1RP-1554

Groundwater Sampling Report

Appendix C

Lab Analysis

DATE:
March 29, 2012

2 of 4

APPENDIX C
LABORATORY ANALYSIS

TRACEANALYSIS, INC.

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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: 7053116

Project Location: Chaves Co. NM
Project Name: Celero Energy-Rock Queen ESA
Project Number: 2972

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

Sample	Description	Matrix	Date Taken	Time Taken	Date 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.

Dr. Blair Leftwich, Director

Standard Flags

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

Analytical Report

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

Analysis:	Alkalinity	Analytical Method:	SM 2320B	Prep Method:	N/A
QC Batch:	37942	Date Analyzed:	2007-06-06	Analyzed By:	JS
Prep Batch:	32856	Sample Preparation:	2007-06-06	Prepared By:	SM

Parameter	Flag	RL 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	1	4.00

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

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

Parameter	Flag	RL Result	Units	Dilution	RL
MTBE		<0.00500	mg/L	5	0.00100
Benzene		<0.00500	mg/L	5	0.00100
Toluene		<0.00500	mg/L	5	0.00100
Ethylbenzene		<0.00500	mg/L	5	0.00100
Xylene		<0.00500	mg/L	5	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	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	Analytical Method:	S 6010B	Prep Method:	S 3005A
QC Batch:	38016	Date Analyzed:	2007-06-09	Analyzed By:	TP
Prep Batch:	32743	Sample Preparation:	2007-06-04	Prepared By:	KV

Parameter	Flag	RL 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

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

Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	38024	Date Analyzed:	2007-06-08	Analyzed By:	ER
Prep Batch:	32926	Sample Preparation:	2007-06-08	Prepared By:	ER

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**146000**		mg/L	10000	0.500

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

Analysis:	Hardness	Analytical Method:	S 6010B	Prep Method:	N/A
QC Batch:	38029	Date Analyzed:	2007-06-11	Analyzed By:	TP
Prep Batch:	32755	Sample Preparation:	2007-06-04	Prepared By:	TS

Parameter	Flag	Result	RL	Units	Dilution	RL
Hardness (by ICP)		**17400**		mg eq CaCO3/L	1	0.00

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

Analysis:	Ion Chromatography	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	38024	Date Analyzed:	2007-06-08	Analyzed By:	ER
Prep Batch:	32926	Sample Preparation:	2007-06-08	Prepared By:	ER

Parameter	Flag	Result	RL	Units	Dilution	RL
Sulfate		**2290**		mg/L	100	0.500

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

Analysis:	pH	Analytical Method:	SM 4500-H+	Prep Method:	N/A
QC Batch:	37839 [a]	Date Analyzed:	2007-06-01	Analyzed By:	SM
Prep Batch:	32776	Sample Preparation:	2007-06-01	Prepared By:	SM

[a]ran in lab

Parameter	Flag	Result	RL	Units	Dilution	RL
pH		**6.61**		s.u.	1	0.00

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

Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	37789	Date Analyzed:	2007-06-04	Analyzed By:	AR
Prep Batch:	32739	Sample Preparation:		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		**188300**	mg/L	100	10.00

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

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	37771	Date Analyzed:	2007-06-01	Analyzed By:	AG
Prep Batch:	32726	Sample Preparation:	2007-06-01	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		**19.5**	mg/L	1	5.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	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	Analytical Method:	S 8015B	Prep Method:	S 5030B
QC Batch:	37859	Date Analyzed:	2007-06-05	Analyzed By:	MT
Prep Batch:	32791	Sample Preparation:	2007-06-05	Prepared By:	MT

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<0.500	mg/L	5	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	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	Date Analyzed:	2007-06-01	Analyzed By:	AG
Prep Batch:	32726	QC Preparation:	2007-06-01	Prepared By:	MS

Parameter	Flag	MDL Result	Units	RL
DRO		<2.61	mg/L	5

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

Method Blank (1) QC Batch: 37789

QC Batch: 37789 | Date Analyzed: 2007-06-04 | Analyzed By: AR
Prep Batch: 32739 | QC Preparation: 2007-06-04 | Prepared By: AR

