ANALYSIS DATE</u> | <u>WORK<br/>ORDER #</u> |
|---------------------------------|---------------|----------------------------|--------------|-------------------------|---------------------------------------|-------------------------|
| <b>Prep Batch #...: 9246284</b> |               |                            |              |                         |                                       |                         |
| Silver                          | ND            | 10                         | ug/L         | SW846 6010B             | 09/04/09                              | LJ8LD1AG                |
|                                 |               | Dilution Factor: 1         |              | Analysis Time...: 13:47 |                                       |                         |
| Arsenic                         | ND            | 15                         | ug/L         | SW846 6010B             | 09/04/09                              | LJ8LD1AX                |
|                                 |               | Dilution Factor: 1         |              | Analysis Time...: 13:47 |                                       |                         |
| Barium                          | 67            | 10                         | ug/L         | SW846 6010B             | 09/04/09                              | LJ8LD1A0                |
|                                 |               | Dilution Factor: 1         |              | Analysis Time...: 13:47 |                                       |                         |
| Calcium                         | 2400          | 200                        | ug/L         | SW846 6010B             | 09/04/09                              | LJ8LD1A1                |
|                                 |               | Dilution Factor: 1         |              | Analysis Time...: 13:47 |                                       |                         |
| Cadmium                         | ND            | 5.0                        | ug/L         | SW846 6010B             | 09/04/09                              | LJ8LD1A2                |
|                                 |               | Dilution Factor: 1         |              | Analysis Time...: 13:47 |                                       |                         |
| Chromium                        | ND            | 10                         | ug/L         | SW846 6010B             | 09/04/09                              | LJ8LD1A3                |
|                                 |               | Dilution Factor: 1         |              | Analysis Time...: 13:47 |                                       |                         |
| Iron                            | 110           | 100                        | ug/L         | SW846 6010B             | 09/04-09/08/09                        | LJ8LD1A4                |
|                                 |               | Dilution Factor: 1         |              | Analysis Time...: 13:57 |                                       |                         |
| Potassium                       | ND            | 3000                       | ug/L         | SW846 6010B             | 09/04/09                              | LJ8LD1A5                |
|                                 |               | Dilution Factor: 1         |              | Analysis Time...: 13:47 |                                       |                         |
| Magnesium                       | 570           | 200                        | ug/L         | SW846 6010B             | 09/04/09                              | LJ8LD1AA                |
|                                 |               | Dilution Factor: 1         |              | Analysis Time...: 13:47 |                                       |                         |
| Manganese                       | ND            | 10                         | ug/L         | SW846 6010B             | 09/04/09                              | LJ8LD1AC                |
|                                 |               | Dilution Factor: 1         |              | Analysis Time...: 13:47 |                                       |                         |
| Sodium                          | 290000        | 1000                       | ug/L         | SW846 6010B             | 09/04/09                              | LJ8LD1AD                |
|                                 |               | Dilution Factor: 1         |              | Analysis Time...: 13:47 |                                       |                         |
| Lead                            | ND            | 9.0                        | ug/L         | SW846 6010B             | 09/04/09                              | LJ8LD1AE                |
|                                 |               | Dilution Factor: 1         |              | Analysis Time...: 13:47 |                                       |                         |
| Selenium                        | ND            | 15                         | ug/L         | SW846 6010B             | 09/04-09/08/09                        | LJ8LD1AF                |
|                                 |               | Dilution Factor: 1         |              | Analysis Time...: 13:57 |                                       |                         |

**Colorado Oil&Gas Conservation Commission**

**Client Sample ID: VAUGHN**

**General Chemistry**

**Lot-Sample #...** D9I020332-001    **Work Order #...** LJ8K9    **Matrix.....** WATER  
**Date Sampled...** 09/02/09 11:25    **Date Received...** 09/02/09

| PARAMETER                 | RESULT | RL                 | UNITS    | METHOD                 | PREPARATION-<br>ANALYSIS DATE | PREP<br>BATCH # |
|---------------------------|--------|--------------------|----------|------------------------|-------------------------------|-----------------|
| pH                        | 8.5    | 0.10               | No Units | SM18 4500-H B          | 09/03/09                      | 9246537         |
|                           |        | Dilution Factor: 1 |          | Analysis Time... 13:26 |                               |                 |
| Bicarbonate<br>Alkalinity | 500    | 5.0                | mg/L     | SM18 2320 B            | 09/04/09                      | 9251189         |
|                           |        | Dilution Factor: 1 |          | Analysis Time... 11:00 |                               |                 |
| Bromide                   | 0.55   | 0.20               | mg/L     | MCAWW 300.0A           | 09/02/09                      | 9246116         |
|                           |        | Dilution Factor: 1 |          | Analysis Time... 22:59 |                               |                 |
| Carbonate Alkalinity      | 30     | 5.0                | mg/L     | SM18 2320 B            | 09/04/09                      | 9251106         |
|                           |        | Dilution Factor: 1 |          | Analysis Time... 11:00 |                               |                 |
| Chloride                  | 55 Q   | 15                 | mg/L     | MCAWW 300.0A           | 09/02-09/03/09                | 9246117         |
|                           |        | Dilution Factor: 5 |          | Analysis Time... 08:24 |                               |                 |
| Fluoride                  | 2.7    | 0.50               | mg/L     | MCAWW 300.0A           | 09/02/09                      | 9246118         |
|                           |        | Dilution Factor: 1 |          | Analysis Time... 22:59 |                               |                 |
| Nitrate                   | ND     | 0.50               | mg/L     | MCAWW 300.0A           | 09/02/09                      | 9246115         |
|                           |        | Dilution Factor: 1 |          | Analysis Time... 22:59 |                               |                 |
| Nitrite                   | ND     | 0.50               | mg/L     | MCAWW 300.0A           | 09/02/09                      | 9246114         |
|                           |        | Dilution Factor: 1 |          | Analysis Time... 22:59 |                               |                 |
| Specific Conductance      | 1100   | 2.0                | umhos/cm | SM18 2510 B            | 09/10/09                      | 9252072         |
|                           |        | Dilution Factor: 1 |          | Analysis Time... 13:00 |                               |                 |
| Sulfate                   | ND     | 5.0                | mg/L     | MCAWW 300.0A           | 09/02/09                      | 9246113         |
|                           |        | Dilution Factor: 1 |          | Analysis Time... 22:59 |                               |                 |
| Total Dissolved<br>Solids | 680    | 10                 | mg/L     | SM18 2540 C            | 09/03/09                      | 9246257         |
|                           |        | Dilution Factor: 1 |          | Analysis Time... 15:52 |                               |                 |

**NOTE(S) :**

RL Reporting Limit

Q Elevated reporting limit. The reporting limit is elevated due to high analyte levels.

**Colorado Oil&Gas Conservation Commission**

**Client Sample ID: CALVIN**

**General Chemistry**

**Lot-Sample #...**: D9I020332-002    **Work Order #...**: LJ8LD    **Matrix.....**: WATER  
**Date Sampled...**: 09/02/09 12:55    **Date Received...**: 09/02/09

| PARAMETER                 | RESULT | RL                 | UNITS    | METHOD                  | PREPARATION-<br>ANALYSIS DATE | PREP<br>BATCH # |
|---------------------------|--------|--------------------|----------|-------------------------|-------------------------------|-----------------|
| pH                        | 8.6    | 0.10               | No Units | SM18 4500-H B           | 09/03/09                      | 9246537         |
|                           |        | Dilution Factor: 1 |          | Analysis Time...: 13:28 |                               |                 |
| Bicarbonate<br>Alkalinity | 480    | 5.0                | mg/L     | SM18 2320 B             | 09/04/09                      | 9251189         |
|                           |        | Dilution Factor: 1 |          | Analysis Time...: 11:00 |                               |                 |
| Bromide                   | 0.78   | 0.20               | mg/L     | MCAWW 300.0A            | 09/02/09                      | 9246116         |
|                           |        | Dilution Factor: 1 |          | Analysis Time...: 23:49 |                               |                 |
| Carbonate Alkalinity      | 58     | 5.0                | mg/L     | SM18 2320 B             | 09/04/09                      | 9251106         |
|                           |        | Dilution Factor: 1 |          | Analysis Time...: 11:00 |                               |                 |
| Chloride                  | 79 Q   | 15                 | mg/L     | MCAWW 300.0A            | 09/02-09/03/09                | 9246117         |
|                           |        | Dilution Factor: 5 |          | Analysis Time...: 08:41 |                               |                 |
| Fluoride                  | 2.4    | 0.50               | mg/L     | MCAWW 300.0A            | 09/02/09                      | 9246118         |
|                           |        | Dilution Factor: 1 |          | Analysis Time...: 23:49 |                               |                 |
| Nitrate                   | ND     | 0.50               | mg/L     | MCAWW 300.0A            | 09/02/09                      | 9246115         |
|                           |        | Dilution Factor: 1 |          | Analysis Time...: 23:49 |                               |                 |
| Nitrite                   | ND     | 0.50               | mg/L     | MCAWW 300.0A            | 09/02/09                      | 9246114         |
|                           |        | Dilution Factor: 1 |          | Analysis Time...: 23:49 |                               |                 |
| Specific Conductance      | 1200   | 2.0                | umhos/cm | SM18 2510 B             | 09/10/09                      | 9252072         |
|                           |        | Dilution Factor: 1 |          | Analysis Time...: 13:00 |                               |                 |
| Sulfate                   | ND     | 5.0                | mg/L     | MCAWW 300.0A            | 09/02/09                      | 9246113         |
|                           |        | Dilution Factor: 1 |          | Analysis Time...: 23:49 |                               |                 |
| Total Dissolved<br>Solids | 700    | 10                 | mg/L     | SM18 2540 C             | 09/03/09                      | 9246257         |
|                           |        | Dilution Factor: 1 |          | Analysis Time...: 15:52 |                               |                 |

**NOTE(S) :**

RL Reporting Limit

Q Elevated reporting limit. The reporting limit is elevated due to high analyte levels.

