# 1RP-1554

# Groundwater Sampling Report

Appendix &C
Lab Analysis

DATE:
March 29, 2012
2014

# APPENDIX C LABORATORY ANALYSIS



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# Analytical and Quality Control Report

Gary Miller Highlander Environmental Services 1910 N. Big Spring Street Midland, TX, 79705

Report Date: June 12, 2007

Work Order:

Project Location:

Chaves Co. NM

Project Name:

Celero Energy-Rock Queen ESA

Project Number:

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

|        |                        |        | Date       | 111116 | Daic       |
|--------|------------------------|--------|------------|--------|------------|
| Sample | Description            | Matrix | Taken      | Taken  | Received   |
| 125990 | Tract 1, T.B. #1- MW-1 | water  | 2007-05-29 | 18:15  | 2007-05-31 |

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 15 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director

#### Standard Flags

B - The sample contains less than ten times the concentration found in the method blank.

2972

Work Order: 7053116 Celero Energy-Rock Queen ESA

Analytical Report

Sample: 125990 - Tract 1, T.B. #1- MW-1

Analysis: Alkalinity
QC Batch: 37942
Prep Batch: 32856

Analytical Method: SM 2320B Date Analyzed: 2007-06-06 Sample Preparation: 2007-06-06 Prep Method: N/A Analyzed By: JS Prepared By: SM

Page Number: 2 of 15

Chaves Co. NM

|                        |      | RL     |               |          |      |
|------------------------|------|--------|---------------|----------|------|
| Parameter              | Flag | Result | Units         | Dilution | RL   |
| Hydroxide Alkalinity   |      | <1.00  | mg/L as CaCo3 | 1        | 1.00 |
| Carbonate Alkalinity   |      | < 1.00 | mg/L as CaCo3 | 1        | 1.00 |
| Bicarbonate Alkalinity |      | 154    | mg/L as CaCo3 | 1        | 4.00 |
| Total Alkalinity       |      | 154    | mg/L as CaCo3 | 11       | 4.00 |

Sample: 125990 - Tract 1, T.B. #1- MW-1

Analysis: BTEX QC Batch: 37858 Prep Batch: 32791 Analytical Method: S 8021B Date Analyzed: 2007-06-05 Sample Preparation: 2007-06-05 Prep Method: S 5030B Analyzed By: MT Prepared By: MT

|              |      | KL        |             |          |         |
|--------------|------|-----------|-------------|----------|---------|
| Parameter    | Flag | Result    | Units       | Dilution | RL      |
| MTBE         |      | < 0.00500 | mg/L        | 5        | 0.00100 |
| Benzene      |      | < 0.00500 | mg/L        | 5        | 0.00100 |
| Toluene      |      | < 0.00500 | ${ m mg/L}$ | 5        | 0.00100 |
| Ethylbenzene |      | < 0.00500 | m mg/L      | 5        | 0.00100 |
| Xylene       |      | < 0.00500 | mg/L        | 5        | 0.00100 |

|                              |      |        |       |          | Spike  | Percent  | Recovery   |
|------------------------------|------|--------|-------|----------|--------|----------|------------|
| Surrogate                    | Flag | Result | Units | Dilution | Amount | Recovery | Limits     |
| Trifluorotoluene (TFT)       |      | 0.487  | mg/L  | 5        | 0.500  | 97       | 78.1 - 112 |
| 4-Bromofluorobenzene (4-BFB) |      | 0.411  | mg/L  | 5        | 0.500  | 82       | 63.1 - 120 |

Sample: 125990 - Tract 1, T.B. #1- MW-1

Analysis: Cations QC Batch: 38016 Prep Batch: 32743 Analytical Method: S 6010B
Date Analyzed: 2007-06-09
Sample Preparation: 2007-06-04

Prep Method: S 3005A Analyzed By: TP Prepared By: KV

|                     |      | RL     |       |          |       |
|---------------------|------|--------|-------|----------|-------|
| Parameter           | Flag | Result | Units | Dilution | RL    |
| Dissolved Calcium   |      | 2170   | mg/L  | 100      | 0.500 |
| Dissolved Potassium |      | 1380   | mg/L  | 100      | 0.500 |
| Dissolved Magnesium |      | 3320   | mg/L  | 100      | 0.500 |
| Dissolved Sodium    |      | 75500  | mg/L  | 1000     | 0.500 |

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Work Order: 7053116 Celero Energy-Rock Queen ESA Page Number: 3 of 15 Chaves Co. NM

Sample: 125990 - Tract 1, T.B. #1- MW-1

Analysis: QC Batch: Prep Batch: Chloride (IC)

38024

Analytical Method: Date Analyzed:

E 300.0 2007-06-08 Sample Preparation: 2007-06-08

Prep Method: N/A Analyzed By: ERPrepared By: ER

RL

Parameter Flag Chloride

32926

Result 146000 Units mg/L Dilution 10000

RL0.500

Sample: 125990 - Tract 1, T.B. #1- MW-1

Analysis: QC Batch: Prep Batch: Hardness 38029 32755

Analytical Method: Date Analyzed:

S 6010B 2007-06-11 2007-06-04 Prep Method: N/A Analyzed By: TP

Sample Preparation:

Prepared By: TS

RL

Parameter Hardness (by ICP) Flag

Result 17400 mg eq CaCO3/L Dilution

Dilution

Dilution

1

100

RL

0.00

RL

0.500

SM

0.00

Sample: 125990 - Tract 1, T.B. #1- MW-1

Analysis: QC Batch: Prep Batch: Ion Chromatography

38024 32926 Analytical Method: Date Analyzed:

E 300.0 2007-06-08 2007-06-08

Units

Prep Method: N/A Analyzed By: ER

Result

2290

Parameter Flag Sulfate

RL

Sample Preparation:

Prepared By:  $\mathbf{E}\mathbf{R}$ 

Sample: 125990 - Tract 1, T.B. #1- MW-1

Analysis: QC Batch: Prep Batch:

37839 a 32776

Analytical Method: Date Analyzed:

Sample Preparation:

SM 4500-H+ 2007-06-01 2007-06-01

Units

mg/L

Prep Method: N/A Analyzed By: SM

aran in lab

Parameter pΗ

RLResult 6.61

Units

s.u.

Prepared By:

RL

Sample: 125990 - Tract 1, T.B. #1- MW-1

Flag

Analysis: QC Batch: TDS 37789 Analytical Method: Date Analyzed:

SM 2540C 2007-06-04 Prep Method: N/A Analyzed By: AR AR

Prep Batch: 32739 Sample Preparation:

Prepared By:

2972

Work Order: 7053116 Celero Energy-Rock Queen ESA Page Number: 4 of 15 Chaves Co. NM

|                        | ,    | RL     |       |          |       |
|------------------------|------|--------|-------|----------|-------|
| Parameter              | Flag | Result | Units | Dilution | RL    |
| Total Dissolved Solids |      | 188300 | mg/L  | 100      | 10.00 |

Sample: 125990 - Tract 1, T.B. #1- MW-1

TPH DRO / Analysis: QC Batch: 37771

32726

Prep Batch:

Analytical Method: Date Analyzed:

Mod. 8015B 2007-06-01

Prep Method: N/A Analyzed By: AG 2007-06-01 Prepared By: AG

RLParameter Flag Result Units Dilution RL19.5 DRO mg/L 5.00

Sample Preparation:

|               |      |        |       |          | Spike  | Percent  | Recovery |
|---------------|------|--------|-------|----------|--------|----------|----------|
| Surrogate     | Flag | Result | Units | Dilution | Amount | Recovery | Limits   |
| n-Triacontane |      | 14.6   | mg/L  | 1        | 15.0   | 97       | 70 - 130 |

Sample: 125990 - Tract 1, T.B. #1- MW-1

Analysis: TPH GRO QC Batch: 37859 Prep Batch: 32791

Analytical Method: Date Analyzed:

S 8015B 2007-06-05 Sample Preparation: 2007-06-05 Prep Method: S 5030B Analyzed By: MTPrepared By: MT

RLParameter Flag Result Units Dilution RLGRO < 0.500 mg/L 5 0.100

|                              |        |        |       |          | Spike  | Percent  | Recovery   |
|------------------------------|--------|--------|-------|----------|--------|----------|------------|
| Surrogate                    | _ Flag | Result | Units | Dilution | Amount | Recovery | Limits     |
| Trifluorotoluene (TFT)       |        | 0.534  | mg/L  | 5        | 0.500  | 107      | 72.8 - 107 |
| 4-Bromofluorobenzene (4-BFB) |        | 0.435  | mg/L  | 5        | 0.500  | 87       | 71 - 110   |

Method Blank (1)

QC Batch: 37771

QC Batch: 37771 Prep Batch: 32726 Date Analyzed: 2007-06-01 QC Preparation: 2007-06-01 Analyzed By: AG Prepared By: MS

MDL Parameter Flag RLResult Units DRO < 2.61 mg/L

|               |      |        |       |          | Spike  | Percent  | Recovery |
|---------------|------|--------|-------|----------|--------|----------|----------|
| Surrogate     | Flag | Result | Units | Dilution | Amount | Recovery | Limits   |
| n-Triacontane |      | 14.0   | mg/L  | 1        | 15.0   | 93       | 70 - 130 |

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Work Order: 7053116 Celero Energy-Rock Queen ESA Page Number: 5 of 15 Chaves Co. NM

Method Blank (1)

QC Batch: 37789

QC Batch: 37789 Prep Batch: 32739

37789

Date Analyzed: 2007-06-04 QC Preparation: 2007-06-04 Analyzed By: AR Prepared By: AR

MDL

Method Blank (1)

QC Batch: 37858

QC Batch: 37858 Prep Batch: 32791 Date Analyzed: 2007-06-05 QC Preparation: 2007-06-05 Analyzed By: MT Prepared By: MT

MDL

Flag Parameter Result Units RLMTBE < 0.000470 mg/L 0.01 Benzene < 0.000247 mg/L 0.001Toluene mg/L 0.001< 0.000257 Ethylbenzene < 0.000336 mg/L 0.001 Xylene < 0.000218 mg/L 0.001

|                              |      |        |       |          | Spike  | Percent  | Recovery   |
|------------------------------|------|--------|-------|----------|--------|----------|------------|
| Surrogate                    | Flag | Result | Units | Dilution | Amount | Recovery | Limits     |
| Trifluorotoluene (TFT)       |      | 0.0836 | mg/L  | i        | 0.100  | 84       | 77.3 - 113 |
| 4-Bromofluorobenzene (4-BFB) | •    | 0.0867 | mg/L  | 1        | 0.100  | 87       | 77.2 - 116 |

Method Blank (1)

QC Batch: 37859

QC Batch: 37859 Prep Batch: 32791 Date Analyzed: 2007-06-05

Analyzed By: MT

QC Preparation: 2007-06-05

Prepared By: MT

|                              |      |        |       |          | Spike  | Percent  | Recovery   |
|------------------------------|------|--------|-------|----------|--------|----------|------------|
| Surrogate                    | Flag | Result | Units | Dilution | Amount | Recovery | Limits     |
| Trifluorotoluene (TFT)       |      | 0.0906 | mg/L  | 1        | 0.100  | 91       | 68 - 117   |
| 4-Bromofluorobenzene (4-BFB) |      | 0.0913 | mg/L  | 1        | 0.100  | 91       | 75.8 - 110 |

Method Blank (1)

QC Batch: 37942

QC Batch: 37942 Prep Batch: 32856 Date Analyzed: 2007-06-06 QC Preparation: 2007-06-06 Analyzed By: JS Prepared By: JS

 $continued \dots$ 

Report Date: June 12, 2007 .

2972

Work Order: 7053116 Celero Energy-Rock Queen ESA Page Number: 6 of 15 Chaves Co. NM

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|--------|------------|-----------|--|
| method | $n_{lank}$ | сопитиеа  |  |

|                        |                 | MDL     |               |    |
|------------------------|-----------------|---------|---------------|----|
| Parameter              | $\mathbf{Flag}$ | Result  | Units         | RL |
| Bicarbonate Alkalinity |                 | · <4.00 | mg/L as CaCo3 | 4  |
| Total Alkalinity       |                 | <4.00   | mg/L as CaCo3 | 4  |

# Method Blank (1)

QC Batch: 38016

| QC Batch:   | 38016 |
|-------------|-------|
| Prep Batch: | 32743 |

Date Analyzed: 2007-06-09 QC Preparation: 2007-06-04 Analyzed By: TP Prepared By: KV

|                     |      | MDL      |       |     |
|---------------------|------|----------|-------|-----|
| Parameter           | Flag | Result   | Units | RL  |
| Dissolved Calcium   |      | < 0.0290 | mg/L  | 0.5 |
| Dissolved Potassium |      | < 0.307  | mg/L  | 0.5 |
| Dissolved Magnesium |      | < 0.0740 | mg/L  | 0.5 |
| Dissolved Sodium    |      | < 0.529  | mg/L  | 0.5 |

# Method Blank (1)

QC Batch: 38024

| QC Batch:   | 38024 |
|-------------|-------|
| Prep Batch: | 32926 |

Date Analyzed: QC Preparation: 2007-06-08

2007-06-08

Analyzed By: ER Prepared By: ER

|           |      | •                    |       |     |
|-----------|------|----------------------|-------|-----|
|           |      | $\operatorname{MDL}$ |       |     |
| Parameter | Flag | Result               | Units | RL  |
| Chloride  |      | < 0.172              | mg/L  | 0.5 |

# Method Blank (1)

QC Batch: 38024

QC Batch: 38024 Prep Batch: 32926 Date Analyzed: QC Preparation: 2007-06-08

2007-06-08

Analyzed By: ER Prepared By: ER

|           |      | MDL     |       |     |
|-----------|------|---------|-------|-----|
| Parameter | Flag | Result  | Units | RL  |
| Sulfate   |      | < 0.777 | mg/L  | 0.5 |

# Duplicates (1)

QC Batch: Prep Batch: 32739

37789

Date Analyzed:

2007-06-04 QC Preparation: 2007-06-04 Analyzed By: AR Prepared By: AR

|                        | Duplicate | Sample |       |          |     | RPD   |
|------------------------|-----------|--------|-------|----------|-----|-------|
| Param                  | Result    | Result | Units | Dilution | RPD | Limit |
| Total Dissolved Solids | 1685      | 1590   | mg/L  | 5        | 6   | 20    |

2972

Work Order: 7053116 Celero Energy-Rock Queen ESA Page Number: 7 of 15 Chaves Co. NM

Duplicates (1)

QC Batch: Prep Batch: 32776

37839

Date Analyzed:

2007-06-01

Analyzed By: SM

QC Preparation: 2007-06-01

Prepared By: SM

|       | Duplicate | Sample |       |          | ,   | RPD   |
|-------|-----------|--------|-------|----------|-----|-------|
| Param | Result    | Result | Units | Dilution | RPD | Limit |
| pН    | 8.52      | 8.50   | s.u.  | 1        | 0   | 0.8   |

Duplicates (1)

QC Batch:

37942 Prep Batch: 32856 Date Analyzed:

2007-06-06 QC Preparation: 2007-06-06 Analyzed By: JS

Prepared By: JS

| Param                  | Duplicate<br>Result | Sample<br>Result | Units         | Dilution | RPD | RPD<br>Limit |
|------------------------|---------------------|------------------|---------------|----------|-----|--------------|
| Hydroxide Alkalinity   | <1.00               | <1.00            | mg/L as CaCo3 | 1        | 0   | 20           |
| Carbonate Alkalinity   | < 1.00              | < 1.00           | mg/L as CaCo3 | 1        | 0   | 20           |
| Bicarbonate Alkalinity | 480                 | 492              | mg/L as CaCo3 | 1        | 2   | 20           |
| Total Alkalinity       | 480                 | 492              | mg/L as CaCo3 | 1        | 2   | 20           |

Laboratory Control Spike (LCS-1)

QC Batch:

37771 Prep Batch: 32726 Date Analyzed: QC Preparation:

2007-06-01 2007-06-01

Analyzed By: AG

Prepared By: MS

|       | LCS      |       |      | Spike  | Matrix |      | Rec.     |
|-------|----------|-------|------|--------|--------|------|----------|
| Param | Result . | Units | Dil. | Amount | Result | Rec. | Limit    |
| DRO   | 31.1     | mg/L  | 1    | 25.0   | < 2.61 | 124  | 70 - 130 |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|       | LCSD   |       |      | Spike  | Matrix |      | Rec.     |     | RPD   |
|-------|--------|-------|------|--------|--------|------|----------|-----|-------|
| Param | Result | Units | Dil. | Amount | Result | Rec. | Limit    | RPD | Limit |
| DRO   | 28.8   | mg/L  | 1    | 25.0   | < 2.61 | 115  | 70 - 130 | 8   | 20    |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|               | LCS    | LCSD   |       |      | Spike  | LCS  | LCSD | Rec.     |
|---------------|--------|--------|-------|------|--------|------|------|----------|
| Surrogate     | Result | Result | Units | Dil. | Amount | Rec. | Rec. | Limit    |
| n-Triacontane | 16.0   | 12.0   | mg/L  | 1    | 15.0   | 107  | 80   | 70 - 130 |

Laboratory Control Spike (LCS-1)

QC Batch: Prep Batch: 32791

37858

Date Analyzed:

2007-06-05

Analyzed By: MT

QC Preparation: 2007-06-05

Prepared By: MT

|       | LCS    |       |      | Spike  | Matrix     |      | Rec.     |
|-------|--------|-------|------|--------|------------|------|----------|
| Param | Result | Units | Dil. | Amount | Result     | Rec. | Limit    |
| MTBE  | 0.0900 | mg/L  | 1    | 0.100  | < 0.000470 | 90   | 76 - 117 |

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Work Order: 7053116 Celero Energy-Rock Queen ESA Page Number: 8 of 15 Chaves Co. NM

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|---------|---------|-----------|--|
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|              | LCS    |              |      | Spike  | Matrix     |             | ${ m Rec.}$ |
|--------------|--------|--------------|------|--------|------------|-------------|-------------|
| Param        | Result | Units        | Dil. | Amount | Result     | ${ m Rec.}$ | Limit       |
| Benzene      | 0.0916 | mg/L         | 1    | 0.100  | < 0.000247 | 92          | 82 - 118    |
| Toluene      | 0.0924 | $_{ m mg/L}$ | 1    | 0.100  | < 0.000257 | 92          | 81.4 - 118  |
| Ethylbenzene | 0.0946 | mg/L         | 1    | 0.100  | < 0.000336 | 95          | 81.5 - 120  |
| Xylene       | 0.290  | ${ m mg/L}$  | 1    | 0.300  | < 0.000218 | 97          | 82.2 - 121  |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|              | * | LCSD   |       |      | Spike  | Matrix     |      | Rec.       |     | RPD   |
|--------------|---|--------|-------|------|--------|------------|------|------------|-----|-------|
| Param        |   | Result | Units | Dil. | Amount | Result     | Rec. | Limit      | RPD | Limit |
| MTBE         |   | 0.0930 | mg/L  | 1    | 0.100  | < 0.000470 | 93   | 76 - 117   | 3   | 20    |
| Benzene      | , | 0.0934 | mg/L  | 1    | 0.100  | < 0.000247 | 93   | 82 - 118   | 2   | 20    |
| Toluene      |   | 0.0941 | mg/L  | 1    | 0.100  | < 0.000257 | 94   | 81.4 - 118 | 2   | 20    |
| Ethylbenzene |   | 0.0967 | mg/L  | 1    | 0.100  | < 0.000336 | 97   | 81.5 - 120 | 2   | 20    |
| Xylene       |   | 0.296  | mg/L  | 1    | 0.300  | < 0.000218 | 99   | 82.2 - 121 | 2   | 20.   |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|                              | LCS    | LCSD   |       |      | Spike  | LCS  | LCSD | Rec.       |
|------------------------------|--------|--------|-------|------|--------|------|------|------------|
| Surrogate                    | Result | Result | Units | Dil. | Amount | Rec. | Rec. | Limit      |
| Trifluorotoluene (TFT)       | 0.0820 | 0.0851 | mg/L  | . 1  | 0.100  | 82   | 85   | 75.7 - 113 |
| 4-Bromofluorobenzene (4-BFB) | 0.0900 | 0.0922 | mg/L  | 1    | 0.100  | 90   | 92   | 75.8 - 110 |

## Laboratory Control Spike (LCS-1)

QC Batch: Prep Batch: 32791

37859

Date Analyzed: QC Preparation: 2007-06-05

2007-06-05

Analyzed By: MT Prepared By: MT

|       | LCS    |       |      | Spike  | Matrix   |                 | Rec.          |
|-------|--------|-------|------|--------|----------|-----------------|---------------|
| Param | Result | Units | Dil. | Amount | Result   | $\mathrm{Re}c.$ | $_{ m Limit}$ |
| GRO   | 1.06   | mg/L  | 1    | 1.00   | < 0.0104 | 106             | 72 - 131      |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|       | LCSD   |       |      | Spike  | Matrix   |      | Rec.     |     | RPD   |
|-------|--------|-------|------|--------|----------|------|----------|-----|-------|
| Param | Result | Units | Dil. | Amount | Result   | Rec. | Limit    | RPD | Limit |
| GRO   | 1.04   | mg/L  | 1    | 1.00   | < 0.0104 | 104  | 72 - 131 | 2   | 20    |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|                              | LCS    | LCSD   |       |      | Spike  | LCS  | LCSD | Rec.       |
|------------------------------|--------|--------|-------|------|--------|------|------|------------|
| Surrogate                    | Result | Result | Units | Dil. | Amount | Rec. | Rec. | Limit      |
| Trifluorotoluene (TFT)       | 0.0983 | 0.0954 | mg/L  | 1    | 0.100  | 98   | 95   | 72.1 - 120 |
| 4-Bromofluorobenzene (4-BFB) | 0.103  | 0.0988 | mg/L  | 1    | 0.100  | 103  | 99   | 80.9 - 114 |

# Laboratory Control Spike (LCS-1)

QC Batch:

38016

Date Analyzed:

2007-06-09

Analyzed By: TP

Prep Batch: 32743

QC Preparation: 2007-06-04

Prepared By: KV

continued ...

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Work Order: 7053116 Celero Energy-Rock Queen ESA Page Number: 9 of 15 Chaves Co. NM

control spikes continued . . .

|                     | LCS    |       |      | Spike  | Matrix   |      | Rec.       |
|---------------------|--------|-------|------|--------|----------|------|------------|
| Param               | Result | Units | Dil. | Amount | Result   | Rec. | Limit      |
|                     | LCS    |       |      | Spike  | Matrix   |      | Rec.       |
| Param               | Result | Units | Dil. | Amount | Result   | Rec. | Limit      |
| Dissolved Calcium   | 51.6   | mg/L  | 1    | 50.0   | < 0.0290 | 103  | 79.1 - 121 |
| Dissolved Potassium | 51.0   | mg/L  | 1    | 50.0   | < 0.307  | 102  | 78.8 - 114 |
| Dissolved Magnesium | 50.6   | mg/L  | 1    | 50.0   | < 0.0740 | 101  | 80.2 - 120 |
| Dissolved Sodium    | 51.4   | mg/L  | 1    | 50.0   | < 0.529  | 103  | 79.4 - 123 |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|                     | LCSD   |       |      | Spike  | Matrix   |      | Rec.       |     | RPD   |
|---------------------|--------|-------|------|--------|----------|------|------------|-----|-------|
| Param               | Result | Units | Dil. | Amount | Result   | Rec. | Limit      | RPD | Limit |
| Dissolved Calcium   | 50.6   | mg/L  | 1    | 50.0   | < 0.0290 | 101  | 79.1 - 121 | 2   | 20    |
| Dissolved Potassium | 50.1   | mg/L  | 1    | 50.0   | < 0.307  | 100  | 78.8 - 114 | 2   | 20    |
| Dissolved Magnesium | 49.7   | mg/L  | 1    | 50.0   | < 0.0740 | 99   | 80.2 - 120 | 2   | 20    |
| Dissolved Sodium    | 50.3   | mg/L  | 1    | 50.0   | < 0.529  | 101  | 79.4 - 123 | 2   | 20    |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

# Laboratory Control Spike (LCS-1)

QC Batch: 38024 Prep Batch: 32926 Date Analyzed: 2007-06-08 QC Preparation: 2007-06-08 Analyzed By: ER Prepared By: ER

|          | LCS    |       |      | Spike  | Matrix  |      | Rec.     |
|----------|--------|-------|------|--------|---------|------|----------|
| Param    | Result | Units | Dil. | Amount | Result  | Rec. | Limit    |
| Chloride | 11.4   | mg/L  | 1    | 12.5   | < 0.172 | 91   | 90 - 110 |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|                   | LCSD   |       |      | Spike  | Matrix  |      | Rec.     |     | RPD   |
|-------------------|--------|-------|------|--------|---------|------|----------|-----|-------|
| Param             | Result | Units | Dil. | Amount | Result  | Rec. | Limit    | RPD | Limit |
| Chloride Chloride | 11.6   | mg/L  | 1    | 12.5   | < 0.172 | 93   | 90 - 110 | 2   | 20    |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

#### Laboratory Control Spike (LCS-1)

QC Batch: 38024 Prep Batch: 32926 Date Analyzed: 2007-06-08 QC Preparation: 2007-06-08 Analyzed By: ER Prepared By: ER

|         | LCS    |       |      | Spike  | Matrix  |      | Rec.     |
|---------|--------|-------|------|--------|---------|------|----------|
| Param   | Result | Units | Dil. | Amount | Result  | Rec. | Limit    |
| Sulfate | 12.2   | mg/L  | 1    | 12.5   | < 0.777 | 98   | 90 - 110 |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|         | LCSD   |       |      | Spike  | Matrix  |      | Rec.     |     | RPD   |
|---------|--------|-------|------|--------|---------|------|----------|-----|-------|
| Param   | Result | Units | Dil. | Amount | Result  | Rec. | Limit    | RPD | Limit |
| Sulfate | 12.3   | mg/L  | 1    | 12.5   | < 0.777 | 98   | 90 - 110 | 1   | 20    |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Work Order: 7053116

2972 Celero Energy-Rock Queen ESA Chaves Co. NM

Matrix Spike (MS-1)

Spiked Sample: 126260

QC Batch: Prep Batch: 32791

37859

Date Analyzed: 2007-06-05 QC Preparation: 2007-06-05 Analyzed By: MT

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Prepared By: MT

|       |   | MS     |       |      | Spike  | Matrix   |      | Rec.     |
|-------|---|--------|-------|------|--------|----------|------|----------|
| Param |   | Result | Units | Dil. | Amount | Result   | Rec. | Limit    |
| GRO   | 1 | 5.33   | mg/L  | 5    | 1.00   | < 0.0518 | 533  | 55 - 138 |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|       |   | MSD    |       |      | Spike  | Matrix   |      | Rec.     |     | RPD              |
|-------|---|--------|-------|------|--------|----------|------|----------|-----|------------------|
| Param |   | Result | Units | Dil. | Amount | Result   | Rec. | Limit    | RPD | $\mathbf{Limit}$ |
| GRO   | 2 | 5.85   | mg/L  | 5    | 1.00   | < 0.0518 | 585  | 55 - 138 | 9   | 20               |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|                                  | MS     | MSD    |       |      | Spike  | MS   | MSD  | Rec.       |
|----------------------------------|--------|--------|-------|------|--------|------|------|------------|
| Surrogate                        | Result | Result | Units | Dil. | Amount | Rec. | Rec. | Limit      |
| Trifluorotoluene (TFT)           | 0.522  | 0.517  | mg/L  | 5    | 0.5    | 104  | 103  | 75.5 - 111 |
| 4-Bromofluorobenzene (4-BFB) 3 4 | 0.514  | 0.552  | mg/L  | 5    | 0.5    | 103  | 110  | 92.3 - 102 |

Matrix Spike (MS-1)

Spiked Sample: 126000

QC Batch: 38016 Prep Batch: 32743

Date Analyzed: QC Preparation:

2007-06-09 2007-06-04 Analyzed By:

Prepared By:

| Param               |   | MS<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit |
|---------------------|---|--------------|-------|------|-----------------|------------------|------|---------------|
| Dissolved Calcium   | 5 | 78.3         | mg/L  | 1    | 50.0            | 6.22             | 144  | 69 - 130      |
| Dissolved Potassium |   | 57.9         | mg/L  | 1    | 50.0            | 1.54             | 113  | 76.8 - 117    |
| Dissolved Magnesium |   | 51.9         | mg/L  | 1    | 50.0            | < 0.0740         | 104  | 77.9 - 122    |
| Dissolved Sodium    |   | 51.8         | mg/L  | 1    | 50.0            | < 0.529          | 104  | 84.2 - 120    |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|                     |   | MSD    |              |      | Spike  | Matrix   |      | Rec.       |     | RPD   |
|---------------------|---|--------|--------------|------|--------|----------|------|------------|-----|-------|
| Param               |   | Result | Units        | Dil. | Amount | Result   | Rec. | Limit      | RPD | Limit |
| Dissolved Calcium   | 6 | 77.1   | mg/L         | 1    | 50.0   | 6.22     | 142  | 69 - 130   | 2.  | 20    |
| Dissolved Potassium |   | 57.3   | ${ m mg/L}$  | 1    | 50.0   | 1.54     | 112  | 76.8 - 117 | 1   | 20    |
| Dissolved Magnesium |   | 51.0   | $_{ m mg/L}$ | 1    | 50.0   | < 0.0740 | 102  | 77.9 - 122 | 2   | 20    |
| Dissolved Sodium    |   | 50.8   | mg/L         | 1    | 50.0   | < 0.529  | 102  | 84.2 - 120 | 2   | 20    |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 126999

QC Batch: 38024 Prep Batch: 32926 Date Analyzed: QC Preparation:

2007-06-08 2007-06-08 Analyzed By: ER Prepared By:

<sup>&</sup>lt;sup>1</sup>Matrix spike recovery out of control limits. Use LCS/LCSD to demonstrate analysis is under control.

<sup>&</sup>lt;sup>2</sup>Matrix spike recovery out of control limits. Use LCS/LCSD to demonstrate analysis is under control. <sup>3</sup>Matrix spike recovery out of control limits. Use LCS/LCSD to demonstrate analysis is under control.

<sup>&</sup>lt;sup>4</sup>Matrix spike recovery out of control limits. Use LCS/LCSD to demonstrate analysis is under control.