Parameter	Flag	MDL Result	Units	RL
Total Dissolved Solids		10.00	mg/L	10

Method Blank (1) QC Batch: 37858

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

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0836	mg/L	1	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 | Date Analyzed: 2007-06-05 | Analyzed By: MT
Prep Batch: 32791 | QC Preparation: 2007-06-05 | Prepared By: MT

Parameter	Flag	MDL Result	Units	RL
GRO		<0.0104	mg/L	0.1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	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 | Date Analyzed: 2007-06-06 | Analyzed By: JS
Prep Batch: 32856 | QC Preparation: 2007-06-06 | Prepared By: JS

Parameter	Flag	MDL Result	Units	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCo3	1
Carbonate Alkalinity		<1.00	mg/L as CaCo3	1

continued ...

method blank continued ...

Parameter	Flag	MDL 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 Date Analyzed: 2007-06-09 Analyzed By: TP
Prep Batch: 32743 QC Preparation: 2007-06-04 Prepared By: KV

Parameter	Flag	MDL 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 Date Analyzed: 2007-06-08 Analyzed By: ER
Prep Batch: 32926 QC Preparation: 2007-06-08 Prepared By: ER

Parameter	Flag	MDL Result	Units	RL
Chloride		<0.172	mg/L	0.5

Method Blank (1) QC Batch: 38024

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

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

Duplicates (1)

QC Batch: 37789 Date Analyzed: 2007-06-04 Analyzed By: AR
Prep Batch: 32739 QC Preparation: 2007-06-04 Prepared By: AR

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

Duplicates (1)

QC Batch: 37839 | Date Analyzed: 2007-06-01 | Analyzed By: SM
Prep Batch: 32776 | QC Preparation: 2007-06-01 | Prepared By: SM

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
pH	8.52	8.50	s.u.	1	0	0.8

Duplicates (1)

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

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD 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 | Date Analyzed: 2007-06-01 | Analyzed By: AG
Prep Batch: 32726 | QC Preparation: 2007-06-01 | Prepared By: MS

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	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.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	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.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD 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: 37858 | Date Analyzed: 2007-06-05 | Analyzed By: MT
Prep Batch: 32791 | QC Preparation: 2007-06-05 | Prepared By: MT

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

continued ...

control spikes continued ...

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.0916	mg/L	1	0.100	<0.000247	92	82 - 118
Toluene	0.0924	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	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.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	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.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD 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: 37859 | Date Analyzed: 2007-06-05 | Analyzed By: MT
Prep Batch: 32791 | QC Preparation: 2007-06-05 | Prepared By: MT

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. 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.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	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.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD 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 ...

control spikes continued ...

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	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.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	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 | Date Analyzed: 2007-06-08 | Analyzed By: ER
Prep Batch: 32926 | QC Preparation: 2007-06-08 | Prepared By: ER

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	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.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
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 | Date Analyzed: 2007-06-08 | Analyzed By: ER
Prep Batch: 32926 | QC Preparation: 2007-06-08 | Prepared By: ER

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	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.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	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.

Matrix Spike (MS-1) Spiked Sample: 126260

QC Batch: 37859 | Date Analyzed: 2007-06-05 | Analyzed By: MT
Prep Batch: 32791 | QC Preparation: 2007-06-05 | Prepared By: MT

Param		MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	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.

Param		MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD 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.

Surrogate		MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD 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 | Date Analyzed: 2007-06-09 | Analyzed By: TP
Prep Batch: 32743 | QC Preparation: 2007-06-04 | Prepared By: KV

Param		MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. 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.