# QC DATA ASSOCIATION SUMMARY

D9I020332

Sample Preparation and Analysis Control Numbers

| <u>SAMPLE#</u> | <u>MATRIX</u> | <u>ANALYTICAL<br/>METHOD</u> | <u>LEACH<br/>BATCH #</u> | <u>PREP<br/>BATCH #</u> | <u>MS RUN#</u> |
|----------------|---------------|------------------------------|--------------------------|-------------------------|----------------|
| 001            | WATER         | SM18 2320 B                  |                          | 9251189                 |                |
|                | WATER         | MCAWW 300.0A                 |                          | 9246117                 | 9247175        |
|                | WATER         | MCAWW 300.0A                 |                          | 9246113                 | 9247089        |
|                | WATER         | MCAWW 300.0A                 |                          | 9246118                 | 9247076        |
|                | WATER         | MCAWW 300.0A                 |                          | 9246115                 | 9247087        |
|                | WATER         | MCAWW 300.0A                 |                          | 9246116                 | 9247081        |
|                | WATER         | MCAWW 300.0A                 |                          | 9246114                 | 9247080        |
|                | WATER         | SM18 2320 B                  |                          | 9251106                 |                |
|                | WATER         | SM18 2510 B                  |                          | 9252072                 | 9253254        |
|                | WATER         | SM18 2540 C                  |                          | 9246257                 | 9246161        |
|                | WATER         | SM18 4500-H B                |                          | 9246537                 | 9248026        |
|                | WATER         | SW846 6010B                  |                          | 9246284                 | 9246184        |
|                | WATER         | SW846 8021B                  |                          | 9246504                 | 9246321        |
|                | WATER         | RSK SOP-175                  |                          | 9246433                 |                |
| 002            | WATER         | SM18 2320 B                  |                          | 9251189                 |                |
|                | WATER         | MCAWW 300.0A                 |                          | 9246117                 | 9247175        |
|                | WATER         | MCAWW 300.0A                 |                          | 9246113                 | 9247089        |
|                | WATER         | MCAWW 300.0A                 |                          | 9246118                 | 9247076        |
|                | WATER         | MCAWW 300.0A                 |                          | 9246115                 | 9247087        |
|                | WATER         | MCAWW 300.0A                 |                          | 9246116                 | 9247081        |
|                | WATER         | MCAWW 300.0A                 |                          | 9246114                 | 9247080        |
|                | WATER         | SM18 2320 B                  |                          | 9251106                 |                |
|                | WATER         | SM18 2510 B                  |                          | 9252072                 | 9253254        |
|                | WATER         | SM18 2540 C                  |                          | 9246257                 | 9246161        |
|                | WATER         | SM18 4500-H B                |                          | 9246537                 | 9248026        |
|                | WATER         | SW846 6010B                  |                          | 9246284                 | 9246184        |
|                | WATER         | SW846 8021B                  |                          | 9246504                 | 9246321        |
|                | WATER         | RSK SOP-175                  |                          | 9246433                 |                |

# METHOD BLANK REPORT

## GC Volatiles

Client Lot #...: D9I020332  
MB Lot-Sample #: D9I030000-433

Work Order #...: LKAF81AA

Matrix.....: WATER

Prep Date.....: 09/03/09

Analysis Time...: 10:52

Analysis Date...: 09/03/09

Prep Batch #...: 9246433

Dilution Factor: 1

| PARAMETER | RESULT | REPORTING<br>LIMIT | UNITS | METHOD      |
|-----------|--------|--------------------|-------|-------------|
| Methane   | ND     | 5.0                | ug/L  | RSK SOP-175 |

### NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.



# LABORATORY CONTROL SAMPLE EVALUATION REPORT

## GC Volatiles

Client Lot #...: D9I020332      Work Order #...: LKAF81AC-LCS      Matrix.....: WATER  
 LCS Lot-Sample#: D9I030000-433      LKAF81AD-LCSD  
 Prep Date.....: 09/03/09      Analysis Date...: 09/03/09  
 Prep Batch #...: 9246433      Analysis Time...: 10:44  
 Dilution Factor: 1

| PARAMETER        | PERCENT<br>RECOVERY | RECOVERY<br>LIMITS | RPD        | RPD<br>LIMITS | METHOD             |
|------------------|---------------------|--------------------|------------|---------------|--------------------|
| <b>Methane</b>   | <b>100</b>          | (75 - 125)         |            |               | <b>RSK SOP-175</b> |
|                  | <b>102</b>          | (75 - 125)         | <b>2.2</b> | <b>(0-20)</b> | <b>RSK SOP-175</b> |
| <b>Ethane</b>    | <b>95</b>           | (75 - 125)         |            |               | <b>RSK SOP-175</b> |
|                  | <b>97</b>           | (75 - 125)         | <b>1.9</b> | <b>(0-20)</b> | <b>RSK SOP-175</b> |
| <b>Ethene</b>    | <b>97</b>           | (75 - 125)         |            |               | <b>RSK SOP-175</b> |
|                  | <b>98</b>           | (75 - 125)         | <b>1.7</b> | <b>(0-20)</b> | <b>RSK SOP-175</b> |
| <b>Acetylene</b> | <b>97</b>           | (75 - 125)         |            |               | <b>RSK SOP-175</b> |
|                  | <b>99</b>           | (75 - 125)         | <b>1.2</b> | <b>(0-20)</b> | <b>RSK SOP-175</b> |

### NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

# LABORATORY CONTROL SAMPLE DATA REPORT

## GC Volatiles

Client Lot #....: D9I020332      Work Order #....: LKAF81AC-LCS      Matrix.....: WATER  
 LCS Lot-Sample#: D9I030000-433      LKAF81AD-LCSD  
 Prep Date.....: 09/03/09      Analysis Date...: 09/03/09  
 Prep Batch #....: 9246433      Analysis Time...: 10:44  
 Dilution Factor: 1

| PARAMETER | SPIKE<br>AMOUNT | MEASURED<br>AMOUNT | UNITS | PERCENT<br>RECOVERY | RPD | METHOD      |
|-----------|-----------------|--------------------|-------|---------------------|-----|-------------|
| Methane   | 73.0            | 72.7               | ug/L  | 100                 |     | RSK SOP-175 |
|           | 73.0            | 74.3               | ug/L  | 102                 | 2.2 | RSK SOP-175 |
| Ethane    | 137             | 130                | ug/L  | 95                  |     | RSK SOP-175 |
|           | 137             | 133                | ug/L  | 97                  | 1.9 | RSK SOP-175 |
| Ethene    | 127             | 123                | ug/L  | 97                  |     | RSK SOP-175 |
|           | 127             | 125                | ug/L  | 98                  | 1.7 | RSK SOP-175 |
| Acetylene | 118             | 115                | ug/L  | 97                  |     | RSK SOP-175 |
|           | 118             | 116                | ug/L  | 99                  | 1.2 | RSK SOP-175 |

### NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

# METHOD BLANK REPORT

## GC Volatiles

Client Lot #...: D9I020332  
MB Lot-Sample #: D9I030000-504

Work Order #...: LKALD1AA

Matrix.....: WATER

Analysis Date...: 09/03/09

Prep Date.....: 09/03/09

Analysis Time...: 11:40

Dilution Factor: 1

Prep Batch #...: 9246504

| PARAMETER       | RESULT | REPORTING |       | METHOD      |
|-----------------|--------|-----------|-------|-------------|
|                 |        | LIMIT     | UNITS |             |
| Benzene         | ND     | 0.50      | ug/L  | SW846 8021B |
| Ethylbenzene    | ND     | 0.50      | ug/L  | SW846 8021B |
| Toluene         | ND     | 0.50      | ug/L  | SW846 8021B |
| Xylenes (total) | ND     | 0.50      | ug/L  | SW846 8021B |

| SURROGATE                       | PERCENT  | RECOVERY   |
|---------------------------------|----------|------------|
|                                 | RECOVERY | LIMITS     |
| a,a,a-Trifluorotoluene<br>(TFT) | 96       | (85 - 115) |

### NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

# LABORATORY CONTROL SAMPLE EVALUATION REPORT

## GC Volatiles

Client Lot #....: D9I020332      Work Order #....: LKALD1AC-LCS      Matrix.....: WATER  
 LCS Lot-Sample#: D9I030000-504      LKALD1AD-LCSD  
 Prep Date.....: 09/03/09      Analysis Date...: 09/03/09  
 Prep Batch #....: 9246504      Analysis Time...: 10:37  
 Dilution Factor: 1

| PARAMETER               | PERCENT<br>RECOVERY | RECOVERY<br>LIMITS | RPD | RPD<br>LIMITS | METHOD      |
|-------------------------|---------------------|--------------------|-----|---------------|-------------|
| Chlorobenzene           | 97                  | (81 - 115)         |     |               | SW846 8021B |
|                         | 102                 | (81 - 115)         | 5.8 | (0-35)        | SW846 8021B |
| Benzene                 | 98                  | (75 - 117)         |     |               | SW846 8021B |
|                         | 102                 | (75 - 117)         | 3.5 | (0-45)        | SW846 8021B |
| 1,3-Dichlorobenzene     | 97                  | (80 - 115)         |     |               | SW846 8021B |
|                         | 100                 | (80 - 115)         | 3.3 | (0-35)        | SW846 8021B |
| Ethylbenzene            | 97                  | (79 - 115)         |     |               | SW846 8021B |
|                         | 102                 | (79 - 115)         | 4.7 | (0-46)        | SW846 8021B |
| 1,4-Dichlorobenzene     | 95                  | (79 - 115)         |     |               | SW846 8021B |
|                         | 97                  | (79 - 115)         | 2.8 | (0-35)        | SW846 8021B |
| 1,2-Dichlorobenzene     | 96                  | (80 - 115)         |     |               | SW846 8021B |
|                         | 101                 | (80 - 115)         | 4.4 | (0-35)        | SW846 8021B |
| Toluene                 | 99                  | (77 - 115)         |     |               | SW846 8021B |
|                         | 103                 | (77 - 115)         | 3.9 | (0-45)        | SW846 8021B |
| Methyl tert-butyl ether | 93                  | (79 - 118)         |     |               | SW846 8021B |
|                         | 102                 | (79 - 118)         | 8.5 | (0-27)        | SW846 8021B |
| Xylenes (total)         | 98                  | (79 - 116)         |     |               | SW846 8021B |
|                         | 103                 | (79 - 116)         | 5.2 | (0-46)        | SW846 8021B |
| m-Xylene & p-Xylene     | 98                  | (79 - 116)         |     |               | SW846 8021B |
|                         | 103                 | (79 - 116)         | 4.9 | (0-46)        | SW846 8021B |
| o-Xylene                | 98                  | (79 - 116)         |     |               | SW846 8021B |
|                         | 103                 | (79 - 116)         | 5.6 | (0-46)        | SW846 8021B |

| SURROGATE                       | PERCENT<br>RECOVERY | RECOVERY<br>LIMITS |
|---------------------------------|---------------------|--------------------|
| a,a,a-Trifluorotoluene<br>(TFT) | 103                 | (85 - 115)         |
|                                 | 98                  | (85 - 115)         |

### NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

# LABORATORY CONTROL SAMPLE DATA REPORT

## GC Volatiles

Client Lot #....: D9I020332      Work Order #....: LKALD1AC-LCS      Matrix.....: WATER  
 LCS Lot-Sample#: D9I030000-504      LKALD1AD-LCSD  
 Prep Date.....: 09/03/09      Analysis Date...: 09/03/09  
 Prep Batch #....: 9246504      Analysis Time...: 10:37  
 Dilution Factor: 1

| PARAMETER               | SPIKE<br>AMOUNT | MEASURED<br>AMOUNT | UNITS | PERCENT<br>RECOVERY | RPD | METHOD      |
|-------------------------|-----------------|--------------------|-------|---------------------|-----|-------------|
| Chlorobenzene           | 20.0            | 19.3               | ug/L  | 97                  |     | SW846 8021B |
|                         | 20.0            | 20.5               | ug/L  | 102                 | 5.8 | SW846 8021B |
| Benzene                 | 20.0            | 19.7               | ug/L  | 98                  |     | SW846 8021B |
|                         | 20.0            | 20.4               | ug/L  | 102                 | 3.5 | SW846 8021B |
| 1,3-Dichlorobenzene     | 20.0            | 19.3               | ug/L  | 97                  |     | SW846 8021B |
|                         | 20.0            | 20.0               | ug/L  | 100                 | 3.3 | SW846 8021B |
| Ethylbenzene            | 20.0            | 19.4               | ug/L  | 97                  |     | SW846 8021B |
|                         | 20.0            | 20.3               | ug/L  | 102                 | 4.7 | SW846 8021B |
| 1,4-Dichlorobenzene     | 20.0            | 18.9               | ug/L  | 95                  |     | SW846 8021B |
|                         | 20.0            | 19.4               | ug/L  | 97                  | 2.8 | SW846 8021B |
| 1,2-Dichlorobenzene     | 20.0            | 19.3               | ug/L  | 96                  |     | SW846 8021B |
|                         | 20.0            | 20.1               | ug/L  | 101                 | 4.4 | SW846 8021B |
| Toluene                 | 20.0            | 19.8               | ug/L  | 99                  |     | SW846 8021B |
|                         | 20.0            | 20.6               | ug/L  | 103                 | 3.9 | SW846 8021B |
| Methyl tert-butyl ether | 20.0            | 18.6               | ug/L  | 93                  |     | SW846 8021B |
|                         | 20.0            | 20.3               | ug/L  | 102                 | 8.5 | SW846 8021B |
| Xylenes (total)         | 60.0            | 58.8               | ug/L  | 98                  |     | SW846 8021B |
|                         | 60.0            | 61.9               | ug/L  | 103                 | 5.2 | SW846 8021B |
| m-Xylene & p-Xylene     | 40.0            | 39.3               | ug/L  | 98                  |     | SW846 8021B |
|                         | 40.0            | 41.3               | ug/L  | 103                 | 4.9 | SW846 8021B |
| o-Xylene                | 20.0            | 19.5               | ug/L  | 98                  |     | SW846 8021B |
|                         | 20.0            | 20.6               | ug/L  | 103                 | 5.6 | SW846 8021B |

| SURROGATE                       | PERCENT<br>RECOVERY | RECOVERY<br>LIMITS |
|---------------------------------|---------------------|--------------------|
| a,a,a-Trifluorotoluene<br>(TFT) | 103                 | (85 - 115)         |
|                                 | 98                  | (85 - 115)         |

### NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

# MATRIX SPIKE SAMPLE EVALUATION REPORT

## GC Volatiles

Client Lot #...: D9I020332      Work Order #...: LJ8LD1A6-MS      Matrix.....: WATER  
 MS Lot-Sample #: D9I020332-002      LJ8LD1A7-MSD  
 Date Sampled...: 09/02/09 12:55      Date Received...: 09/02/09  
 Prep Date.....: 09/03/09      Analysis Date...: 09/03/09  
 Prep Batch #...: 9246504      Analysis Time...: 13:20  
 Dilution Factor: 1

| PARAMETER               | PERCENT<br>RECOVERY | RECOVERY<br>LIMITS | RPD  | RPD<br>LIMITS | METHOD      |
|-------------------------|---------------------|--------------------|------|---------------|-------------|
| Chlorobenzene           | 101                 | (81 - 115)         |      |               | SW846 8021B |
|                         | 101                 | (81 - 115)         | 0.06 | (0-35)        | SW846 8021B |
| Benzene                 | 104                 | (75 - 117)         |      |               | SW846 8021B |
|                         | 102                 | (75 - 117)         | 2.2  | (0-45)        | SW846 8021B |
| 1,3-Dichlorobenzene     | 102                 | (80 - 115)         |      |               | SW846 8021B |
|                         | 99                  | (80 - 115)         | 3.6  | (0-35)        | SW846 8021B |
| Ethylbenzene            | 106                 | (79 - 115)         |      |               | SW846 8021B |
|                         | 101                 | (79 - 115)         | 5.1  | (0-46)        | SW846 8021B |
| 1,4-Dichlorobenzene     | 101                 | (79 - 115)         |      |               | SW846 8021B |
|                         | 96                  | (79 - 115)         | 5.0  | (0-35)        | SW846 8021B |
| 1,2-Dichlorobenzene     | 102                 | (80 - 115)         |      |               | SW846 8021B |
|                         | 98                  | (80 - 115)         | 3.6  | (0-35)        | SW846 8021B |
| Toluene                 | 106                 | (77 - 115)         |      |               | SW846 8021B |
|                         | 115                 | (77 - 115)         | 7.8  | (0-45)        | SW846 8021B |
| Methyl tert-butyl ether | 105                 | (79 - 118)         |      |               | SW846 8021B |
|                         | 101                 | (79 - 118)         | 3.9  | (0-27)        | SW846 8021B |
| Xylenes (total)         | 104                 | (79 - 116)         |      |               | SW846 8021B |
|                         | 102                 | (79 - 116)         | 1.5  | (0-46)        | SW846 8021B |
| m-Xylene & p-Xylene     | 104                 | (79 - 116)         |      |               | SW846 8021B |
|                         | 103                 | (79 - 116)         | 0.51 | (0-46)        | SW846 8021B |
| o-Xylene                | 104                 | (79 - 116)         |      |               | SW846 8021B |
|                         | 101                 | (79 - 116)         | 3.5  | (0-46)        | SW846 8021B |

| SURROGATE                       | PERCENT<br>RECOVERY | RECOVERY<br>LIMITS |
|---------------------------------|---------------------|--------------------|
| a,a,a-Trifluorotoluene<br>(TFT) | 99                  | (85 - 115)         |
|                                 | 99                  | (85 - 115)         |

### NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.  
 Bold print denotes control parameters

# MATRIX SPIKE SAMPLE DATA REPORT

## GC Volatiles

Client Lot #...: D9I020332      Work Order #...: LJ8LD1A6-MS      Matrix.....: WATER  
 MS Lot-Sample #: D9I020332-002      LJ8LD1A7-MSD  
 Date Sampled...: 09/02/09 12:55      Date Received...: 09/02/09  
 Prep Date.....: 09/03/09      Analysis Date...: 09/03/09  
 Prep Batch #...: 9246504      Analysis Time...: 13:20  
 Dilution Factor: 1

| PARAMETER               | SAMPLE<br>AMOUNT | SPIKE<br>AMT | MEASRD<br>AMOUNT | UNITS | PERCNT<br>RECVRY | RPD  | METHOD      |
|-------------------------|------------------|--------------|------------------|-------|------------------|------|-------------|
| Chlorobenzene           | ND               | 20.0         | 20.2             | ug/L  | 101              |      | SW846 8021B |
|                         | ND               | 20.0         | 20.2             | ug/L  | 101              | 0.06 | SW846 8021B |
| Benzene                 | ND               | 20.0         | 20.9             | ug/L  | 104              |      | SW846 8021B |
|                         | ND               | 20.0         | 20.4             | ug/L  | 102              | 2.2  | SW846 8021B |
| 1,3-Dichlorobenzene     | ND               | 20.0         | 20.4             | ug/L  | 102              |      | SW846 8021B |
|                         | ND               | 20.0         | 19.7             | ug/L  | 99               | 3.6  | SW846 8021B |
| Ethylbenzene            | ND               | 20.0         | 21.2             | ug/L  | 106              |      | SW846 8021B |
|                         | ND               | 20.0         | 20.1             | ug/L  | 101              | 5.1  | SW846 8021B |
| 1,4-Dichlorobenzene     | ND               | 20.0         | 20.2             | ug/L  | 101              |      | SW846 8021B |
|                         | ND               | 20.0         | 19.2             | ug/L  | 96               | 5.0  | SW846 8021B |
| 1,2-Dichlorobenzene     | ND               | 20.0         | 20.4             | ug/L  | 102              |      | SW846 8021B |
|                         | ND               | 20.0         | 19.7             | ug/L  | 98               | 3.6  | SW846 8021B |
| Toluene                 | ND               | 20.0         | 21.2             | ug/L  | 106              |      | SW846 8021B |
|                         | ND               | 20.0         | 22.9             | ug/L  | 115              | 7.8  | SW846 8021B |
| Methyl tert-butyl ether | ND               | 20.0         | 20.9             | ug/L  | 105              |      | SW846 8021B |
|                         | ND               | 20.0         | 20.1             | ug/L  | 101              | 3.9  | SW846 8021B |
| Xylenes (total)         | ND               | 60.0         | 62.4             | ug/L  | 104              |      | SW846 8021B |
|                         | ND               | 60.0         | 61.4             | ug/L  | 102              | 1.5  | SW846 8021B |
| m-Xylene & p-Xylene     | ND               | 40.0         | 41.5             | ug/L  | 104              |      | SW846 8021B |
|                         | ND               | 40.0         | 41.3             | ug/L  | 103              | 0.51 | SW846 8021B |
| o-Xylene                | ND               | 20.0         | 20.9             | ug/L  | 104              |      | SW846 8021B |
|                         | ND               | 20.0         | 20.2             | ug/L  | 101              | 3.5  | SW846 8021B |

| SURROGATE                       | PERCENT<br>RECOVERY | RECOVERY<br>LIMITS |
|---------------------------------|---------------------|--------------------|
| a,a,a-Trifluorotoluene<br>(TFT) | 99                  | (85 - 115)         |
|                                 | 99                  | (85 - 115)         |

### NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

# METHOD BLANK REPORT

## TOTAL Metals

Client Lot #....: D9I020332

Matrix.....: WATER

| PARAMETER  | RESULT | REPORTING<br>LIMIT      | UNITS | METHOD      | PREPARATION-<br>ANALYSIS DATE | WORK<br>ORDER # |
|--|--------|-------------------------|-------|-------------|-------------------------------|-----------------|
| <b>MB Lot-Sample #:</b> D9I030000-284 <b>Prep Batch #....:</b> 9246284 |        |                         |       |             |                               |                 |
| Arsenic  | ND     | 15                      | ug/L  | SW846 6010B | 09/04/09                      | LJ9G01AA        |
|  |        | Dilution Factor: 1      |       |             |                               |                 |
|  |        | Analysis Time...: 13:30 |       |             |                               |                 |
| Barium   | ND     | 10                      | ug/L  | SW846 6010B | 09/04/09                      | LJ9G01AC        |
|  |        | Dilution Factor: 1      |       |             |                               |                 |
|  |        | Analysis Time...: 13:30 |       |             |                               |                 |
| Cadmium  | ND     | 5.0                     | ug/L  | SW846 6010B | 09/04/09                      | LJ9G01AE        |
|  |        | Dilution Factor: 1      |       |             |                               |                 |
|  |        | Analysis Time...: 13:30 |       |             |                               |                 |
| Calcium  | ND     | 200                     | ug/L  | SW846 6010B | 09/04/09                      | LJ9G01AD        |
|  |        | Dilution Factor: 1      |       |             |                               |                 |
|  |        | Analysis Time...: 13:30 |       |             |                               |                 |
| Chromium   | ND     | 10                      | ug/L  | SW846 6010B | 09/04/09                      | LJ9G01AF        |
|  |        | Dilution Factor: 1      |       |             |                               |                 |
|  |        | Analysis Time...: 13:30 |       |             |                               |                 |
| Iron   | ND     | 100                     | ug/L  | SW846 6010B | 09/04-09/08/09                | LJ9G01AG        |
|  |        | Dilution Factor: 1      |       |             |                               |                 |
|  |        | Analysis Time...: 13:40 |       |             |                               |                 |
| Lead   | ND     | 9.0                     | ug/L  | SW846 6010B | 09/04/09                      | LJ9G01AM        |
|  |        | Dilution Factor: 1      |       |             |                               |                 |
|  |        | Analysis Time...: 13:30 |       |             |                               |                 |
| Magnesium  | ND     | 200                     | ug/L  | SW846 6010B | 09/04/09                      | LJ9G01AJ        |
|  |        | Dilution Factor: 1      |       |             |                               |                 |
|  |        | Analysis Time...: 13:30 |       |             |                               |                 |
| Manganese  | ND     | 10                      | ug/L  | SW846 6010B | 09/04/09                      | LJ9G01AK        |
|  |        | Dilution Factor: 1      |       |             |                               |                 |
|  |        | Analysis Time...: 13:30 |       |             |                               |                 |
| Potassium  | ND     | 3000                    | ug/L  | SW846 6010B | 09/04/09                      | LJ9G01AH        |
|  |        | Dilution Factor: 1      |       |             |                               |                 |
|  |        | Analysis Time...: 13:30 |       |             |                               |                 |
| Selenium   | ND     | 15                      | ug/L  | SW846 6010B | 09/04-09/08/09                | LJ9G01AN        |
|  |        | Dilution Factor: 1      |       |             |                               |                 |
|  |        | Analysis Time...: 13:40 |       |             |                               |                 |

(Continued on next page)



# METHOD BLANK REPORT

## TOTAL Metals

Client Lot #...: D9I020332

Matrix.....: WATER

| PARAMETER | RESULT | REPORTING<br>LIMIT      | UNITS | METHOD      | PREPARATION-<br>ANALYSIS DATE | WORK<br>ORDER # |
|-----------|--------|-------------------------|-------|-------------|-------------------------------|-----------------|
| Silver    | ND     | 10                      | ug/L  | SW846 6010B | 09/04/09                      | LJ9G01AP        |
|           |        | Dilution Factor: 1      |       |             |                               |                 |
|           |        | Analysis Time...: 13:30 |       |             |                               |                 |
| Sodium    | ND     | 1000                    | ug/L  | SW846 6010B | 09/04/09                      | LJ9G01AL        |
|           |        | Dilution Factor: 1      |       |             |                               |                 |
|           |        | Analysis Time...: 13:30 |       |             |                               |                 |

### NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

# LABORATORY CONTROL SAMPLE EVALUATION REPORT

## TOTAL Metals

Client Lot #...: D9I020332

Matrix.....: WATER

| PARAMETER   | PERCENT<br>RECOVERY | RECOVERY<br>LIMITS | METHOD                  | PREPARATION-<br>ANALYSIS DATE | WORK ORDER # |
|---|---------------------|--------------------|-------------------------|-------------------------------|--------------|
| LCS Lot-Sample#: D9I030000-284 Prep Batch #...: 9246284 |                     |                    |                         |                               |              |
| Arsenic   | 92                  | (88 - 110)         | SW846 6010B             | 09/04/09                      | LJ9G01AQ     |
|   |                     | Dilution Factor: 1 | Analysis Time...: 13:32 |                               |              |
| Barium  | 99                  | (90 - 112)         | SW846 6010B             | 09/04/09                      | LJ9G01AR     |
|   |                     | Dilution Factor: 1 | Analysis Time...: 13:32 |                               |              |
| Calcium   | 98                  | (90 - 111)         | SW846 6010B             | 09/04/09                      | LJ9G01AT     |
|   |                     | Dilution Factor: 1 | Analysis Time...: 13:32 |                               |              |
| Cadmium   | 92                  | (88 - 111)         | SW846 6010B             | 09/04/09                      | LJ9G01AU     |
|   |                     | Dilution Factor: 1 | Analysis Time...: 13:32 |                               |              |
| Chromium  | 96                  | (90 - 113)         | SW846 6010B             | 09/04/09                      | LJ9G01AV     |
|   |                     | Dilution Factor: 1 | Analysis Time...: 13:32 |                               |              |
| Iron  | 101                 | (89 - 115)         | SW846 6010B             | 09/04-09/08/09                | LJ9G01AW     |
|   |                     | Dilution Factor: 1 | Analysis Time...: 13:42 |                               |              |
| Potassium   | 103                 | (89 - 114)         | SW846 6010B             | 09/04/09                      | LJ9G01AX     |
|   |                     | Dilution Factor: 1 | Analysis Time...: 13:32 |                               |              |
| Magnesium   | 105                 | (90 - 113)         | SW846 6010B             | 09/04/09                      | LJ9G01A0     |
|   |                     | Dilution Factor: 1 | Analysis Time...: 13:32 |                               |              |
| Manganese   | 95                  | (90 - 110)         | SW846 6010B             | 09/04/09                      | LJ9G01A1     |
|   |                     | Dilution Factor: 1 | Analysis Time...: 13:32 |                               |              |
| Sodium  | 94                  | (90 - 115)         | SW846 6010B             | 09/04/09                      | LJ9G01A2     |
|   |                     | Dilution Factor: 1 | Analysis Time...: 13:32 |                               |              |
| Lead  | 92                  | (89 - 110)         | SW846 6010B             | 09/04/09                      | LJ9G01A3     |
|   |                     | Dilution Factor: 1 | Analysis Time...: 13:32 |                               |              |
| Selenium  | 98                  | (85 - 112)         | SW846 6010B             | 09/04-09/08/09                | LJ9G01A4     |
|   |                     | Dilution Factor: 1 | Analysis Time...: 13:42 |                               |              |
| Silver  | 103                 | (86 - 115)         | SW846 6010B             | 09/04/09                      | LJ9G01A5     |
|   |                     | Dilution Factor: 1 | Analysis Time...: 13:32 |                               |              |

### NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

# LABORATORY CONTROL SAMPLE DATA REPORT

## TOTAL Metals

Client Lot #...: D9I020332

Matrix.....: WATER

| PARAMETER   | SPIKE<br>AMOUNT | MEASURED<br>AMOUNT | UNITS              | PERCNT<br>RECVRY | METHOD                  | PREPARATION-<br>ANALYSIS DATE | WORK<br>ORDER # |
|---|-----------------|--------------------|--------------------|------------------|-------------------------|-------------------------------|-----------------|
| LCS Lot-Sample#: D9I030000-284 Prep Batch #...: 9246284 |                 |                    |                    |                  |                         |                               |                 |
| Arsenic   | 1000            | 922                | ug/L               | 92               | SW846 6010B             | 09/04/09                      | LJ9G01AQ        |
|   |                 |                    | Dilution Factor: 1 |                  | Analysis Time...: 13:32 |                               |                 |
| Barium  | 2000            | 1980               | ug/L               | 99               | SW846 6010B             | 09/04/09                      | LJ9G01AR        |
|   |                 |                    | Dilution Factor: 1 |                  | Analysis Time...: 13:32 |                               |                 |
| Calcium   | 50000           | 49200              | ug/L               | 98               | SW846 6010B             | 09/04/09                      | LJ9G01AT        |
|   |                 |                    | Dilution Factor: 1 |                  | Analysis Time...: 13:32 |                               |                 |
| Cadmium   | 100             | 92.0               | ug/L               | 92               | SW846 6010B             | 09/04/09                      | LJ9G01AU        |
|   |                 |                    | Dilution Factor: 1 |                  | Analysis Time...: 13:32 |                               |                 |
| Chromium  | 200             | 192                | ug/L               | 96               | SW846 6010B             | 09/04/09                      | LJ9G01AV        |
|   |                 |                    | Dilution Factor: 1 |                  | Analysis Time...: 13:32 |                               |                 |
| Iron  | 1000            | 1010               | ug/L               | 101              | SW846 6010B             | 09/04-09/08/09                | LJ9G01AW        |
|   |                 |                    | Dilution Factor: 1 |                  | Analysis Time...: 13:42 |                               |                 |
| Potassium   | 50000           | 51300              | ug/L               | 103              | SW846 6010B             | 09/04/09                      | LJ9G01AX        |
|   |                 |                    | Dilution Factor: 1 |                  | Analysis Time...: 13:32 |                               |                 |
| Magnesium   | 50000           | 52400              | ug/L               | 105              | SW846 6010B             | 09/04/09                      | LJ9G01A0        |
|   |                 |                    | Dilution Factor: 1 |                  | Analysis Time...: 13:32 |                               |                 |
| Manganese   | 500             | 474                | ug/L               | 95               | SW846 6010B             | 09/04/09                      | LJ9G01A1        |
|   |                 |                    | Dilution Factor: 1 |                  | Analysis Time...: 13:32 |                               |                 |
| Sodium  | 50000           | 47100              | ug/L               | 94               | SW846 6010B             | 09/04/09                      | LJ9G01A2        |
|   |                 |                    | Dilution Factor: 1 |                  | Analysis Time...: 13:32 |                               |                 |
| Lead  | 500             | 459                | ug/L               | 92               | SW846 6010B             | 09/04/09                      | LJ9G01A3        |
|   |                 |                    | Dilution Factor: 1 |                  | Analysis Time...: 13:32 |                               |                 |
| Selenium  | 2000            | 1960               | ug/L               | 98               | SW846 6010B             | 09/04-09/08/09                | LJ9G01A4        |
|   |                 |                    | Dilution Factor: 1 |                  | Analysis Time...: 13:42 |                               |                 |
| Silver  | 50.0            | 51.4               | ug/L               | 103              | SW846 6010B             | 09/04/09                      | LJ9G01A5        |
|   |                 |                    | Dilution Factor: 1 |                  | Analysis Time...: 13:32 |                               |                 |

### NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

# MATRIX SPIKE SAMPLE EVALUATION REPORT

## TOTAL Metals

Client Lot #...: D9I020332

Matrix.....: WATER

Date Sampled...: 09/02/09 11:25 Date Received...: 09/02/09

| PARAMETER  | PERCENT<br>RECOVERY | RECOVERY<br>LIMITS      | RPD<br>RPD | RPD<br>LIMITS | METHOD      | PREPARATION-<br>ANALYSIS DATE | WORK<br>ORDER # |
|--|---------------------|-------------------------|------------|---------------|-------------|-------------------------------|-----------------|
| <b>MS Lot-Sample #: D9I020332-001 Prep Batch #...: 9246284</b> |                     |                         |            |               |             |                               |                 |
| Arsenic  | 93                  | (84 - 124)              |            |               | SW846 6010B | 09/04/09                      | LJ8K91A6        |
|  | 92                  | (84 - 124) 1.2          | (0-25)     |               | SW846 6010B | 09/04/09                      | LJ8K91A7        |
|  |                     | Dilution Factor: 1      |            |               |             |                               |                 |
|  |                     | Analysis Time...: 13:42 |            |               |             |                               |                 |
| Barium   | 99                  | (85 - 120)              |            |               | SW846 6010B | 09/04/09                      | LJ8K91A8        |
|  | 98                  | (85 - 120) 1.2          | (0-25)     |               | SW846 6010B | 09/04/09                      | LJ8K91A9        |
|  |                     | Dilution Factor: 1      |            |               |             |                               |                 |
|  |                     | Analysis Time...: 13:42 |            |               |             |                               |                 |
| Cadmium  | 94                  | (82 - 119)              |            |               | SW846 6010B | 09/04/09                      | LJ8K91CD        |
|  | 93                  | (82 - 119) 1.3          | (0-25)     |               | SW846 6010B | 09/04/09                      | LJ8K91CE        |
|  |                     | Dilution Factor: 1      |            |               |             |                               |                 |
|  |                     | Analysis Time...: 13:42 |            |               |             |                               |                 |
| Calcium  | 97                  | (48 - 153)              |            |               | SW846 6010B | 09/04/09                      | LJ8K91CA        |
|  | 96                  | (48 - 153) 0.59         | (0-25)     |               | SW846 6010B | 09/04/09                      | LJ8K91CC        |
|  |                     | Dilution Factor: 1      |            |               |             |                               |                 |
|  |                     | Analysis Time...: 13:42 |            |               |             |                               |                 |
| Chromium   | 97                  | (73 - 135)              |            |               | SW846 6010B | 09/04/09                      | LJ8K91CF        |
|  | 95                  | (73 - 135) 1.2          | (0-25)     |               | SW846 6010B | 09/04/09                      | LJ8K91CG        |
|  |                     | Dilution Factor: 1      |            |               |             |                               |                 |
|  |                     | Analysis Time...: 13:42 |            |               |             |                               |                 |
| Iron   | 96                  | (52 - 155)              |            |               | SW846 6010B | 09/04-09/08/09                | LJ8K91CH        |
|  | 95                  | (52 - 155) 0.96         | (0-25)     |               | SW846 6010B | 09/04-09/08/09                | LJ8K91CJ        |
|  |                     | Dilution Factor: 1      |            |               |             |                               |                 |
|  |                     | Analysis Time...: 13:52 |            |               |             |                               |                 |
| Lead   | 93                  | (89 - 121)              |            |               | SW846 6010B | 09/04/09                      | LJ8K91CU        |
|  | 92                  | (89 - 121) 1.2          | (0-25)     |               | SW846 6010B | 09/04/09                      | LJ8K91CV        |
|  |                     | Dilution Factor: 1      |            |               |             |                               |                 |
|  |                     | Analysis Time...: 13:42 |            |               |             |                               |                 |
| Magnesium  | 102                 | (62 - 146)              |            |               | SW846 6010B | 09/04/09                      | LJ8K91CM        |
|  | 101                 | (62 - 146) 0.67         | (0-25)     |               | SW846 6010B | 09/04/09                      | LJ8K91CN        |
|  |                     | Dilution Factor: 1      |            |               |             |                               |                 |
|  |                     | Analysis Time...: 13:42 |            |               |             |                               |                 |

(Continued on next page)

# MATRIX SPIKE SAMPLE EVALUATION REPORT

## TOTAL Metals

Client Lot #...: D9I020332

Matrix.....: WATER

Date Sampled...: 09/02/09 11:25 Date Received...: 09/02/09

| PARAMETER | PERCENT<br>RECOVERY | RECOVERY<br>LIMITS      | RPD<br>RPD | RPD<br>LIMITS | METHOD      | PREPARATION-<br>ANALYSIS DATE | WORK<br>ORDER # |
|-----------|---------------------|-------------------------|------------|---------------|-------------|-------------------------------|-----------------|
| Manganese | 93                  | (79 - 121)              |            |               | SW846 6010B | 09/04/09                      | LJ8K91CP        |
|           | 92                  | (79 - 121)              | 0.82       | (0-25)        | SW846 6010B | 09/04/09                      | LJ8K91CQ        |
|           |                     | Dilution Factor: 1      |            |               |             |                               |                 |
|           |                     | Analysis Time...: 13:42 |            |               |             |                               |                 |
| Potassium | 104                 | (76 - 132)              |            |               | SW846 6010B | 09/04/09                      | LJ8K91CK        |
|           | 103                 | (76 - 132)              | 0.75       | (0-25)        | SW846 6010B | 09/04/09                      | LJ8K91CL        |
|           |                     | Dilution Factor: 1      |            |               |             |                               |                 |
|           |                     | Analysis Time...: 13:42 |            |               |             |                               |                 |
| Selenium  | 99                  | (71 - 140)              |            |               | SW846 6010B | 09/04-09/08/09                | LJ8K91CW        |
|           | 97                  | (71 - 140)              | 1.5        | (0-25)        | SW846 6010B | 09/04-09/08/09                | LJ8K91CX        |
|           |                     | Dilution Factor: 1      |            |               |             |                               |                 |
|           |                     | Analysis Time...: 13:52 |            |               |             |                               |                 |
| Silver    | 105                 | (75 - 141)              |            |               | SW846 6010B | 09/04/09                      | LJ8K91C0        |
|           | 104                 | (75 - 141)              | 1.2        | (0-25)        | SW846 6010B | 09/04/09                      | LJ8K91C1        |
|           |                     | Dilution Factor: 1      |            |               |             |                               |                 |
|           |                     | Analysis Time...: 13:42 |            |               |             |                               |                 |
| Sodium    | 105 MSB             | (70 - 203)              |            |               | SW846 6010B | 09/04/09                      | LJ8K91CR        |
|           | 108 MSB             | (70 - 203)              | 0.51       | (0-40)        | SW846 6010B | 09/04/09                      | LJ8K91CT        |
|           |                     | Dilution Factor: 1      |            |               |             |                               |                 |
|           |                     | Analysis Time...: 13:42 |            |               |             |                               |                 |

### NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

MSB The recovery and RPD may be outside control limits because the sample amount was greater than 4X the spike amount.

# MATRIX SPIKE SAMPLE DATA REPORT

## TOTAL Metals

Client Lot #...: D9I020332

Matrix.....: WATER

Date Sampled...: 09/02/09 11:25 Date Received...: 09/02/09

| PARAMETER | AMOUNT | SAMPLE SPIKE<br>AMT | MEASRD<br>AMOUNT | UNITS | PERCENT<br>RECVRY | RPD | METHOD | PREPARATION-<br>ANALYSIS DATE | WORK<br>ORDER # |
|-----------|--------|---------------------|------------------|-------|-------------------|-----|--------|-------------------------------|-----------------|
|-----------|--------|---------------------|------------------|-------|-------------------|-----|--------|-------------------------------|-----------------|

MS Lot-Sample #: D9I020332-001 Prep Batch #...: 9246284

### Arsenic

|                         |      |     |      |    |     |  |             |          |          |
|-------------------------|------|-----|------|----|-----|--|-------------|----------|----------|
| ND                      | 1000 | 930 | ug/L | 93 |     |  | SW846 6010B | 09/04/09 | LJ8K91A6 |
| ND                      | 1000 | 919 | ug/L | 92 | 1.2 |  | SW846 6010B | 09/04/09 | LJ8K91A7 |
| Dilution Factor: 1      |      |     |      |    |     |  |             |          |          |
| Analysis Time...: 13:42 |      |     |      |    |     |  |             |          |          |

### Barium

|                         |      |      |      |    |     |  |             |          |          |
|-------------------------|------|------|------|----|-----|--|-------------|----------|----------|
| 54                      | 2000 | 2030 | ug/L | 99 |     |  | SW846 6010B | 09/04/09 | LJ8K91A8 |
| 54                      | 2000 | 2010 | ug/L | 98 | 1.2 |  | SW846 6010B | 09/04/09 | LJ8K91A9 |
| Dilution Factor: 1      |      |      |      |    |     |  |             |          |          |
| Analysis Time...: 13:42 |      |      |      |    |     |  |             |          |          |

### Cadmium

|                         |     |      |      |    |     |  |             |          |          |
|-------------------------|-----|------|------|----|-----|--|-------------|----------|----------|
| ND                      | 100 | 93.9 | ug/L | 94 |     |  | SW846 6010B | 09/04/09 | LJ8K91CD |
| ND                      | 100 | 92.7 | ug/L | 93 | 1.3 |  | SW846 6010B | 09/04/09 | LJ8K91CE |
| Dilution Factor: 1      |     |      |      |    |     |  |             |          |          |
| Analysis Time...: 13:42 |     |      |      |    |     |  |             |          |          |

### Calcium

|                         |       |       |      |    |      |  |             |          |          |
|-------------------------|-------|-------|------|----|------|--|-------------|----------|----------|
| 2400                    | 50000 | 50700 | ug/L | 97 |      |  | SW846 6010B | 09/04/09 | LJ8K91CA |
| 2400                    | 50000 | 50400 | ug/L | 96 | 0.59 |  | SW846 6010B | 09/04/09 | LJ8K91CC |
| Dilution Factor: 1      |       |       |      |    |      |  |             |          |          |
| Analysis Time...: 13:42 |       |       |      |    |      |  |             |          |          |

### Chromium

|                         |     |     |      |    |     |  |             |          |          |
|-------------------------|-----|-----|------|----|-----|--|-------------|----------|----------|
| ND                      | 200 | 193 | ug/L | 97 |     |  | SW846 6010B | 09/04/09 | LJ8K91CF |
| ND                      | 200 | 191 | ug/L | 95 | 1.2 |  | SW846 6010B | 09/04/09 | LJ8K91CG |
| Dilution Factor: 1      |     |     |      |    |     |  |             |          |          |
| Analysis Time...: 13:42 |     |     |      |    |     |  |             |          |          |

### Iron

|                         |      |      |      |    |      |  |             |                |          |
|-------------------------|------|------|------|----|------|--|-------------|----------------|----------|
| 230                     | 1000 | 1190 | ug/L | 96 |      |  | SW846 6010B | 09/04-09/08/09 | LJ8K91CH |
| 230                     | 1000 | 1180 | ug/L | 95 | 0.96 |  | SW846 6010B | 09/04-09/08/09 | LJ8K91CJ |
| Dilution Factor: 1      |      |      |      |    |      |  |             |                |          |
| Analysis Time...: 13:52 |      |      |      |    |      |  |             |                |          |

### Lead

|                         |     |     |      |    |     |  |             |          |          |
|-------------------------|-----|-----|------|----|-----|--|-------------|----------|----------|
| ND                      | 500 | 466 | ug/L | 93 |     |  | SW846 6010B | 09/04/09 | LJ8K91CU |
| ND                      | 500 | 460 | ug/L | 92 | 1.2 |  | SW846 6010B | 09/04/09 | LJ8K91CV |
| Dilution Factor: 1      |     |     |      |    |     |  |             |          |          |
| Analysis Time...: 13:42 |     |     |      |    |     |  |             |          |          |