<sup>&</sup>lt;sup>5</sup>Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

<sup>&</sup>lt;sup>6</sup>Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

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Work Order: 7053116 Celero Energy-Rock Queen ESA Page Number: 11 of 15 Chaves Co. NM

| 2312         |                | ·                    | CCICI     | O Dheigy-i | LOCK QUE  |              |           |            | Ontros    |            |
|--------------|----------------|----------------------|-----------|------------|-----------|--------------|-----------|------------|-----------|------------|
|              |                |                      | MS        |            |           | Spike        | Ma        | ıtrix      |           | Rec.       |
| Param        | •              |                      | esult     | Units      | Dil.      | Amount       |           |            | ec.       | Limit      |
| Chloride     |                | ¥                    | 126       | mg/L       | 5         | 62.5         | 54.       |            |           | 10 - 188   |
| Percent rec  | overv is based | on the spike resul   | t. RPD is |            | the spike | and spike di | plicate   | result.    |           |            |
|              |                | <u>-</u>             |           |            | -         | -            |           |            |           |            |
| _            |                | MSD                  |           |            | Spike     | Matrix       | _         | Rec.       |           | RPD        |
| Param        |                | Result               |           |            | Amount    | Result       | Rec.      | Limit      | RPD       | Limit      |
| Chloride     |                | 125                  | mg/L      |            | 62.5      | 54.1581      | 113       | 10 - 188   | 1         | 20         |
| Percent rec  | overy is based | l on the spike resul | t. RPD is | s based on | the spike | and spike di | iplicate: | result.    |           |            |
|              |                |                      |           |            |           |              |           |            |           |            |
| Matrix Sp    | oike (MS-1)    | Spiked Sample:       | 126999    |            |           |              |           |            |           |            |
| QC Batch:    | 38024          |                      | Date A    | Analyzed:  | 2007-06   | 5-08         |           | An         | alyzed B  | v: ER      |
| Prep Batch   |                |                      |           | eparation: |           |              | -         |            | epared B  |            |
| •            |                |                      | ·         | •          |           |              |           |            |           | ,          |
|              |                | ;                    | MS        |            |           | Spike        | Mat       | riv '      |           | Rec.       |
| Param        |                |                      | esult     | Units      | Dil.      | Amount       | Res       |            |           | Limit      |
| Sulfate      |                |                      | 193       | mg/L       | 5         | 62.5         | 124.      |            |           | 3.1 - 114  |
|              | overvie beed   | l on the spike resul |           |            |           | <del></del>  |           |            |           |            |
| rercent tec  | overy is based | i on the spike resul | t. RFD E  | s pased on | the spike | and spike di | ipiicate  | resurt.    |           |            |
|              |                | MSD                  |           |            | Spike     | Matrix       |           | Rec.       |           | RPD        |
| Param        |                | Result               | Units     | Dil.       | Amount    | Result       | Rec.      | Limit      | RPD       | Limit      |
| Sulfate      |                | 189                  | mg/L      | 5          | 62.5      | 124.44       | 103       | 83.1 - 114 | 2         | 20         |
| Percent rece | overy is based | l on the spike resul | t. RPD is | s based on | the spike | and spike du | plicate   | result.    |           |            |
|              | •              | _                    |           |            | -         | _            | -         |            |           |            |
| Standard     | (CCV-1)        |                      |           |            |           |              |           |            |           |            |
| Dumana       | (0011)         |                      |           |            |           |              |           |            |           |            |
| QC Batch:    | 37771          |                      | Date A    | Analyzed:  | 2007-06-0 | )1           |           | An         | alyzed By | y: AG      |
|              |                |                      | aa.       | G G        |           | G GT I       |           | <b>n</b> . |           |            |
|              |                |                      | CCVs      | CC         |           | CCVs         |           | Percent    |           | <b>D</b> . |
| D            | Ela a          | TT:4-                | True      | Four       |           | Percent      |           | Recovery   |           | Date       |
| Param        | Flag           | Units                | Conc.     | Con        |           | Recovery     |           | Limits     |           | nalyzed    |
| DRO          |                | mg/L                 | 250       | 26         | 4         | 105          |           | 85 - 115   | 200       | 07-06-01   |
|              | •              |                      |           |            |           |              |           |            |           |            |
| Standard (   | (CCV-2)        |                      |           |            |           |              |           |            |           |            |
| 00 0-4-1     | 02551          |                      | D. 1. 4   |            | 0007.00.0 | 11           |           |            | 1 .15     | 1.0        |
| QC Batch:    | 37771          |                      | Date A    | nalyzed:   | 2007-06-0 | )1           |           | Ana        | alyzed By | y: AG      |

| Standard | (CCV-2) |
|----------|---------|
|----------|---------|

|       |      |       | CCVs  | $\mathbf{CCVs}$ | CCVs     | Percent  |            |
|-------|------|-------|-------|-----------------|----------|----------|------------|
|       |      |       | True  | Found           | Percent  | Recovery | Date       |
| Param | Flag | Units | Conc. | Conc.           | Recovery | Limits   | Analyzed   |
| DRO   |      | mg/L  | 250   | 241             | 96       | 85 - 115 | 2007-06-01 |

Standard (ICV-1)

QC Batch: 37789

Date Analyzed: 2007-06-04

Analyzed By: AR

Work Order: 7053116 Celero Energy-Rock Queen ESA Page Number: 12 of 15 Chaves Co. NM

|                        |       |                       | ICVs      | ICVs      | ICVs      | Percent  |             |
|------------------------|-------|-----------------------|-----------|-----------|-----------|----------|-------------|
|                        |       |                       | True      | Found     | Percent   | Recovery | Date        |
| Param                  | Flag  | Units                 | Conc.     | Conc.     | Recovery  | Limits   | Analyzed    |
| Total Dissolved Solids |       | mg/L                  | 1000      | 1034      | 103       | 90 - 110 | 2007-06-04  |
| Standard (CCV-1)       |       |                       |           |           |           |          |             |
| QC Batch: 37789        |       | Date                  | Analyzed: | 2007-06-0 | 4         | Analy    | yzed By: AR |
|                        |       |                       | CCVs      | CCVs      | CCVs      | Percent  |             |
|                        |       |                       | True      | Found     | Percent   | Recovery | Date        |
| Param                  | Flag  | Units                 | Conc.     | Conc.     | Recovery  | Limits   | Analyzed    |
| Total Dissolved Solids |       | mg/L                  | 1000      | 1000      | 100       | 90 - 110 | 2007-06-04  |
| Standard (ICV-1)       |       |                       | ,         |           |           |          |             |
| QC Batch: 37839        |       | Date                  | Analyzed: | 2007-06-0 | 1         | Analy    | yzed By: SM |
|                        |       | ICVs                  | ICV       | /s        | ICVs      | Percent  |             |
|                        |       | $\operatorname{True}$ | Four      |           | Percent   | Recovery | Date        |
| Param Flag             | Units | Conc.                 | Con       |           | Recovery  | Limits   | Analyzed    |
| pH                     | s.u.  | 7.00                  | 7.1       | 0         | 101       | 98 - 102 | 2007-06-01  |
| Standard (CCV-1)       | ·     |                       |           |           |           |          | •           |
| QC Batch: 37839        |       | Date                  | Analyzed: | 2007-06-0 | 1         | Analy    | zed By: SM  |
|                        |       | CCVs                  | CC.       | Vs        | CCVs      | Percent  |             |
|                        |       | True                  | Four      |           | Percent   | Recovery | Date        |
| Param Flag             | Units | Conc.                 | Con       |           | Recovery. | Limits   | Analyzed    |
| Hq                     | s.u.  | 7.00                  | 7.1       | 2 ·       | 102       | 98 - 102 | 2007-06-01  |

QC Batch: 37858

Date Analyzed: 2007-06-05

Analyzed By: MT

|              |      |       | ICVs  | <b>ICVs</b> | ICVs     | Percent  |             |
|--------------|------|-------|-------|-------------|----------|----------|-------------|
|              |      |       | True  | Found       | Percent  | Recovery | Date        |
| Param        | Flag | Units | Conc. | Conc.       | Recovery | Limits   | Analyzed    |
| MTBE         |      | mg/L  | 0.100 | 0.0896      | 90       | 85 - 115 | 2007-06-05  |
| Benzene      |      | mg/L  | 0.100 | 0.0900      | 90       | 85 - 115 | 2007-06-05  |
| Toluene      |      | mg/L  | 0.100 | 0.0908      | 91       | 85 - 115 | 2007-06-05  |
| Ethylbenzene |      | mg/L  | 0.100 | 0.0930      | 93       | 85 - 115 | 2007-06-05. |
| Xylene       |      | mg/L  | 0.300 | 0.286       | 95       | 85 - 115 | 2007-06-05  |

Standard (CCV-1)

QC Batch: 37858

Date Analyzed: 2007-06-05

Analyzed By: MT

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Work Order: 7053116

Celero Energy-Rock Queen ESA

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Chaves Co. NM

**CCVs CCVs CCVs** Percent True Found Percent Recovery Date Param Flag Units Conc. Conc. Recovery Limits Analyzed MTBE mg/L 0.100 0.102 102 85 - 115 2007-06-05 Benzene mg/L 0.1000.0951 95 85 - 115 2007-06-05 Toluene mg/L 96 85 - 115 0.1000.0958 2007-06-05 Ethylbenzene mg/L 0.1000.0980 98 85 - 115 2007-06-05 Xylene mg/L 0.3000.298 99 85 - 115 2007-06-05

Standard (ICV-1)

QC Batch: 37859

Date Analyzed: 2007-06-05

Analyzed By: MT

|       | ,                     |       | ICVs   | ICVs - | ICVs     | Percent  |            |
|-------|-----------------------|-------|--------|--------|----------|----------|------------|
|       |                       |       | True . | Found  | Percent  | Recovery | Date       |
| Param | $\operatorname{Flag}$ | Units | Conc.  | Conc.  | Recovery | Limits   | Analyzed   |
| GRO   | ·····                 | mg/L  | 1.00   | 1.07   | 107      | 85 - 115 | 2007-06-05 |

Standard (CCV-1)

QC Batch: 37859

Date Analyzed: 2007-06-05

Analyzed By: MT

|       |      |       | CCVs  | CCVs  | $\mathbf{CCVs}$ | Percent  |            |
|-------|------|-------|-------|-------|-----------------|----------|------------|
|       |      |       | True  | Found | Percent         | Recovery | Date       |
| Param | Flag | Units | Conc. | Conc. | Recovery        | Limits   | Analyzed   |
| GRO   |      | mg/L  | 1.00  | 1.12  | 112             | 85 - 115 | 2007-06-05 |

Standard (ICV-1)

QC Batch: 37942

Date Analyzed: 2007-06-06

Analyzed By: JS

|                  |      |               | ICVs  | ICVs  | ICVs     | Percent  |            |
|------------------|------|---------------|-------|-------|----------|----------|------------|
|                  |      |               | True  | Found | Percent  | Recovery | Date       |
| Param            | Flag | Units         | Conc. | Conc. | Recovery | Limits   | Analyzed   |
| Total Alkalinity |      | mg/L as CaCo3 | 250   | 244   | 98       | 90 - 110 | 2007-06-06 |

Standard (CCV-1)

QC Batch: 37942

Date Analyzed: 2007-06-06

Analyzed By: JS

|                  |      |               | CCVs  | CCVs  | CCVs     | Percent  |            |
|------------------|------|---------------|-------|-------|----------|----------|------------|
|                  |      |               | True  | Found | Percent  | Recovery | Date       |
| Param            | Flag | Units         | Conc. | Conc. | Recovery | Limits   | Analyzed   |
| Total Alkalinity |      | mg/L as CaCo3 | 250   | 250   | 100      | 90 - 110 | 2007-06-06 |

Standard (ICV-1)

QC Batch: 38016

Date Analyzed: 2007-06-09

Analyzed By: TP

Report Date: June 12, 2007 2972

Work Order: 7053116 Celero Energy-Rock Queen ESA Page Number: 14 of 15 Chaves Co. NM

Analyzed By: ER

|                      |          |                       | •            | <b>ICVs</b> | ICVs             | ICVs      | Percent  |                  |
|----------------------|----------|-----------------------|--------------|-------------|------------------|-----------|----------|------------------|
|                      |          |                       |              | True        | Found            | Percent   | Recovery | Date             |
| Param                | -        | Flag                  | Units        | Conc.       | Conc.            | Recovery  | Limits   | Analyzed         |
| Dissolved Ca         | alcium   |                       | mg/L         | 50.0        | 50.2             | 100       | 90 - 110 | 2007-06-09       |
| Dissolved Po         |          |                       | mg/L         | 50.0        | 50.2             | 100       | 90 - 110 | 2007-06-09       |
| Dissolved M          | agnesium |                       | mg/L         | 50.0        | 50.4             | 101       | 90 - 110 | 2007-06-09       |
| Dissolved Sc         | odium    |                       | mg/L         | 50.0        | 49.8             | 100       | 90 - 110 | 2007-06-09       |
| Standard (           | (CCV-1)  |                       | ÷            |             |                  |           |          |                  |
| QC Batch:            | 38016    |                       | Date         | Analyzed:   | 2007-06-0        | 9         | Anal     | yzed By: TP      |
|                      |          |                       |              | CCVs        | CCVs             | CCVs      | Percent  |                  |
|                      |          |                       |              | True        | Found            | Percent   | Recovery | Date             |
| Param                |          | $\operatorname{Flag}$ | Units        | Conc.       | Conc.            | Recovery  | Limits   | Analyzed         |
| Dissolved Ca         | alcium   |                       | mg/L         | 50.0        | 53.1             | 106       | 90 - 110 | 2007-06-09       |
| Dissolved Po         | otassium |                       | ${ m mg/L}$  | 50.0        | 52.5             | 105       | 90 - 110 | 2007-06-09       |
| Dissolved M          | agnesium |                       | mg/L         | 50.0        | 52.6             | 105       | 90 - 110 | 2007-06-09       |
| Dissolved So         | odium    |                       | mg/L         | 50.0        | 51.9             | 104       | 90 - 110 | 2007-06-09       |
| Standard (           | ICV-1)   |                       |              |             |                  |           |          |                  |
| QC Batch:            |          | · .                   | Date         | Analyzed:   | 2007-06-0        | 98        | Anal     | yzed By: ER      |
| -                    |          |                       | ICVs         | _           | CVs              | ICVs      | Percent  | v v              |
|                      |          |                       | True         |             | ound             | Percent   | Recovery | Date             |
| Param                | Flag     | Units                 | Conc.        |             | onc.             | Recovery  | Limits   | Analyzed         |
| Chloride             |          | mg/L                  | 12.5         |             | 11.7             | 94        | 90 - 110 | 2007-06-08       |
| Standard (           | ICV-1)   |                       |              |             |                  |           |          |                  |
| QC Batch:            | 38024    |                       | Date         | Analyzed:   | 2007-06-0        | 8         | Anal     | yzed By: ER      |
|                      |          |                       | ICVs         | IC          | CVs              | ICVs      | Percent  |                  |
|                      |          |                       | True         | Fo          | und              | Percent   | Recovery | Date             |
| Param                | Flag     | Units                 | Conc.        | Co          | onc.             | Recovery  | Limits   | Analyzed         |
| Sulfate              |          | mg/L                  | 12.5         | 1           | 1.5              | 92        | 90 - 110 | 2007-06-08       |
|                      |          |                       |              |             |                  | •         |          |                  |
| Standard (           | CCV-1)   |                       | *            |             |                  |           |          |                  |
| Standard ( QC Batch: | ,        |                       | Date         | Analyzed:   | 2007-06-0        | . 8       | Analy    | yzed By: ER      |
| ,                    | ,        |                       | Date<br>CCVs | ·           | 2007-06-0<br>CVs | 8<br>CCVs | Anal     | yzed By: ER      |
| ,                    | ,        |                       |              | C           |                  |           | ٠.       | yzed By: ER Date |
| ,                    | ,        | Units                 | CCVs         | C<br>Fe     | CVs              | CCVs      | Percent  |                  |

# Standard (CCV-1)

QC Batch: 38024

Date Analyzed: 2007-06-08

Report Date: June 12, 2007 2972

Work Order: 7053116 Celero Energy-Rock Queen ESA Page Number: 15 of 15 Chaves Co. NM

|         |      |       | CCVs  | CCVs  | CCVs     | Percent  |            |
|---------|------|-------|-------|-------|----------|----------|------------|
|         |      |       | True  | Found | Percent  | Recovery | Date       |
| Param   | Flag | Units | Conc. | Conc. | Recovery | Limits   | Analyzed   |
| Sulfate |      | mg/L  | 12.5  | 11.9  | 95       | 90 - 110 | 2007-06-08 |

| Ana                     | lysi            | s Re     | aı                | 116       | 28        | t a                | $\overline{\mathbf{nd}}$ | Cł          | nai          | in           | of            | Ē        | Cust         | od              | V          | R        | e          | co   | r             | ì          |               |                 |           |             |             |                |                     | PAC          |                          |                |               |               |                        | OF:  |            | 1  |        | 1        |
|-------------------------|-----------------|----------|-------------------|-----------|-----------|--------------------|--------------------------|-------------|--------------|--------------|---------------|----------|--------------|-----------------|------------|----------|------------|------|---------------|------------|---------------|-----------------|-----------|-------------|-------------|----------------|---------------------|--------------|--------------------------|----------------|---------------|---------------|------------------------|--|------------|--|--------|----------|
|                         |                 |          |                   |           |           |                    |                          |             |              | ··           |               |          | ************ |                 | _          |          |            |      |               |            | $\dashv$      |                 |           |             | (Cir        |                |                     |              | IS R<br>ecify            |                |               |               | No.)                   | į  |            |  |        |          |
|                         | HIGI<br>2) 682- |          | 1V.               | 1         | 91        | N E<br>0 N<br>dlan | . Bi                     | g S         | Spr          | ing          | S             | t.       |              | ک را<br>Fax (   |            |          |            |      | 394           | 6          |               |                 | 50022     |             | Cr Ph Hg Se |                |                     |              |                          | 6              |               | eş.           |                        |  |            |  |        |          |
| CLIENT N                | eler            | · A      |                   |           |           |                    | SITE                     | AN          | AGE          | R: [/        |               |          |              |                 | ERS        |          | PF         |      | ERV!          | ATTVI      | E             |                 | ROD S     |             | S 8         |                |                     |              | 89/0                     | 0250/0220      |               | Chloride      |                        |  | ١          | 1  |        |          |
| PROJECT 2               |                 |          | PR                | OJE       | CT        | NAME:              | och                      | . Q         | ve           | +N           | E             | 5/3      | 2            |                 | CONTAINERS | (3/3)    |            |      |               |            | - 1           | Ans             | 13 (8016  | 1           | 17 B        |                | Voletiles           |              | 8840/888                 | - 1            | 308           | 138           | ,<br>26                | (Atr.)                                       | tos)       | The state of the s | -      |          |
| LAB I.D.<br>NUMBER      | DATE            | TIME     | KATRIX            | CRAR.     |           | ÷                  | SAL                      | <b>IPLE</b> | DE           | NTIFI        | CATIO         | N        |              |                 | NUMBER OF  |          | HCL        | HNOS | ICE           | NONE       | Mary ansateha | NTRE ROOM /R/09 | TPH 418.1 | PAH 8870    | RCRA Metals | TCLP Volatiles | TCLP Send Volatiles | RCI          | GC.MS Vol. 6840/8280/684 | FCR's 8080/808 | Pest. 808/808 | BOD, 138, pH. | <b>Germma</b> Spec.    | Alpha Beta                                   | PIN (Asber |  |        |          |
| 125990                  | 5-29-01         |          |                   |           |           | Traci              | +1,                      | 7.          | B.           | #            | !/-           | - /      | nwl          |                 | 4          |          |            |      | X             |            |               | 4               | 7         |             |             |                |                     |              |                          |                | T             |               | П                      |  | 7          |  |        | -        |
|                         | ·               |          |                   |           |           |                    |                          |             |              |              |               |          |              |                 |            |          |            |      |               |            |               | T               |           |             | $\top$      |                |                     |              |                          |                |               |               | П                      |  | 1          |  |        | _        |
|                         |                 |          |                   |           |           |                    |                          |             |              |              |               |          |              |                 | T          |          |            |      |               |            |               |                 |           |             | T           | T              |                     |              |                          |                |               |               |                        | П  |            | 1  |        | _        |
|                         |                 |          |                   |           | T         | ٠.                 |                          |             |              |              |               |          |              |                 |            |          |            |      |               |            |               | T               | T         |             | 1           | 1              |                     |              |                          |                | T             | Γ             |                        |  | 1          |  |        | _        |
|                         |                 |          |                   | $\dagger$ | 1         |                    |                          |             |              |              |               |          |              |                 | 1          |          |            |      |               |            |               | 1               | 1         |             | 1           | 1              |                     | T-           |                          |                | †             |               |                        | П  | T          | 1  |        |          |
|                         |                 |          |                   | $\dagger$ | $\dagger$ |                    |                          | ······      |              | -            |               |          |              | $\neg \uparrow$ | $\top$     | 1        |            |      |               |            |               | $\dagger$       | T         | $  \cdot  $ | $\dagger$   | T              | T                   |              |                          | +              | T             | T             | $\dagger$              |  | 十          | †  |        | _        |
|                         |                 |          |                   | T         | $\dagger$ |                    |                          |             |              |              |               |          |              |                 | $\dagger$  | +        | 7          |      |               |            | $\dagger$     | $\dagger$       | T         | $\Box$      | +           | $\dagger$      | T                   | T            |                          | $\dagger$      | $\dagger$     |               | $  \cdot  $            |  | +          | †  | $\top$ | -        |
| <u> </u>                |                 |          | $\dagger \dagger$ | $\dagger$ | $\dagger$ |                    |                          |             | <del> </del> |              | ·- , <u>-</u> |          |              |                 | $\dashv$   |          | 1          |      |               |            |               | $\dagger$       | -         | ╂╌┨         | $\dashv$    | $\dagger$      | Ť                   | <del> </del> |                          |                | $\dagger$     | T             | H                      | $\Box$                                       | +          | 十  |        | _        |
|                         |                 |          |                   | $\dagger$ | ╁         |                    |                          |             |              | <del>-</del> |               |          | <del></del>  |                 | ╁          | $\dashv$ | -          |      |               | $\dashv$   | $\dashv$      | $\dagger$       | +         | H           | +           | +              | $\dagger$           | +            |                          | +              | 十             | +             | H                      | $\vdash$                                     | +          | ╁  |        | -        |
| <u> </u>                |                 |          | H                 | $\dagger$ | ╁         | <del></del>        |                          | ·           |              | ···          |               |          |              |                 | $\dashv$   | $\dashv$ | 1          |      |               |            | +             | $\dagger$       | $\dagger$ |             | +           | +              | +                   | +            | $\Box$                   | +              | +             |               | $\left  \cdot \right $ | $\vdash$                                     | +          | ╁  |        | 4        |
| нилиопын                | D BY: 60        | mature)  | <u></u>           |           |           | Date:              | 95                       | 31-0<br>50  | ן די         | RECEI        | WED B         | TY:      | Signature    | <u></u>         |            |          | Dat<br>Tim |      | ≤ /           | ا د<br>ک د | 97            | _               | SAL       | PLE         |             |                |                     |              | Tign)                    |                | <u></u>       |               | Date:                  |  | ولم        | 20   | 7      | 4        |
| RELINGUISH              | D br: (Si       | gnature) |                   |           |           | Date:              |                          |             |              |              |               |          | Signature    |                 |            |          | Dat        | e: _ |               |            |               |                 | SAI       |             |             | PPET           |                     |              | irole<br>BU              |                |               |               |                        |  |            |  |        | -        |
| RELINQUISH              | ed by: (Si      |          |                   |           | 1         | Date:<br>Time;     | _                        |             |              | RECEI        | VED B         | 3Y: (    | Signature,   | )               |            |          | Det<br>Tim |      |               |            |               | (               | HA        | ם מא        |             |                |                     |              | UP:                      | 3              |               | OTT           | IER:                   | <u>"                                    </u> | ON)        | = 9  | TH     | <u>,</u> |
| RECEIVING I<br>ADDRESS: | ABORATOR        |          | TGA               |           |           |                    | ZIP:                     |             | Ri           | ECEIV        | ED BY         | r: (8    | ignoture)    |                 |            |          |            |      |               |            |               |                 | MC        | 121441      |             | CU             | 41 A.               | vi 5.        | eral                     | u4.            |               |               |                        | USH<br>uthor                                 | Charg      | es .   |        |          |
| CONTACT:                | DITICH TH       |          | PHO               | ONE:      | =         |                    | MATRIX                   |             | _ D          | ATE: _       |               | <u>-</u> |              |                 | KR:        |          | 797        | EMAJ | - P. S. S. S. |            |               |                 |           |             |             |                |                     |              |                          |                |               |               | <u> </u>               | Yes  |            | Mo   |        | _        |
| I Man \ /               | Cool/           | 40       |                   |           | te        |                    |                          | 7           | -Sou         | <b>9</b>     | A-AI<br>SL-8  |          |              | -Solid<br>Other |            |          |            |      |               |            |               |                 |           |             |             |                |                     |              |                          |                |               |               | فيجيد                  |  |            |  |        |          |

Please Fill out all copies - Laboratory retains yellow copy - Return original copy to Highlander Environmental Corp. - Project Manager retains pink copy - Accounting receives Gold copy.



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Lubbock, Texas 79424 El Paso, Texas 79922 Midland Texas 79703

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FAX 432 • 689 • 6313

E-Mail: lab@traceanalysis.com

# Certifications

WBENC: 237019

HUB:

1752439743100-86536

DBE:

VN 20657

NCTRCA WFWB38444Y0909

# NELAP Certifications

Lubbock:

T104704219-08-TX

El Paso:

T104704221-08-TX

Midland:

T104704392-08-TX

LELAP-02003 Kansas E-10317 LELAP-02002

# Analytical and Quality Control Report

Jeff Kindley Tetra Tech 1910 N. Big Spring Street

Midland, TX, 79705

Report Date:

January 7, 2010

Work Order:

Project Location:

Chavez County, NM Celero/Tract 1 TB

Project Name: Project Number:

114-6403129

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

|        |             |         | Date       | Time  | Date       |
|--------|-------------|---------|------------|-------|------------|
| Sample | Description | Matrix  | Taken      | Taken | Received   |
| 218521 | MW-1        | water   | 2009-12-29 | 15:00 | 2009-12-29 |
| 218522 | MW-2        | water   | 2009-12-29 | 15:30 | 2009-12-29 |
| 218523 | MW-3        | water   | 2009-12-29 | 16:00 | 2009-12-29 |
| 218524 | MW-4        | water · | 2009-12-29 | 14:30 | 2009-12-29 |

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 25 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Michael april

Dr. Blair Leftwich, Director Dr. Michael Abel, Project Manager

# Standard Flags

B - The sample contains less than ten times the concentration found in the method blank.

# Case Narrative

Samples for project Celero/Tract 1 TB were received by TraceAnalysis, Inc. on 2009-12-29 and assigned to work order 9122911. Samples for work order 9122911 were received intact without headspace and at a temperature of 2.1 deg. C.

Samples were analyzed for the following tests using their respective methods.

|               |            | Prep    | Prep                | $_{ m QC}$ | Analysis            |
|---------------|------------|---------|---------------------|------------|---------------------|
| Test          | Method     | Batch   | Date                | Batch      | Date                |
| Alkalinity    | SM 2320B   | 56729   | 2009-12-30 at 12:20 | 66366      | 2009-12-30 at 14:20 |
| BTEX          | S 8021B    | 56863   | 2010-01-06 at 11:00 | 66515      | 2010-01-06 at 12:46 |
| Ca, Dissolved | S 6010B    | 56807   | 2010-01-05 at 13:18 | 66490      | 2010-01-06 at 14:02 |
| Chloride (IC) | E 300.0    | 56732   | 2009-12-30 at 11:39 | 66392      | 2009-12-30 at 17:04 |
| Chloride (IC) | E 300.0    | 56733   | 2009-12-30 at 11:40 | 66393      | 2009-12-30 at 20:05 |
| Hardness      | S 6010B    | 56807   | 2010-01-05 at 13:18 | 66490      | 2010-01-06 at 14:02 |
| K, Dissolved  | S 6010B    | 56807   | 2010-01-05 at 13:18 | 66490      | 2010-01-06 at 14:02 |
| Mg, Dissolved | S 6010B    | 56807   | 2010-01-05 at 13:18 | 66490      | 2010-01-06 at 14:02 |
| Na, Dissolved | S 6010B    | 56807   | 2010-01-05 at 13:18 | 66490      | 2010-01-06 at 14:02 |
| pН            | SM 4500-H+ | 56717   | 2009-12-29 at 15:30 | 66350      | 2009-12-29 at 15:45 |
| SO4 (IC)      | E 300.0    | 56732   | 2009-12-30 at 11:39 | 66392      | 2009-12-30 at 17:04 |
| SO4 (IC)      | E 300.0    | 56733 . | 2009-12-30 at 11:40 | 66393      | 2009-12-30 at 20:05 |
| TDS           | SM 2540C   | 56731   | 2009-12-30 at 12:35 | 66452      | 2010-01-05 at 12:34 |

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 9122911 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Report Date: January 7, 2010 114-6403129

Work Order: 9122911 Celero/Tract 1 TB Page Number: 4 of 25 Chavez County, NM

# **Analytical Report**

Sample: 218521 - MW-1

Laboratory: Midland

Analysis: Alkalinity
QC Batch: 66366
Prep Batch: 56729

Analytical Method: SM 2320B Date Analyzed: 2009-12-30 Sample Preparation: 2009-12-30 Prep Method: N/A
Analyzed By: AR
Prepared By: AR

RLParameter Flag Result Dilution RLUnits Hydroxide Alkalinity 1.00 mg/L as CaCo3 < 1.00 1 Carbonate Alkalinity mg/L as CaCo3 1.00 < 1.00 1 Bicarbonate Alkalinity 4.00 mg/L as CaCo3 1 < 4.00Total Alkalinity < 4.00 mg/L as CaCo3 1 4.00

Sample: 218521 - MW-1

Laboratory:

Midland

Analysis: BTEX QC Batch: 66515 Prep Batch: 56863 Analytical Method: S 80
Date Analyzed: 2010
Sample Preparation: 2009

S 8021B 2010-01-06 2009-01-06 Prep Method: S 5030B Analyzed By: AG

AG

Prepared By:

RLRLParameter Flag Result Units Dilution Benzene < 0.00100 0.00100 mg/L Toluene < 0.00100 mg/L 1 0.00100Ethylbenzene < 0.00100 mg/L 1 0.00100Xylene < 0.00100 1 0.00100 mg/L

|                              |      |        |       | •        | Spike  | Percent  | Recovery     |
|------------------------------|------|--------|-------|----------|--------|----------|--------------|
| Surrogate                    | Flag | Result | Units | Dilution | Amount | Recovery | Limits       |
| Trifluorotoluene (TFT)       |      | 0.0727 | mg/L  | 1        | 0.100  | 73       | 70.9 - 129.8 |
| 4-Bromofluorobenzene (4-BFB) |      | 0.0755 | mg/L  | 1        | 0.100  | 76       | 57.1 - 118.8 |

Sample: 218521 - MW-1

Laboratory:

Lubbock

Analysis: Cations QC Batch: 66490 Prep Batch: 56807 Analytical Method: Date Analyzed:

Sample Preparation:

S 6010B 2010-01-06 2010-01-05 Prep Method: S 3005A Analyzed By: RR

KV

Prepared By:

 $\mathrm{RL}$ 

continued ...