Param		MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Dissolved Calcium	[6]	77.1	mg/L	1	50.0	6.22	142	69 - 130	2	20
Dissolved Potassium		57.3	mg/L	1	50.0	1.54	112	76.8 - 117	1	20
Dissolved Magnesium		51.0	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 | Date Analyzed: 2007-06-08 | Analyzed By: ER
Prep Batch: 32926 | QC Preparation: 2007-06-08 | Prepared By: ER

[1] Matrix spike recovery out of control limits. Use LCS/LCSD to demonstrate analysis is under control.
[2] Matrix spike recovery out of control limits. Use LCS/LCSD to demonstrate analysis is under control.
[3] Matrix spike recovery out of control limits. Use LCS/LCSD to demonstrate analysis is under control.
[4] Matrix spike recovery out of control limits. Use LCS/LCSD to demonstrate analysis is under control.
[5] Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.
[6] Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	126	mg/L	5	62.5	54.1581	115	10 - 188

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	125	mg/L	5	62.5	54.1581	113	10 - 188	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: 126999

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

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Sulfate	193	mg/L	5	62.5	124.44	110	83.1 - 114

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Sulfate	189	mg/L	5	62.5	124.44	103	83.1 - 114	2	20

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

Standard (CCV-1)

QC Batch: 37771 | Date Analyzed: 2007-06-01 | Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/L	250	262	105	85 - 115	2007-06-01

Standard (CCV-2)

QC Batch: 37771 | Date Analyzed: 2007-06-01 | Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date 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

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	1034	103	90 - 110	2007-06-04

Standard (CCV-1)

QC Batch: 37789 Date Analyzed: 2007-06-04 Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	1000	100	90 - 110	2007-06-04

Standard (ICV-1)

QC Batch: 37839 Date Analyzed: 2007-06-01 Analyzed By: SM

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
pH		s.u.	7.00	7.10	101	98 - 102	2007-06-01

Standard (CCV-1)

QC Batch: 37839 Date Analyzed: 2007-06-01 Analyzed By: SM

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
pH		s.u.	7.00	7.12	102	98 - 102	2007-06-01

Standard (ICV-1)

QC Batch: 37858 Date Analyzed: 2007-06-05 Analyzed By: MT

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date 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

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.100	0.102	102	85 - 115	2007-06-05
Benzene		mg/L	0.100	0.0951	95	85 - 115	2007-06-05
Toluene		mg/L	0.100	0.0958	96	85 - 115	2007-06-05
Ethylbenzene		mg/L	0.100	0.0980	98	85 - 115	2007-06-05
Xylene		mg/L	0.300	0.298	99	85 - 115	2007-06-05

Standard (ICV-1)

QC Batch: 37859 Date Analyzed: 2007-06-05 Analyzed By: MT

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date 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

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date 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

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date 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

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date 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

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	50.0	50.2	100	90 - 110	2007-06-09
Dissolved Potassium		mg/L	50.0	50.2	100	90 - 110	2007-06-09
Dissolved Magnesium		mg/L	50.0	50.4	101	90 - 110	2007-06-09
Dissolved Sodium		mg/L	50.0	49.8	100	90 - 110	2007-06-09

Standard (CCV-1)

QC Batch: 38016 Date Analyzed: 2007-06-09 Analyzed By: TP

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	50.0	53.1	106	90 - 110	2007-06-09
Dissolved Potassium		mg/L	50.0	52.5	105	90 - 110	2007-06-09
Dissolved Magnesium		mg/L	50.0	52.6	105	90 - 110	2007-06-09
Dissolved Sodium		mg/L	50.0	51.9	104	90 - 110	2007-06-09

Standard (ICV-1)

QC Batch: 38024 Date Analyzed: 2007-06-08 Analyzed By: ER

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	11.7	94	90 - 110	2007-06-08

Standard (ICV-1)

QC Batch: 38024 Date Analyzed: 2007-06-08 Analyzed By: ER

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Sulfate		mg/L	12.5	11.5	92	90 - 110	2007-06-08

Standard (CCV-1)

QC Batch: 38024 Date Analyzed: 2007-06-08 Analyzed By: ER

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	11.7	94	90 - 110	2007-06-08

Standard (CCV-1)

QC Batch: 38024 Date Analyzed: 2007-06-08 Analyzed By: ER

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

WO # 7053116

Analysis Request and Chain of Custody Record

HIGHLANDER ENVIRONMENTAL CORP.