(Continued on next page)

# MATRIX SPIKE SAMPLE DATA REPORT

## TOTAL Metals

Client Lot #...: D9I020332

Matrix.....: WATER

Date Sampled...: 09/02/09 11:25 Date Received...: 09/02/09

|           | SAMPLE AMOUNT | SPIKE AMT | MEASRD AMOUNT           | UNITS | PERCNT RECVRY | RPD  | METHOD      | PREPARATION- ANALYSIS DATE | WORK ORDER # |
|-----------|---------------|-----------|-------------------------|-------|---------------|------|-------------|----------------------------|--------------|
| Magnesium |               |           |                         |       |               |      |             |                            |              |
|           | 620           | 50000     | 51500                   | ug/L  | 102           |      | SW846 6010B | 09/04/09                   | LJ8K91CM     |
|           | 620           | 50000     | 51200                   | ug/L  | 101           | 0.67 | SW846 6010B | 09/04/09                   | LJ8K91CN     |
|           |               |           | Dilution Factor: 1      |       |               |      |             |                            |              |
|           |               |           | Analysis Time...: 13:42 |       |               |      |             |                            |              |
| Manganese |               |           |                         |       |               |      |             |                            |              |
|           | ND            | 500       | 469                     | ug/L  | 93            |      | SW846 6010B | 09/04/09                   | LJ8K91CP     |
|           | ND            | 500       | 465                     | ug/L  | 92            | 0.82 | SW846 6010B | 09/04/09                   | LJ8K91CQ     |
|           |               |           | Dilution Factor: 1      |       |               |      |             |                            |              |
|           |               |           | Analysis Time...: 13:42 |       |               |      |             |                            |              |
| Potassium |               |           |                         |       |               |      |             |                            |              |
|           | ND            | 50000     | 53800                   | ug/L  | 104           |      | SW846 6010B | 09/04/09                   | LJ8K91CK     |
|           | ND            | 50000     | 53400                   | ug/L  | 103           | 0.75 | SW846 6010B | 09/04/09                   | LJ8K91CL     |
|           |               |           | Dilution Factor: 1      |       |               |      |             |                            |              |
|           |               |           | Analysis Time...: 13:42 |       |               |      |             |                            |              |
| Selenium  |               |           |                         |       |               |      |             |                            |              |
|           | ND            | 2000      | 1970                    | ug/L  | 99            |      | SW846 6010B | 09/04-09/08/09             | LJ8K91CW     |
|           | ND            | 2000      | 1940                    | ug/L  | 97            | 1.5  | SW846 6010B | 09/04-09/08/09             | LJ8K91CX     |
|           |               |           | Dilution Factor: 1      |       |               |      |             |                            |              |
|           |               |           | Analysis Time...: 13:52 |       |               |      |             |                            |              |
| Silver    |               |           |                         |       |               |      |             |                            |              |
|           | ND            | 50.0      | 53.6                    | ug/L  | 105           |      | SW846 6010B | 09/04/09                   | LJ8K91C0     |
|           | ND            | 50.0      | 52.9                    | ug/L  | 104           | 1.2  | SW846 6010B | 09/04/09                   | LJ8K91C1     |
|           |               |           | Dilution Factor: 1      |       |               |      |             |                            |              |
|           |               |           | Analysis Time...: 13:42 |       |               |      |             |                            |              |
| Sodium    |               |           |                         |       |               |      |             |                            |              |
|           | 270000        | 50000     | 321000                  | ug/L  | 105           |      | SW846 6010B | 09/04/09                   | LJ8K91CR     |
|           |               |           | Qualifiers: MSB         |       |               |      |             |                            |              |
|           | 270000        | 50000     | 322000                  | ug/L  | 108           | 0.51 | SW846 6010B | 09/04/09                   | LJ8K91CT     |
|           |               |           | Qualifiers: MSB         |       |               |      |             |                            |              |
|           |               |           | Dilution Factor: 1      |       |               |      |             |                            |              |
|           |               |           | Analysis Time...: 13:42 |       |               |      |             |                            |              |

### NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

MSB The recovery and RPD may be outside control limits because the sample amount was greater than 4X the spike amount.

# METHOD BLANK REPORT

## General Chemistry

Client Lot #...: D9I020332

Matrix.....: WATER

| PARAMETER                 | RESULT | REPORTING<br>LIMIT                                    | UNITS    | METHOD       | PREPARATION-<br>ANALYSIS DATE | PREP<br>BATCH # |
|---------------------------|--------|---|----------|--------------|-------------------------------|-----------------|
| Bicarbonate<br>Alkalinity | ND     | 5.0   | mg/L     | SM18 2320 B  | 09/04/09                      | 9251189         |
|                           |        | Work Order #: LKFNL1AA MB Lot-Sample #: D9I080000-189 |          |              |                               |                 |
|                           |        | Dilution Factor: 1                                    |          |              |                               |                 |
|                           |        | Analysis Time...: 11:00                               |          |              |                               |                 |
| Bromide                   | ND     | 0.20  | mg/L     | MCAWW 300.0A | 09/02/09                      | 9246116         |
|                           |        | Work Order #: LKA9H1AA MB Lot-Sample #: D9I030000-116 |          |              |                               |                 |
|                           |        | Dilution Factor: 1                                    |          |              |                               |                 |
|                           |        | Analysis Time...: 22:42                               |          |              |                               |                 |
| Carbonate Alkalinity      | ND     | 5.0   | mg/L     | SM18 2320 B  | 09/04/09                      | 9251106         |
|                           |        | Work Order #: LKFNT1AA MB Lot-Sample #: D9I080000-106 |          |              |                               |                 |
|                           |        | Dilution Factor: 1                                    |          |              |                               |                 |
|                           |        | Analysis Time...: 11:00                               |          |              |                               |                 |
| Chloride                  | ND     | 3.0   | mg/L     | MCAWW 300.0A | 09/02/09                      | 9246117         |
|                           |        | Work Order #: LKA891AA MB Lot-Sample #: D9I030000-117 |          |              |                               |                 |
|                           |        | Dilution Factor: 1                                    |          |              |                               |                 |
|                           |        | Analysis Time...: 22:42                               |          |              |                               |                 |
| Fluoride                  | ND     | 0.50  | mg/L     | MCAWW 300.0A | 09/02/09                      | 9246118         |
|                           |        | Work Order #: LKA841AA MB Lot-Sample #: D9I030000-118 |          |              |                               |                 |
|                           |        | Dilution Factor: 1                                    |          |              |                               |                 |
|                           |        | Analysis Time...: 22:42                               |          |              |                               |                 |
| Nitrate                   | ND     | 0.50  | mg/L     | MCAWW 300.0A | 09/02/09                      | 9246115         |
|                           |        | Work Order #: LKA9W1AA MB Lot-Sample #: D9I030000-115 |          |              |                               |                 |
|                           |        | Dilution Factor: 1                                    |          |              |                               |                 |
|                           |        | Analysis Time...: 22:42                               |          |              |                               |                 |
| Nitrite                   | ND     | 0.50  | mg/L     | MCAWW 300.0A | 09/02/09                      | 9246114         |
|                           |        | Work Order #: LKA9E1AA MB Lot-Sample #: D9I030000-114 |          |              |                               |                 |
|                           |        | Dilution Factor: 1                                    |          |              |                               |                 |
|                           |        | Analysis Time...: 22:42                               |          |              |                               |                 |
| Specific Conductance      | ND     | 2.0   | umhos/cm | SM18 2510 B  | 09/10/09                      | 9252072         |
|                           |        | Work Order #: LKK001AA MB Lot-Sample #: D9I090000-072 |          |              |                               |                 |
|                           |        | Dilution Factor: 1                                    |          |              |                               |                 |
|                           |        | Analysis Time...: 13:00                               |          |              |                               |                 |
| Sulfate                   | ND     | 5.0   | mg/L     | MCAWW 300.0A | 09/02/09                      | 9246113         |
|                           |        | Work Order #: LKA921AA MB Lot-Sample #: D9I030000-113 |          |              |                               |                 |
|                           |        | Dilution Factor: 1                                    |          |              |                               |                 |
|                           |        | Analysis Time...: 22:42                               |          |              |                               |                 |

(Continued on next page)



METHOD BLANK REPORT

General Chemistry

Client Lot #....: D9I020332

Matrix.....: WATER

| <u>PARAMETER</u>                                      | <u>RESULT</u> | <u>REPORTING</u><br><u>LIMIT</u> | <u>UNITS</u> | <u>METHOD</u> | <u>PREPARATION-</u><br><u>ANALYSIS DATE</u> | <u>PREP</u><br><u>BATCH #</u> |
|---|---------------|----------------------------------|--------------|---------------|---|-------------------------------|
| Total Dissolved Solids                                | ND            | 10                               | mg/L         | SM18 2540 C   | 09/03/09                                    | 9246257                       |
| Work Order #: LJ89T1AA MB Lot-Sample #: D9I030000-257 |               |                                  |              |               |   |                               |
| Dilution Factor: 1                                    |               |                                  |              |               |   |                               |
| Analysis Time...: 15:52                               |               |                                  |              |               |   |                               |

**NOTE(S) :**

Calculations are performed before rounding to avoid round-off errors in calculated results.