114-6403129 Celero/Tract 1 TB Chavez County, NM sample 218521 continued ... RLFlag Parameter Result Units Dilution RLDissolved Potassium 2490 1.00 mg/L 10 Dissolved Magnesium 4370 mg/L 100 1.00 Dissolved Sodium 64600 mg/L1000 1.00 Sample: 218521 - MW-1 Laboratory: Midland E 300.0 Chloride (IC) Analytical Method: Analysis: Prep Method: N/A QC Batch: 66392 Date Analyzed: 2009-12-30 Analyzed By: AR Prep Batch: 56732 Sample Preparation: 2009-12-30 Prepared By: AR RLParameter Result Units Dilution Flag RLChloride 164000 5000 mg/L 0.500 Sample: 218521 - MW-1 Laboratory: Lubbock Analysis: Hardness Analytical Method: S 6010B Prep Method: N/A QC Batch: 66490 Date Analyzed: 2010-01-06 Analyzed By: RRPrep Batch: 56807 Sample Preparation: 2010-01-05 Prepared By: KV RLParameter Flag Result Units Dilution RLHardness (by ICP) 24300 mg eq CaCO3/L 0.00 Sample: 218521 - MW-1

Analytical Method:

Sample Preparation:

RL

Result

5.27

Date Analyzed:

SM 4500-H+

Units

s.u.

2009-12-29

2009-12-29

Work Order: 9122911

Page Number: 5 of 25

Prep Method:

Analyzed By:

Prepared By:

Dilution

N/A

AR

AR

RL

0.00

Report Date: January 7, 2010

Laboratory:

Prep Batch:

Analysis:

QC Batch:

Parameter

Hq

Midland

pН

66350

56717

Flag

Page Number: 6 of 25 Report Date: January 7, 2010 Work Order: 9122911 114-6403129 Celero/Tract 1 TB Chavez County, NM Sample: 218521 - MW-1 Laboratory: Midland Analysis: SO4 (IC) Analytical Method: E 300.0 Prep Method: N/A QC Batch: 66392 Date Analyzed: 2009-12-30 Analyzed By: ARPrep Batch: 56732 Sample Preparation: 2009-12-30 Prepared By: ARRLResult RLParameter Flag Units Dilution Sulfate 2230 50 0.500 mg/L Sample: 218521 - MW-1 Laboratory: Midland Analysis: TDS Analytical Method: SM 2540C Prep Method: N/A QC Batch: 66452 Analyzed By: ARDate Analyzed: 2010-01-05 Prep Batch: Prepared By: 56731 Sample Preparation: 2009-12-30 ARRLParameter Flag Result Units Dilution RLTotal Dissolved Solids 244000 100 10.0 mg/L Sample: 218522 - MW-2 Midland Laboratory: Alkalinity Analysis: Analytical Method: SM 2320B Prep Method: N/A 66366 QC Batch: Date Analyzed: 2009-12-30 Analyzed By: AR Prep Batch: 56729 Sample Preparation: 2009-12-30 Prepared By: AR RLFlag Parameter Result Units Dilution RLHydroxide Alkalinity <1.00 mg/L as CaCo3 1.00 1 Carbonate Alkalinity < 1.00 mg/L as CaCo3 1 1.00 Bicarbonate Alkalinity 138 mg/L as CaCo3 1 4.00 138 mg/L as CaCo3 1 4.00 Total Alkalinity

Sample: 218522 - MW-2

Laboratory: Midland
Analysis: BTEX
QC Batch: 66515
Prep Batch: 56863

Analytical Method: S 8021B
Date Analyzed: 2010-01-06
Sample Preparation: 2009-01-06

Prep Method: S 5030B Analyzed By: AG Prepared By: AG

114-6403129

Work Order: 9122911 Celero/Tract 1 TB

Page Number: 7 of 25 Chavez County, NM

|                             |      | R        | L .   |              |        |          |              |
|-----------------------------|------|----------|-------|--------------|--------|----------|--------------|
| Parameter F                 | lag  | Resul    | t     | Units        | I      | Dilution | RL           |
| Benzene                     |      | < 0.0010 | 0     | mg/L         |        | 1        | 0.00100      |
| Toluene                     |      | < 0.0010 | 0     | $_{ m mg/L}$ |        | 1        | 0.00100      |
| Ethylbenzene                | ,    | < 0.0010 | 0     | mg/L         |        | 1        | 0.00100      |
| Xylene                      |      | < 0.0010 | 0     | mg/L         |        | 11       | 0.00100      |
|                             |      |          |       |              | Spike  | Percent  | Recovery     |
| Surrogate                   | Flag | Result   | Units | Dilution     | Amount | Recovery | Limits       |
| Trifluorotoluene (TFT)      |      | 0.0736   | mg/L  | 1            | 0.100  | 74       | 70.9 - 129.8 |
| 4-Bromofluorobenzene (4-BF) | B)   | 0.0724   | mg/L  | 1            | 0.100  | 72       | 57.1 - 118.8 |

Sample: 218522 - MW-2

Laboratory: Lubbock

Prep Batch: 56807

Analysis: QC Batch: Cations 66490

Analytical Method:

S 6010B Date Analyzed: 2010-01-06

S 3005A Prep Method: Analyzed By: RRSample Preparation: 2010-01-05 Prepared By: KV

|                     |      | m RL   |             | ,        |      |
|---------------------|------|--------|-------------|----------|------|
| Parameter           | Flag | Result | Units       | Dilution | RL   |
| Dissolved Calcium   |      | 1630   | mg/L        | 10       | 1.00 |
| Dissolved Potassium |      | 18.0   | mg/L        | 1        | 1.00 |
| Dissolved Magnesium |      | 379    | ${ m mg/L}$ | 1        | 1.00 |
| Dissolved Sodium    |      | 1360   | mg/L        | 10       | 1.00 |

Sample: 218522 - MW-2

Laboratory:

Midland

Chloride (IC) Analysis: QC Batch: 66392 Prep Batch: 56732

Analytical Method: Date Analyzed: . Sample Preparation:

E 300.0 2009-12-30 2009-12-30 Prep Method: N/A Analyzed By: AR Prepared By: AR

RLParameter Flag Result Units Dilution RL5480 Chloride 500 0.500 mg/L

Sample: 218522 - MW-2

Laboratory: Lubbock

Analysis: Hardness QC Batch: 66490 Prep Batch: 56807

Analytical Method: S 6010B Date Analyzed: 2010-01-06 Sample Preparation: 2010-01-05

Prep Method: N/A Analyzed By: RRPrepared By: ΚV

114-6403129

Work Order: 9122911 Celero/Tract 1 TB Page Number: 8 of 25 Chavez County, NM

|                     |                | RL                   |               |               |            |
|---------------------|----------------|----------------------|---------------|---------------|------------|
| Parameter           | Flag           | Result               | Units         | Dilution      | RL         |
| Hardness (by ICP)   |                | 5630                 | mg eq CaCO3/L | 1             | 0.00       |
|                     |                |                      |               |               |            |
| Sample: 218522 - MV | V-2            | ·                    |               |               |            |
| Laboratory: Midland |                |                      |               |               |            |
| Analysis: pH        |                | Analytical Method:   | SM 4500-H+    | Prep Method:  | N/A        |
| QC Batch: 66350     |                | Date Analyzed:       | 2009-12-29    | Analyzed By:  | AR         |
| Prep Batch: 56717   |                | Sample Preparation:  | 2009-12-29    | Prepared By:  | AR         |
|                     |                | RL                   |               |               |            |
| Parameter           | Flag           | Result               | Units         | Dilution      | RL         |
| pH                  |                | 7.30                 | s.u.          | 1             | 0.00       |
| Sample: 218522 - MV | V-2            | •                    | •             |               |            |
| Laboratory: Midland | , <b>-</b> ,   |                      | •             |               |            |
| Analysis: SO4 (IC)  | *              | Analytical Method:   | E 300.0       | Prep Method:  | N/A        |
| QC Batch: 66392     |                | Date Analyzed:       | 2009-12-30    | Analyzed By:  | AR         |
| Prep Batch: 56732   |                | Sample Preparation:  |               | Prepared By:  | AR         |
| Trep Daten. 50752   |                | Sample 1 reparation. | 2009-12-30    | r repared by. | AIL        |
|                     |                | RL                   | •             |               |            |
| Parameter           | Flag           | Result               | Units         | Dilution      | RL         |
| Sulfate             |                | 4.43                 | mg/L          | 5             | 0.500      |
|                     | 1              |                      |               |               |            |
| Sample: 218522 - MW | V-2            |                      |               |               |            |
| Laboratory: Midland |                |                      | •             |               | į          |
| Analysis: TDS       |                | Analytical Method:   | SM 2540C      | Prep Method:  | N/A        |
| QC Batch: 66452     |                | Date Analyzed:       | 2010-01-05    | Analyzed By:  | AR         |
| Prep Batch: 56731   | s <sub>e</sub> | Sample Preparation:  | 2009-12-30    | Prepared By:  | AR         |
| 1 Tep Baten: 00101  |                |                      |               |               |            |
| Trop Baten. 90101   |                | RL                   | •             |               |            |
| Parameter           | Flag           |                      | Units         | Dilution      | RL<br>10.0 |

Sample: 218523 - MW-3

Laboratory: Midland Analysis: Alkalinity QC Batch: 66366 Prep Batch: 56729

Analytical Method: SM 2320B Date Analyzed: 2009-12-30 Sample Preparation: 2009-12-30

Prep Method: N/A
Analyzed By: AR
Prepared By: AR

114-6403129

Work Order: 9122911 Celero/Tract 1 TB

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|                        |      | RL     |               |          |      |
|------------------------|------|--------|---------------|----------|------|
| Parameter              | Flag | Result | Units         | Dilution | RL   |
| Hydroxide Alkalinity   |      | <1.00  | mg/L as CaCo3 | 1        | 1.00 |
| Carbonate Alkalinity   |      | < 1.00 | mg/L as CaCo3 | 1        | 1.00 |
| Bicarbonate Alkalinity | •    | 106    | mg/L as CaCo3 | 1        | 4.00 |
| Total Alkalinity       |      | 106    | mg/L as CaCo3 | 1        | 4.00 |

# Sample: 218523 - MW-3

Laboratory:

Midland

Analysis: **BTEX** QC Batch: 66515Prep Batch: 56863

Analytical Method: Date Analyzed: Sample Preparation:

S 8021B 2010-01-06 2009-01-06 Prep Method: S 5030B Analyzed By: AG

AG

Prepared By:

RLParameter Flag Result Units Dilution RLBenzene < 0.00100 mg/L 0.00100 1 Toluene < 0.00100 1 mg/L 0.00100Ethylbenzene < 0.00100 mg/L 1 0.00100 Xylene < 0.00100 mg/L 1 0.00100

|                              |      |        |       |          | $\operatorname{Spike}$ | Percent  | Recovery     |
|------------------------------|------|--------|-------|----------|------------------------|----------|--------------|
| Surrogate                    | Flag | Result | Units | Dilution | Amount                 | Recovery | Limits       |
| Trifluorotoluene (TFT)       |      | 0.0874 | mg/L  | 1        | 0.100                  | 87       | 70.9 - 129.8 |
| 4-Bromofluorobenzene (4-BFB) |      | 0.0818 | mg/L  | 1        | 0.100                  | 82       | 57.1 - 118.8 |

#### Sample: 218523 - MW-3

Laboratory:

Lubbock

Analysis: Cations QC Batch: 66490 Prep Batch: 56807

Analytical Method: Date Analyzed:

S 6010B 2010-01-06 Sample Preparation: 2010-01-05

S 3005A Prep Method: Analyzed By: RR

KV

Prepared By:

RLParameter Flag Result Units Dilution RLDissolved Calcium 2120 mg/L 10 1.00 Dissolved Potassium 146 mg/L 1 1.00 Dissolved Magnesium 804 mg/L 10 1.00 Dissolved Sodium 12000 100 mg/L 1.00

| Sample: 21 Laboratory: Analysis: QC Batch: Prep Batch:  Parameter pH  Sample: 21 Laboratory: Analysis: QC Batch: Prep Batch: Prep Batch: Prep Batch: Prep Batch: | Midland pH 66350 56717  Flag  8523 - MW-3  Midland SO4 (IC) 66393 56733  Flag | Analytical Method: Date Analyzed: Sample Preparation: RL Result 6.77  Analytical Method: Date Analyzed: Sample Preparation: RL Result Result 661 | SM 4500-H+ 2009-12-29 2009-12-29  Units s.u.  E 300.0 2009-12-30 2009-12-30  Units mg/L | Prep Method: Analyzed By: Prepared By:  Dilution  1  Prep Method: Analyzed By: Prepared By: Dilution  50 | N/A<br>AR<br>AR<br>O.000<br>N/A<br>AR<br>AR<br>AR |
|--|---|--|---|--|---|
| Laboratory: Analysis: QC Batch: Prep Batch:  Parameter pH  Sample: 21  Laboratory: Analysis: QC Batch: Prep Batch:   | Midland pH 66350 56717  Flag  8523 - MW-3  Midland SO4 (IC) 66393 56733       | Date Analyzed: Sample Preparation:  RL Result 6.77  Analytical Method: Date Analyzed: Sample Preparation:  RL                                    | 2009-12-29<br>2009-12-29<br>Units<br>s.u.<br>E 300.0<br>2009-12-30<br>2009-12-30        | Analyzed By: Prepared By:  Dilution  1  Prep Method: Analyzed By: Prepared By:                           | AR<br>AR<br>O.000<br>N/A<br>AR<br>AR              |
| Laboratory: Analysis: QC Batch: Prep Batch:  Parameter pH  Sample: 21  Laboratory: Analysis: QC Batch:   | Midland pH 66350 56717  Flag  8523 - MW-3  Midland SO4 (IC) 66393             | Date Analyzed: Sample Preparation: RL Result 6.77  Analytical Method: Date Analyzed:   | 2009-12-29<br>2009-12-29<br>Units<br>s.u.<br>E 300.0<br>2009-12-30                      | Analyzed By: Prepared By:  Dilution  1  Prep Method: Analyzed By:  | AR<br>AR<br>RL<br>0.00                            |
| Laboratory: Analysis: QC Batch: Prep Batch:  Parameter pH  Sample: 21  Laboratory: Analysis: QC Batch:   | Midland pH 66350 56717  Flag  8523 - MW-3  Midland SO4 (IC) 66393             | Date Analyzed: Sample Preparation: RL Result 6.77  Analytical Method: Date Analyzed:   | 2009-12-29<br>2009-12-29<br>Units<br>s.u.<br>E 300.0<br>2009-12-30                      | Analyzed By: Prepared By:  Dilution  1  Prep Method: Analyzed By:  | AR<br>AR<br>RL<br>0.00                            |
| Laboratory: Analysis: QC Batch: Prep Batch:  Parameter pH  Sample: 21  Laboratory: Analysis:   | Midland pH 66350 56717  Flag  8523 - MW-3  Midland SO4 (IC)                   | Date Analyzed: Sample Preparation: RL Result 6.77  Analytical Method:  | 2009-12-29<br>2009-12-29<br>Units<br>s.u.   | Analyzed By: Prepared By:  Dilution  1  Prep Method:   | AR<br>AR<br>RL<br>0.00                            |
| Laboratory: Analysis: QC Batch: Prep Batch:  Parameter pH  Sample: 21  Laboratory:   | Midland pH 66350 56717  Flag  8523 - MW-3  Midland                            | Date Analyzed: Sample Preparation: RL Result 6.77  | 2009-12-29<br>2009-12-29<br>Units<br>s.u.   | Analyzed By: Prepared By:  Dilution  1   | AR<br>AR<br>RL<br>0.00                            |
| Laboratory: Analysis: QC Batch: Prep Batch:  Parameter pH  | Midland pH 66350 56717  Flag  8523 - MW-3                                     | Date Analyzed:<br>Sample Preparation:<br>RL<br>Result  | 2009-12-29<br>2009-12-29<br>Units   | Analyzed By:<br>Prepared By:<br>Dilution   | AR<br>AR<br>RL                                    |
| Laboratory: Analysis: QC Batch: Prep Batch:  Parameter pH  | Midland<br>pH<br>66350<br>56717<br>Flag                                       | Date Analyzed:<br>Sample Preparation:<br>RL<br>Result  | 2009-12-29<br>2009-12-29<br>Units   | Analyzed By:<br>Prepared By:<br>Dilution   | AR<br>AR<br>RL                                    |
| Laboratory:<br>Analysis:<br>QC Batch:<br>Prep Batch:   | Midland<br>pH<br>66350<br>56717   | Date Analyzed:<br>Sample Preparation:<br>RL<br>Result  | 2009-12-29<br>2009-12-29<br>Units   | Analyzed By:<br>Prepared By:<br>Dilution   | AR<br>AR<br>RL                                    |
| Laboratory: Analysis: QC Batch: Prep Batch:  | Midland<br>pH<br>66350<br>56717   | Date Analyzed:<br>Sample Preparation:<br>RL<br>Result  | 2009-12-29<br>2009-12-29<br>Units   | Analyzed By:<br>Prepared By:<br>Dilution   | AR<br>AR<br>RL                                    |
| Laboratory:<br>Analysis:<br>QC Batch:<br>Prep Batch:   | Midland<br>pH<br>66350<br>56717   | Date Analyzed:<br>Sample Preparation:<br>RL  | 2009-12-29<br>2009-12-29  | Analyzed By:<br>Prepared By:   | AR<br>AR  |
| Laboratory:<br>Analysis:<br>QC Batch:  | Midland<br>pH<br>66350  | Date Analyzed:<br>Sample Preparation:  | 2009-12-29  | Analyzed By:   | AR  |
| Laboratory:<br>Analysis:<br>QC Batch:  | Midland<br>pH<br>66350  | Date Analyzed:   | 2009-12-29  | Analyzed By:   | AR  |
| Laboratory:<br>Analysis:<br>QC Batch:  | Midland<br>pH<br>66350  | Date Analyzed:   | 2009-12-29  | Analyzed By:   | AR  |
| Laboratory:<br>Analysis:   | Midland<br>pH   |  |   | <del>-</del>   |   |
| Laboratory:  | Midland   |  |   |  | •   |
| Sample: 21   | 8929 - IVI VV -9  |  |   |  |   |
|  | orog MANA g   |  |   |  |   |
|  |   |  |   |  |   |
| Hardness (by   |   | 8600   | mg eq CaCO3/L   | 1  | 0.00  |
| Parameter  | Flag  | Result   | Units   | Dilution   | RL  |
|  |   | RL   |   |  |   |
| Prep Batch:  | 56807   | Sample Preparation:  |   | Prepared By:   | KV  |
| QC Batch:  | 66490   | Date Analyzed:   | 2010-01-06  | Analyzed By:   | RR  |
| Analysis:  | Hardness  | Analytical Method:   | S 6010B   | Prep Method:   | N/A   |
| Laboratory:  | Lubbock   |  |   | · r  |   |
| Sample: 21   | 8523 - MW-3   |  |   |  |   |
| •  |   | •  |   |  |   |
| Omoriue  |   | ###UU  | mg/L  | 000  | 0.000   |
| Parameter Chloride   | Flag  | Result <b>22400</b>  | Units   | Dilution<br>500  | $\frac{\mathrm{RL}}{0.500}$                       |
| <b>D</b>   | Tol.  | RL   | ** **   | D.1  | D.F.  |
| Prep Batch:  | 30133   | Sample Preparation   | on: 2009-12-30  | Prepared By:   | AR  |
| QC Batch:  | 66393<br>56733  | Date Analyzed:   | 2009-12-30  | Analyzed By:   | AR  |
| Analysis:  | Chloride (IC)   | Analytical Method  |   | Prep Method:   | N/A   |
| Laboratory:  | Midland   | A 1 (* 136 ()  | I D 000 0   | D. M. I. I.  | NT / A  |
|  |   | •  |   |  |   |
| _  | 19524 - M/M//-4   |  |   |  |   |
| _  |   |  |   |  |   |
| 114-6403129 Sample: 21   |   | Celero/Tra   | act 1 TB  | Chavez Coun  | ty, NM  |

114-6403129

Work Order: 9122911 Celero/Tract 1 TB

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Sample: 218523 - MW-3

Laboratory:

Midland

Analysis: QC Batch: Prep Batch: TDS 66452 56731

Analytical Method: Date Analyzed:

Sample Preparation:

SM 2540C 2010-01-05

2009-12-30

Prep Method: N/A Analyzed By:

AR Prepared By: AR

RL

Flag Result Units Dilution RLParameter Total Dissolved Solids 40700 mg/L 100 10.0

Sample: 218524 - MW-4

Laboratory: Midland

Analysis: QC Batch:

Parameter

Hydroxide Alkalinity

Carbonate Alkalinity

Alkalinity

66366 Prep Batch: 56729

Analytical Method:

Date Analyzed:

SM 2320B 2009-12-30

Prep Method: Analyzed By: Prepared By:

AR AR

N/A

4.00

4.00

Flag

Sample Preparation: 2009-12-30

> RLResult Units Dilution RL<1.00 mg/L as CaCo3 1.00 1 < 1.00 mg/L as CaCo3 1 1.00 99.0 1

Bicarbonate Alkalinity mg/L as CaCo3 Total Alkalinity 99.0 mg/L as CaCo3 1

Sample: 218524 - MW-4

Laboratory:

Midland

Analysis: QC Batch:

Prep Batch:

BTEX 66515 56863

Analytical Method: Date Analyzed: Sample Preparation:

S 8021B 2010-01-06 2009-01-06 Prep Method: S 5030B AGAnalyzed By:

Prepared By:

AG

RLParameter Flag Result Units Dilution RL0.00100 Benzene < 0.00100 mg/L 1 0.00100 Toluene < 0.00100 mg/L 1 < 0.00100 1 0.00100 Ethylbenzene mg/L **Xylene** < 0.00100 1 0.00100 mg/L

|                              |      |        |             |          | Spike  | Percent  | Recovery     |
|------------------------------|------|--------|-------------|----------|--------|----------|--------------|
| Surrogate                    | Flag | Result | Units       | Dilution | Amount | Recovery | Limits       |
| Trifluorotoluene (TFT)       |      | 0.107  | mg/L        | 1        | 0.100  | 107      | 70.9 - 129.8 |
| 4-Bromofluorobenzene (4-BFB) |      | 0.0997 | ${ m mg/L}$ | 1        | 0.100  | 100      | 57.1 - 118.8 |

Report Date: January 7, 2010 114-6403129

Work Order: 9122911 Celero/Tract 1 TB Page Number: 12 of 25 Chavez County, NM

Sample: 218524 - MW-4

Laboratory: Lubbock

Analysis: Cations QC Batch: 66490 Prep Batch: 56807 Analytical Method: S 6010B
Date Analyzed: 2010-01-06
Sample Preparation: 2010-01-05

Prep Method: S 3005A Analyzed By: RR Prepared By: KV

RL

|                     |      | NL     |       |          |      |
|---------------------|------|--------|-------|----------|------|
| Parameter           | Flag | Result | Units | Dilution | RL   |
| Dissolved Calcium   |      | 1660   | mg/L  | 10       | 1.00 |
| Dissolved Potassium |      | 14.1   | mg/L  | 1        | 1.00 |
| Dissolved Magnesium |      | 349    | mg/L  | 10       | 1.00 |
| Dissolved Sodium    |      | 1020   | mg/L  | 10       | 1.00 |

Sample: 218524 - MW-4

Laboratory: Midland

Analysis: Chloride (IC) QC Batch: 66393 Prep Batch: 56733 Analytical Method: E 300.0
Date Analyzed: 2009-12-30
Sample Preparation: 2009-12-30

Prep Method: N/A Analyzed By: AR Prepared By: AR

RL

| Parameter | Flag | Result | Units | Dilution | RL    |
|-----------|------|--------|-------|----------|-------|
| Chloride  |      | 5070   | mg/L  | 500      | 0.500 |

Sample: 218524 - MW-4

Laboratory: Lubbock

Analysis: Hardness QC Batch: 66490 Prep Batch: 56807 Analytical Method: S 6010B
Date Analyzed: 2010-01-06
Sample Preparation: 2010-01-05

Prep Method: N/A Analyzed By: RR Prepared By: KV

RL

| Parameter         | Flag | Result | Units         | Dilution | RL_  |
|-------------------|------|--------|---------------|----------|------|
| Hardness (by ICP) |      | 5580   | mg eq CaCO3/L | 1        | 0.00 |

Sample: 218524 - MW-4

Laboratory: Midland

Analysis: pH QC Batch: 66350 Prep Batch: 56717 Analytical Method: SM 4500-H+ Date Analyzed: 2009-12-29 Sample Preparation: 2009-12-29 Prep Method: N/A
Analyzed By: AR
Prepared By: AR

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Work Order: 9122911 Celero/Tract 1 TB Page Number: 13 of 25 Chavez County, NM

| _           | 771         | RL                  | TT:::4     | Dilution     | RL    |
|-------------|-------------|---------------------|------------|--------------|-------|
| Parameter   | Flag        | Result              | Units      | Ditution     |       |
| pH          |             | 7.51                | s.u.       | 1            | 0.00  |
|             |             |                     |            |              |       |
| Sample: 218 | 8524 - MW-4 |                     |            |              |       |
| Laboratory: | Midland     |                     |            |              |       |
| Analysis:   | SO4 (IC)    | Analytical Method:  | E 300.0    | Prep Method: | N/A   |
| QC Batch:   | 66393       | Date Analyzed:      | 2009-12-30 | Analyzed By: | AR    |
| Prep Batch: | 56733       | Sample Preparation: | 2009-12-30 | Prepared By: | AR    |
|             |             | RL                  |            |              |       |
| Parameter   | Flag        | Result              | Units      | Dilution     | RL    |
| Sulfate     | 1971        | 148                 | mg/L       | 5            | 0.500 |

| C 1     | 910594   | RATES A   |
|---------|----------|-----------|
| Sample: | 218524 - | IVI VV -4 |

| Laboratory: | Midland |
|-------------|---------|
|-------------|---------|

Analysis: TDS QC Batch: 66452 Prep Batch: 56731

Analytical Method: SM 2540C Date Analyzed: 2010-01-05 Sample Preparation: 2009-12-30 Prep Method: N/A
Analyzed By: AR
Prepared By: AR

|                        |      | m RL   |       |          |      |
|------------------------|------|--------|-------|----------|------|
| Parameter              | Flag | Result | Units | Dilution | m RL |
| Total Dissolved Solids |      | 9900   | mg/L  | 20       | 10.0 |

# Method Blank (1)

QC Batch: 66366

QC Batch: 66366 Prep Batch: 56729 Date Analyzed: 2009-12-30 QC Preparation: 2009-12-30

Analyzed By: AR Prepared By: AR

|                        |      | MDL    |               |    |
|------------------------|------|--------|---------------|----|
| Parameter              | Flag | Result | Units         | RL |
| Hydroxide Alkalinity   |      | <1.00  | mg/L as CaCo3 | 1  |
| Carbonate Alkalinity   |      | < 1.00 | mg/L as CaCo3 | 1  |
| Bicarbonate Alkalinity |      | <4.00  | mg/L as CaCo3 | 4  |
| Total Alkalinity       |      | <4.00  | mg/L as CaCo3 | 4_ |

# Method Blank (1)

QC Batch: 66392

QC Batch: 66392 Prep Batch: 56732 Date Analyzed: 2009-12-30 QC Preparation: 2009-12-30

Analyzed By: AR Prepared By: AR

Report Date: January 7, 2010 Work Order: 9122911 Page Number: 14 of 25 114-6403129 Celero/Tract 1 TB Chavez County, NM MDL Flag Parameter Result Units RLChloride 1.37 mg/L 0.5 Method Blank (1) QC Batch: 66392 QC Batch: 66392 Analyzed By: AR Date Analyzed: 2009-12-30 Prep Batch: 56732 AR QC Preparation: 2009-12-30 Prepared By: MDL Parameter Units RLFlag Result Sulfate < 0.217 mg/L 0.5 Method Blank (1) QC Batch: 66393 QC Batch: 66393 Date Analyzed: 2009-12-30 Analyzed By: AR Prep Batch: 56733 QC Preparation: 2009-12-30 Prepared By: AR MDL Parameter Flag Units Result RLChloride 1.06 0.5 mg/L Method Blank (1) QC Batch: 66393 QC Batch: 66393 Date Analyzed: Analyzed By: AR 2009-12-30 Prep Batch: 56733 QC Preparation: 2009-12-30 Prepared By: MDL Parameter Units RLFlag Result Sulfate mg/L 0.5 < 0.217

Method Blank (1)

Prep Batch: 56731

66452

QC Batch:

QC Batch: 66452

Date Analyzed:

QC Preparation: 2009-12-30

2010-01-05

continued ...