1910 N. Big Spring St.
Midland, Texas 79705

(432) 682-4559 Fax (432) 682-3946

PAGE: | OF:

CLIENT NAME: Cabot

SITE MANAGER: G. Miller

PROJECT NO.: 2972

PROJECT NAME: Rock Queen ESA

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8020/602	MTBE 8020/602	TPH 418.1 (8015 MOD. TX1005)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	ECI	GC/MS Vol. 8240/8260/624	GC/MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 608/608	BOD, TSS, pH, TDS, Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Ions (see attached)
125990	5-29-07	6:15	W		X	Tract 1, T.B. #1 - MW1	4				X		X		X															X	

RELINQUISHED BY: (Signature) — Date: 05-31-07 Time: 10:50
RECEIVED BY: (Signature) Helen Shelton — Date: 05/31/07 Time: 10:50
SAMPLED BY: (Print & Sign) J. Jones — Date: 5-29-07 Time: 5:00

RELINQUISHED BY: (Signature) — Date: Time:
RECEIVED BY: (Signature) — Date: Time:
SAMPLE SHIPPED BY: (Circle) FEDEX HAND DELIVERED BUS UPS AIRBILL # LONE STAR OTHER:

RELINQUISHED BY: (Signature) — Date: Time:
RECEIVED BY: (Signature) — Date: Time:

RECEIVING LABORATORY: TRACE
ADDRESS:
CITY: STATE: ZIP:
CONTACT: PHONE:
RECEIVED BY: (Signature)
DATE: TIME:

HIGHLANDER CONTACT PERSON:

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: Hand / Cool / 4° / HE

MATRIX: W-Water A-Air SD-Solid S-Soil SL-Sludge O-Other

REMARKS:

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.

4-45

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
200 East Sunset Road, Suite E El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
5002 Basin Street, Suite A1 Midland, Texas 79703 432•689•6301 FAX 432•689•6313
6015 Harris Parkway, Suite 110 Ft. Worth, Texas 76132 817•201•5260
E-Mail: lab@traceanalysis.com

Certifications

WBENC: 237019 **HUB:** 1752439743100-86536 **DBE:** VN 20657
NCTRCA WFWB38444Y0909

NELAP Certifications

Lubbock: T104704219-08-TX LELAP-02003 Kansas E-10317 **El Paso:** T104704221-08-TX LELAP-02002 **Midland:** T104704392-08-TX

Analytical and Quality Control Report

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

Report Date: January 7, 2010

Work Order: 9122911

Project Location: Chavez County, NM
Project Name: Celero/Tract 1 TB
Project Number: 114-6403129

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

Sample	Description	Matrix	Date Taken	Time Taken	Date 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.

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.

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis 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
pH	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.

Analytical Report

Sample: 218521 - MW-1

Laboratory:	Midland				
Analysis:	Alkalinity	Analytical Method:	SM 2320B	Prep Method:	N/A
QC Batch:	66366	Date Analyzed:	2009-12-30	Analyzed By:	AR
Prep Batch:	56729	Sample Preparation:	2009-12-30	Prepared By:	AR

Parameter	Flag	RL 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		<4.00	mg/L as CaCo3	1	4.00
Total Alkalinity		<4.00	mg/L as CaCo3	1	4.00

Sample: 218521 - MW-1

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	66515	Date Analyzed:	2010-01-06	Analyzed By:	AG
Prep Batch:	56863	Sample Preparation:	2009-01-06	Prepared By:	AG

Parameter	Flag	RL 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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	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	Analytical Method:	S 6010B	Prep Method:	S 3005A
QC Batch:	66490	Date Analyzed:	2010-01-06	Analyzed By:	RR
Prep Batch:	56807	Sample Preparation:	2010-01-05	Prepared By:	KV

Parameter	Flag	RL Result	Units	Dilution	RL
Dissolved Calcium		**2520**	mg/L	10	1.00

continued ...

sample 218521 continued ...