# LABORATORY CONTROL SAMPLE EVALUATION REPORT

## General Chemistry

Lot-Sample #...: D9I020332

Matrix.....: WATER

|                      | PERCENT<br>RECOVERY | RECOVERY<br>LIMITS  | RPD  | RPD<br>LIMITS           | METHOD        | PREPARATION-<br>ANALYSIS DATE | PREP<br>BATCH # |
|----------------------|---------------------|---|------|-------------------------|---------------|-------------------------------|-----------------|
| pH                   |                     | WO#:LKEAD1AA-LCS/LKEAD1AC-LCSD LCS Lot-Sample#: D9I030000-537 |      |                         |               |                               |                 |
|                      | 100 FT              | (97 - 102)  |      |                         | SM18 4500-H B | 09/03/09                      | 9246537         |
|                      | 100 FT              | (97 - 102)  | 0.0  | (0-5.0)                 | SM18 4500-H B | 09/03/09                      | 9246537         |
|                      |                     | Dilution Factor: 1  |      | Analysis Time...: 11:46 |               |                               |                 |
| Bromide              |                     | WO#:LKA9H1AC-LCS/LKA9H1AD-LCSD LCS Lot-Sample#: D9I030000-116 |      |                         |               |                               |                 |
|                      | 98                  | (90 - 110)  |      |                         | MCAWW 300.0A  | 09/02/09                      | 9246116         |
|                      | 98                  | (90 - 110)  | 0.20 | (0-10)                  | MCAWW 300.0A  | 09/02/09                      | 9246116         |
|                      |                     | Dilution Factor: 1  |      | Analysis Time...: 22:08 |               |                               |                 |
| Chloride             |                     | WO#:LKA891AC-LCS/LKA891AD-LCSD LCS Lot-Sample#: D9I030000-117 |      |                         |               |                               |                 |
|                      | 99                  | (90 - 110)  |      |                         | MCAWW 300.0A  | 09/02/09                      | 9246117         |
|                      | 99                  | (90 - 110)  | 0.20 | (0-10)                  | MCAWW 300.0A  | 09/02/09                      | 9246117         |
|                      |                     | Dilution Factor: 1  |      | Analysis Time...: 22:08 |               |                               |                 |
| Fluoride             |                     | WO#:LKA841AC-LCS/LKA841AD-LCSD LCS Lot-Sample#: D9I030000-118 |      |                         |               |                               |                 |
|                      | 101                 | (90 - 110)  |      |                         | MCAWW 300.0A  | 09/02/09                      | 9246118         |
|                      | 102                 | (90 - 110)  | 0.21 | (0-10)                  | MCAWW 300.0A  | 09/02/09                      | 9246118         |
|                      |                     | Dilution Factor: 1  |      | Analysis Time...: 22:08 |               |                               |                 |
| Nitrate              |                     | WO#:LKA9W1AC-LCS/LKA9W1AD-LCSD LCS Lot-Sample#: D9I030000-115 |      |                         |               |                               |                 |
|                      | 98                  | (90 - 110)  |      |                         | MCAWW 300.0A  | 09/02/09                      | 9246115         |
|                      | 99                  | (90 - 110)  | 0.30 | (0-10)                  | MCAWW 300.0A  | 09/02/09                      | 9246115         |
|                      |                     | Dilution Factor: 1  |      | Analysis Time...: 22:08 |               |                               |                 |
| Nitrite              |                     | WO#:LKA9E1AC-LCS/LKA9E1AD-LCSD LCS Lot-Sample#: D9I030000-114 |      |                         |               |                               |                 |
|                      | 100                 | (90 - 110)  |      |                         | MCAWW 300.0A  | 09/02/09                      | 9246114         |
|                      | 100                 | (90 - 110)  | 0.15 | (0-10)                  | MCAWW 300.0A  | 09/02/09                      | 9246114         |
|                      |                     | Dilution Factor: 1  |      | Analysis Time...: 22:08 |               |                               |                 |
| Specific Conductance |                     | WO#:LKK001AC-LCS/LKK001AD-LCSD LCS Lot-Sample#: D9I090000-072 |      |                         |               |                               |                 |
|                      | 101                 | (90 - 110)  |      |                         | SM18 2510 B   | 09/10/09                      | 9252072         |
|                      | 101                 | (90 - 110)  | 0.07 | (0-10)                  | SM18 2510 B   | 09/10/09                      | 9252072         |
|                      |                     | Dilution Factor: 1  |      | Analysis Time...: 13:00 |               |                               |                 |
| Sulfate              |                     | WO#:LKA921AC-LCS/LKA921AD-LCSD LCS Lot-Sample#: D9I030000-113 |      |                         |               |                               |                 |
|                      | 99                  | (90 - 110)  |      |                         | MCAWW 300.0A  | 09/02/09                      | 9246113         |
|                      | 99                  | (90 - 110)  | 0.36 | (0-10)                  | MCAWW 300.0A  | 09/02/09                      | 9246113         |
|                      |                     | Dilution Factor: 1  |      | Analysis Time...: 22:08 |               |                               |                 |

(Continued on next page)

# LABORATORY CONTROL SAMPLE EVALUATION REPORT

## General Chemistry

Lot-Sample #...: D9I020332

Matrix.....: WATER

| PARAMETER              | PERCENT<br>RECOVERY | RECOVERY<br>LIMITS             | RPD<br>LIMITS | METHOD                  | PREPARATION-<br>ANALYSIS DATE  | PREP<br>BATCH # |
|------------------------|---------------------|--------------------------------|---------------|-------------------------|--------------------------------|-----------------|
| Total Dissolved Solids |                     | WO#:LJ89T1AC-LCS/LJ89T1AD-LCSD |               |                         | LCS Lot-Sample#: D9I030000-257 |                 |
|                        | 97                  | (86 - 106)                     |               | SM18 2540 C             | 09/03/09                       | 9246257         |
|                        | 97                  | (86 - 106)                     | 0.20 (0-20)   | SM18 2540 C             | 09/03/09                       | 9246257         |
|                        |                     | Dilution Factor: 1             |               | Analysis Time...: 15:52 |                                |                 |

### NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

FT The associated analysis is recommended to be performed in the field.

# LABORATORY CONTROL SAMPLE DATA REPORT

## General Chemistry

Lot-Sample #...: D9I020332

Matrix.....: WATER

| PARAMETER            | SPIKE<br>AMOUNT | MEASURED<br>AMOUNT | UNITS    | PERCNT<br>RECVRY | RPD  | METHOD                         | PREPARATION-<br>ANALYSIS DATE  | PREP<br>BATCH # |
|----------------------|-----------------|--------------------|----------|------------------|------|--------------------------------|--------------------------------|-----------------|
| pH                   |                 |                    |          |                  |      |                                |                                |                 |
|                      |                 |                    |          |                  |      | WO#:LKEAD1AA-LCS/LKEAD1AC-LCSD | LCS Lot-Sample#: D9I030000-537 |                 |
|                      | 7.00            | 7.00               | FT       | No Units         | 100  | SM18 4500-H B                  | 09/03/09                       | 9246537         |
|                      | 7.00            | 7.00               | FT       | No Units         | 100  | 0.0 SM18 4500-H B              | 09/03/09                       | 9246537         |
|                      |                 |                    |          |                  |      | Dilution Factor: 1             | Analysis Time...: 11:46        |                 |
| Bromide              |                 |                    |          |                  |      | WO#:LKA9H1AC-LCS/LKA9H1AD-LCSD | LCS Lot-Sample#: D9I030000-116 |                 |
|                      | 5.00            | 4.90               | mg/L     | 98               |      | MCAWW 300.0A                   | 09/02/09                       | 9246116         |
|                      | 5.00            | 4.89               | mg/L     | 98               | 0.20 | MCAWW 300.0A                   | 09/02/09                       | 9246116         |
|                      |                 |                    |          |                  |      | Dilution Factor: 1             | Analysis Time...: 22:08        |                 |
| Chloride             |                 |                    |          |                  |      | WO#:LKA891AC-LCS/LKA891AD-LCSD | LCS Lot-Sample#: D9I030000-117 |                 |
|                      | 25.0            | 24.8               | mg/L     | 99               |      | MCAWW 300.0A                   | 09/02/09                       | 9246117         |
|                      | 25.0            | 24.7               | mg/L     | 99               | 0.20 | MCAWW 300.0A                   | 09/02/09                       | 9246117         |
|                      |                 |                    |          |                  |      | Dilution Factor: 1             | Analysis Time...: 22:08        |                 |
| Fluoride             |                 |                    |          |                  |      | WO#:LKA841AC-LCS/LKA841AD-LCSD | LCS Lot-Sample#: D9I030000-118 |                 |
|                      | 5.00            | 5.07               | mg/L     | 101              |      | MCAWW 300.0A                   | 09/02/09                       | 9246118         |
|                      | 5.00            | 5.08               | mg/L     | 102              | 0.21 | MCAWW 300.0A                   | 09/02/09                       | 9246118         |
|                      |                 |                    |          |                  |      | Dilution Factor: 1             | Analysis Time...: 22:08        |                 |
| Nitrate              |                 |                    |          |                  |      | WO#:LKA9W1AC-LCS/LKA9W1AD-LCSD | LCS Lot-Sample#: D9I030000-115 |                 |
|                      | 5.00            | 4.92               | mg/L     | 98               |      | MCAWW 300.0A                   | 09/02/09                       | 9246115         |
|                      | 5.00            | 4.94               | mg/L     | 99               | 0.30 | MCAWW 300.0A                   | 09/02/09                       | 9246115         |
|                      |                 |                    |          |                  |      | Dilution Factor: 1             | Analysis Time...: 22:08        |                 |
| Nitrite              |                 |                    |          |                  |      | WO#:LKA9E1AC-LCS/LKA9E1AD-LCSD | LCS Lot-Sample#: D9I030000-114 |                 |
|                      | 5.00            | 5.01               | mg/L     | 100              |      | MCAWW 300.0A                   | 09/02/09                       | 9246114         |
|                      | 5.00            | 5.01               | mg/L     | 100              | 0.15 | MCAWW 300.0A                   | 09/02/09                       | 9246114         |
|                      |                 |                    |          |                  |      | Dilution Factor: 1             | Analysis Time...: 22:08        |                 |
| Specific Conductance |                 |                    |          |                  |      | WO#:LKK001AC-LCS/LKK001AD-LCSD | LCS Lot-Sample#: D9I090000-072 |                 |
|                      | 1410            | 1420               | umhos/cm | 101              |      | SM18 2510 B                    | 09/10/09                       | 9252072         |
|                      | 1410            | 1420               | umhos/cm | 101              | 0.07 | SM18 2510 B                    | 09/10/09                       | 9252072         |
|                      |                 |                    |          |                  |      | Dilution Factor: 1             | Analysis Time...: 13:00        |                 |
| Sulfate              |                 |                    |          |                  |      | WO#:LKA921AC-LCS/LKA921AD-LCSD | LCS Lot-Sample#: D9I030000-113 |                 |
|                      | 25.0            | 24.7               | mg/L     | 99               |      | MCAWW 300.0A                   | 09/02/09                       | 9246113         |
|                      | 25.0            | 24.6               | mg/L     | 99               | 0.36 | MCAWW 300.0A                   | 09/02/09                       | 9246113         |
|                      |                 |                    |          |                  |      | Dilution Factor: 1             | Analysis Time...: 22:08        |                 |

(Continued on next page)

# LABORATORY CONTROL SAMPLE DATA REPORT

## General Chemistry

Lot-Sample #...: D9I020332

Matrix.....: WATER

| PARAMETER       | SPIKE<br>AMOUNT | MEASURED<br>AMOUNT | UNITS | PERCNT<br>RECVRY | RPD  | METHOD      | PREPARATION-<br>ANALYSIS DATE | PREP<br>BATCH # |
|-----------------|-----------------|--------------------|-------|------------------|------|-------------|-------------------------------|-----------------|
| Total Dissolved |                 |                    |       |                  |      |             |                               |                 |
| Solids          |                 |                    |       |                  |      |             |                               |                 |
|                 | 500             | 484                | mg/L  | 97               |      | SM18 2540 C | 09/03/09                      | 9246257         |
|                 | 500             | 483                | mg/L  | 97               | 0.20 | SM18 2540 C | 09/03/09                      | 9246257         |

WO#:LJ89T1AC-LCS/LJ89T1AD-LCSD LCS Lot-Sample#: D9I030000-257

Dilution Factor: 1 Analysis Time...: 15:52

### NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

FT The associated analysis is recommended to be performed in the field.