Analyzed By: AR

Prepared By: AR

| Report Date: January 7, 20<br>114-6403129    | 010            | 7                   |                              | ler: 9122911<br>Tract 1 TB                 |                          |                                 | umber: 15<br>vez Count |  |
|--|----------------|---------------------|------------------------------|--|--------------------------|---------------------------------|------------------------|--|
| method blank continued                       |                |                     |                              | MDL  |                          |                                 |                        |  |
| Parameter                                    | F              | ag                  |                              | Result                                     | 1                        | Units                           |                        | RL   |
|  |                |                     |                              | MDL  | . ""                     |                                 |                        |  |
| Parameter                                    | F              | ag                  |                              | Result                                     | Ţ                        | Units                           |                        | RL   |
| Total Dissolved Solids                       |                |                     |                              | <9.75                                      | 1                        | mg/L                            |                        | 10   |
| Method Blank (1) Q                           | C Batch: 66490 |                     |                              | 4  |                          |                                 |                        |  |
| QC Batch: 66490<br>Prep Batch: 56807         |                | Date And<br>QC Prep | •                            | 2010-01-06<br>2010-01-05                   |                          |                                 | lyzed By:<br>pared By: | RR<br>KV                                       |
| Parameter                                    | Fla            | ng                  |                              | MDL<br>Result                              |                          | Units                           |                        | RL   |
| Dissolved Calcium                            |                |                     |                              | < 0.117                                    |                          | mg/L                            |                        | 1  |
| Dissolved Potassium                          |                |                     |                              | < 0.172                                    |                          | mg/L                            |                        | 1  |
| Dissolved Magnesium Dissolved Sodium         |                |                     |                              | <0.160<br><0.0500                          |                          | mg/L<br>mg/L                    |                        | 1<br>1   |
|  |                |                     |                              |  |                          | 0/-                             |                        |  |
| Method Blank (1) Q                           | C Batch: 66515 |                     |                              |  |                          |                                 |                        |  |
| QC Batch: 66515<br>Prep Batch: 56863         |                | Date Ana<br>QC Prep |                              | 2010-01-06<br>2010-01-06                   |                          |                                 | lyzed By:<br>pared By: | AG   |
|  |                |                     |                              |  |                          |                                 |                        | AG   |
| D. manistan                                  | E1             |                     | 7                            | MDL  |                          | <b>.</b>                        |                        |  |
| Parameter                                    | Flag           |                     |                              | Result                                     | Uni                      |                                 |                        | RL   |
| Benzene                                      | Flag           |                     | < 0.0                        | Result<br>00300                            | mg                       | /L                              |                        | RL<br>0.001                                    |
| Benzene<br>Toluene                           | Flag           |                     | <0.0<br><0.0                 | Result<br>00300<br>00200                   | mg,                      | /L<br>/L                        |                        | RL<br>0.001<br>0.001                           |
| Benzene                                      | Flag           |                     | <0.0<br><0.0<br><0.0         | Result<br>00300                            | mg                       | /L<br>/L<br>/L                  |                        | RL<br>0.001                                    |
| Benzene<br>Toluene<br>Ethylbenzene<br>Xylene |                | Regult              | <0.0<br><0.0<br><0.0<br><0.0 | Result<br>00300<br>00200<br>00200<br>00900 | mg,<br>mg,<br>mg,<br>mg, | /L<br>/L<br>/L<br>/L<br>Percent | Reco                   | RL<br>0.001<br>0.001<br>0.001<br>0.001         |
| Benzene<br>Toluene<br>Ethylbenzene           | Flag<br>Flag   | Result 0.110        | <0.0<br><0.0<br><0.0         | Result 00300 00200 00200 00900 Dilution    | mg,<br>mg,<br>mg,<br>mg, | /L<br>/L<br>/L<br>/L            |                        | RL<br>0.001<br>0.001<br>0.001<br>0.001<br>very |

Duplicates (1) Duplicated Sample: 218524

 QC Batch:
 66350
 Date Analyzed:
 2009-12-29

 Prep Batch:
 56717
 QC Preparation:
 2009-12-29

Analyzed: 2009-12-29 Analyzed By: AR Preparation: 2009-12-29 Prepared By: AR

114-6403129

Work Order: 9122911

Celero/Tract 1 TB

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| Param | Duplicate<br>Result | Sample<br>Result | Units | Dilution | RPD | RPD<br>Limit |
|-------|---------------------|------------------|-------|----------|-----|--------------|
| pН    | 7.50                | 7.51             | s.u.  | 1        | 0   | 1.5          |

Duplicated Sample: 218524 Duplicates (1)

QC Batch: Prep Batch:

66366 56729 Date Analyzed:

2009-12-30

QC Preparation: 2009-12-30 Analyzed By: AR

Prepared By: AR

| Param                  | Duplicate<br>Result | Sample<br>Result | Units         | Dilution | RPD | RPD<br>Limit |
|------------------------|---------------------|------------------|---------------|----------|-----|--------------|
| Hydroxide Alkalinity   | <1.00               | <1.00            | mg/L as CaCo3 | 1        | 0   | 20           |
| Carbonate Alkalinity   | < 1.00              | < 1.00           | mg/L as CaCo3 | 1        | 0   | 20           |
| Bicarbonate Alkalinity | 107                 | 99.0             | mg/L as CaCo3 | 1        | 8   | 20           |
| Total Alkalinity       | 107                 | 99.0             | mg/L as CaCo3 | 1        | 8   | 20           |

Duplicated Sample: 218524 Duplicates (1)

QC Batch: Prep Batch:

66452 56731 Date Analyzed:

QC Preparation:

2010-01-05 2009-12-30 Analyzed By:

ARPrepared By: AR

Duplicate RPD Sample Result Result Dilution RPD Limit Param Units Total Dissolved Solids 9900 9580 mg/L 20 10

Laboratory Control Spike (LCS-1)

QC Batch:

Prep Batch: 56732

Date Analyzed:

2009-12-30 QC Preparation: 2009-12-30 Analyzed By: AR

Prepared By: AR

LCS Matrix Rec. Spike Result Dil. Result Limit Param Units Rec. Amount mg/L 90 - 110 Chloride 24.6 25.0< 0.47598

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|          | LCSD   |       |      | Spike  | Matrix  |      | Rec.     |     | RPD   |
|----------|--------|-------|------|--------|---------|------|----------|-----|-------|
| Param    | Result | Units | Dil. | Amount | Result  | Rec. | Limit    | RPD | Limit |
| Chloride | 24.7   | mg/L  | 1    | 25.0   | < 0.475 | 99   | 90 - 110 | 0   |       |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

114-6403129

Work Order: 9122911 · Celero/Tract 1 TB

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Laboratory Control Spike (LCS-1)

QC Batch:

66392 Prep Batch: 56732 Date Analyzed:

2009-12-30

QC Preparation: 2009-12-30 Analyzed By: AR

Prepared By: AR

|         | LCS    |       |      | Spike  | Matrix  |      | Rec.     |
|---------|--------|-------|------|--------|---------|------|----------|
| Param   | Result | Units | Dil. | Amount | Result  | Rec. | Limit    |
| Sulfate | 23.9   | mg/L  | 1    | 25.0   | < 0.217 | 96   | 90 - 110 |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|         | LCSD   |       |      | Spike  | Matrix  |      | Rec.     |       | RPD   |
|---------|--------|-------|------|--------|---------|------|----------|-------|-------|
| Param   | Result | Units | Dil. | Amount | Result  | Rec. | Limit    | RPD · | Limit |
| Sulfate | 23.7   | mg/L  | 1    | 25.0   | < 0.217 | 95   | 90 - 110 | 1     |       |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

# Laboratory Control Spike (LCS-1)

QC Batch:

66393

Date Analyzed:

2009-12-30

Analyzed By: AR

Prepared By: AR

Prep Batch: 56733

QC Preparation: 2009-12-30

|          | LCS    |       |      | Spike  | Matrix  |      | Rec.     |
|----------|--------|-------|------|--------|---------|------|----------|
| Param    | Result | Units | Dil. | Amount | Result  | Rec. | Limit    |
| Chloride | 25.6   | mg/L  | 1    | 25.0   | < 0.475 | 102  | 90 - 110 |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|          | • | LCSD   |       |      | Spike  | Matrix  |      | Rec.     |     | RPD   |
|----------|---|--------|-------|------|--------|---------|------|----------|-----|-------|
| Param    |   | Result | Units | Dil. | Amount | Result  | Rec. | Limit    | RPD | Limit |
| Chloride |   | 25.5   | mg/L  | 1    | 25.0   | < 0.475 | 102  | 90 - 110 | 0   |       |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

#### Laboratory Control Spike (LCS-1)

QC Batch:

Date Analyzed:

2009-12-30

Analyzed By: AR

Prepared By: AR

Prep Batch: 56733

QC Preparation: 2009-12-30

|         | LCS    |       |      | Spike  | Matrix  |      | Rec.     |
|---------|--------|-------|------|--------|---------|------|----------|
| Param   | Result | Units | Dil. | Amount | Result  | Rec. | Limit    |
| Sulfate | 23.8   | mg/L  | 1    | 25.0   | < 0.217 | 95   | 90 - 110 |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|         | LCSD   |       |      | Spike  | Matrix  |      | Rec.             |     | RPD   |
|---------|--------|-------|------|--------|---------|------|------------------|-----|-------|
| Param   | Result | Units | Dil. | Amount | Result  | Rec. | $\mathbf{Limit}$ | RPD | Limit |
| Sulfate | 23.9   | mg/L  | 1    | 25.0   | < 0.217 | 96   | 90 - 110         | 0   |       |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

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Work Order: 9122911 Celero/Tract 1 TB

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# Laboratory Control Spike (LCS-1)

QC Batch:

Prep Batch: 56731

Date Analyzed:

2010-01-05

QC Preparation: 2009-12-30 Analyzed By: AR

Rec.

100

Prepared By: AR

LCS

Param Result Total Dissolved Solids 1000

Spike Dil. Units Amount mg/L 1 1000

Matrix Result < 9.75

Rec. Limit 90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|                        | LCSD   |       |      | Spike  | Matrix |      | Rec.     |     | RPD   |
|------------------------|--------|-------|------|--------|--------|------|----------|-----|-------|
| Param                  | Result | Units | Dil. | Amount | Result | Rec. | Limit    | RPD | Limit |
| Total Dissolved Solids | 973    | mg/L  | 1    | 1000   | < 9.75 | 97   | 90 - 110 | 3   | 10    |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

# Laboratory Control Spike (LCS-1)

QC Batch:

66490 Prep Batch: 56807

Date Analyzed: QC Preparation: 2010-01-05

2010-01-06

Analyzed By: RR

Prepared By: KV

| Param               | LCS<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit |
|---------------------|---------------|-------|------|-----------------|------------------|------|---------------|
| Dissolved Calcium   | 49.1          | mg/L  | 1    | 50.0            | < 0.117          | 98   | 85 - 115      |
| Dissolved Potassium | 46.1          | mg/L  | 1    | 50.0            | < 0.172          | 92   | 85 - 115      |
| Dissolved Magnesium | 47.9          | mg/L  | 1    | 50.0            | < 0.160          | 96   | 85 - 115      |
| Dissolved Sodium    | 46.9          | mg/L  | 1    | 50.0            | < 0.0500         | 94   | 85 - 115      |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|                     | LCSD   |             |      | Spike  | Matrix   |      | Rec.     |     | RPD   |
|---------------------|--------|-------------|------|--------|----------|------|----------|-----|-------|
| Param               | Result | Units       | Dil. | Amount | Result   | Rec. | Limit    | RPD | Limit |
| Dissolved Calcium   | 49.1   | mg/L        | 1    | 50.0   | < 0.117  | 98   | 85 - 115 | 0   | 20    |
| Dissolved Potassium | 46.5   | ${ m mg/L}$ | 1    | 50.0   | < 0.172  | 93   | 85 - 115 | 1   | 20    |
| Dissolved Magnesium | 47.9   | mg/L        | 1    | 50.0   | < 0.160  | 96   | 85 - 115 | 0   | 20    |
| Dissolved Sodium    | 48.1   | mg/L        | 1    | 50.0   | < 0.0500 | 96   | 85 - 115 | 2   | 20    |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

# Laboratory Control Spike (LCS-1)

QC Batch: Prep Batch:

66515 56863 Date Analyzed:

2010-01-06 QC Preparation: 2010-01-06 Analyzed By: AG

Prepared By: AG

continued ...

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| 1       | • 7    | 1. 1      |  |  |
|---------|--------|-----------|--|--|
| control | svikes | continued |  |  |

| Param        | $rac{	ext{LCS}}{	ext{Result}}$ | Units   | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit    |
|--------------|---------------------------------|---------|------|-----------------|------------------|------|------------------|
|              | LCS                             | T-177-1 |      | Spike           | Matrix           |      | Rec.             |
| Param        | Result                          | Units   | Dil. | Amount          | Result           | Rec. | $\mathbf{Limit}$ |
| Benzene      | 0.102                           | mg/L    | 1    | 0.100           | < 0.000300       | 102  | 79.4 - 111.8     |
| Toluene      | 0.103                           | mg/L    | 1    | 0.100           | < 0.000200       | 103  | 79.3 - 110       |
| Ethylbenzene | 0.101                           | mg/L    | 1    | 0.100           | < 0.000200       | 101  | 73.8 - 113.1     |
| Xylene       | 0.307                           | mg/L    | 1    | 0.300           | < 0.000900       | 102  | 73.9 - 113.6     |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|              | LCSD   |             |      | Spike  | Matrix     |      | Rec.         |     | RPD   |
|--------------|--------|-------------|------|--------|------------|------|--------------|-----|-------|
| Param        | Result | Units       | Dil. | Amount | Result     | Rec. | Limit        | RPD | Limit |
| Benzene      | 0.0978 | mg/L        | 1    | 0.100  | < 0.000300 | 98   | 79.4 - 111.8 | 4   | 20    |
| Toluene      | 0.0980 | ${ m mg/L}$ | 1    | 0.100  | < 0.000200 | 98   | 79.3 - 110   | 5   | 20    |
| Ethylbenzene | 0.0965 | mg/L        | 1    | 0.100  | < 0.000200 | 96   | 73.8 - 113.1 | 5   | 20    |
| Xylene       | 0.292  | mg/L        | 1    | 0.300  | < 0.000900 | 97   | 73.9 - 113.6 | 5   | 20    |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

| Surrogate                    | $rac{	ext{LCS}}{	ext{Result}}$ | LCSD<br>Result | Units | Dil. | Spike<br>Amount | LCS<br>Rec. | LCSD<br>Rec. | Rec.<br>Limit |
|------------------------------|---------------------------------|----------------|-------|------|-----------------|-------------|--------------|---------------|
| Trifluorotoluene (TFT)       | 0.0867                          | 0.103          | mg/L  | 1    | 0.100           | 87          | 103          | 76.2 - 129.6  |
| 4-Bromofluorobenzene (4-BFB) | 0.0872                          | 0.104          | mg/L  | 1    | 0.100           | 87          | 104          | 77.9 - 119.8  |

Matrix Spike (MS-1) Spiked Sample: 218522

QC Batch: 66392 Prep Batch: 56732 Date Analyzed: 2009-12-30 QC Preparation: 2009-12-30

Analyzed By: AR Prepared By: AR

|          |    | MS     | •     |      | Spike  | Matrix |      | Rec.     |
|----------|----|--------|-------|------|--------|--------|------|----------|
| Param    |    | Result | Units | Dil. | Amount | Result | Rec. | Limit    |
| Chloride | -1 | 8340   | mg/L  | 50   | 1380   | 5910   | 177  | 90 - 110 |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|          |   | MSD    |       |      | Spike  | Matrix |      | Rec.     |     | RPD   |
|----------|---|--------|-------|------|--------|--------|------|----------|-----|-------|
| Param    |   | Result | Units | Dil. | Amount | Result | Rec. | Limit    | RPD | Limit |
| Chloride | 2 | 8350   | mg/L  | 50   | 1380   | 5910   | 177  | 90 - 110 | 0   |       |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

<sup>&</sup>lt;sup>1</sup>Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

<sup>&</sup>lt;sup>2</sup>MSD analyte out of range. MS/MSD has a RPD within limits. Therfore, MS shows extraction occured properly.

Report Date: January 7, 2010

114-6403129

Work Order: 9122911 Celero/Tract 1 TB

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Matrix Spike (MS-1)

Spiked Sample: 218522

QC Batch: Prep Batch: 56732

66392

Date Analyzed:

2009-12-30

QC Preparation: 2009-12-30 Analyzed By: AR

Prepared By: AR

|         | MS     |       |      | Spike  | Matrix |      | Rec.     |
|---------|--------|-------|------|--------|--------|------|----------|
| Param   | Result | Units | Dil. | Amount | Result | Rec. | Limit    |
| Sulfate | 1350   | mg/L  | 50   | 1380   | <10.8  | 98   | 90 - 110 |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|         | MSD    |       |      | Spike  | Matrix |      | Rec.     |     | RPD   |
|---------|--------|-------|------|--------|--------|------|----------|-----|-------|
| Param   | Result | Units | Dil. | Amount | Result | Rec. | Limit    | RPD | Limit |
| Sulfate | 1330   | mg/L  | 50   | 1380   | <10.8  | 96   | 90 - 110 | 2   |       |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1)

Spiked Sample: 218524

QC Batch:

66393

Date Analyzed:

2009-12-30

Analyzed By: AR

Prep Batch: 56733

QC Preparation:

2009-12-30

Prepared By: AR

|          | MS     |       |      | Spike  | Matrix |      | Rec.     |
|----------|--------|-------|------|--------|--------|------|----------|
| Param    | Result | Units | Dil. | Amount | Result | Rec. | Limit    |
| Chloride | 8100   | mg/L  | 50   | 1380   | 6445   | 120  | 90 - 110 |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|          |   | MSD    |       |      | Spike  | Matrix |      | Rec.     |     | RPD   |
|----------|---|--------|-------|------|--------|--------|------|----------|-----|-------|
| Param    |   | Result | Units | Dil. | Amount | Result | Rec. | Limit    | RPD | Limit |
| Chloride | 4 | 8080   | mg/L  | 50   | 1380   | 6445   | 119  | 90 - 110 | 0   |       |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1)

Spiked Sample: 218524

QC Batch:

66393

Date Analyzed:

2009-12-30

Analyzed By: AR

Prep Batch:

56733

QC Preparation: 2009-12-30

Prepared By: AR

|         | MS     |       |      | Spike  | Matrix |      | ${ m Rec.}$ |
|---------|--------|-------|------|--------|--------|------|-------------|
| Param   | Result | Units | Dil. | Amount | Result | Rec. | Limit       |
| Sulfate | 1410   | mg/L  | 50   | 1380   | 148    | 92   | 90 - 110    |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

<sup>&</sup>lt;sup>3</sup>Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

<sup>&</sup>lt;sup>4</sup>MSD analyte out of range. MS/MSD has a RPD within limits. Therfore, MS shows extraction occured properly.

Report Date: January 7, 2010

114-6403129

Work Order: 9122911 Celero/Tract 1 TB

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|         | MSD    |       |      | Spike  | Matrix |      | Rec.     |     | RPD   |
|---------|--------|-------|------|--------|--------|------|----------|-----|-------|
| Param   | Result | Units | Dil. | Amount | Result | Rec. | Limit    | RPD | Limit |
| Sulfate | 1400   | mg/L  | 50   | 1380   | 148    | 91 . | 90 - 110 | 1   |       |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1)

Spiked Sample: 218384

QC Batch: Prep Batch: 56807

66490

Date Analyzed: QC Preparation: 2010-01-05

2010-01-06

Analyzed By: RR

Prepared By: KV

|                     | MS     |       |      | Spike  | Matrix |      | Rec.     |
|---------------------|--------|-------|------|--------|--------|------|----------|
| Param               | Result | Units | Dil. | Amount | Result | Rec. | Limit    |
| Dissolved Calcium   | 167    | mg/L  | 1    | 50.0   | 121    | 92   | 75 - 125 |
| Dissolved Potassium | 50.6   | mg/L  | 1    | 50.0   | 3.36   | 94   | 75 - 125 |
| Dissolved Magnesium | 59.9   | mg/L  | 1    | 50.0   | 12.7   | 94   | 75 - 125 |
| Dissolved Sodium    | 92.8   | mg/L  | 1 .  | 50.0   | 45.5   | 95   | 75 - 125 |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|                     | MSD-   |             |      | Spike  | Matrix |      | Rec.     |     | RPD   |
|---------------------|--------|-------------|------|--------|--------|------|----------|-----|-------|
| Param               | Result | Units       | Dil. | Amount | Result | Rec. | Limit    | RPD | Limit |
| Dissolved Calcium   | 171    | mg/L        | 1    | 50.0   | 121    | 100  | 75 - 125 | 2   | 20    |
| Dissolved Potassium | 51.4   | ${ m mg/L}$ | 1    | 50.0   | 3.36   | 96   | 75 - 125 | 2   | 20    |
| Dissolved Magnesium | 60.9   | m mg/L      | 1    | 50.0   | 12.7   | 96   | 75 - 125 | 2   | 20    |
| Dissolved Sodium    | 94.7   | mg/L        | 1    | 50.0   | 45.5   | 98   | 75 - 125 | 2   | 20    |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1)

Spiked Sample: 218565

QC Batch: 66515 Prep Batch: 56863 Date Analyzed: 2010-01-06 2010-01-06 QC Preparation:

Analyzed By: AG Prepared By:

|              | MS     | ٠            |      | Spike  | Matrix     |      | Rec.         |
|--------------|--------|--------------|------|--------|------------|------|--------------|
| Param        | Result | Units        | Dil. | Amount | Result     | Rec. | Limit        |
| Benzene      | 0.102  | mg/L         | 1    | 0.100  | < 0.000300 | 102  | 77.3 - 117.4 |
| Toluene      | 0.101  | $_{ m mg/L}$ | 1    | 0.100  | < 0.000200 | 101  | 75 - 111.8   |
| Ethylbenzene | 0.101  | $_{ m mg/L}$ | 1    | 0.100  | < 0.000200 | 101  | 78.8 - 106.6 |
| Xylene       | 0.303  | mg/L         | . 1  | 0.300  | < 0.000900 | 101  | 68.9 - 114   |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

| Param        | MSD<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit | RPD | RPD<br>Limit |
|--------------|---------------|-------|------|-----------------|------------------|------|---------------|-----|--------------|
| Benzene      | 0.104         | mg/L  | 1    | 0.100           | < 0.000300       | 104  | 77.3 - 117.4  | 2   | 20           |
| Toluene      | 0.104         | mg/L  | 1    | 0.100           | < 0.000200       | 104  | 75 - 111.8    | 3   | 20           |
| Ethylbenzene | 0.103         | mg/L  | . 1  | 0.100           | < 0.000200       | 103  | 78.8 - 106.6  | 2   | 20           |

 $continued \dots$ 

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|     |     | -7     |           |  |  |
|-----|-----|--------|-----------|--|--|
| mat | rix | svikes | continued |  |  |

|        | MSD    |       |      | Spike  | Matrix     |      | Rec.       |     | RPD   |
|--------|--------|-------|------|--------|------------|------|------------|-----|-------|
| Param  | Result | Units | Dil. | Amount | Result     | Rec. | Limit      | RPD | Limit |
| Xylene | 0.310  | mg/L  | 1    | 0.300  | < 0.000900 | 103  | 68.9 - 114 | 2   | 20    |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|                              | MS                      | MSD               |                  |      | Spike  | MS          | MSD         | Rec.         |
|------------------------------|-------------------------|-------------------|------------------|------|--------|-------------|-------------|--------------|
| Surrogate                    | $\operatorname{Result}$ | $\mathbf{Result}$ | $\mathbf{Units}$ | Dil. | Amount | ${ m Rec.}$ | ${ m Rec.}$ | Limit        |
| Trifluorotoluene (TFT)       | 0.102                   | 0.0869            | mg/L             | 1    | 0.1    | 102         | 87          | 76.3 - 129.8 |
| 4-Bromofluorobenzene (4-BFB) | 0.105                   | 0.0899            | mg/L             | 1    | 0.1    | 105         | 90          | 75.2 - 112.8 |

### Standard (ICV-1)

QC Batch: 66350

Date Analyzed: 2009-12-29

Analyzed By: AR

|       |      |       | ICVs  | ICVs  | ICVs      | Percent  |            |
|-------|------|-------|-------|-------|-----------|----------|------------|
|       |      |       | True  | Found | , Percent | Recovery | Date       |
| Param | Flag | Units | Conc. | Conc. | Recovery  | Limits   | Analyzed   |
| pН    |      | s.u.  | 7.00  | 7.02  | 100       | 98 - 102 | 2009-12-29 |

### Standard (CCV-1)

QC Batch: 66350

Date Analyzed: 2009-12-29

Analyzed By: AR

| •     |      |       | CCVs  | CCVs  | CCVs     | Percent  |            |
|-------|------|-------|-------|-------|----------|----------|------------|
| •     |      |       | True  | Found | Percent  | Recovery | Date       |
| Param | Flag | Units | Conc. | Conc. | Recovery | Limits   | Analyzed   |
| pН    |      | s.u.  | 7.00  | 6.87  | 98       | 98 - 102 | 2009-12-29 |

### Standard (ICV-1)

QC Batch: 66366

Date Analyzed: 2009-12-30

Analyzed By: AR

|                        |      |               | <b>ICVs</b> | ICVs  | ICVs     | Percent  |            |
|------------------------|------|---------------|-------------|-------|----------|----------|------------|
|                        |      |               | True        | Found | Percent  | Recovery | Date       |
| Param                  | Flag | Units         | Conc.       | Conc. | Recovery | Limits   | Analyzed   |
| Hydroxide Alkalinity   |      | mg/L as CaCo3 | 0.00        | <1.00 |          | 0 - 200  | 2009-12-30 |
| Carbonate Alkalinity   |      | mg/L as CaCo3 | 0.00        | 238   |          | 0 - 200  | 2009-12-30 |
| Bicarbonate Alkalinity |      | mg/L as CaCo3 | 0.00        | 19.0  | `        | 0 - 200  | 2009-12-30 |
| Total Alkalinity       |      | mg/L as CaCo3 | 250         | 257   | 103      | 90 - 110 | 2009-12-30 |

### Standard (CCV-1)

QC Batch: 66366

Date Analyzed: 2009-12-30

Analyzed By: AR

Report Date: January 7, 2010 114-6403129

Work Order: 9122911 Celero/Tract 1 TB

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|                        |      |               | $rac{	ext{CCVs}}{	ext{True}}$ | CCVs<br>Found | $egin{array}{c} 	ext{CCVs} \ 	ext{Percent} \end{array}$ | Percent<br>Recovery | Date       |
|------------------------|------|---------------|--------------------------------|---------------|---|---------------------|------------|
| Param                  | Flag | Units         | Conc.                          | Conc.         | Recovery  | Limits              | Analyzed   |
| Hydroxide Alkalinity   |      | mg/L as CaCo3 | 0.00                           | <1.00         |   | 0 - 200             | 2009-12-30 |
| Carbonate Alkalinity   |      | mg/L as CaCo3 | 0.00                           | 180           |   | 0 - 200             | 2009-12-30 |
| Bicarbonate Alkalinity |      | mg/L as CaCo3 | 0.00                           | 73.0          |   | 0 - 200             | 2009-12-30 |
| Total Alkalinity       |      | mg/L as CaCo3 | 250                            | 253           | 101   | 90 - 110            | 2009-12-30 |

QC Batch: 66392

Date Analyzed: 2009-12-30

Analyzed By: AR

|          |      |                   | ICVs<br>True | ICVs<br>Found | ICVs<br>Percent | Percent<br>Recovery | Date       |
|----------|------|-------------------|--------------|---------------|-----------------|---------------------|------------|
| Param    | Flag | Units             | Conc.        | Conc.         | Recovery        | Limits              | Analyzed   |
| Chloride |      | $_{ m mg}/{ m L}$ | 25.0         | 23.6          | 94              | 90 - 110            | 2009-12-30 |

### Standard (ICV-1)

QC Batch: 66392

Date Analyzed: 2009-12-30

Analyzed By: AR

|         |      | •     | ICVs  | ICVs  | ICVs     | Percent  | _                     |
|---------|------|-------|-------|-------|----------|----------|-----------------------|
|         |      |       | True  | Found | Percent  | Recovery | $\operatorname{Date}$ |
| Param   | Flag | Units | Conc. | Conc. | Recovery | Limits   | Analyzed              |
| Sulfate |      | mg/L  | 25.0  | 24.1  | 96       | 90 - 110 | 2009-12-30            |

### Standard (CCV-1)

QC Batch: 66392

Date Analyzed: 2009-12-30

Analyzed By: AR

|          |                       |       | CCVs<br>True | CCVs<br>Found | $egin{array}{c} 	ext{CCVs} \ 	ext{Percent} \end{array}$ | Percent<br>Recovery | Date       |
|----------|-----------------------|-------|--------------|---------------|---|---------------------|------------|
| Param    | $\operatorname{Flag}$ | Units | Conc.        | Conc.         | Recovery  | Limits              | Analyzed   |
| Chloride |                       | mg/L  | 25.0         | 24.2          | 97  | 90 - 110            | 2009-12-30 |

### Standard (CCV-1)

QC Batch: 66392

Date Analyzed: 2009-12-30

Analyzed By: AR

|         |      |       | CCVs  | CCVs  | CCVs     | Percent  |            |
|---------|------|-------|-------|-------|----------|----------|------------|
|         |      |       | True  | Found | Percent  | Recovery | Date       |
| Param   | Flag | Units | Conc. | Conc. | Recovery | Limits   | Analyzed   |
| Sulfate |      | mg/L  | 25.0  | 24.4  | 98       | 90 - 110 | 2009-12-30 |

| Report Date 114-6403129 | e: January 7<br>9 | , 2010  |          | Work Order: 91<br>Celero/Tract 1 |              |                     | umber: 24 of 25<br>vez County, NM |
|-------------------------|-------------------|---------|----------|----------------------------------|--------------|---------------------|-----------------------------------|
| Standard (              | (ICV-1)           |         |          |                                  |              |                     |                                   |
| QC Batch:               | 66393             |         | Date A   | nalyzed: 2009-1                  | 2-30         | Anal                | yzed By: AR                       |
|                         |                   |         | ICVs     | ICVs                             | ICVs         | Percent             |                                   |
|                         |                   |         | True     | Found                            | Percent      | Recovery            | Date                              |
| Param                   | Flag              | Units   | Conc.    | Conc.                            | Recovery     | Limits              | Analyzed                          |
| Chloride                |                   | mg/L    | 25.0     | 24.2                             | 97           | 90 - 110            | 2009-12-30                        |
| Standard (              | (ICV-1)           |         |          |                                  |              |                     |                                   |
| QC Batch:               | 66393             |         | Date A   | nalyzed: 2009-1                  | 2-30         | Anal                | yzed By: AR                       |
|                         |                   |         | ICVs     | ICVs                             | ICVs         | Percent             |                                   |
|                         |                   |         | True     | Found                            | Percent      | Recovery            | Date                              |
| Param                   | Flag              | Units   | Conc.    | Conc.                            | Recovery     | Limits              | Analyzed                          |
| Sulfate                 |                   | mg/L    | 25.0     | 24.4                             | 98           | 90 - 110            | 2009-12-30                        |
| QC Batch:               | 66393             |         | CCVs     | nalyzed: 2009-1<br>CCVs          | 2-30<br>CCVs | Anai<br>Percent     | lyzed By: AR                      |
|                         |                   |         | True     | Found                            | Percent      |                     | Date                              |
| Param                   | Flag              | Units   | Conc.    | Conc.                            | Recovery     | Recovery<br>Limits  | Analyzed                          |
| Chloride                | Tiag              | mg/L    | 25.0     | 24.2                             | 97           | 90 - 110            | 2009-12-30                        |
| Omoride                 |                   | 1116/11 | 20.0     | 27.2                             |              | 30 - 110            | 2005-12-50                        |
| Standard (              | CCV-1)            |         |          |                                  |              |                     | •                                 |
| QC Batch:               | 66393             |         | Date Ar  | nalyzed: 2009-1                  | 2-30         | Anal                | yzed By: AR                       |
|                         |                   |         | CCVs     | CCVs                             | CCVs         | Percent             |                                   |
|                         |                   | •       | True     | Found                            | Percent      | Recovery            | Date                              |
| Param                   | Flag              | Units   | Conc.    | Conc.                            | Recovery     | Limits              | Analyzed                          |
| Sulfate                 |                   | mg/L    | 25.0     | 24.2                             | 97           | 90 - 110            | 2009-12-30                        |
| Standard (              | ICV-1)            |         |          |                                  |              |                     |                                   |
| QC Batch:               | 66490             |         | Date Ar  | nalyzed: 2010-0                  | 1-06         | Anal                | yzed By: RR                       |
| _                       |                   |         |          | CVs ICV<br>True Foun             | d Percent    | Percent<br>Recovery | Date                              |
| Danama                  |                   | Trlo m  | IInita ( | lana Can                         | · Daggergur  | Timita              | Analusad                          |

Conc.