Parameter	Flag	Result	RL	Units	Dilution	RL
Dissolved Potassium		**2490**		mg/L	10	1.00
Dissolved Magnesium		**4370**		mg/L	100	1.00
Dissolved Sodium		**64600**		mg/L	1000	1.00

Sample: 218521 - MW-1

Laboratory:	Midland				
Analysis:	Chloride (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:	2009-12-30	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**164000**		mg/L	5000	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:	RR
Prep Batch:	56807	Sample Preparation:	2010-01-05	Prepared By:	KV

Parameter	Flag	Result	RL	Units	Dilution	RL
Hardness (by ICP)		**24300**		mg eq CaCO3/L	1	0.00

Sample: 218521 - MW-1

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

Parameter	Flag	Result	RL	Units	Dilution	RL
pH		**5.27**		s.u.	1	0.00

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:	AR
Prep Batch:	56732	Sample Preparation:	2009-12-30	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Sulfate		**2230**	mg/L	50	0.500

Sample: 218521 - MW-1

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	66452	Date Analyzed:	2010-01-05	Analyzed By:	AR
Prep Batch:	56731	Sample Preparation:	2009-12-30	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		**244000**	mg/L	100	10.0

Sample: 218522 - MW-2

Laboratory:	Midland				
Analysis:	Alkalinity	Analytical Method:	SM 2320B	Prep Method:	N/A
QC Batch:	66366	Date Analyzed:	2009-12-30	Analyzed By:	AR
Prep Batch:	56729	Sample Preparation:	2009-12-30	Prepared By:	AR

Parameter	Flag	RL 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		**138**	mg/L as CaCo3	1	4.00
Total Alkalinity		**138**	mg/L as CaCo3	1	4.00

Sample: 218522 - MW-2

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	66515	Date Analyzed:	2010-01-06	Analyzed By:	AG
Prep Batch:	56863	Sample Preparation:	2009-01-06	Prepared By:	AG

Parameter	Flag	RL 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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0736	mg/L	1	0.100	74	70.9 - 129.8
4-Bromofluorobenzene (4-BFB)		0.0724	mg/L	1	0.100	72	57.1 - 118.8

Sample: 218522 - MW-2

Laboratory:	Lubbock				
Analysis:	Cations	Analytical Method:	S 6010B	Prep Method:	S 3005A
QC Batch:	66490	Date Analyzed:	2010-01-06	Analyzed By:	RR
Prep Batch:	56807	Sample Preparation:	2010-01-05	Prepared By:	KV

Parameter	Flag	RL Result	Units	Dilution	RL
Dissolved Calcium		**1630**	mg/L	10	1.00
Dissolved Potassium		**18.0**	mg/L	1	1.00
Dissolved Magnesium		**379**	mg/L	1	1.00
Dissolved Sodium		**1360**	mg/L	10	1.00

Sample: 218522 - MW-2

Laboratory:	Midland				
Analysis:	Chloride (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:	2009-12-30	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**5480**	mg/L	500	0.500

Sample: 218522 - MW-2

Laboratory:	Lubbock				
Analysis:	Hardness	Analytical Method:	S 6010B	Prep Method:	N/A
QC Batch:	66490	Date Analyzed:	2010-01-06	Analyzed By:	RR
Prep Batch:	56807	Sample Preparation:	2010-01-05	Prepared By:	KV

Parameter	Flag	RL Result	Units	Dilution	RL
Hardness (by ICP)		**5630**	mg eq CaCO3/L	1	0.00

Sample: 218522 - MW-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

Parameter	Flag	RL Result	Units	Dilution	RL
pH		**7.30**	s.u.	1	0.00

Sample: 218522 - MW-2

Laboratory:	Midland				
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:	2009-12-30	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Sulfate		**4.43**	mg/L	5	0.500