# MATRIX SPIKE SAMPLE EVALUATION REPORT

## General Chemistry

Client Lot #....: D9I020332

Matrix.....: WATER

Date Sampled....: 09/01/09 10:40 Date Received...: 09/02/09

| PARAMETER | PERCENT RECOVERY | RECOVERY LIMITS | RPD  | RPD LIMITS | METHOD       | PREPARATION- ANALYSIS DATE | PREP BATCH # |
|-----------|------------------|-----------------|--|------------|--------------|----------------------------|--------------|
| Bromide   |                  |                 | WO#: LJ8K91DQ-MS/LJ8K91DR-MSD MS Lot-Sample #: D9I020332-001 |            |              |                            |              |
|           | 102              | (80 - 120)      |  |            | MCAWW 300.0A | 09/02/09                   | 9246116      |
|           | 103              | (80 - 120)      | 0.88   | (0-20)     | MCAWW 300.0A | 09/02/09                   | 9246116      |
|           |                  |                 | Dilution Factor: 1   |            |              |                            |              |
|           |                  |                 | Analysis Time...: 23:16                                      |            |              |                            |              |
| Chloride  |                  |                 | WO#: LJ7291CX-MS/LJ7291C0-MSD MS Lot-Sample #: D9I020253-001 |            |              |                            |              |
|           | 105 I            | (80 - 120)      |  |            | MCAWW 300.0A | 09/02-09/03/09             | 9247301      |
|           | 104 I            | (80 - 120)      | 0.27   | (0-20)     | MCAWW 300.0A | 09/02-09/03/09             | 9247301      |
|           |                  |                 | Dilution Factor: 10  |            |              |                            |              |
|           |                  |                 | Analysis Time...: 02:37                                      |            |              |                            |              |
| Fluoride  |                  |                 | WO#: LJ8K91DJ-MS/LJ8K91DK-MSD MS Lot-Sample #: D9I020332-001 |            |              |                            |              |
|           | 96               | (80 - 120)      |  |            | MCAWW 300.0A | 09/02/09                   | 9246118      |
|           | 97               | (80 - 120)      | 0.54   | (0-20)     | MCAWW 300.0A | 09/02/09                   | 9246118      |
|           |                  |                 | Dilution Factor: 1   |            |              |                            |              |
|           |                  |                 | Analysis Time...: 23:16                                      |            |              |                            |              |
| Nitrate   |                  |                 | WO#: LJ8K91DT-MS/LJ8K91DU-MSD MS Lot-Sample #: D9I020332-001 |            |              |                            |              |
|           | 102              | (80 - 120)      |  |            | MCAWW 300.0A | 09/02/09                   | 9246115      |
|           | 103              | (80 - 120)      | 0.95   | (0-20)     | MCAWW 300.0A | 09/02/09                   | 9246115      |
|           |                  |                 | Dilution Factor: 1   |            |              |                            |              |
|           |                  |                 | Analysis Time...: 23:16                                      |            |              |                            |              |
| Nitrite   |                  |                 | WO#: LJ8K91DN-MS/LJ8K91DP-MSD MS Lot-Sample #: D9I020332-001 |            |              |                            |              |
|           | 103              | (80 - 120)      |  |            | MCAWW 300.0A | 09/02/09                   | 9246114      |
|           | 104              | (80 - 120)      | 0.94   | (0-20)     | MCAWW 300.0A | 09/02/09                   | 9246114      |
|           |                  |                 | Dilution Factor: 1   |            |              |                            |              |
|           |                  |                 | Analysis Time...: 23:16                                      |            |              |                            |              |
| Sulfate   |                  |                 | WO#: LJ8K91DV-MS/LJ8K91DW-MSD MS Lot-Sample #: D9I020332-001 |            |              |                            |              |
|           | 99               | (80 - 120)      |  |            | MCAWW 300.0A | 09/02/09                   | 9246113      |
|           | 100              | (80 - 120)      | 1.1  | (0-20)     | MCAWW 300.0A | 09/02/09                   | 9246113      |
|           |                  |                 | Dilution Factor: 1   |            |              |                            |              |
|           |                  |                 | Analysis Time...: 23:16                                      |            |              |                            |              |

### NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

I Estimated result. Result concentration exceeds the calibration range.

# MATRIX SPIKE SAMPLE DATA REPORT

## General Chemistry

Client Lot #...: D9I020332

Matrix.....: WATER

Date Sampled...: 09/01/09 10:40 Date Received...: 09/02/09

| PARAMETER  | SAMPLE AMOUNT | SPIKE AMT | MEASRD AMOUNT | UNITS | PERCNT RECVRY | RPD  | METHOD       | PREPARATION- ANALYSIS DATE | PREP BATCH # |
|--|---------------|-----------|---------------|-------|---------------|------|--------------|----------------------------|--------------|
| Bromide  |               |           |               |       |               |      |              |                            |              |
| WO#: LJ8K91DQ-MS/LJ8K91DR-MSD MS Lot-Sample #: D9I020332-001 |               |           |               |       |               |      |              |                            |              |
|  | 0.55          | 5.00      | 5.64          | mg/L  | 102           |      | MCAWW 300.0A | 09/02/09                   | 9246116      |
|  | 0.55          | 5.00      | 5.69          | mg/L  | 103           | 0.88 | MCAWW 300.0A | 09/02/09                   | 9246116      |
| Dilution Factor: 1   |               |           |               |       |               |      |              |                            |              |
| Analysis Time...: 23:16                                      |               |           |               |       |               |      |              |                            |              |
| Chloride   |               |           |               |       |               |      |              |                            |              |
| WO#: LJ7291CX-MS/LJ7291C0-MSD MS Lot-Sample #: D9I020253-001 |               |           |               |       |               |      |              |                            |              |
|  | 490           | 250       | 757 I         | mg/L  | 105           |      | MCAWW 300.0A | 09/02-09/03/09             | 9247301      |
|  | 490           | 250       | 755 I         | mg/L  | 104           | 0.27 | MCAWW 300.0A | 09/02-09/03/09             | 9247301      |
| Dilution Factor: 10  |               |           |               |       |               |      |              |                            |              |
| Analysis Time...: 02:37                                      |               |           |               |       |               |      |              |                            |              |
| Fluoride   |               |           |               |       |               |      |              |                            |              |
| WO#: LJ8K91DJ-MS/LJ8K91DK-MSD MS Lot-Sample #: D9I020332-001 |               |           |               |       |               |      |              |                            |              |
|  | 2.7           | 5.00      | 7.52          | mg/L  | 96            |      | MCAWW 300.0A | 09/02/09                   | 9246118      |
|  | 2.7           | 5.00      | 7.56          | mg/L  | 97            | 0.54 | MCAWW 300.0A | 09/02/09                   | 9246118      |
| Dilution Factor: 1   |               |           |               |       |               |      |              |                            |              |
| Analysis Time...: 23:16                                      |               |           |               |       |               |      |              |                            |              |
| Nitrate  |               |           |               |       |               |      |              |                            |              |
| WO#: LJ8K91DT-MS/LJ8K91DU-MSD MS Lot-Sample #: D9I020332-001 |               |           |               |       |               |      |              |                            |              |
|  | ND            | 5.00      | 5.13          | mg/L  | 102           |      | MCAWW 300.0A | 09/02/09                   | 9246115      |
|  | ND            | 5.00      | 5.18          | mg/L  | 103           | 0.95 | MCAWW 300.0A | 09/02/09                   | 9246115      |
| Dilution Factor: 1   |               |           |               |       |               |      |              |                            |              |
| Analysis Time...: 23:16                                      |               |           |               |       |               |      |              |                            |              |
| Nitrite  |               |           |               |       |               |      |              |                            |              |
| WO#: LJ8K91DN-MS/LJ8K91DP-MSD MS Lot-Sample #: D9I020332-001 |               |           |               |       |               |      |              |                            |              |
|  | ND            | 5.00      | 5.14          | mg/L  | 103           |      | MCAWW 300.0A | 09/02/09                   | 9246114      |
|  | ND            | 5.00      | 5.19          | mg/L  | 104           | 0.94 | MCAWW 300.0A | 09/02/09                   | 9246114      |
| Dilution Factor: 1   |               |           |               |       |               |      |              |                            |              |
| Analysis Time...: 23:16                                      |               |           |               |       |               |      |              |                            |              |
| Sulfate  |               |           |               |       |               |      |              |                            |              |
| WO#: LJ8K91DV-MS/LJ8K91DW-MSD MS Lot-Sample #: D9I020332-001 |               |           |               |       |               |      |              |                            |              |
|  | ND            | 25.0      | 24.7          | mg/L  | 99            |      | MCAWW 300.0A | 09/02/09                   | 9246113      |
|  | ND            | 25.0      | 25.0          | mg/L  | 100           | 1.1  | MCAWW 300.0A | 09/02/09                   | 9246113      |
| Dilution Factor: 1   |               |           |               |       |               |      |              |                            |              |
| Analysis Time...: 23:16                                      |               |           |               |       |               |      |              |                            |              |

### NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

I Estimated result. Result concentration exceeds the calibration range.

# SAMPLE DUPLICATE EVALUATION REPORT

## General Chemistry

Client Lot #...: D9I020332

Work Order #...: LJ60T-SMP  
LJ60T-DUP

Matrix.....: WATER

Date Sampled...: 09/01/09 14:39 Date Received...: 09/02/09

| PARAM                          | RESULT | DUPLICATE<br>RESULT | UNITS | RPD | RPD<br>LIMIT | METHOD                  | PREPARATION-<br>ANALYSIS DATE | PREP<br>BATCH # |
|--------------------------------|--------|---------------------|-------|-----|--------------|-------------------------|-------------------------------|-----------------|
| Total Dissolved Solids         | 1000   | 1000                | mg/L  | 1.0 | (0-20)       | SM18 2540 C             | 09/03/09                      | 9246257         |
| Dilution Factor: 1             |        |                     |       |     |              | Analysis Time...: 15:52 |                               |                 |
| SD Lot-Sample #: D9I020123-001 |        |                     |       |     |              |                         |                               |                 |



# SAMPLE DUPLICATE EVALUATION REPORT

## General Chemistry

Client Lot #...: D9I020332

Work Order #...: LJ2G3-SMP  
LJ2G3-DUP

Matrix.....: WATER

Date Sampled...: 08/27/09 16:40

Date Received...: 08/29/09

| PARAM                | RESULT | DUPLICATE<br>RESULT | UNITS    | RPD                | RPD<br>LIMIT            | METHOD  | PREPARATION-<br>ANALYSIS DATE | PREP<br>BATCH # |
|----------------------|--------|---------------------|----------|--------------------|-------------------------|---|-------------------------------|-----------------|
| Specific Conductance | 480    | 480                 | umhos/cm | 0.21               | (0-10)                  | SD Lot-Sample #: D9H290134-009<br>SM18 2510 B | 09/10/09                      | 9252072         |
|                      |        |                     |          | Dilution Factor: 1 | Analysis Time...: 13:00 |   |                               |                 |