50.0

50.0

Flag

Units

mg/L mg/L

Param

Dissolved Calcium

Dissolved Potassium

Conc.

53.0

49.6

Recovery

106

99

Limits

90 - 110

90 - 110

Analyzed

2010-01-06

2010-01-06  $continued \dots$ 

Report Date: January 7, 2010 114-6403129

Work Order: 9122911 Celero/Tract 1 TB Page Number: 25 of 25 Chavez County, NM

| ot an | dand | continued |      |
|-------|------|-----------|------|
| stan  | aara | continuea | <br> |

|                     |      |       | ICVs  | ICVs  | ICVs     | Percent  |            |
|---------------------|------|-------|-------|-------|----------|----------|------------|
|                     |      |       | True  | Found | Percent  | Recovery | Date       |
| Param               | Flag | Units | Conc. | Conc. | Recovery | Limits   | Analyzed   |
| Dissolved Magnesium |      | mg/L  | 50.0  | 52.9  | 106      | 90 - 110 | 2010-01-06 |
| Dissolved Sodium    |      | mg/L  | 50.0  | 50.2  | 100      | 90 - 110 | 2010-01-06 |

### Standard (CCV-1)

QC Batch: 66490

Date Analyzed: 2010-01-06

Analyzed By: RR

|                     |                 |             | $rac{	ext{CCVs}}{	ext{True}}$ | CCVs<br>Found | ${ m CCVs} \ { m Percent}$ | Percent<br>Recovery | Date       |
|---------------------|-----------------|-------------|--------------------------------|---------------|----------------------------|---------------------|------------|
| Param               | $\mathbf{Flag}$ | Units       | Conc.                          | Conc.         | Recovery                   | Limits              | Analyzed   |
| Dissolved Calcium   |                 | mg/L        | 50.0                           | 52.3          | 105                        | 90 - 110            | 2010-01-06 |
| Dissolved Potassium |                 | m mg/L      | 50.0                           | 49.4          | 99                         | 90 - 110            | 2010-01-06 |
| Dissolved Magnesium |                 | mg/L        | 50.0                           | 52.3          | 105                        | 90 - 110            | 2010-01-06 |
| Dissolved Sodium    |                 | ${ m mg/L}$ | 50.0                           | 51.2          | 102                        | 90 - 110            | 2010-01-06 |

### Standard (CCV-1)

QC Batch: 66515

Date Analyzed: 2010-01-06

Analyzed By: AG

| Param        | Flag | Units  | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|--------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| Benzene      |      | mg/L   | 0.100                 | 0.0995                 | 100                         | 80 - 120                      | 2010-01-06       |
| Toluene      |      | mg/L   | 0.100                 | 0.0993                 | 99                          | 80 - 120                      | 2010-01-06       |
| Ethylbenzene |      | m mg/L | 0.100                 | 0.0967                 | 97                          | 80 - 120                      | 2010-01-06       |
| Xylene       |      | mg/L   | 0.300                 | 0.293                  | 98                          | 80 - 120                      | 2010-01-06       |

### Standard (CCV-2)

QC Batch: 66515

Date Analyzed: 2010-01-06

Analyzed By: AG

| Param        | Flag | Units  | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|--------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| Benzene      |      | mg/L   | 0.100                 | 0.100                  | 100                         | 80 - 120                      | 2010-01-06       |
| Toluene      |      | mg/L   | 0.100                 | 0.100                  | 100                         | 80 - 120                      | 2010-01-06       |
| Ethylbenzene |      | mg/L   | 0.100                 | 0.0975                 | 98                          | 80 - 120                      | 2010-01-06       |
| Xylene       |      | m mg/L | 0.300                 | 0.295                  | 98                          | 80 - 120                      | 2010-01-06       |

Order #: 9122911

| An                                | alvs         | sis F       | <del>}</del> | C     | 110  | est            | Of              | Ch               | ain            | of C             | ustod         | v F                                    | <u>}</u>       | C          | Or           | d        |             |            |                 |                              |                |                |                     |                                 | PΑ                 | GE:            |   | 1           |                  | OF:            |                             | <u> </u>   |            |
|-----------------------------------|--------------|-------------|--------------|-------|------|----------------|-----------------|------------------|----------------|------------------|---------------|--|----------------|------------|--------------|----------|-------------|------------|-----------------|------------------------------|----------------|----------------|---------------------|---------------------------------|--------------------|----------------|---|-------------|------------------|----------------|-----------------------------|--|------------|
|                                   |              |             | •            |       |      |                |                 |                  |                |                  |               | · ·                                    |                |            |              |          | <del></del> |            |                 |                              |                | (              |                     |                                 |                    |                | QUE<br>Meth   |             | No.)             |                |                             |  |            |
|                                   |              |             |              |       |      |                | 1910 t<br>Midla | N. Big<br>nd, Te | Springexas 79  | g St.            | 46            |  |                |            |              |          |             |            | 5 (Ext. to C35) | Cr Pb Hq Se                  | Vr Pd Hg       |                |                     |                                 |                    |                |   |             |                  | T)S            |                             |  |            |
| CLIENT NA                         | ME:          | <del></del> |              | **    |      |                | SITE            | MANAG            | SER: VI        | Mey              |               | ERS                                    | П              |            | IESE!<br>MET |          |             |            | TX1005          | Ba Cd                        | Ba             |                |                     | 0/624                           | 8270/625           |                |   |             |                  | 1              | Y                           |  |            |
| PROJECT N                         | O.:          | 1           | PR           |       | ECT  |                | Trust           | 17               | 7/3            | G-1. 7           |               | NUMBER OF CONTAINERS                   | (V/N)          |            | T            |          |             |            | ١.١             | als Ag As                    | 2              | tiles          | ii Volatiles        | HCI<br>GC.MS Vol. 8240/8260/624 | mi. Vol. 827       | 10/608         | 808   | pec.        | a (Air)          | astos)         | Tongs Sur                   |  |            |
| LAB I.D.<br>NUMBER                | DATE<br>२००५ | TIME        | MATRIX       | COMP. | GRAB |                | i heav « i      |                  | ルバ<br>PLE IDEN | TIFICATION       | ·             | NUMBER (                               | FILTERED (Y/N) | HCL<br>HCL | HN03         | NONF     |             | BTEX 8021B | трн 80          | PAH 82/0<br>RCRA Metals Ag / | TCLP Me        | TCLP Volatiles | TCLP Semi Volatiles | GC.MS Vo                        | GC.MS Semi. Vol.   | PCB's 8080/608 | Pest. 808/608   | Gamma Spec. | Alpha Beta (Air) | PLM (Asbestos) |                             |  |            |
| 218521                            | 17/28        | 1500        | Gu           |       | χ    | pot (          | ا ، در          |                  |                |                  |               | H                                      | اربر           | ×          | ,            | <b>(</b> |             | X          |                 |                              |                |                |                     |                                 |                    |                | 7   |             |                  |                |                             |  |            |
| 522                               |              | 1530        |              |       |      | mi             | 7               |                  |                |                  |               |  |                |            |              |          |             |            |                 |                              |                |                |                     |                                 |                    |                | $\perp \!\!\! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \!$ |             |                  | $\bot$         |                             |  |            |
| 123                               |              | 1600        |              |       | J    | ped is         | , · 3           |                  |                |                  | -             |  |                |            |              |          |             |            |                 |                              |                |                |                     |                                 |                    |                |   |             |                  |                |                             |  |            |
| 5214                              | 4            | 14130       | <b>A</b>     |       | X    | MW             | - 4/            |                  |                |                  |               | -                                      | <b>A</b>       |            | ,            | I        |             | 4          |                 |                              |                |                |                     |                                 |                    |                | <b>₹</b>  | 1           |                  | -              | 7                           |  | _          |
|                                   |              |             |              |       |      | `              | ·               |                  |                |                  |               |  |                | $\perp$    | $\bot$       | $\perp$  | _           | _          |                 | _                            | 1              |                |                     |                                 | _                  |                | _   | _           |                  | _              | _                           | <del>                                     </del> | $\perp$    |
|                                   |              |             |              |       |      |                |                 | <del></del> -    |                |                  | ·             |  |                | _          | _            | _        | _           | _          |                 | 1                            | <del> </del> - |                | $\sqcup$            | 1                               | _                  |                | 1   | 1           |                  | $\downarrow$   | _                           | $\downarrow \downarrow$                          | _          |
|                                   |              | ļ           |              |       |      |                |                 |                  |                |                  |               |  |                | _          |              | _        | _           | _          |                 | 1                            | -              |                |                     | _                               | -                  |                | 1   | _           |                  | _              | _                           | $\sqcup$   | _          |
|                                   |              | <b></b>     |              |       |      |                |                 |                  |                |                  |               |  |                | $\perp$    | _            | $\perp$  |             | _          |                 |                              | -              |                |                     |                                 | 1                  |                |   | _           |                  | _              | _                           | Ш  | _          |
|                                   |              |             |              |       |      |                | ····            | <del></del>      |                |                  |               |  |                |            | 1            |          |             |            |                 | _                            |                |                |                     | _                               | $oldsymbol{\perp}$ |                |   |             |                  |                |                             | $\coprod$  | $\perp$    |
| RELINQUISHE                       | DRY (Stanot  |             |              |       |      | Date:          | 12/2            | <del>ulm</del>   | Lecci          | (ED-8Y: (Signa)  | 4             |  |                |            | ite:         | 127      | 291         |            | Ц               | SAM                          | 21 50          | By. /          |                     | O Injui                         |                    |                | $\perp$   |             |                  |                | ٠,                          | 33/  |            |
| HELINGUISHE                       |              | 6 KJ E      | 7/           | 士     |      | Time:          | 120             | J                |                | /ED BY: (Signati | h             | -                                      |                | Tin        |              | 12       | 0.0         |            |                 |                              |                |                | Print               |                                 |                    | 7              |   |             | Tir              | ne:            |                             |  |            |
| BELINOWISHE                       | 12           |             |              |       |      | Time:<br>Date: |                 | £.ŭ              |                | /ED BY: (Signati |               | ······································ |                | Da         | ne:<br>ite:  |          |             |            |                 |                              | ND DI          |                | ERED                | ں ح                             |                    |                |   |             | отн              | ER:            |                             |  |            |
| RECEIVING LA<br>ADDRESS:<br>CITY: |              |             | :            | 7/    |      | Time:          | P:              |                  |                | D BY: (Signature | e)            |  |                | Tin        | ne: _        |          |             |            | -               | IEIR                         | J.             | JHC<br>J.Į     | ONIA                | Line                            | /                  | y<br>Y         |   |             |                  | RUSI<br>Autho  | its by:<br>I Chai<br>orized | nges<br>:  |            |
| SAMPLE CON                        | intact       | ,           |              |       | HON  | 7              | EMARKS:         | l ()             | DATE:          | Btex             | gihal copy to | 10/ 0                                  | ME: _          |            | 1) O(        |          | D)          |            |                 | S                            | k co           | <u>J</u>       |                     | 00                              | otin               | ( -            | Coive   | di.         | 00<br>00         | 5              | )()(<br>                    |  | **<br>(48) |

### **Cation-Anion Balance Sheet**

2.76

2.12

1.98

|   | DATE:    | 1/7/2010 | ł         | •        |           |            |                  |          |          |          |          |          |          |             |
|---|----------|----------|-----------|----------|-----------|------------|------------------|----------|----------|----------|----------|----------|----------|-------------|
| : | Sample # | Calcium  | Magnesium | Sodium   | Potassium | Alkalinity | Sulfate          | Chloride | Nitrate  | Fluoride | Bromide  | TDS .    | EC       |             |
|   |          | ppm      | ppm       | ppm      | ppm       | ppm        | ppm              | ppm      | ppm      | ppm      | ppm      | ppm      | μMHOs/cm |             |
|   | 218521   | 2520     | 4370      | 64600    | 2490      | 0          | 2230             | 164000   |          |          |          | 244000   |          |             |
|   | 218522   | 1630     | 379       | 1360     | 18        | 138        | 4.43             | 5480     |          |          |          | 14000    |          |             |
|   | 218523   | 2120     | 804       | 12000    | 146       | 106        | 661              | 22400    |          |          | ·        | 40700    |          |             |
|   | 218524   | 1660     | 349       | 1020     | 14.1      | 99         | 148 <sup>-</sup> | 5070     |          |          |          | 9900     |          |             |
|   |          |          |           |          | _         |            |                  |          |          |          |          |          |          |             |
|   | Sample # | Calcium  | Magnesium | Sodium   | Potassium | Alkalinity | Sulfate          | Chloride | Nitrate  | Fluoride | Bromide  | Cations  | Anions   | Percentage  |
|   |          | in meq/L | in meq/L  | in meq/L | in meq/L  | in meq/L   | in meq/L         | in meq/L | in meq/L | in meq/L | in meq/L | in meq/L | in meq/L | Error       |
| L | 218521   | 125.75   | 359.61    | 2810.10  | 63.69     | 0.00       | 46.43            | 4626.44  | 0        | 0        | 0        | 3359.15  | 4672.87  | 32,71205527 |
|   |          |          |           |          |           |            |                  |          |          |          |          |          |          |             |

0.09

13.76

3.08

154.59

631.90

143.02

0

0

|        | EC/Cation  | EC/Anion   |       |   |    |   |
|--------|------------|------------|-------|---|----|---|
| 218521 | 335914.95  | 467286.86  | range | 0 | to | 0 |
| 218522 | 17214.535  | 15744.3033 | range | 0 | to | 0 |
| 218523 | 69768.384  | 64778.602  | range | 0 | to | 0 |
| 218524 | 15628.3888 | 14808.606  | range | 0 | to | 0 |

59.16

522.00

44.37

3.73

0.36

31.19

66.16

28.72

105.79

82.83

218522

218523

218524

| TDS/EC  | TDS/Cat | TDS/Anion |                       |
|---------|---------|-----------|-----------------------|
| #DIV/0! | 0.73    | 0.52      | needs to be 0.55-0.77 |
| #DIV/0! | 0.81    | 0.89      | needs to be 0.55-0.77 |
| #DIV/0! | 0.58    | 0.63      | needs to be 0.55-0.77 |
| #DIV/0! | 0.63    | 0.67      | needs to be 0.55-0.77 |

172.15

697.68

156.28

157.44

647.79

148.09

8.921623562

7.417159088

5.386752571



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E-Mail: lab@traceanalysis.com

## Certifications

WBENC:

237019

HUB:

1752439743100-86536

DBE: VN 20657

NCTRCA WFWB38444Y0909

### **NELAP Certifications**

Lubbock:

T104704219-08-TX

LELAP-02003

El Paso:

T104704221-08-TX

LELAP-02002

Midland:

T104704392-08-TX

Kansas E-10317

# Analytical and Quality Control Report

Jeff Kindley Tetra Tech

1910 N. Big Spring Street Midland, TX, 79705

Report Date: July 27, 2010

Work Order:

Project Location:

Chavez County, NM

Project Name:

Celero/Rock Queen #1 TB

Project Number:

115-6403129

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

|        |             |        | Date       | ${f Time}$ | Date       |
|--------|-------------|--------|------------|------------|------------|
| Sample | Description | Matrix | Taken      | Taken      | Received   |
| 237445 | MW-1        | water  | 2010-07-13 | 14:05      | 2010-07-14 |
| 237446 | MW-2        | water  | 2010-07-13 | 14:10      | 2010-07-14 |
| 237447 | MW-3        | water  | 2010-07-13 | 14:00      | 2010-07-14 |
| 237448 | MW-4        | water  | 2010-07-13 | 14:15      | 2010-07-14 |

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 14 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Michael april

Dr. Blair Leftwich, Director Dr. Michael Abel, Project Manager

### Standard Flags

 ${f B}$  - The sample contains less than ten times the concentration found in the method blank.

# Case Narrative

Samples for project Celero/Rock Queen #1 TB were received by TraceAnalysis, Inc. on 2010-07-14 and assigned to work order 10071408. Samples for work order 10071408 were received intact without headspace and at a temperature of 3.9 C.

Samples were analyzed for the following tests using their respective methods.

|               |          | Prep  | Prep                | QC    | Analysis            |
|---------------|----------|-------|---------------------|-------|---------------------|
| Test          | Method   | Batch | Date                | Batch | Date                |
| BTEX          | S 8021B  | 61451 | 2010-07-14 at 16:00 | 71724 | 2010-07-14 at 16:42 |
| Chloride (IC) | E 300.0  | 61481 | 2010-07-15 at 09:53 | 71928 | 2010-07-15 at 18:26 |
| SO4 (IC)      | E 300.0  | 61481 | 2010-07-15 at 09:53 | 71928 | 2010-07-15 at 18:26 |
| TDS           | SM 2540C | 61516 | 2010-07-15 at 10:29 | 72039 | 2010-07-26 at 12:30 |

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 10071408 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

115-6403129

Work Order: 10071408 Celero/Rock Queen #1 TB Page Number: 4 of 14 Chavez County, NM

# **Analytical Report**

Sample: 237445 - MW-1

Laboratory: Midland

Prep Batch: 61451

Analysis: QC Batch: BTEX 71724

Analytical Method: Date Analyzed:

S 8021B

2010-07-14

Prep Method: S 5030B Analyzed By:

Sample Preparation:

2010-07-14

Prepared By:

AG AG

| Parameter    | Flag | Result    | Units | Dilution | RL      |
|--------------|------|-----------|-------|----------|---------|
| Benzene      |      | < 0.00100 | mg/L  | 1        | 0.00100 |
| Toluene      |      | < 0.00100 | mg/L  | 1        | 0.00100 |
| Ethylbenzene |      | < 0.00100 | mg/L  | 1        | 0.00100 |
| Xylene       |      | < 0.00100 | mg/L  | 1        | 0.00100 |

|                              |      |        |              |          | Spike  | Percent  | Recovery   |
|------------------------------|------|--------|--------------|----------|--------|----------|------------|
| Surrogate                    | Flag | Result | Units        | Dilution | Amount | Recovery | Limits     |
| Trifluorotoluene (TFT)       | 1    | 0.0651 | mg/L         | 1        | 0.100  | 65       | 67.8 - 126 |
| 4-Bromofluorobenzene (4-BFB) |      | 0.0549 | $_{ m mg/L}$ | 1        | 0.100  | 55       | 51.1 - 128 |

Sample: 237445 - MW-1

Laboratory: Midland

Analysis: Chloride (IC) QC Batch: 71928 Prep Batch: 61481

Analytical Method:

Sample Preparation:

Date Analyzed:

E 300.0 2010-07-15 2010-07-15 Prep Method: N/A

Prepared By:

Analyzed By: AR

AR

RL

| Parameter | Flag | Result | Units | Dilution | RL   |
|-----------|------|--------|-------|----------|------|
| Chloride  |      | 49900  | mg/L  | 5000     | 2.50 |

Sample: 237445 - MW-1

Laboratory:

Midland

Analysis: SO4 (IC) QC Batch: 71928 Prep Batch: 61481

Analytical Method: Date Analyzed:

Sample Preparation:

E 300.0 2010-07-15 2010-07-15 Prep Method: N/A Analyzed By:

ARPrepared By: AR

RL

| Parameter | Flag | Result | Units | Dilution | RL   |
|-----------|------|--------|-------|----------|------|
| Sulfate   |      | 1720   | mg/L  | 50       | 2.50 |

<sup>&</sup>lt;sup>1</sup>SPECIAL-TFT is out of control limits due to an unknown anomaly. However, 4-BFB is within control limits and shows the method to be in control. •

115-6403129

Work Order: 10071408 Celero/Rock Queen #1 TB Page Number: 5 of 14 Chavez County, NM

Sample: 237445 - MW-1

Laboratory: Midland

Analysis: QC Batch:

Prep Batch: 61516

TDS 72039 Analytical Method: Date Analyzed:

Sample Preparation:

SM 2540C 2010-07-26

Prep Method: N/A Analyzed By: AR 2010-07-16 Prepared By: AR

RL

Parameter Flag Result Units Dilution RLTotal Dissolved Solids 98000 mg/L 100 10.0

Sample: 237446 - MW-2

Laboratory: Midland

Analysis: **BTEX** QC Batch: 71724 Prep Batch: 61451

Analytical Method: Date Analyzed:

Sample Preparation:

S 8021B 2010-07-14 2010-07-14 Prep Method: S 5030B

Analyzed By:  $\mathbf{AG}$ Prepared By: AG

RL

|              |      | 1011      |        |          |         |
|--------------|------|-----------|--------|----------|---------|
| Parameter    | Flag | Result    | Units  | Dilution | m RL    |
| Benzene      |      | < 0.00100 | mg/L   | 1        | 0.00100 |
| Toluene      |      | < 0.00100 | m mg/L | 1        | 0.00100 |
| Ethylbenzene |      | < 0.00100 | mg/L   | 1        | 0.00100 |
| Xylene       |      | < 0.00100 | mg/L   | 1 .      | 0.00100 |

|                              |      |        |              |          | Spike  | $\operatorname{Percent}$ | Recovery   |
|------------------------------|------|--------|--------------|----------|--------|--------------------------|------------|
| Surrogate                    | Flag | Result | Units        | Dilution | Amount | Recovery                 | Limits     |
| Trifluorotoluene (TFT)       |      | 0.109  | $_{ m mg/L}$ | 1        | 0.100  | 109                      | 67.8 - 126 |
| 4-Bromofluorobenzene (4-BFB) |      | 0.0885 | mg/L         | 1        | 0.100  | 88                       | 51.1 - 128 |

Sample: 237446 - MW-2

Laboratory: Midland

Analysis: Chloride (IC) QC Batch: 71928 Prep Batch: 61481

Analytical Method: Date Analyzed:

 $\to 300.0$ 2010-07-15 Sample Preparation: 2010-07-15

Prep Method: N/A Analyzed By: AR

Prepared By:

RL

| Parameter | Flag | Result | Units | Dilution | RL   |
|-----------|------|--------|-------|----------|------|
| Chloride  |      | 5930   | mg/L  | 500      | 2.50 |

115-6403129

Work Order: 10071408 Celero/Rock Queen #1 TB Page Number: 6 of 14 Chavez County, NM

Sample: 237446 - MW-2

Laboratory:

Midland

Analysis: QC Batch: Prep Batch: SO4 (IC) 71928 61481

Analytical Method: Date Analyzed:

Sample Preparation:

E 300.0

2010-07-15 2010-07-15

Prep Method: N/A AR Analyzed By: Prepared By: AR

RL

Parameter Sulfate

Flag

Result 47.8

Units mg/L Dilution 5

RL2.50

Sample: 237446 - MW-2

Laboratory:

Midland TDS

Analysis: QC Batch: 72039 Prep Batch: 61516 Analytical Method:

Date Analyzed: Sample Preparation:

SM 2540C 2010-07-26 2010-07-16 Prep Method: N/A Analyzed By: Prepared By:

AR AR

RL

Parameter Total Dissolved Solids Flag Result 14100 Units mg/L Dilution 100 RL

10.0

Sample: 237447 - MW-3

Laboratory:

Midland

Analysis: **BTEX** QC Batch: 71724 Prep Batch: 61451

Analytical Method: Date Analyzed:

S 8021B 2010-07-14 2010-07-14

Prep Method: S 5030B Analyzed By: AG Prepared By: AG

RL

Sample Preparation:

| Parameter    | Flag | Result    | Units  | Dilution | RL      |
|--------------|------|-----------|--------|----------|---------|
| Benzene      |      | < 0.00100 | mg/L   | i        | 0.00100 |
| Toluene      |      | < 0.00100 | mg/L   | 1        | 0.00100 |
| Ethylbenzene |      | < 0.00100 | m mg/L | . 1      | 0.00100 |
| Xylene       | 1    | < 0.00100 | mg/L   | 1        | 0.00100 |

|                              |      |        |       |          | Spike  | Percent  | Recovery   |
|------------------------------|------|--------|-------|----------|--------|----------|------------|
| Surrogate                    | Flag | Result | Units | Dilution | Amount | Recovery | Limits     |
| Trifluorotoluene (TFT)       |      | 0.0852 | mg/L  | 1        | 0.100  | 85       | 67.8 - 126 |
| 4-Bromofluorobenzene (4-BFB) |      | 0.0750 | mg/L  | 1        | 0.100  | 75       | 51.1 - 128 |

Report Date: July 27, 2010 Work Order: 10071408 Page Number: 7 of 14 115-6403129 Celero/Rock Queen #1 TB Chavez County, NM Sample: 237447 - MW-3 Laboratory: Midland Analysis: Chloride (IC) Analytical Method: E 300.0 Prep Method: N/A QC Batch: 71928 Date Analyzed: 2010-07-15 Analyzed By: AR. Prep Batch: 61481 Sample Preparation: 2010-07-15 Prepared By: AR RLResult Parameter Flag Units Dilution RLChloride 133000 5000 2.50mg/L Sample: 237447 - MW-3 Midland Laboratory: Analytical Method: Analysis: SO4 (IC) E 300.0 Prep Method: N/A QC Batch: 71928 Date Analyzed: 2010-07-15 Analyzed By: AR Prep Batch: 61481 Sample Preparation: 2010-07-15 AR Prepared By: RLResult Dilution Parameter Flag Units RL2.501970 Sulfate mg/L 50 Sample: 237447 - MW-3 Laboratory: Midland Analysis: TDS Analytical Method: SM 2540C Prep Method: N/A QC Batch: 72039 Date Analyzed: Analyzed By: AR2010-07-26 Prep Batch: 61516 Sample Preparation: 2010-07-16 Prepared By: AR RLResult Flag Dilution Parameter Units RLTotal Dissolved Solids 237000 mg/L 100 10.0 Sample: 237448 - MW-4 Laboratory: Midland S 5030B Analysis: **BTEX** Analytical Method: S 8021B Prep Method: QC Batch: 71724 Date Analyzed: 2010-07-14 Analyzed By: AG Prep Batch: 61451 Sample Preparation: 2010-07-14 Prepared By: AG RLParameter Flag Result Units Dilution RL

< 0.00100

< 0.00100

mg/L

mg/L

Benzene

Toluene

0.00100

0.00100

1

1

 $continued \dots$ 

Report Date: July 27, 2010 115-6403129

Work Order: 10071408 Celero/Rock Queen #1 TB Page Number: 8 of 14 Chavez County, NM

sample 237448 continued ...

| Parameter                 | Flag |      | Result    |       | Units    | Dil    | ution    | RL         |
|---------------------------|------|------|-----------|-------|----------|--------|----------|------------|
| Ethylbenzene              |      |      | < 0.00100 |       | m mg/L   |        | i        | 0.00100    |
| Xylene                    |      |      | < 0.00100 | )     | mg/L     |        | 1        | 0.00100    |
|                           |      |      |           |       |          | Spike  | Percent  | Recovery   |
| Surrogate                 |      | Flag | Result    | Units | Dilution | Amount | Recovery | Limits     |
| Trifluorotoluene (TFT)    |      |      | 0.113     | mg/L  | 1        | 0.100  | 113      | 67.8 - 126 |
| 4-Bromofluorobenzene (4-B | FB)  |      | 0.0908    | mg/L  | 1        | 0.100  | 91       | 51.1 - 128 |

Laboratory: Midland

Analysis: Chloride (IC)
QC Batch: 71928
Prep Batch: 61481

Analytical Method: E 300.0
Date Analyzed: 2010-07-15
Sample Preparation: 2010-07-15

Prep Method: N/A
Analyzed By: AR
Prepared By: AR

|           |      | m RL   |       |          |      |
|-----------|------|--------|-------|----------|------|
| Parameter | Flag | Result | Units | Dilution | RL   |
| Chloride  |      | 1140   | mg/L  | 50       | 2.50 |