Sample: 218522 - MW-2

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	66452	Date Analyzed:	2010-01-05	Analyzed By:	AR
Prep Batch:	56731	Sample Preparation:	2009-12-30	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		**14000**	mg/L	20	10.0

Sample: 218523 - MW-3

Laboratory:	Midland				
Analysis:	Alkalinity	Analytical Method:	SM 2320B	Prep Method:	N/A
QC Batch:	66366	Date Analyzed:	2009-12-30	Analyzed By:	AR
Prep Batch:	56729	Sample Preparation:	2009-12-30	Prepared By:	AR

Parameter	Flag	RL 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	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	66515	Date Analyzed:	2010-01-06	Analyzed By:	AG
Prep Batch:	56863	Sample Preparation:	2009-01-06	Prepared By:	AG

Parameter	Flag	RL 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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	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	Analytical Method:	S 6010B	Prep Method:	S 3005A
QC Batch:	66490	Date Analyzed:	2010-01-06	Analyzed By:	RR
Prep Batch:	56807	Sample Preparation:	2010-01-05	Prepared By:	KV

Parameter	Flag	RL Result	Units	Dilution	RL
Dissolved 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**	mg/L	100	1.00

Sample: 218523 - MW-3

Laboratory:	Midland				
Analysis:	Chloride (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

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**22400**		mg/L	500	0.500

Sample: 218523 - MW-3

Laboratory:	Lubbock				
Analysis:	Hardness	Analytical Method:	S 6010B	Prep Method:	N/A
QC Batch:	66490	Date Analyzed:	2010-01-06	Analyzed By:	RR
Prep Batch:	56807	Sample Preparation:	2010-01-05	Prepared By:	KV

Parameter	Flag	Result	RL	Units	Dilution	RL
Hardness (by ICP)		**8600**		mg eq CaCO3/L	1	0.00

Sample: 218523 - MW-3

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

Parameter	Flag	Result	RL	Units	Dilution	RL
pH		**6.77**		s.u.	1	0.00

Sample: 218523 - MW-3

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

Parameter	Flag	Result	RL	Units	Dilution	RL
Sulfate		**661**		mg/L	50	0.500

Sample: 218523 - MW-3

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	66452	Date Analyzed:	2010-01-05	Analyzed By:	AR
Prep Batch:	56731	Sample Preparation:	2009-12-30	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Total Dissolved Solids		**40700**		mg/L	100	10.0

Sample: 218524 - MW-4

Laboratory:	Midland				
Analysis:	Alkalinity	Analytical Method:	SM 2320B	Prep Method:	N/A
QC Batch:	66366	Date Analyzed:	2009-12-30	Analyzed By:	AR
Prep Batch:	56729	Sample Preparation:	2009-12-30	Prepared By:	AR

Parameter	Flag	Result	RL	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		**99.0**		mg/L as CaCo3	1	4.00
Total Alkalinity		**99.0**		mg/L as CaCo3	1	4.00

Sample: 218524 - MW-4

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	66515	Date Analyzed:	2010-01-06	Analyzed By:	AG
Prep Batch:	56863	Sample Preparation:	2009-01-06	Prepared By:	AG

Parameter	Flag	Result	RL	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

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

Sample: 218524 - MW-4

Laboratory:	Lubbock				
Analysis:	Cations	Analytical Method:	S 6010B	Prep Method:	S 3005A
QC Batch:	66490	Date Analyzed:	2010-01-06	Analyzed By:	RR
Prep Batch:	56807	Sample Preparation:	2010-01-05	Prepared By:	KV

Parameter	Flag	Result	RL	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)	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

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

Sample: 218524 - MW-4

Laboratory:	Lubbock				
Analysis:	Hardness	Analytical Method:	S 6010B	Prep Method:	N/A
QC Batch:	66490	Date Analyzed:	2010-01-06	Analyzed By:	RR
Prep Batch:	56807	Sample Preparation:	2010-01-05	Prepared By:	KV

Parameter	Flag	Result	RL	Units	Dilution	RL
Hardness (by ICP)		**5580**		mg eq CaCO3/L	1	0.00

Sample: 218524 - MW-4

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

Parameter	Flag	RL Result	Units	Dilution	RL
pH		**7.51**	s.u.	1	0.00

Sample: 218524 - 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

Parameter	Flag	RL Result	Units	Dilution	RL
Sulfate		**148**	mg/L	5	0.500

Sample: 218524 - MW-4

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	66452	Date Analyzed:	2010-01-05	Analyzed By:	AR
Prep Batch:	56731	Sample Preparation:	2009-12-30	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		**9900**	mg/L	20	10.0

Method Blank (1) QC Batch: 66366

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

Parameter	Flag	MDL 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	Date Analyzed:	2009-12-30	Analyzed By:	AR
Prep Batch:	56732	QC Preparation:	2009-12-30	Prepared By:	AR

Parameter	Flag	MDL Result	Units	RL
Chloride		1.37	mg/L	0.5

Method Blank (1) QC Batch: 66392

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

Parameter	Flag	MDL Result	Units	RL
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

Parameter	Flag	MDL Result	Units	RL
Chloride		1.06	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

Parameter	Flag	MDL Result	Units	RL
Sulfate		<0.217	mg/L	0.5

Method Blank (1) QC Batch: 66452

QC Batch: 66452 Date Analyzed: 2010-01-05 Analyzed By: AR
Prep Batch: 56731 QC Preparation: 2009-12-30 Prepared By: AR

continued ...

method blank continued ...

Parameter	Flag	MDL Result	Units	RL

Parameter	Flag	MDL Result	Units	RL
Total Dissolved Solids		<9.75	mg/L	10

Method Blank (1) QC Batch: 66490

QC Batch: 66490 Date Analyzed: 2010-01-06 Analyzed By: RR
Prep Batch: 56807 QC Preparation: 2010-01-05 Prepared By: KV

Parameter	Flag	MDL Result	Units	RL
Dissolved Calcium		<0.117	mg/L	1
Dissolved Potassium		<0.172	mg/L	1
Dissolved Magnesium		<0.160	mg/L	1
Dissolved Sodium		<0.0500	mg/L	1

Method Blank (1) QC Batch: 66515

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

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.000300	mg/L	0.001
Toluene		<0.000200	mg/L	0.001
Ethylbenzene		<0.000200	mg/L	0.001
Xylene		<0.000900	mg/L	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.110	mg/L	1	0.100	110	73.6 - 126.6
4-Bromofluorobenzene (4-BFB)		0.100	mg/L	1	0.100	100	70.6 - 117.5

Duplicates (1) Duplicated Sample: 218524

QC Batch: 66350 Date Analyzed: 2009-12-29 Analyzed By: AR
Prep Batch: 56717 QC Preparation: 2009-12-29 Prepared By: AR

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
pH	7.50	7.51	s.u.	1	0	1.5

Duplicates (1) Duplicated Sample: 218524

QC Batch: 66366 | Date Analyzed: 2009-12-30 | Analyzed By: AR
Prep Batch: 56729 | QC Preparation: 2009-12-30 | Prepared By: AR

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD 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

Duplicates (1) Duplicated Sample: 218524

QC Batch: 66452 | Date Analyzed: 2010-01-05 | Analyzed By: AR
Prep Batch: 56731 | QC Preparation: 2009-12-30 | Prepared By: AR

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Total Dissolved Solids	9580	9900	mg/L	20	3	10

Laboratory Control Spike (LCS-1)

QC Batch: 66392 | Date Analyzed: 2009-12-30 | Analyzed By: AR
Prep Batch: 56732 | QC Preparation: 2009-12-30 | Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	24.6	mg/L	1	25.0	<0.475	98	90 - 110

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	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.