### Sample: 237448 - MW-4

Laboratory: Midland

Analysis: SO4 (IC) QC Batch: 71928 Prep Batch: 61481 Analytical Method: E 300.0
Date Analyzed: 2010-07-15
Sample Preparation: 2010-07-15

Prep Method: N/A Analyzed By: AR Prepared By: AR

|           |      | ${ m RL}$ |       |          |               |
|-----------|------|-----------|-------|----------|---------------|
| Parameter | Flag | Result    | Units | Dilution | $\mathrm{RL}$ |
| Sulfate   |      | 71.1      | mg/L  | 5 ,      | 2.50          |

### Sample: 237448 - MW-4

Laboratory: Midland

Analysis: TDS QC Batch: 72039 Prep Batch: 61516 Analytical Method: SM 2540C Date Analyzed: 2010-07-26 Sample Preparation: 2010-07-16

Prep Method: N/A
Analyzed By: AR
Prepared By: AR

|                        |      | m RL   |       | •        |      |
|------------------------|------|--------|-------|----------|------|
| Parameter              | Flag | Result | Units | Dilution | RL   |
| Total Dissolved Solids |      | 1880   | mg/L  | 5        | 10.0 |

| Report Date: July 27, 2<br>115-6403129 | 2010            |                | fork Order: 10071408 Page Number: ro/Rock Queen #1 TB Chavez Coun |               |              |                |         |                  |
|--|-----------------|----------------|---|---------------|--------------|----------------|---------|------------------|
| Method Blank (1)                       | QC Batch: 71724 |                |   |               |              | ,              |         |                  |
| QC Batch: 71724                        |                 | Date Analyzed  | : 20  | 10-07-14      |              | Analy          | zed By: | AG               |
| Prep Batch: 61451                      | •               | QC Preparation |   | 10-07-14      |              |                | red By: | AG               |
|  |                 |                | MI  | OL            |              |                |         |                  |
| Parameter                              | Flag            |                | Resi  |               | Unit         |                |         | RL               |
| Benzene                                |                 |                | 0.0006  |               | mg/i         |                |         | 0.001            |
| Toluene                                |                 |                | 0.0006  |               | mg/]         |                |         | 0.001            |
| Ethylbenzene<br>Xylene                 |                 |                | 0.0008 $0.0007$   |               | mg/]<br>mg/] |                |         | $0.001 \\ 0.001$ |
| Aylene                                 |                 |                | 0.0001  | 01            | mg/          | <u> </u>       |         | 0.001            |
| _                                      |                 |                |   |               | Spike        | Percent        |         | overy            |
| Surrogate                              | Flag            |                | nits  | Dilution      | Amount       | Recovery       |         | mits             |
| Trifluorotoluene (TFT)                 | 4 DDD\          |                | g/L   | 1             | 0.100        | 97             |         | - 118            |
| 4-Bromofluorobenzene (4                | 4-BFB)          | 0.0848 m       | g/L   | 1             | 0.100        | 85             | 41.3    | - 116            |
|  | •               |                |   |               |              |                |         |                  |
| Method Blank (1)                       | QC Batch: 71928 |                |   |               |              |                |         |                  |
| QC Batch: 71928                        |                 | Date Analyzed  | : 20  | 10-07-15      |              | Analy          | zed By: | AR               |
| Prep Batch: 61481                      |                 | QC Preparation |   | 10-07-15      |              |                | red By: | AR               |
|  |                 |                | MDL   |               |              |                |         |                  |
| Parameter                              | Flag            |                | Result  |               | Units        | 3              |         | RL               |
| Chloride                               |                 |                | 0.463   |               | mg/I         |                |         | 2.5              |
|  |                 |                |   |               |              |                |         |                  |
| Method Blank (1)                       | QC Batch: 71928 |                |   |               |              |                |         |                  |
| QC Batch: 71928                        |                 | Date Analyzed  | : 20  | 10-07-15      |              | Analya         | ed By:  | AR               |
| Prep Batch: 61481                      |                 | QC Preparatio  | n: 20   | 10-07-15      |              |                | ed By:  | AR               |
|  |                 |                | MDL   |               |              |                |         |                  |
| Parameter                              | Flag            |                | Result  |               | Units        | S              |         | RL               |
| Sulfate                                |                 |                | < 0.177   |               | mg/I         | ر              |         | 2.5              |
|  |                 |                |   |               |              |                |         |                  |
| Method Blank (1)                       | QC Batch: 72039 |                |   |               |              |                |         |                  |
|  |                 | Date Analyzed  | : 20  | 10-07-26      |              | Analyz         | ed By:  | AR               |
| QC Batch: 72039                        |                 |                |   |               |              |                |         |                  |
|  |                 | QC Preparatio  | n: 20   | 10-07-15      |              | Prepar         | ed By:  | AR               |
| •                                      |                 | QC Preparatio  |   |               |              | Prepai         | ed By:  | An               |
|  | . Fla           |                |   | MDL<br>Result | <b>T</b> T:  | Prepai<br>nits | ed By:  | RL               |

115-6403129

Work Order: 10071408 Celero/Rock Queen #1 TB Page Number: 10 of 14 Chavez County, NM

Duplicates (2) Duplicated Sample: 237468

QC Batch: Prep Batch: 61516

72039

Date Analyzed:

2010-07-26

QC Preparation: 2010-07-15

Analyzed By: AR

Prepared By: AR

|                        | Duplicate | Sample |                 |          |     | RPD   |
|------------------------|-----------|--------|-----------------|----------|-----|-------|
| Param                  | Result    | Result | Units           | Dilution | RPD | Limit |
| Total Dissolved Solids | 109000    | 5910   | mg/L            | 100      | 7   | 10    |
| Total Dissolved Solids | 109000    | 102000 | $\mathrm{mg/L}$ | 100      | 7   | 10    |

### Laboratory Control Spike (LCS-1)

QC Batch:

71724 Prep Batch: 61451

Date Analyzed:

2010-07-14 QC Preparation: 2010-07-14 Analyzed By: AG

Prepared By: AG

| Param        | $rac{	ext{LCS}}{	ext{Result}}$ | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit |
|--------------|---------------------------------|-------|------|-----------------|------------------|------|---------------|
| Benzene      | 0.100                           | mg/L  | 1    | 0.100           | < 0.000600       | 100  | 82.9 - 108    |
| Toluene      | 0.0992                          | mg/L  | 1    | 0.100           | < 0.000600       | 99   | 82.7 - 107    |
| Ethylbenzene | 0.0949                          | mg/L  | 1    | 0.100           | < 0.000800       | 95   | 78.8 - 106    |
| Xylene       | 0.287                           | mg/L  | 1    | 0.300           | < 0.000767       | 96   | 79.3 - 106    |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|              | LCSD   |       |      | Spike  | Matrix     |      | Rec.       |     | RPD   |
|--------------|--------|-------|------|--------|------------|------|------------|-----|-------|
| Param        | Result | Units | Dil. | Amount | Result     | Rec. | Limit      | RPD | Limit |
| Benzene      | 0.101  | mg/L  | 1    | 0.100  | < 0.000600 | 101  | 82.9 - 108 | 1   | 20    |
| Toluene      | 0.101  | mg/L  | 1    | 0.100  | < 0.000600 | 101  | 82.7 - 107 | 2   | 20    |
| Ethylbenzene | 0.0967 | mg/L  | 1    | 0.100  | < 0.000800 | 97   | 78.8 - 106 | 2   | 20    |
| Xylene       | 0.292  | mg/L  | 1    | 0.300  | < 0.000767 | 97   | 79.3 - 106 | 2   | 20    |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

| Surrogate                    | $egin{array}{c} 	ext{LCS} \ 	ext{Result} \end{array}$ | LCSD<br>Result | Units | Dil. | Spike<br>Amount | LCS<br>Rec. | LCSD<br>Rec. | Rec.<br>Limit |
|------------------------------|---|----------------|-------|------|-----------------|-------------|--------------|---------------|
| Trifluorotoluene (TFT)       | 0.103   | 0.0996         | mg/L  | 1    | 0.100           | 103         | 100          | 67.3 - 113    |
| 4-Bromofluorobenzene (4-BFB) | 0.0966  | 0.0941         | mg/L  | 1    | 0.100           | 97          | 94           | 68.2 - 124    |

### Laboratory Control Spike (LCS-1)

QC Batch:

71928

Prep Batch: 61481

Date Analyzed:

2010-07-15

QC Preparation: 2010-07-15

Analyzed By: AR

Prepared By: AR

|          | LCS    |       |      | Spike  | Matrix  |      | Rec.     |
|----------|--------|-------|------|--------|---------|------|----------|
| Param    | Result | Units | Dil. | Amount | Result  | Rec. | Limit    |
| Chloride | 25.0   | mg/L  | 1    | 25.0   | < 0.265 | 100  | 90 - 110 |

115-6403129

Work Order: 10071408 Celero/Rock Queen #1 TB Page Number: 11 of 14 Chavez County, NM

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|          |   | LCSD   |       |      | $\operatorname{Spike}$ | Matrix  |      | Rec.       |     | RPD   |
|----------|---|--------|-------|------|------------------------|---------|------|------------|-----|-------|
| Param    |   | Result | Units | Dil. | Amount                 | Result  | Rec. | Limit      | RPD | Limit |
| Chloride | ~ | 25.1   | mg/L  | 1    | 25.0                   | < 0.265 | 100  | · 90 - 110 | 0   | 20    |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

### Laboratory Control Spike (LCS-1)

QC Batch:

71928

Date Analyzed:

2010-07-15

Analyzed By: AR

Prep Batch: 61481

QC Preparation:

2010-07-15

Prepared By:

LCS

Matrix

AR

Param Result Sulfate 22.8

Spike Units Dil. Amount mg/L 25.0

Result < 0.177

Rec. Limit 90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|         |   | LCSD   |
|---------|---|--------|
| Param   | · | Result |
| Calfoto |   | 22.0   |

Spike Dil. Amount Matrix

Rec.

Rec.

91

RPD

RPD Units Result Rec. Limit Limit mg/L 20 25.0 < 0.17790 - 110 Sulfate 92

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

### Laboratory Control Spike (LCS-1)

QC Batch:

72039

Date Analyzed:

2010-07-26

Analyzed By:

AR

Prep Batch:

61516

QC Preparation:

2010-07-15

Prepared By:

AR

| Param |  |
|-------|--|

LCS

Spike

Matrix

Rec.

Total Dissolved Solids

Result 1030

Dil. Units mg/L

Amount 1000

Result < 9.75

104

Rec. 103

Limit 90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

| Param           |        |  |
|-----------------|--------|--|
| Total Dissolved | Solids |  |

LCSD Result Dil. Units 1040 mg/L

Amount < 9.75

Matrix Result Rec.

Rec. Limit

90 - 110

RPD

RPD Limit

10

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1)

Spiked Sample: 237430

QC Batch:

71724

Spike

1000

2010-07-14

Analyzed By: AG

Prep Batch: 61451

Date Analyzed: QC Preparation:

2010-07-14

Prepared By:

115-6403129

Work Order: 10071408 Celero/Rock Queen #1 TB Page Number: 12 of 14 Chavez County, NM

| Param        |   | MS<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit |
|--------------|---|--------------|-------|------|-----------------|------------------|------|---------------|
| Benzene      |   | 0.100        | mg/L  | 1    | 0.100           | 0.0031           | 97   | 77.9 - 114    |
| Toluene      |   | 0.0800       | mg/L  | 1    | 0.100           | < 0.000600       | 80   | 78.3 - 111    |
| Ethylbenzene | 2 | 0.0695       | mg/L  | 1    | 0.100           | < 0.000800       | 70   | 75.3 - 110    |
| Xylene       | 3 | 0.211        | mg/L  | . 1  | 0.300           | < 0.000767       | 70   | 75.7 - 109    |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|              |   | MSD    |                  |      | Spike  | Matrix     |                 | Rec.       |     | RPD   |
|--------------|---|--------|------------------|------|--------|------------|-----------------|------------|-----|-------|
| Param        |   | Result | $\mathbf{Units}$ | Dil. | Amount | Result     | $\mathrm{Rec}.$ | Limit      | RPD | Limit |
| Benzene      |   | 0.0908 | mg/L             | 1    | 0.100  | 0.0031     | 88              | 77.9 - 114 | 10  | 20    |
| Toluene      | 4 | 0.0719 | mg/L             | 1    | 0.100  | < 0.000600 | 72              | 78.3 - 111 | 11  | 20    |
| Ethylbenzene | 5 | 0.0623 | mg/L             | 1    | 0.100  | < 0.000800 | 62              | 75.3 - 110 | 11  | 20    |
| Xylene       | 6 | 0.189  | mg/L             | 1.   | 0.300  | < 0.000767 | 63              | 75.7 - 109 | 11  | 20    |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|                              |      | MS     | MSD    |       |      | Spike  | MS   | MSD  | Rec.       |
|------------------------------|------|--------|--------|-------|------|--------|------|------|------------|
| Surrogate                    |      | Result | Result | Units | Dil. | Amount | Rec. | Rec. | Limit      |
| Trifluorotoluene (TFT)       | 7 8  | 0.0434 | 0.0551 | mg/L  | 1    | 0.1    | 43   | 55   | 68.3 - 107 |
| 4-Bromofluorobenzene (4-BFB) | 9 10 | 0.0418 | 0.0525 | mg/L  | 1    | 0.1    | 42   | 52   | 60.1 - 135 |

Matrix Spike (MS-1)

Spiked Sample: 237448

QC Batch: Prep Batch: 61481

71928

Date Analyzed:

2010-07-15

QC Preparation: 2010-07-15

Analyzed By: AR Prepared By:

AR

|          | MS     |       |      | Spike  | Matrix |      | ${ m Rec.}$ |
|----------|--------|-------|------|--------|--------|------|-------------|
| Param    | Result | Units | Dil. | Amount | Result | Rec. | Limit       |
| Chloride | 2430   | mg/L  | 50   | 1380   | 1140   | 94   | 90 - 110    |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|          | MSD    |       |      | Spike  | Matrix |      | Rec.     |     | RPD   |
|----------|--------|-------|------|--------|--------|------|----------|-----|-------|
| Param    | Result | Units | Dil. | Amount | Result | Rec. | Limit    | RPD | Limit |
| Chloride | 2450   | mg/L  | . 50 | 1380   | 1140   | . 95 | 90 - 110 | 1   | 20    |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

<sup>&</sup>lt;sup>2</sup>Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

<sup>&</sup>lt;sup>3</sup>Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

<sup>&</sup>lt;sup>4</sup>MSD analyte out of range. MS/MSD has a RPD within limits. Therfore, MS shows extraction occured properly.

<sup>&</sup>lt;sup>5</sup>MSD analyte out of range. MS/MSD has a RPD within limits. Therfore, MS shows extraction occured properly.

<sup>&</sup>lt;sup>6</sup>MSD analyte out of range. MS/MSD has a RPD within limits. Therfore, MS shows extraction occured properly. <sup>7</sup>Surrogate TFT out due to matrix interference. Sample was not reran due to lack of sample.

 $<sup>^8\</sup>mathrm{Surrogate}$  TFT out due to matrix interference. Sample was not reran due to lack of sample.

<sup>&</sup>lt;sup>9</sup>Surrogate 4-BFB out due to matrix interference. Sample was not reran due to lack of sample.

<sup>&</sup>lt;sup>10</sup>Surrogate 4-BFB out due to matrix interference. Sample was not reran due to lack of sample.

115-6403129

Work Order: 10071408 Celero/Rock Queen #1 TB Page Number: 13 of 14 Chavez County, NM

Matrix Spike (MS-1)

Spiked Sample: 237448

QC Batch:

71928

Date Analyzed:

2010-07-15

Prep Batch: 61481

QC Preparation:

2010-07-15

Analyzed By: AR

Prepared By: AR

|         |    | MS     |       |      | Spike  | Matrix |      | Rec.     |
|---------|----|--------|-------|------|--------|--------|------|----------|
| Param   |    | Result | Units | Dil. | Amount | Result | Rec. | Limit    |
| Sulfate | 11 | 1210   | mg/L  | 50   | 1380   | 70.8   | 83   | 90 - 110 |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

| ·       |    | MSD    |       |      | Spike  | Matrix |      | Rec.     |     | RPD   |
|---------|----|--------|-------|------|--------|--------|------|----------|-----|-------|
| Param   |    | Result | Units | Dil. | Amount | Result | Rec. | Limit    | RPD | Limit |
| Sulfate | 12 | 1180   | mg/L  | 50   | 1380   | 70.8   | 81   | 90 - 110 | 2   | 20    |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

### Standard (CCV-2)

QC Batch: 71724

Date Analyzed: 2010-07-14

Analyzed By: AG

|              |      |              | CCVs                  | CCVs   | CCVs     | Percent  | _          |
|--------------|------|--------------|-----------------------|--------|----------|----------|------------|
|              |      |              | $\operatorname{True}$ | Found  | Percent  | Recovery | Date       |
| Param        | Flag | Units        | Conc.                 | Conc.  | Recovery | Limits   | Analyzed   |
| Benzene      |      | m mg/L       | 0.100                 | 0.0999 | 100      | 80 - 120 | 2010-07-14 |
| Toluene      |      | $_{ m mg/L}$ | 0.100                 | 0.100  | 100      | 80 - 120 | 2010-07-14 |
| Ethylbenzene |      | mg/L         | 0.100                 | 0.0966 | 97       | 80 - 120 | 2010-07-14 |
| Xylene       |      | mg/L         | 0.300                 | 0.292  | 97       | 80 - 120 | 2010-07-14 |

#### Standard (CCV-3)

QC Batch: 71724

Date Analyzed: 2010-07-14

Analyzed By: AG

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| Benzene      |      | mg/L  | 0.100                 | 0.0992                 | 99                          | 80 - 120                      | 2010-07-14       |
| Toluene      |      | mg/L  | 0.100                 | 0.0982                 | 98                          | 80 - 120                      | 2010-07-14       |
| Ethylbenzene |      | mg/L  | 0.100                 | 0.0938                 | 94                          | 80 - 120                      | 2010-07-14       |
| Xylene .     |      | mg/L  | 0.300                 | 0.283                  | 94                          | 80 - 120                      | 2010-07-14       |

### Standard (ICV-1)

QC Batch: 71928

Date Analyzed: 2010-07-15

Analyzed By: AR

<sup>11</sup> Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

<sup>&</sup>lt;sup>12</sup>MSD analyte out of range. MS/MSD has a RPD within limits. Therfore, MS shows extraction occured properly.

115-6403129

Param

Sulfate

Flag

Units

mg/L

Work Order: 10071408 Celero/Rock Queen #1 TB Page Number: 14 of 14 Chavez County, NM

Recovery

Limits

90 - 110

Date

Analyzed

2010-07-15

|                     |         |       | ICVs     | ICVs           | ICVs     | Percent  |              |
|---------------------|---------|-------|----------|----------------|----------|----------|--------------|
|                     |         |       | True     | Found          | Percent  | Recovery | Date         |
| Param               | Flag    | Units | Conc.    | Conc.          | Recovery | Limits   | Analyzed     |
| Chloride            |         | mg/L  | 25.0     | 26.8           | 107      | 90 - 110 | 2010-07-15   |
| Standard (          | (ICV-1) |       |          |                |          |          |              |
| QC Batch:           | 71928   |       | Date Ana | alyzed: 2010-0 | 7-15     | Ana      | lyzed By: AR |
|                     |         |       | ICVs     | ICVs           | ICVs     | Percent  |              |
|                     |         |       | True     | Found          | Percent  | Recovery | Date         |
| Param               | Flag    | Units | Conc.    | Conc.          | Recovery | Limits   | Analyzed     |
| Sulfate             |         | mg/L  | 25.0     | 26.2           | 105      | 90 - 110 | 2010-07-15   |
| Standard (QC Batch: | ,       |       | Date Ana | alyzed: 2010-0 | 7-15     | Ana      | lyzed By: AR |
|                     | •       |       | CCVs     | CCVs           | CCVs     | Percent  |              |
|                     |         |       | True     | Found          | Percent  | Recovery | Date         |
| Param               | Flag    | Units | Conc.    | Conc.          | Recovery | Limits   | Analyzed     |
| Chloride            |         | mg/L  | 25.0     | 27.3           | 109      | 90 - 110 | 2010-07-15   |
| •                   | ,       |       |          |                |          |          |              |
| Standard (          | (CCV-1) |       |          |                |          |          |              |
| QC Batch:           | 71928   |       | Date Ana | alyzed: 2010-0 | 7-15     | Anal     | yzed By: AR  |
|                     |         |       | CCVs     | CCVs           | CCVs     | Percent  |              |

Found

Conc.

23.9

Percent

Recovery

96

True

Conc.

25.0

Order #: 6071408

| Analysis Request of Cha  | in of Custody Reco  | rd 📙                            |  | PAGE  | <u> </u>   | OF:                           |
|--|---|---------------------------------|--|---|--|-------------------------------|
|  |   |                                 |  | ANALYSIS F<br>(Circle or Specify  |  | .)                            |
| TETRA 1910 N. Big S Midland, Texa (432) 682-4559 • F   | pring St.   | (Ext. to C35)                   | Or Pd  |   |  | <u> </u>                      |
| CLIENT NAME: SITE MANAGER  | PRESI<br>ME   | ERVATIVE THOD                   | As Ba Cd<br>As Ba Cd   | 8260/624<br>8270/625  |  | oms, pH(TDS                   |
| PROJECT NO.: PROJECT NAME:  115-6403124 Celevo / Pak Queen   | *1 13 CONTA   | \<br>§                          | 8 48 8   | /olatile<br>3240/8<br>. Vol. 8  | B     E  | 1 1 1                         |
| Chave Co,  |   | NONE NONE BIEX 80218 TPH 8015 A | PAH 8270<br>RCFA Metals Ag /<br>TCLP Metals Ag /<br>TCLP Voletiles | TCLP Semi Volatiles RCI GC.MS Vol. 8240/8260/624 GC.MS Semi. Vol. 8270/625 PCB's 8080/608 | Pest. 808/608<br>Chloride<br>Gamma Spec.<br>Alpha Beta (Alr) | PLM (Asbestos) Major Anions/G |
| 287445 713 1405 W X MW-1   | 4 N X   | XX                              |  |   | X  | x×                            |
| 446 ( 1410 ( MW-Z  |   |                                 |  |   |  |                               |
| 447 ) 1-100 \ NN-3   |   |                                 |  |   |  |                               |
| 448 \$ 1415 \$ MW-4  | 44  | 4 4                             |  |   | #  | 111                           |
|  |   |                                 |  |   |  |                               |
|  |   |                                 |  |   |  |                               |
|  |   |                                 |  |   |  |                               |
|  |   |                                 |  |   |  |                               |
|  |   |                                 |  |   |  |                               |
| 5  |   |                                 |  |   |  |                               |
| RELINQUISHED BY: (Signature)  A  Time:   | RECEIVED BY: (Signature)  Date: Time:                       | 7125                            | SAMPLED BY: (  | Print & Initial)  |  | Pate: 7/13//a<br>Ime:         |
| REUNQUISHED BY: (Signature)  Date: Time:   | RECOULDER: (Signature) Date:                                |                                 | SAMPLE SHIPP<br>FEDEX  | PED BY: (Circle)<br>BUS   | AIRE   | BILL #:                       |
| RELINQUISHED BY: (Signature) Date:   | RECEIVED BY: (Signature) Date:                              |                                 | HAND DELIM   |   | ОТН  |                               |
| RECEIVING LABORATORY: 7:447 RE   | CEIVED BY: (Signature)                                      |                                 |  |   |  | Results by: RUSH Charges      |
|  | TE: TIME:   |                                 | 144  | Kindley   | •  | Authorized: Yes No            |
| SAMPLE CONDITION WHEN RECEIVED:  REMARKS:  A A   temperature   temperatu | Sty Midloud opy - Return Orginal copy to Tetra Tech - Proje | ct Manager retain               | ns Pink copy   | - Accounting re   | ceives Gold (  | сору.                         |



6701 Aberdeen Avenue, Suite 9 200 East Sunset Road, Suite E 5002 Basin Street, Suite A1

Lubbock, Texas 79424 El Paso, Texas 79922 Midland, Texas 79703

800 • 378 • 1296 888 • 588 • 3443 806 • 794 • 1296 915 • 585 • 3443 FAX 806 • 794 • 1298 FAX 915 • 585 • 4944 FAX 432 • 689 • 6313

6015 Harris Parkway, Suite 110 Ft. Worth, Texas 76132 432-689-6301

817 • 201 • 5260

E-Mail: lab@traceanalysis.com

# Certifications

WBENC: 237019 **HUB**:

1752439743100-86536

DBE: VN 20657

NCTRCA

WFWB38444Y0909

LELAP-02002

### NELAP Certifications

Lubbock:

T104704219-08-TX

LELAP-02003 Kansas E-10317 El Paso:

T104704221-08-TX

Midland:

T104704392-08-TX

Analytical and Quality Control Report

Jeff Kindley Tetra Tech 1910 N. Big Spring Street Midland, TX, 79705

Report Date: November 30, 2010

Work Order:

Project Location:

Chavez County, NM

Project Name:

Celero/Rock Queen #1 TB

Project Number:

115-6403129

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

|        |             |        | Date       | 1 ime | Date       |
|--------|-------------|--------|------------|-------|------------|
| Sample | Description | Matrix | Taken      | Taken | Received   |
| 247501 | MW-1        | water  | 2010-10-12 | 14:45 | 2010-10-13 |
| 247502 | MW-2        | water  | 2010-10-12 | 14:35 | 2010-10-13 |
| 247503 | MW-3        | water  | 2010-10-12 | 14:55 | 2010-10-13 |
| 247504 | MW-4        | water  | 2010-10-12 | 14:25 | 2010-10-13 |

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 21 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Michael april

Dr. Blair Leftwich, Director Dr. Michael Abel, Project Manager

### Standard Flags

 ${f B}$  - The sample contains less than ten times the concentration found in the method blank.

### Case Narrative

Samples for project Celero/Rock Queen #1 TB were received by TraceAnalysis, Inc. on 2010-10-13 and assigned to work order 10101405. Samples for work order 10101405 were received intact without headspace and at a temperature of 3.5 C.

Samples were analyzed for the following tests using their respective methods.

|               |          | Prep  | Prep                | QC    | Analysis            |
|---------------|----------|-------|---------------------|-------|---------------------|
| Test          | Method   | Batch | Date                | Batch | Date                |
| BTEX          | S 8021B  | 63840 | 2010-10-14 at 13:40 | 74557 | 2010-10-14 at 18:04 |
| BTEX          | S 8021B  | 63988 | 2010-10-19 at 16:30 | 74590 | 2010-10-20 at 10:10 |
| Chloride (IC) | E 300.0  | 64180 | 2010-10-26 at 14:38 | 74818 | 2010-10-26 at 17:25 |
| Chloride (IC) | E 300.0  | 64185 | 2010-10-26 at 12:00 | 74823 | 2010-10-26 at 22:53 |
| Chloride (IC) | E 300.0  | 64963 | 2010-11-29 at 15:22 | 75734 | 2010-11-29 at 17:05 |
| SO4 (IC)      | E 300.0  | 64528 | 2010-11-09 at 10:35 | 75227 | 2010-11-09 at 18:09 |
| SO4 (IC)      | E 300.0  | 64638 | 2010-11-12 at 12:49 | 75341 | 2010-11-12 at 17:36 |
| TDS           | SM 2540C | 63873 | 2010-10-15 at 10:25 | 74622 | 2010-10-21 at 14:52 |

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 10101405 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

115-6403129

Work Order: 10101405 Celero/Rock Queen #1 TB Page Number: 4 of 21 Chavez County, NM

# **Analytical Report**

Sample: 247501 - MW-1

Laboratory: Midland

Analysis:

**BTEX** 

Analytical Method:

S 8021B

Prep Method: S 5030B

QC Batch: Prep Batch: 63988

74590

Date Analyzed: Sample Preparation:

2010-10-20 2010-10-19

Analyzed By: AGPrepared By: AG

ÐΤ

|              |      | $\mathbf{n}$ |        |          |         |
|--------------|------|--------------|--------|----------|---------|
| Parameter    | Flag | Result       | Units  | Dilution | RL      |
| Benzene      |      | < 0.00100    | mg/L   | 1        | 0.00100 |
| Toluene      |      | < 0.00100    | m mg/L | 1        | 0.00100 |
| Ethylbenzene |      | < 0.00100    | mg/L   | 1        | 0.00100 |
| Xylene       |      | < 0.00100    | m mg/L | 1        | 0.00100 |

|                              |      |        |       |          | Spike  | Percent  | Recovery   |
|------------------------------|------|--------|-------|----------|--------|----------|------------|
| Surrogate                    | Flag | Result | Units | Dilution | Amount | Recovery | Limits     |
| Trifluorotoluene (TFT)       | 1    | 0.0554 | mg/L  | 1        | 0.100  | 55       | 66.2 - 107 |
| 4-Bromofluorobenzene (4-BFB) |      | 0.0474 | mg/L  | . 1      | 0.100  | 47       | 39 - 138   |

Sample: 247501 - MW-1

Laboratory: Lubbock

Analysis: Chloride (IC) QC Batch: 74818

Analytical Method:

E 300.0 2010-10-26 Prep Method: N/A

PG

Prep Batch: 64180

Date Analyzed: Sample Preparation: 2010-10-26

Analyzed By: Prepared By:

RL

| Parameter | Flag | Result | Units | Dilution | RL   |
|-----------|------|--------|-------|----------|------|
| Chloride  |      | 133000 | mg/L  | 10000    | 2.50 |

Sample: 247501 - MW-1

Laboratory:

Lubbock

Analysis: SO4 (IC) QC Batch: 75341 Prep Batch: 64638

Analytical Method: Date Analyzed:

Sample Preparation:

E 300.0 2010-11-12

2010-11-12

Prep Method: N/A

PGAnalyzed By: Prepared By: PG

RL

| Parameter | Flag | Result | Units       | Dilution | RL   |
|-----------|------|--------|-------------|----------|------|
| Sulfate   |      | 1870   | ${ m mg/L}$ | 50       | 2.50 |

<sup>&</sup>lt;sup>1</sup>SPECIAL - TFT is out of control limits due to unknown anomaly. However, 4-BFB is within control limits and shows the method to be in control. •

115-6403129

Work Order: 10101405 Celero/Rock Queen #1 TB Page Number: 5 of 21 Chavez County, NM

Sample: 247501 - MW-1

Laboratory:

Midland

Analysis: QC Batch:

Prep Batch:

TDS 74622 63873 Analytical Method: Date Analyzed:

SM 2540C

2010-10-21 2010-10-15 Prep Method: N/A Analyzed By: AR Prepared By: AR

Sample Preparation:

RL

Parameter Total Dissolved Solids

Result Flag 260000

Units mg/L Dilution

100

RL10.0

Sample: 247502 - MW-2

Laboratory: Midland

**BTEX** Analysis: QC Batch: 74557 Prep Batch: 63840

Analytical Method: Date Analyzed:

S 8021B 2010-10-14 2010-10-14 Prep Method: S 5030B

Analyzed By:  $\mathbf{AG}$ Prepared By: AG

RL

Sample Preparation:

| Parameter    | Flag | Result    | Units  | Dilution | RL      |
|--------------|------|-----------|--------|----------|---------|
| Benzene      |      | < 0.00100 | mg/L   | 1        | 0.00100 |
| Toluene      |      | < 0.00100 | mg/L   | 1        | 0.00100 |
| Ethylbenzene |      | < 0.00100 | mg/L   | 1 .      | 0.00100 |
| Xylene       |      | < 0.00100 | m mg/L | 1        | 0.00100 |

|                              |      |        |             |          | Spike  | Percent  | Recovery   |
|------------------------------|------|--------|-------------|----------|--------|----------|------------|
| Surrogate                    | Flag | Result | Units       | Dilution | Amount | Recovery | Limits     |
| Trifluorotoluene (TFT)       |      | 0.0924 | mg/L        | 1        | 0.100  | 92       | 66.2 - 107 |
| 4-Bromofluorobenzene (4-BFB) |      | 0.0801 | ${ m mg/L}$ | 1        | 0.100  | 80       | 39 - 138   |

Sample: 247502 - MW-2

Laboratory:

Lubbock

Analysis: Chloride (IC) QC Batch: 75734 Prep Batch: 64963

Analytical Method: Date Analyzed:

 $\to 300.0$ 2010-11-29 Sample Preparation: 2010-11-29 Prep Method: N/A Analyzed By: PG

PG

Prepared By:

RL

| Parameter | Flag | Result | Units | Dilution | RL   |
|-----------|------|--------|-------|----------|------|
| Chloride  |      | 6580   | mg/L  | 500      | 2.50 |

Sample: 247502 - MW-2 Laboratory: Lubbock Analysis: SO4 (IC) Analytical Method: E 300.0 Prep Method: N/A QC Batch: 75227 Date Analyzed: 2010-11-09 Analyzed By: PGPrep Batch: 64528 Sample Preparation: 2010-11-09 Prepared By: PG RLFlag Parameter Result Units Dilution RLSulfate 88.9 2.50 mg/L 5 Sample: 247502 - MW-2 Laboratory: Midland Analysis: TDS Analytical Method: SM 2540C Prep Method: N/A QC Batch: 74622 Date Analyzed: 2010-10-21 Analyzed By: AR Prep Batch: 63873 Sample Preparation: 2010-10-15 Prepared By: ARRL Parameter Flag Result Units Dilution RLTotal Dissolved Solids 11700 mg/L 100 10.0 Sample: 247503 - MW-3 Laboratory: Midland Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5030B QC Batch: 74557 Date Analyzed: 2010-10-14 Analyzed By: AG 63840 Prep Batch: Sample Preparation: 2010-10-14 Prepared By: AG RLParameter Flag Result Units Dilution RLBenzene < 0.00100 mg/L 0.00100

< 0.00100

< 0.00100

< 0.00100

Units

mg/L

mg/L

Result

0.0742

0.0468

Flag

mg/L

mg/L

mg/L

Dilution

1

1

1

1

Percent

Recovery

74

47

Spike

Amount

0.100

0.100

0.00100

0.00100

0.00100

Recovery

Limits

66.2 - 107

39 - 138

Work Order: 10101405

Celero/Rock Queen #1 TB

Page Number: 6 of 21

Chavez County, NM

Report Date: November 30, 2010

115-6403129

Toluene

**Xylene** 

Surrogate

Trifluorotoluene (TFT)

4-Bromofluorobenzene (4-BFB)

Ethylbenzene

| Report Date: 115-6403129 | November 30,  | 2010 |                       | er: 10101405<br>Queen #1 TB | Page Number:<br>Chavez Cou |         |  |
|--------------------------|---------------|------|-----------------------|-----------------------------|----------------------------|---------|--|
| Sample: 247              | 7503 - MW-3   |      |                       |                             |                            |         |  |
| Laboratory:              | Lubbock       |      |                       |                             |                            |         |  |
| Analysis:                | Chloride (IC) |      | Analytical Method     | i: E 300.0                  | Prep Method                | : N/A   |  |
| QC Batch:                | 74823         |      | Date Analyzed:        | 2010-10-26                  | Analyzed By:               | PG      |  |
| Prep Batch:              | 64185         |      | Sample Preparation    | on: 2010-10-26              | Prepared By:               | SS      |  |
|                          |               |      | RL                    |                             |                            |         |  |
| Parameter                | Fl            | ag   | Result                | Units                       | Dilution                   | RL      |  |
| Chloride                 |               |      | 57300                 | mg/L                        | 10000                      | 2.50    |  |
|                          |               |      |                       |                             |                            |         |  |
| Sample: 247              | 7503 - MW-3   |      |                       |                             |                            |         |  |
| *                        |               |      |                       | 7.000                       |                            |         |  |
| Analysis:                | SO4 (IC)      |      | Analytical Method:    | E 300.0                     | Prep Method                |         |  |
| QC Batch:                | 75341         |      | Date Analyzed:        | 2010-11-12                  | Analyzed By:               |         |  |
| Prep Batch:              | 64638         |      | Sample Preparation:   | 2010-11-12                  | Prepared By:               | PG      |  |
| <b>.</b>                 | -             |      | RL                    |                             | <b>7.1</b> 1               |         |  |
| Parameter                | F'1           | ag   | Result                | Units                       | Dilution                   | RL      |  |
| Sulfate                  |               |      | 1630                  | mg/L                        | 50                         | 2.50    |  |
|                          |               |      |                       |                             |                            |         |  |
| Sample: 247              | 7503 - MW-3   |      |                       |                             |                            |         |  |
| Laboratory:              | Midland       |      |                       |                             |                            |         |  |
| Analysis:                | TDS           |      | Analytical Method:    | SM 2540C                    | Prep Method:               |         |  |
| QC Batch:                | 74622         |      | Date Analyzed:        | 2010-10-21                  | Analyzed By:               |         |  |
| Prep Batch:              | 63873         |      | Sample Preparation:   | 2010-10-15                  | Prepared By:               | AR      |  |
|                          |               |      | $\mathrm{RL}$         |                             |                            |         |  |
| Parameter                |               | Flag | Result                | Units                       | Dilution                   | RL      |  |
| Total Dissolve           | ed Solids     |      | 110000                | mg/L                        | 100                        | 10.0    |  |
|                          |               |      |                       |                             |                            |         |  |
| Sample: 247              | '504 - MW-4   |      |                       |                             |                            |         |  |
|                          | Midland       | •    | 4 1 1 1 1 1 1 1 1 1 1 | G 000475                    |                            | v00     |  |
| Analysis:                | BTEX          |      |                       | S 8021B                     | <b>-</b>                   | 5030B   |  |
| QC Batch:                | 74557         |      | •                     | 2010-10-14                  | •                          | .G      |  |
| Prep Batch:              | 63840         |      | Sample Preparation:   | 2010-10-14                  | Prepared By: A             | .G      |  |
| <b>.</b>                 |               | N    | RL                    | TT 1/                       |                            | ***     |  |
| Parameter                | <u></u>       | lag  | Result                | Units                       | Dilution                   | RL      |  |
| Benzene                  |               |      | <0.00100              | mg/L                        |                            | 0.00100 |  |
| Toluene                  |               |      | < 0.00100             | mg/L                        | 1 (                        | 0.00100 |  |

continued ...

115-6403129

Work Order: 10101405 Celero/Rock Queen #1 TB Page Number: 8 of 21 Chavez County, NM

sample 247504 continued ...

| Parameter I                | lag |      | RL<br>Result |             | Units    | Dil    | ution    | RL         |
|----------------------------|-----|------|--------------|-------------|----------|--------|----------|------------|
| Ethylbenzene               |     |      | < 0.00100    |             | mg/L     |        | 1        | 0.00100    |
| Xylene                     |     |      | < 0.00100    | )           | mg/L     |        | 1        | 0.00100    |
|                            |     |      |              |             |          | Spike  | Percent  | Recovery   |
| Surrogate                  |     | Flag | Result       | Units       | Dilution | Amount | Recovery | Limits     |
| Trifluorotoluene (TFT)     |     |      | 0.101        | mg/L        | 1        | 0.100  | 101      | 66.2 - 107 |
| 4-Bromofluorobenzene (4-BF | В)  |      | 0.0836       | ${ m mg/L}$ | 1        | 0.100  | 84       | 39 - 138   |

Sample: 247504 - MW-4

Laboratory: Lubbock

Analysis: Chloride (IC) QC Batch: 74823 Prep Batch: 64185

Analytical Method: E 300.0 Date Analyzed: 2010-10-26 Sample Preparation:

2010-10-26

Prep Method: N/A Analyzed By: PG Prepared By: SS

RLParameter Flag Result Units Dilution RLChloride 16500 1000 2.50 mg/L

Sample: 247504 - MW-4

Laboratory: Lubbock

Analysis: SO4 (IC) QC Batch: 75341 Prep Batch: 64638

Analytical Method: E 300.0 Date Analyzed: 2010-11-12 Sample Preparation: 2010-11-12

Prep Method: N/A Analyzed By: PG Prepared By: PG

RLRLParameter Flag Result Units Dilution Sulfate 238 50 2.50mg/L

Sample: 247504 - MW-4

Laboratory: Midland

TDS Analysis: QC Batch: 74622 Prep Batch: 63873 Analytical Method: SM 2540C Date Analyzed: 2010-10-21 Sample Preparation: 2010-10-15

Prep Method: N/A Analyzed By: ARPrepared By: AR

RLParameter Flag Result Units Dilution RLTotal Dissolved Solids 43800 100 10.0 mg/L

Report Date: November 30, 2010 Work Order: 10101405 Page Number: 9 of 21 115-6403129 Celero/Rock Queen #1 TB Chavez County, NM Method Blank (1) QC Batch: 74557 QC Batch: 74557 Date Analyzed: 2010-10-14 Analyzed By: AGPrep Batch: 63840 QC Preparation: 2010-10-14 Prepared By: AG MDL Parameter Flag Result Units RLBenzene < 0.000400 mg/L 0.001 Toluene < 0.000800 0.001 mg/L Ethylbenzene -< 0.000400 mg/L 0.001 Xylene < 0.000400 mg/L 0.001 Spike Percent Recovery Surrogate Flag Result Units Dilution Amount Recovery Limits Trifluorotoluene (TFT) 0.0893 mg/L 1 0.100 89 61.8 - 106 mg/L 4-Bromofluorobenzene (4-BFB) 0.07841 0.10078 48.5 - 129Method Blank (1) QC Batch: 74590 Date Analyzed: QC Batch: 74590 2010-10-20 Analyzed By: AG QC Preparation: Prep Batch: 63988 2010-10-19 Prepared By:  $\mathbf{AG}$ MDL Flag Parameter Result Units RLBenzene < 0.000400 mg/L 0.001 Toluene < 0.000800 mg/L 0.001 Ethylbenzene < 0.000400 mg/L 0.001 Xylene < 0.000400 mg/L 0.001Spike Percent Recovery Surrogate Flag Result Units Dilution Amount Recovery Limits Trifluorotoluene (TFT) 0.0970 mg/L  $\overline{1}$ 0.100 97 61.8 - 106 4-Bromofluorobenzene (4-BFB) 0.0870 mg/L 1 0.10048.5 - 129 87

| Method Blank (1)       | QC Batch: 74622 |                |            |       |              |    |
|------------------------|-----------------|----------------|------------|-------|--------------|----|
| QC Batch: 74622        | D               | ate Analyzed:  | 2010-10-21 |       | Analyzed By: | AR |
| Prep Batch: 63873      | Q               | C Preparation: | 2010-10-15 |       | Prepared By: | AR |
|                        |                 |                | MDL        |       |              |    |
| Parameter              | Flag            |                | Result     | Units |              | RL |
| Total Dissolved Solids |                 |                | 11.0       | mg/L  | ,            | 10 |

| Report Date: November 115-6403129    | er 30, 2010     | Work Ord<br>Celero/Rock           |                          | Page Number: 10 of 21<br>Chavez County, NM |                              |                 |  |
|--------------------------------------|-----------------|-----------------------------------|--------------------------|--|------------------------------|-----------------|--|
| Method Blank (1)                     | QC Batch: 74818 |                                   |                          |  |                              |                 |  |
| QC Batch: 74818<br>Prep Batch: 64180 |                 | Date Analyzed:<br>QC Preparation: | 2010-10-26<br>2010-10-26 |  | Analyzed By:<br>Prepared By: | PG<br>PG        |  |
| _                                    |                 |                                   | IDL                      |  |                              |                 |  |
| Parameter                            | Flag            |                                   | sult                     | Units                                      |                              | RL              |  |
| Chloride                             |                 | <0.0                              | 350                      | mg/L                                       |                              | 2.5             |  |
| Method Blank (1)                     | QC Batch: 74823 |                                   |                          |  | •                            |                 |  |
| QC Batch: 74823                      |                 | Date Analyzed:                    | 2010-10-26               |  | Analyzed By:                 | PG              |  |
| Prep Batch: 64185                    |                 | QC Preparation:                   | 2010-10-26               |  | Prepared By:                 | PG              |  |
|                                      |                 |                                   | IDL.                     |  |                              |                 |  |
| Parameter                            | Flag            |                                   | sult                     | Units                                      |                              | RL              |  |
| Chloride                             |                 | <0.0                              | 1350                     | mg/L                                       |                              | 2.5             |  |
| Method Blank (1)                     | QC Batch: 75227 |                                   |                          |  |                              |                 |  |
| QC Batch: 75227<br>Prep Batch: 64528 |                 | Date Analyzed:<br>QC Preparation: | 2010-11-09<br>2010-11-09 |  | Analyzed By:<br>Prepared By: | PG<br>PG        |  |
|                                      |                 | M                                 | DL                       |  |                              |                 |  |
| Parameter                            | Flag            | Res                               |                          | Units                                      |                              | RL              |  |
| Sulfate                              |                 | <0.8                              | 596                      | mg/L                                       |                              | 2.5             |  |
|                                      |                 |                                   |                          |  |                              |                 |  |
| Method Blank (1)                     | QC Batch: 75341 |                                   |                          |  |                              |                 |  |
| QC Batch: 75341<br>Prep Batch: 64638 | •               | Date Analyzed:<br>QC Preparation: | 2010-11-12<br>2010-11-12 |  | Analyzed By:<br>Prepared By: | PG<br>PG        |  |
|                                      |                 |                                   | DL                       |  |                              |                 |  |
| Parameter                            | Flag            | Res                               |                          | Units                                      |                              | $\frac{RL}{25}$ |  |
| Sulfate                              |                 | <0.8                              | 96                       | mg/L                                       |                              | 2.5             |  |
| Method Blank (1)                     | QC Batch: 75734 |                                   |                          |  |                              | ,               |  |
| QC Batch: 75734                      |                 | Date Analyzed:                    | 2010-11-29               |  | Analyzed By:                 | PG              |  |
| Prep Batch: 64963                    |                 | QC Preparation:                   | 2010-11-29               |  | Prepared By:                 | PG              |  |

115-6403129

Work Order: 10101405 Celero/Rock Queen #1 TB Page Number: 11 of 21 Chavez County, NM

|           |      | MDL      |             |     |
|-----------|------|----------|-------------|-----|
| Parameter | Flag | Result   | ${f Units}$ | RL  |
| Chloride  |      | < 0.0350 | mg/L        | 2.5 |

Duplicates (2) Duplicated Sample: 247533

QC Batch: 74622 Prep Batch: 63873 Date Analyzed: 2010-10-21 QC Preparation: 2010-10-15

Analyzed By: AR Prepared By: AR

| Param                  | Duplicate<br>Result | Sample<br>Result | Units | Dilution | RPD | $rac{	ext{RPD}}{	ext{Limit}}$ |
|------------------------|---------------------|------------------|-------|----------|-----|--------------------------------|
| Total Dissolved Solids | 46600               | 11700            | mg/L  | 100      | 4   | 10                             |
| Total Dissolved Solids | 46600               | 48400            | mg/L  | 100      | 4   | 10                             |

### Laboratory Control Spike (LCS-1)

QC Batch: 74557 Prep Batch: 63840 Date Analyzed: 2010-10-14 QC Preparation: 2010-10-14 Analyzed By: AG Prepared By: AG

|              | LCS    |             |      | Spike  | Matrix     |      | Rec.       |
|--------------|--------|-------------|------|--------|------------|------|------------|
| Param        | Result | Units       | Dil. | Amount | Result     | Rec. | Limit      |
| Benzene      | 0.0939 | mg/L        | 1    | 0.100  | < 0.000400 | 94   | 80.7 - 117 |
| Toluene      | 0.0947 | ${ m mg/L}$ | 1    | 0.100  | < 0.000800 | 95   | 80.5 - 117 |
| Ethylbenzene | 0.0947 | ${ m mg/L}$ | 1    | 0.100  | < 0.000400 | 95   | 79.2 - 117 |
| Xylene       | 0.277  | ${ m mg/L}$ | 1    | 0.300  | < 0.000400 | 92   | 74.1 - 120 |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|              | LCSD   |       |      | Spike  | Matrix     |      | Rec.       |     | RPD   |
|--------------|--------|-------|------|--------|------------|------|------------|-----|-------|
| Param        | Result | Units | Dil. | Amount | Result     | Rec. | Limit      | RPD | Limit |
| Benzene      | 0.0950 | mg/L  | 1    | 0.100  | < 0.000400 | 95   | 80.7 - 117 | 1   | 20    |
| Toluene      | 0.0975 | mg/L  | 1    | 0.100  | < 0.000800 | 98   | 80.5 - 117 | 3   | 20    |
| Ethylbenzene | 0.0968 | mg/L  | 1    | 0.100  | < 0.000400 | 97   | 79.2 - 117 | 2   | 20    |
| Xylene       | 0.286  | mg/L  | 1    | 0.300  | < 0.000400 | 95   | 74.1 - 120 | 3   | 20    |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|                              | LCS    | LCSD   |       |      | Spike  | LCS  | LCSD | Rec.       |
|------------------------------|--------|--------|-------|------|--------|------|------|------------|
| Surrogate                    | Result | Result | Units | Dil. | Amount | Rec. | Rec. | Limit      |
| Trifluorotoluene (TFT)       | 0.0875 | 0.0904 | mg/L  | 1    | 0.100  | 88   | 90   | 72.5 - 126 |
| 4-Bromofluorobenzene (4-BFB) | 0.0805 | 0.0847 | mg/L  | 1    | 0.100  | 80   | 85   | 48.3 - 135 |

### Laboratory Control Spike (LCS-1)

QC Batch: 74590 Prep Batch: 63988 Date Analyzed: 2010-10-20 QC Preparation: 2010-10-19

Analyzed By: AG Prepared By: AG

115-6403129

Work Order: 10101405 Celero/Rock Queen #1 TB Page Number: 12 of 21 Chavez County, NM

| Param        | LCS<br>Result | Units        | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit |
|--------------|---------------|--------------|------|-----------------|------------------|------|---------------|
| Benzene      | 0.0942        | mg/L         | 1    | 0.100           | < 0.000400       | 94   | 80.7 - 117    |
| Toluene      | 0.0972        | mg/L         | 1    | 0.100           | < 0.000800       | 97   | 80.5 - 117    |
| Ethylbenzene | 0.0975        | $_{ m mg/L}$ | 1    | 0.100           | < 0.000400       | 98   | 79.2 - 117    |
| Xylene       | 0.285         | mg/L         | 1    | 0.300           | < 0.000400       | 95   | 74.1 - 120    |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|              | LCSD   |       |      | Spike  | Matrix     |      | Rec.       |     | RPD   |
|--------------|--------|-------|------|--------|------------|------|------------|-----|-------|
| Param        | Result | Units | Dil. | Amount | Result     | Rec. | Limit      | RPD | Limit |
| Benzene      | 0.0982 | mg/L  | 1    | 0.100  | < 0.000400 | 98   | 80.7 - 117 | 4   | 20    |
| Toluene      | 0.0965 | mg/L  | 1    | 0.100  | < 0.000800 | 96   | 80.5 - 117 | 1   | 20    |
| Ethylbenzene | 0.0915 | mg/L  | 1    | 0.100  | < 0.000400 | 92   | 79.2 - 117 | 6   | 20    |
| Xylene       | 0.281  | mg/L  | 1    | 0.300  | < 0.000400 | 94   | 74.1 - 120 | 1   | 20    |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|                              | LCS    | LCSD   |       |      | Spike  | LCS  | LCSD | Rec.       |
|------------------------------|--------|--------|-------|------|--------|------|------|------------|
| Surrogate                    | Result | Result | Units | Dil. | Amount | Rec. | Rec. | Limit      |
| Trifluorotoluene (TFT)       | 0.0955 | 0.0926 | mg/L  | 1    | 0.100  | 96   | 93   | 72.5 - 126 |
| 4-Bromofluorobenzene (4-BFB) | 0.0860 | 0.0911 | mg/L  | 1    | 0.100  | 86   | 91   | 48.3 - 135 |

### Laboratory Control Spike (LCS-1)

QC Batch:

74622 Prep Batch: 63873 Date Analyzed:

2010-10-21

QC Preparation: 2010-10-15

Analyzed By: AR

Prepared By: AR

|                        | LCS    |       |      | Spike  | Matrix |      | Rec.     |
|------------------------|--------|-------|------|--------|--------|------|----------|
| Param                  | Result | Units | Dil. | Amount | Result | Rec. | Limit    |
| Total Dissolved Solids | 979    | mg/L  | 1    | 1000   | < 9.75 | 98   | 90 - 110 |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|                        | LCSD   |       |      | Spike  | Matrix |      | Rec.     |     | RPD   |
|------------------------|--------|-------|------|--------|--------|------|----------|-----|-------|
| Param                  | Result | Units | Dil. | Amount | Result | Rec. | Limit    | RPD | Limit |
| Total Dissolved Solids | 994    | mg/L  | 1    | 1000   | < 9.75 | 99   | 90 - 110 | 2   | 10    |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

### Laboratory Control Spike (LCS-2)

QC Batch:

Prep Batch: 63873

74622

Date Analyzed:

2010-10-21

Analyzed By: AR

QC Preparation: 2010-10-15

Prepared By: AR

115-6403129

Work Order: 10101405 Celero/Rock Queen #1 TB Page Number: 13 of 21 Chavez County, NM

|                        | LCS    |        |      | Spike  | Matrix |      | Rec.     |
|------------------------|--------|--------|------|--------|--------|------|----------|
| Param                  | Result | Units  | Dil. | Amount | Result | Rec. | Limit    |
| Total Dissolved Solids | 1020   | m mg/L | 1    | 1000   | < 9.75 | 102  | 90 - 110 |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

| •                      | LCSD   |       |      | Spike  | Matrix |      | Rec.     |     | RPD   |
|------------------------|--------|-------|------|--------|--------|------|----------|-----|-------|
| Param                  | Result | Units | Dil. | Amount | Result | Rec. | Limit    | RPD | Limit |
| Total Dissolved Solids | 1010   | mg/L  | 1    | 1000   | < 9.75 | 101  | 90 - 110 | 1   | 10    |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

### Laboratory Control Spike (LCS-1)

QC Batch:

74818

Date Analyzed:

2010-10-26

Analyzed By: PG

Prep Batch: 64180

QC Preparation: 2010-10-26

Prepared By: PG

|          | LCS    |              |      | Spike  | Matrix   |                 | Rec.     |
|----------|--------|--------------|------|--------|----------|-----------------|----------|
| Param    | Result | Units        | Dil. | Amount | Result   | $\mathrm{Re}c.$ | Limit    |
| Chloride | 24.0   | $_{ m mg/L}$ | 1    | 25.0   | < 0.0350 | 96              | 90 - 110 |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|          | LCSD   |       |      | Spike  | Matrix   |      | Rec.     |     | RPD   |
|----------|--------|-------|------|--------|----------|------|----------|-----|-------|
| Param    | Result | Units | Dil. | Amount | Result   | Rec. | Limit    | RPD | Limit |
| Chloride | 23.9   | mg/L  | 1    | 25.0   | < 0.0350 | .96  | 90 - 110 | 0   | 20    |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

### Laboratory Control Spike (LCS-1)

QC Batch:

74823

Prep Batch: 64185

Date Analyzed:

2010-10-26

QC Preparation: 2010-10-26

Analyzed By: PG Prepared By: PG

| •        | LCS    |       |      | Spike  | Matrix   |                 | Rec.     |
|----------|--------|-------|------|--------|----------|-----------------|----------|
| Param    | Result | Units | Dil. | Amount | Result   | $\mathrm{Rec}.$ | Limit    |
| Chloride | 23.8   | mg/L  | 1    | 25.0   | < 0.0350 | 95              | 90 - 110 |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|          | LCSD   |       |      | Spike  | Matrix   |      | Rec.     |     | RPD   |
|----------|--------|-------|------|--------|----------|------|----------|-----|-------|
| Param    | Result | Units | Dil. | Amount | Result   | Rec. | Limit    | RPD | Limit |
| Chloride | 23.8   | mg/L  | 1    | 25.0   | < 0.0350 | 95   | 90 - 110 | 0   | 20    |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

### Laboratory Control Spike (LCS-1)

QC Batch:

Prep Batch: 64528

75227

Date Analyzed:

2010-11-09

QC Preparation: 2010-11-09

Analyzed By: PG

Prepared By: PG

115-6403129

Work Order: 10101405 Celero/Rock Queen #1 TB Page Number: 14 of 21 Chavez County, NM

|         | LCS    |       |      | Spike  | Matrix  |      | Rec.     |
|---------|--------|-------|------|--------|---------|------|----------|
| Param   | Result | Units | Dil. | Amount | Result  | Rec. | Limit    |
| Sulfate | 25.6   | mg/L  | 1    | 25.0   | < 0.596 | 102  | 90 - 110 |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|         | LCSD   |       |      | Spike  | Matrix  |      | Rec.     |     | RPD   |
|---------|--------|-------|------|--------|---------|------|----------|-----|-------|
| Param   | Result | Units | Dil. | Amount | Result  | Rec. | Limit    | RPD | Limit |
| Sulfate | 25.2   | mg/L  | 1    | 25.0   | < 0.596 | 101  | 90 - 110 | 2   | 20    |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

### Laboratory Control Spike (LCS-1)

QC Batch: 75341 Date Analyzed:

2010-11-12

Analyzed By: PG

Prep Batch: 64638

QC Preparation: 2010-11-12

Prepared By: PG

|         |   | LCS    |       |      | Spike  | Matrix  |      | Rec.     |
|---------|---|--------|-------|------|--------|---------|------|----------|
| Param   |   | Result | Units | Dil. | Amount | Result  | Rec. | Limit    |
| Sulfate | , | 24.8   | mg/L  | 1    | 25.0   | < 0.596 | 99   | 90 - 110 |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|         | LCSD   |       |      | Spike  | Matrix  |      | Rec.     |     | RPD   |
|---------|--------|-------|------|--------|---------|------|----------|-----|-------|
| Param   | Result | Units | Dil. | Amount | Result  | Rec. | Limit    | RPD | Limit |
| Sulfate | 25.8   | mg/L  | 1    | 25.0   | < 0.596 | 103  | 90 - 110 | 4   | 20    |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

### Laboratory Control Spike (LCS-1)

QC Batch:

75734

Date Analyzed:

2010-11-29

Analyzed By: PG

Prep Batch: 64963

QC Preparation: 2010-11-29

Prepared By: PG

|          | LCS    |       |      | Spike  | Matrix   |      | Rec.     |
|----------|--------|-------|------|--------|----------|------|----------|
| Param    | Result | Units | Dil. | Amount | Result   | Rec. | Limit    |
| Chloride | 23.7   | mg/L  | 1    | 25.0   | < 0.0350 | 95   | 90 - 110 |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|          | LCSD   |       |      | Spike  | Matrix   | ·    | Rec.     |     | RPD   |
|----------|--------|-------|------|--------|----------|------|----------|-----|-------|
| Param    | Result | Units | Dil. | Amount | Result   | Rec. | Limit    | RPD | Limit |
| Chloride | 23.9   | mg/L  | 1    | 25.0   | < 0.0350 | 96   | 90 - 110 | 1   | 20    |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 247532

QC Batch: 74557 Date Analyzed:

2010-10-14

Analyzed By: AG

Prep Batch: 63840

QC Preparation: 2010-10-14

Prepared By:  $\mathbf{AG}$ 

115-6403129

Work Order: 10101405 Celero/Rock Queen #1 TB Page Number: 15 of 21 Chavez County, NM

| Param        | $rac{	ext{MS}}{	ext{Result}}$ | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit |
|--------------|--------------------------------|-------|------|-----------------|------------------|------|---------------|
| Benzene      | 0.107                          | mg/L  | 1    | 0.100           | 0.0048           | 102  | 60.9 - 132    |
| Toluene      | 0.0929                         | mg/L  | 1    | 0.100           | < 0.000800       | 93   | 65.7 - 129    |
| Ethylbenzene | 0.0881                         | mg/L  | 1    | 0.100           | < 0.000400       | 88   | 51.5 - 134    |
| Xylene       | 0.332                          | mg/L  | 1.   | 0.300           | < 0.000400       | 111  | 62.6 - 124    |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|              |   | MSD    |        |      | Spike  | Matrix     |      | Rec.             |     | RPD   |
|--------------|---|--------|--------|------|--------|------------|------|------------------|-----|-------|
| Param        |   | Result | Units  | Dil. | Amount | Result     | Rec. | $\mathbf{Limit}$ | RPD | Limit |
| Benzene      | 2 | 0.0817 | mg/L   | 1    | 0.100  | 0.0048     | 77   | 60.9 - 132       | 27  | 20    |
| Toluene      | 3 | 0.0712 | m mg/L | 1    | 0.100  | < 0.000800 | . 71 | 65.7 - 129       | 26  | 20    |
| Ethylbenzene | 4 | 0.0645 | mg/L   | 1    | 0.100  | < 0.000400 | 64   | 51.5 - 134       | 31  | 20    |
| Xylene       |   | 0.283  | mg/L   | 1    | 0.300  | < 0.000400 | 94   | 62.6 - 124       | 16  | 20    |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|                              | MS     | MSD    |       |      | Spike  | MS   | MSD  | Rec.       |
|------------------------------|--------|--------|-------|------|--------|------|------|------------|
| Surrogate                    | Result | Result | Units | Dil. | Amount | Rec. | Rec. | Limit      |
| Trifluorotoluene (TFT) 5 6   | 0.317  | 0.331  | mg/L  | 1    | 0.1    | 317  | 331  | 75.1 - 117 |
| 4-Bromofluorobenzene (4-BFB) | 0.0577 | 0.0585 | mg/L  | 1    | 0.1    | 58   | 58   | 31.3 - 143 |

Matrix Spike (MS-1)

Spiked Sample: 247916

QC Batch: 74590 Prep Batch: 63988

O Date Analyzed:

Date Analyzed: 2010-10-20 QC Preparation: 2010-10-19

Analyzed By: AG Prepared By: AG

| Param        | MS<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit |
|--------------|--------------|-------|------|-----------------|------------------|------|---------------|
| Benzene      | 0.102        | mg/L  | 1    | 0.100           | < 0.000400       | 102  | 60.9 - 132    |
| Toluene      | 0.0988       | mg/L  | 1    | 0.100           | < 0.000800       | 99   | 65.7 - 129    |
| Ethylbenzene | 0.0951       | mg/L  | 1    | 0.100           | < 0.000400       | 95   | 51.5 - 134    |
| Xylene       | 0.290        | mg/L  | 1    | 0.300           | < 0.000400       | 97   | 62.6 - 124    |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

| Param        | MSD<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit | RPD | RPD<br>Limit |
|--------------|---------------|-------|------|-----------------|------------------|------|---------------|-----|--------------|
| Benzene      | 0.104         | mg/L  | 1    | 0.100           | < 0.000400       | 104  | 60.9 - 132    | 2   | 20           |
| Toluene      | 0.101         | mg/L  | 1    | 0.100           | < 0.000800       | 101  | 65.7 - 129    | 2   | 20           |
| Ethylbenzene | 0.0999        | mg/L  | 1    | 0.100           | < 0.000400       | 100  | 51.5 - 134    | 5   | 20           |
| Xylene       | 0.295         | mg/L  | 1    | 0.300           | < 0.000400       | 98   | 62.6 - 124    | 2   | 20           |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

<sup>&</sup>lt;sup>2</sup>MS/MSD RPD out of RPD Limits. Use LCS/LCSD to demonstrate analysis is under control.

<sup>&</sup>lt;sup>3</sup>MS/MSD RPD out of RPD Limits. Use LCS/LCSD to demonstrate analysis is under control.

<sup>&</sup>lt;sup>4</sup>MS/MSD RPD out of RPD Limits. Use LCS/LCSD to demonstrate analysis is under control.

<sup>&</sup>lt;sup>5</sup>High surrogate recovery due to peak interference.

<sup>&</sup>lt;sup>6</sup>High surrogate recovery due to peak interference.

115-6403129

Work Order: 10101405 Celero/Rock Queen #1 TB Page Number: 16 of 21 Chavez County, NM

| Surrogate                    | MS<br>Result | MSD<br>Result | Units | Dil. | Spike<br>Amount | MS<br>Rec. | MSD<br>Rec. | Rec.<br>Limit |
|------------------------------|--------------|---------------|-------|------|-----------------|------------|-------------|---------------|
| Trifluorotoluene (TFT)       | 0.0986       | 0.0931        | mg/L  | 1    | 0.1             | 99         | 93          | 75.1 - 117    |
| 4-Bromofluorobenzene (4-BFB) | 0.0840       | 0.0861        | mg/L  | 1    | 0.1             | 84         | 86          | 31.3 - 143    |

Matrix Spike (MS-1)

Spiked Sample: 247502

QC Batch:

74818

Date Analyzed:

2010-10-26

Analyzed By: PG

Prep Batch: 64180

QC Preparation: 2010-10-26

Prepared By: PG

|          | MS     |                  |       | Spike  | Matrix |      | Rec.     |
|----------|--------|------------------|-------|--------|--------|------|----------|
| Param    | Result | $\mathbf{Units}$ | Dil.  | Amount | Result | Rec. | Limit    |
| Chloride | 244000 | $_{ m mg/L}$     | 10000 | 250000 | 16700  | 91   | 90 - 110 |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|          | MSD    |       |       | Spike  | Matrix |      | Rec.     |     | RPD   |
|----------|--------|-------|-------|--------|--------|------|----------|-----|-------|
| Param    | Result | Units | Dil.  | Amount | Result | Rec. | Limit    | RPD | Limit |
| Chloride | 248000 | mg/L  | 10000 | 250000 | 16700  | 92   | 90 - 110 | 2   | 20    |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1)

Spiked Sample: 248233

QC Batch:

74823

Date Analyzed:

2010-10-26

Analyzed By: PG

Prep Batch: 64185

QC Preparation: 2010-10-26

Prepared By: PG

|          | MS     |       | •    | Spike  | Matrix |      | Rec.     |
|----------|--------|-------|------|--------|--------|------|----------|
| Param    | Result | Units | Dil. | Amount | Result | Rec. | Limit    |
| Chloride | 208    | mg/L  | 5    | 125    | 75.8   | 106  | 90 - 110 |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|          | MSD    |       |      | Spike  | Matrix |      | Rec.     |     | RPD   |
|----------|--------|-------|------|--------|--------|------|----------|-----|-------|
| Param    | Result | Units | Dil. | Amount | Result | Rec. | Limit    | RPD | Limit |
| Chloride | 207    | mg/L  | 5    | 125    | 75.8   | 105  | 90 - 110 | 0   | 20 .  |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 247504

QC Batch:

75227

Date Analyzed:

2010-11-09

Analyzed By: PG

Prep Batch: 64528

QC Preparation: 2010-11-09

Prepared By: PG

continued ...

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Work Order: 10101405 Celero/Rock Queen #1 TB Page Number: 17 of 21 Chavez County, NM

| Param   |   | MS<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit |
|---------|---|--------------|-------|------|-----------------|------------------|------|---------------|
| Param   |   | MS<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | Rec.<br>Limit |
| Sulfate | 7 | 493          | mg/L  | 5    | 125             | < 2.98           | 394  | 90 - 110      |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|         |   | MSD    |       |      | $\mathbf{Spike}$ | Matrix |      | Rec.     |     | RPD   |
|---------|---|--------|-------|------|------------------|--------|------|----------|-----|-------|
| Param   |   | Result | Units | Dil. | Amount           | Result | Rec. | Limit    | RPD | Limit |
| Sulfate | 8 | 484    | mg/L  | 5    | 125              | < 2.98 | 387  | 90 - 110 | 2   | 20    |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1)

Spiked Sample: 250076

QC Batch:

75341

Date Analyzed:

2010-11-12

Analyzed By: PG

Prep Batch: 64638

QC Preparation:

2010-11-12

Prepared By: PG

MS Spike Matrix Rec. Param Result Units Dil. Amount Result Rec. Limit Sulfate 274 mg/L 5 125 < 2.9821990 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|         | *  | MSD    |       |      | Spike  | Matrix |      | Rec.     |     | RPD   |
|---------|----|--------|-------|------|--------|--------|------|----------|-----|-------|
| Param   |    | Result | Units | Dil. | Amount | Result | Rec. | Limit    | RPD | Limit |
| Sulfate | 10 | 278    | mg/L  | 5    | 125    | < 2.98 | 222  | 90 - 110 | 1   | 20    |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1)

Spiked Sample: 247502

QC Batch:

75734

Date Analyzed:

2010-11-29

Analyzed By: PG

Prep Batch: 64963

QC Preparation:

2010-11-29

Prepared By: PG

MS

Rec. Spike Matrix Param Result Units Dil. Result Limit Amount Rec. Chloride 19500 500 12500 6580 103 90 - 110 mg/L

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

<sup>&</sup>lt;sup>7</sup>matrix spikes run with batch but spiked sample was reported in another run •

<sup>8</sup>matrix spikes run with batch but spiked sample was reported in another run •

 $<sup>^{9}</sup>$ matrix spikes run with batch but spiked sample was reported in another run ullet

<sup>&</sup>lt;sup>10</sup>matrix spikes run with batch but spiked sample was reported in another run •

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Work Order: 10101405 Celero/Rock Queen #1 TB Page Number: 18 of 21 Chavez County, NM

|          | MSD    |       | •    | Spike  | Matrix |      | Rec.             |     | RPD   |
|----------|--------|-------|------|--------|--------|------|------------------|-----|-------|
| Param    | Result | Units | Dil. | Amount | Result | Rec. | $\mathbf{Limit}$ | RPD | Limit |
| Chloride | 19500  | mg/L  | 500  | 12500  | 6580   | 103  | 90 - 110         | 0   | 20    |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

### Standard (CCV-1)

QC Batch: 74557

Date Analyzed: 2010-10-14

Analyzed By: AG

|              |      |       | $\cdot$ CCVs | CCVs   | CCVs     | Percent  |            |
|--------------|------|-------|--------------|--------|----------|----------|------------|
|              |      |       | True         | Found  | Percent  | Recovery | Date       |
| Param        | Flag | Units | Conc.        | Conc.  | Recovery | Limits   | Analyzed   |
| Benzene      |      | mg/L  | 0.100        | 0.0953 | 95       | 80 - 120 | 2010-10-14 |
| Toluene      |      | mg/L  | 0.100        | 0.0980 | 98       | 80 - 120 | 2010-10-14 |
| Ethylbenzene |      | mg/L  | 0.100        | 0.0945 | 94       | 80 - 120 | 2010-10-14 |
| Xylene       |      | mg/L  | 0.300        | 0.280  | 93       | 80 - 120 | 2010-10-14 |

### Standard (CCV-2)

QC Batch: 74557

Date Analyzed: 2010-10-14

Analyzed By: AG

| Param        | Flag | Units  | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|--------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| Benzene      |      | mg/L · | 0.100                 | 0.0941                 | 94                          | 80 - 120                      | 2010-10-14       |
| Toluene      |      | mg/L   | 0.100                 | 0.0958                 | . 96                        | 80 - 120                      | 2010-10-14       |
| Ethylbenzene |      | mg/L   | 0.100                 | 0.0935                 | 94                          | 80 - 120                      | 2010-10-14       |
| Xylene       |      | mg/L   | 0.300                 | 0.275                  | 92                          | 80 - 120                      | 2010-10-14       |

### Standard (CCV-3)

QC Batch: 74557

Date Analyzed: 2010-10-14

Analyzed By: AG

| D. com       | T01  | TI-:4- | CCVs<br>True | CCVs<br>Found | CCVs<br>Percent | Percent<br>Recovery | Date .     |
|--------------|------|--------|--------------|---------------|-----------------|---------------------|------------|
| Param        | Flag | Units  | Conc.        | Conc.         | Recovery        | Limits              | Analyzed   |
| Benzene      |      | mg/L   | 0.100        | 0.0998        | 100             | 80 - 120            | 2010-10-14 |
| Toluene      |      | mg/L   | 0.100        | 0.100         | 100             | 80 - 120            | 2010-10-14 |
| Ethylbenzene |      | mg/L   | 0.100        | 0.0964        | 96              | 80 - 120            | 2010-10-14 |
| Xylene       |      | mg/L   | 0.300        | 0.288         | 96              | 80 - 120            | 2010-10-14 |

### Standard (CCV-1)

QC Batch: 74590

Date Analyzed: 2010-10-20

Analyzed By: AG

115-6403129

Work Order: 10101405 Celero/Rock Queen #1 TB Page Number: 19 of 21 Chavez County, NM

| Param        | Flag | Units        | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|--------------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| Benzene      |      | mg/L         | 0.100                 | 0.0914                 | 91                          | 80 - 120                      | 2010-10-20       |
| Toluene      | •    | mg/L         | 0.100                 | 0.0954                 | 95                          | 80 - 120                      | 2010-10-20       |
| Ethylbenzene |      | $_{ m mg/L}$ | 0.100                 | 0.0987                 | 99                          | 80 - 120                      | 2010-10-20       |
| Xylene       |      | mg/L         | 0.300                 | 0.287                  | 96                          | 80 - 120                      | 2010-10-20       |

### Standard (CCV-2)

QC Batch: 74590

Date Analyzed: 2010-10-20

Analyzed By: AG

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| Benzene      |      | mg/L  | 0.100                 | 0.0981                 | 98                          | 80 - 120                      | 2010-10-20       |
| Toluene      |      | mg/L  | 0.100                 | 0.0985                 | 98                          | 80 - 120                      | 2010-10-20       |
| Ethylbenzene |      | mg/L  | 0.100                 | 0.0963                 | 96                          | 80 - 120                      | 2010-10-20       |
| Xylene       |      | mg/L  | 0.300                 | 0.280                  | 93                          | 80 - 120                      | 2010-10-20       |

### Standard (CCV-1)

QC Batch: 74818

Date Analyzed: 2010-10-26

Analyzed By: PG

|          |      |       | CCVs            | CCVs  | CCVs     | Percent  |            |
|----------|------|-------|-----------------|-------|----------|----------|------------|
|          |      |       | $\mathbf{True}$ | Found | Percent  | Recovery | Date       |
| Param    | Flag | Units | Conc.           | Conc. | Recovery | Limits   | Analyzed   |
| Chloride |      | mg/L  | 25.0            | 24.2  | 97       | 90 - 110 | 2010-10-26 |

### Standard (CCV-2)

QC Batch: 74818

Date Analyzed: 2010-10-26

Analyzed By: PG

|          |      |        | CCVs<br>True | CCVs<br>Found | ${ m CCVs} \ { m Percent}$ | Percent<br>Recovery | Date       |
|----------|------|--------|--------------|---------------|----------------------------|---------------------|------------|
| Param    | Flag | Units  | Conc.        | Conc.         | Recovery                   | Limits              | Analyzed   |
| Chloride |      | m mg/L | 25.0         | 23.6          | 94                         | 90 - 110            | 2010-10-26 |

### Standard (CCV-1)

QC Batch: 74823

Date Analyzed: 2010-10-26

Analyzed By: PG

| Report Dat<br>115-6403129 | e: November<br>9                | 30, 2010      |                       | Work Order: 16<br>lero/Rock Que |                             | • | umber: 20 of 21<br>vez County, NM |
|---------------------------|---------------------------------|---------------|-----------------------|---------------------------------|-----------------------------|---|-----------------------------------|
| Param                     | Flag                            | Units         | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc.          | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits           | Date<br>Analyzed                  |
| Chloride                  |                                 | mg/L          | 25.0                  | 23.6                            | 94                          | 90 - 110                                | 2010-10-26                        |
| Standard (                | (CCV-2)                         |               |                       |                                 |                             |   |                                   |
| QC Batch:                 | 74823 Date Analyzed: 2010-10-26 |               | 0-26                  | Anal                            | yzed By: PG                 |   |                                   |
| D.                        | T31                             | TI -24 -      | CCVs<br>True          | CCVs<br>Found                   | CCVs<br>Percent             | Percent<br>Recovery                     | Date                              |
| Param<br>Chloride         | Flag                            | Units<br>mg/L | Conc.<br>25.0         | Conc. 23.5                      | Recovery<br>94              | Limits 90 - 110                         | Analyzed 2010-10-26               |
| Standard (                |                                 |               | Date Ana              | alyzed: 2010-1                  | 1-09                        | Anal                                    | yzed By: PG                       |
| Param                     | Flag                            | Units         | CCVs True Conc.       | CCVs<br>Found<br>Conc.          | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits           | Date<br>Analyzed                  |
| Sulfate                   | - Trag                          | mg/L          | 25.0                  | 24.9                            | 100                         | 90 - 110                                | 2010-11-09                        |
| Standard (                | (CCV-2)                         |               |                       |                                 |                             |   |                                   |
| QC Batch:                 | 75227                           |               | Date Ana              | alyzed: 2010-1                  | 1-09                        | Anal                                    | yzed By: PG                       |
| Param                     | Flag                            | Units         | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc.          | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits           | Date<br>Analyzed                  |
| Sulfate                   | * *****                         | mg/L          | 25.0                  | 23.7                            | 95                          | 90 - 110                                | 2010-11-09                        |

| 1) |    |
|----|----|
|    | 1) |

QC Batch: 75341

Date Analyzed: 2010-11-12

Analyzed By: PG

|         |      |       | CCVs  | CCVs  | CCVs     | Percent  |            |
|---------|------|-------|-------|-------|----------|----------|------------|
|         |      |       | True  | Found | Percent  | Recovery | Date       |
| Param   | Flag | Units | Conc. | Conc. | Recovery | Limits   | Analyzed   |
| Sulfate |      | mg/L  | 25.0  | 24.3  | 97       | 90 - 110 | 2010-11-12 |

### Standard (CCV-2)

QC Batch: 75341

Date Analyzed: 2010-11-12

Analyzed By: PG

115-6403129

Work Order: 10101405 Celero/Rock Queen #1 TB Page Number: 21 of 21 Chavez County, NM

|         |      |       | CCVs  | CCVs  | $\overline{\mathrm{CCVs}}$ | Percent  |            |
|---------|------|-------|-------|-------|----------------------------|----------|------------|
|         |      |       | True  | Found | Percent                    | Recovery | Date       |
| Param   | Flag | Units | Conc. | Conc. | Recovery                   | Limits   | Analyzed   |
| Sulfate |      | mg/L  | 25.0  | 25.8  | 103                        | 90 - 110 | 2010-11-12 |

Standard (CCV-1)

QC Batch: 75734

Date Analyzed: 2010-11-29

Analyzed By: PG

|          |      |       | CCVs<br>True | CCVs<br>Found | $\begin{array}{c} { m CCVs} \\ { m Percent} \end{array}$ | Percent<br>Recovery | Date       |
|----------|------|-------|--------------|---------------|--|---------------------|------------|
| Param    | Flag | Units | Conc.        | Conc.         | Recovery   | Limits              | Analyzed   |
| Chloride |      | mg/L  | 25.0         | 23.3          | . 93   | 90 - 110            | 2010-11-29 |

Standard (CCV-2)

QC Batch: 75734

Date Analyzed: 2010-11-29

Analyzed By: PG

**CCVs** CCVs $\mathbf{CCVs}$ Percent True Found Percent Recovery Date Units Param Flag Conc. Conc. Recovery Limits Analyzed 25.0 Chloride mg/L 23.9 96 90 - 110 2010-11-29

| RELINGUISHED BY (Signature)  ACCEVED BY (Signature)  A | -   |                                  |             |         |        | 101405                     |                          | (3)                                      |           |            |                |          |            | rise (*)      |           | <br>       |             | ·               |           |                  |                  | · -            |             | ·        |            |                 |         |          | -        |
|--|---|----------------------------------|-------------|---------|--------|----------------------------|--------------------------|--|-----------|------------|----------------|----------|------------|---------------|-----------|------------|-------------|-----------------|-----------|------------------|------------------|----------------|-------------|----------|------------|-----------------|---------|----------|----------|
| TETRATECH 1910 N. Big Spring St. Midland, Texasa 79705 (ASS Beg-2599 Face Ass) | Analysis Request of Chain of Custody Record |                                  |             |         |        |                            |                          |  |           |            | <del></del>    |          |            | ANA           |           |            |             | <u>/</u><br>EST |           | <u>UF:</u>       |                  | <u> </u>       | -           |          |            |                 |         |          |          |
| THE CHARGE TIME BY 1875 AND STATE TIME BY 1875 AND STATE TIME BY 1875 AND STATE STAT |   |                                  |             | <u></u> |        |                            |                          |  |           |            |                |          |            |               |           |            |             |                 | (Circ     |                  |                  |                |             |          |            | ١.              |         |          | _        |
| RELINGUISHED BY (Signatural)  Delte: LATATION DESCRIPTION DESCR |   |                                  |             | L       |        | 1910 N. Big<br>Midland, Te | Spring St.<br>xas 79705  |  |           |            |                |          |            |               |           | 1.         | Cr Pb Hg Se | oc Su pa w      | Red days  |                  |                  |                |             |          |            | ne i            |         |          |          |
| RELINGUISHED BY (Signatural)  Delte: LATATION DESCRIPTION DESCR | CLIENT NAM                                  | AE:                              |             |         |        |                            |                          |  | 83        | 2 T        |                |          |            | /E            |           | 3          | 88<br>20    | ð               |           | 0/824            | 70/625           |                |             |          |            | 15              | 1       |          |          |
| RELINGUISHED BY (Signatural)  Delte: LATATION DESCRIPTION DESCR |   |                                  | <del></del> | PRO     | DJEC1  | NAME:                      |                          |  | 1E        |            | Т              |          |            |               | ا         | į          | \$          |                 | \$        | 7826             |                  |                |             | .   :    |            | 1               |         |          | l        |
| RELINGUISHED BY (Signatural)  Delte: LATATION DESCRIPTION DESCR | 115-246                                     | D 3 12 4                         |             | C       | elego  | 1 Ruk Guin .               | 1 73                     | <u> </u>                                 |           | XX.        |                | ŀ        |            |               |           |            | IS A        | 2 8             | N S       | 1826             | 2                | 88             | 8           | ပ္ထ      | ₹          | 10 C            |         |          | l        |
| RELINGUISHED BY (Signatural)  Delte: LATATION DESCRIPTION DESCR | LAB I.D.<br>NUMBER                          |                                  | TIME        | MATRIX  | COMIP. | Chevra Co. 1               | <b>O</b> M               |  | NUMBER OF | FILTERED ( | <b></b>        | 3<br>E 5 | NONE       |               | BTEX 8021 | PAH 8270   | HCRA Mate   | TOLP Volat      | TCLP Semi | RCI<br>GC MS Vol | GC.MS Ser        | PCB's 8080     | Pest. 808/6 | Gamma Sp | Alpha Beta | PLM (Asbe       | S.1641. |          |          |
| RELINQUISHED BY: (Signature)  Date: LSS /SU/FD   RECEIVED BY: (Signature)  Date: Time: LSS /SU/FD   RECEIVED BY | 247501                                      | 10.                              | 1445        | $\Pi$   |        | ا ختشم.                    |                          |  | 4         | 2          |                |          | 1          |               | X         |            |             |                 |           |                  |                  | 1              | 7           | <        |            | $\lceil \rceil$ | ₹<br>Z  |          |          |
| RELINGUISHED BY: Bignarmy  Deta: alsi   Received By: Bignarmy  Deta: alsi   Received By: Bignarmy  Deta: alsi   Received By: Bignarmy  Time: alsi   Received By: Bignarmy  Deta: alsi   Received By: Bignarmy  Time: alsi   Received By: Bignarmy  Tim |   | 1                                |             | 1/1     | I      |                            |                          |  | 1         | 1          | )              | 1/       | 7          |               | 7         |            |             | 1               |           |                  |                  |                | 7           |          |            |                 | 17      |          | İ        |
| RELINGUISHED BY, (Signatura)  Date: LELIACU SAMPLED BY, (Signatura)  Date: LELIACU SAMPLED BY, (Signatura)  Time:  |   |                                  | ]           | N       | 1      |                            |                          |  | 1         | Ì          |                | 1        |            | 4             | Ì         |            |             |                 |           |                  |                  |                | 1           |          |            |                 | N       | çera e e | I        |
| RELINQUISHED BY (Signature)  Date: Last/Office: SAMPLED BY: (Print & Initial)  Time: Last/Office: SAMPLED BY: (Print & Initial)  PRINT BY: Last/Office: SAMPLED BY: (Print & Initial)  Date: Last/Office: SAMPLED BY: (Print & Initial)  Time: Last/Office: SAMPLED BY: (Print & Initial)  Date: Last/Office: SAMPLED BY: (Print & Initial)  Time: Last/Office: SAMPLED BY: (Print & Initial)  Date: Last/Office: SAMPLED BY: (Print & Initial)  Date: Last/Office: SAMPLED BY: (Print & Initial)  Time: Last/Office: SAMPLED BY: (Print & Initial)  Date: Last/Office: SAMPLED BY: (Print & Initial)  Date: Last/Office: SAMPLED BY: (Print & Initial)  Time: Last/Of | <u> </u> ক্তম                               | 4                                | 1425        | 6       | 4      | ·                          |                          | and the second of the second             | <b>V</b>  | \$         | 4              | 4        | 7          |               | V         |            |             |                 |           |                  |                  |                | 1           |          |            | 3               | 7 4     |          | +        |
| Time: 173 Time:  |   |                                  |             |         |        |                            |                          | a make a side of the compact             |           |            |                |          |            |               |           |            |             |                 |           |                  |                  |                |             |          | 1 - 4<br>1 |                 |         |          |          |
| Time: 173 Time:  |   |                                  |             |         |        | ~                          |                          | Autoria de la marecta de Constantina     |           |            |                |          |            |               |           |            |             |                 | A 14.     |                  |                  |                | $\prod$     |          |            |                 |         |          |          |
| Time: 173 Time:  |   |                                  |             |         |        |                            |                          | en e |           | V-10       |                |          |            | 3 75)<br>1    |           |            |             |                 |           |                  |                  |                |             |          | . "        |                 |         |          | 1        |
| Time: 173 Time:  |   |                                  |             |         |        |                            |                          | ورائي ومضاريات                           |           |            |                |          |            | 1             |           |            |             |                 |           |                  |                  |                |             |          |            |                 |         |          | -        |
| Time: 173 Time:  |   |                                  |             |         |        |                            | the most accommodate     | er da jaka                               |           |            |                |          |            | A 1.22*       |           |            |             |                 |           | . web 1          |                  |                |             |          |            |                 |         |          |          |
| Time: 173 Time:  | :   |                                  |             |         |        |                            |                          |  |           |            |                |          |            |               |           |            |             |                 |           | 2 92             |                  |                | T           | T        |            | П               |         |          | 1        |
| RELINGUISHED BY: Signature)  Date: 15/15/10   RECEIVED BY: ISIgnature)  RECEIVED BY: (Signature)  Time: 15/15/10   RECEIVED BY: (Signature)  RECEIVED BY: (Signature)  Time: 15/15/10   Results by: Results by: RECEIVED BY: (Signature)  ADDRESS: CITY: 15/15/15/15/15/15/15/15/15/15/15/15/15/1  | tang baran sa per                           | در چرون<br>درد ت <del>سد</del> د | 616         | 大       |        | Tima: 1475                 |                          |  |           |            |                | e:(      | 9//3       | 37 <i>1</i> : | 15,       | s          | AMPLE       | D BY            | Print     | & Initi          | د الإ            | D.             | 7           |          |            |                 | 10/15   | 7.0      | -        |
| RECEIVED BY: (Signature)  Date: Time: TETRA TECH CONTACT PERSON: Received BY: (Signature)  RECEIVED BY: (Signature)  RECEIVED BY: (Signature)  RECEIVED BY: (Signature)  Time: TETRA TECH CONTACT PERSON: Results by:  RECEIVED BY: (Signature)  ADDRESS: CONTACT: STATE: 7 ZIP: CONTACT: PHONE: DATE: TIME:  SAMPLE CONDITION WHEN RECEIVED: 3.13.0 REMARKS:  3.5 C N + 44 CT 3.13.0 REMARKS:  3.5 C N + 44 CT 3.13.0 REMARKS:  | RELINGUISHED                                | BY: (Signistr                    | re)//       |         |        | Date: \S/\\/\O             | ABCEIVED BY: (Stoneture) | STA                                      |           | ~~~        | <i>D</i> a     | e: _L    | 0-1        | 5-1           | Ö         | :S         | AMPLE       | SHIP            |           | Y: (Cir          | oloj             |                |             | <u> </u> | AIRE       | JILL 0:         |         |          | <u>=</u> |
| RECEIVED BY: (Signature) ADDRESS: CITY: Mediant STATE: 7 ZIP: CONTACT: PHONE: DATE: TIME:  SAMPLE CONDITION WHEN RECEIVED: 3.13.0 REMARKS:  3.5 C N + 4 Ct / 3.12 M C COLL CI - DT eX TOS  | RELINGUISHED                                | SY: (Signatu                     | ire)        |         |        | Dato:                      | RECEIVED BY: (Signature) | DV-VA                                    |           |            | Da             | ø:       | 100        | <u></u>       | ZIJ.      | 70         | HAND        | OEÚ!            |           | ) u              | PS.              | N <sup>c</sup> |             | ·        | отн        | ***             | He Au   |          | _        |
| SAMPLE CONTACT:  SAMPLE CONDITION WHEN RECEIVED: 3.113.0 REMARKS.  3.5 C N-194-13.113.0 REMARKS.  3.5 C N-194-13.113.0 REMARKS.  | A D. C. C. C. C.                            | 2-1-1                            |             | 7       |        |                            | RECEIVED BY: (Signature) |  |           |            |                |          |            |               |           | <b>–</b> " |             |                 |           |                  |                  | * #*           |             |          |            | RUSI            | l Churc | 763.     | _        |
| 35c Walt 18 Midland - Brex MS Stillwill - Milwieles and later a  | CONTACT:                                    |                                  |             |         |        |                            | DATE                     | · ·                                      | 'n        | ME         |                |          |            | <u> </u>      |           |            |             |                 |           | ,<br>            |                  |                |             |          | . ·        |                 |         | No       |          |
|  |   | 100 t                            | alt         | 12.     | T'     | 1/2 1/3 1-3                | and-bre                  | x Ms                                     | >         |            | ا<br><u>کن</u> | Ĺ        | <u>J.,</u> | <u>a(</u>     | U         | - 6        |             | TXJ             | ic        | <u>ko k</u>      | -<br>ائ <u>س</u> | à              | L           | 10       | L          | رل              | ر.      | A        | ŗ        |