Laboratory Control Spike (LCS-1)

QC Batch: 66392 | Date Analyzed: 2009-12-30 | Analyzed By: AR
Prep Batch: 56732 | QC Preparation: 2009-12-30 | Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	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.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	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
Prep Batch: 56733 | QC Preparation: 2009-12-30 | Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	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.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	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: 66393 | Date Analyzed: 2009-12-30 | Analyzed By: AR
Prep Batch: 56733 | QC Preparation: 2009-12-30 | Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	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.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	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.

Laboratory Control Spike (LCS-1)

QC Batch: 66452 | Date Analyzed: 2010-01-05 | Analyzed By: AR
Prep Batch: 56731 | QC Preparation: 2009-12-30 | Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Dissolved Solids	1000	mg/L	1	1000	<9.75	100	90 - 110

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	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 | Date Analyzed: 2010-01-06 | Analyzed By: RR
Prep Batch: 56807 | QC Preparation: 2010-01-05 | Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. 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.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Dissolved Calcium	49.1	mg/L	1	50.0	<0.117	98	85 - 115	0	20
Dissolved Potassium	46.5	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: 66515 | Date Analyzed: 2010-01-06 | Analyzed By: AG
Prep Batch: 56863 | QC Preparation: 2010-01-06 | Prepared By: AG

continued ...

control spikes continued ...

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. 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.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	0.0978	mg/L	1	0.100	<0.000300	98	79.4 - 111.8	4	20
Toluene	0.0980	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	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. 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 | Date Analyzed: 2009-12-30 | Analyzed By: AR
Prep Batch: 56732 | QC Preparation: 2009-12-30 | Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	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.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	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.

[1] Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.
[2] MSD analyte out of range. MS/MSD has a RPD within limits. Therfore, MS shows extraction occured properly.

Matrix Spike (MS-1) Spiked Sample: 218522

QC Batch: 66392 | Date Analyzed: 2009-12-30 | Analyzed By: AR
Prep Batch: 56732 | QC Preparation: 2009-12-30 | Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	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.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	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

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride [3]	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.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	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

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	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.

[3]Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.
[4]MSD analyte out of range. MS/MSD has a RPD within limits. Therfore, MS shows extraction occured properly.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	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: 66490 | Date Analyzed: 2010-01-06 | Analyzed By: RR
Prep Batch: 56807 | QC Preparation: 2010-01-05 | Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	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.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Dissolved Calcium	171	mg/L	1	50.0	121	100	75 - 125	2	20
Dissolved Potassium	51.4	mg/L	1	50.0	3.36	96	75 - 125	2	20
Dissolved Magnesium	60.9	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 | Date Analyzed: 2010-01-06 | Analyzed By: AG
Prep Batch: 56863 | QC Preparation: 2010-01-06 | Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.102	mg/L	1	0.100	<0.000300	102	77.3 - 117.4
Toluene	0.101	mg/L	1	0.100	<0.000200	101	75 - 111.8
Ethylbenzene	0.101	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 Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD 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 ...

matrix spikes continued ...

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	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.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	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

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
pH		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

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
pH		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

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date 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

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date 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

Standard (ICV-1)

QC Batch: 66392 Date Analyzed: 2009-12-30 Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/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

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date 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

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date 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

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

Standard (ICV-1)

QC Batch: 66393 Date Analyzed: 2009-12-30 Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	25.0	24.2	97	90 - 110	2009-12-30

Standard (ICV-1)

QC Batch: 66393 Date Analyzed: 2009-12-30 Analyzed By: AR

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

Standard (CCV-1)

QC Batch: 66393 Date Analyzed: 2009-12-30 Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	25.0	24.2	97	90 - 110	2009-12-30

Standard (CCV-1)

QC Batch: 66393 Date Analyzed: 2009-12-30 Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Sulfate		mg/L	25.0	24.2	97	90 - 110	2009-12-30

Standard (ICV-1)

QC Batch: 66490 Date Analyzed: 2010-01-06 Analyzed By: RR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	50.0	53.0	106	90 - 110	2010-01-06
Dissolved Potassium		mg/L	50.0	49.6	99	90 - 110	2010-01-06

continued ...

standard continued ...

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date 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

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	50.0	52.3	105	90 - 110	2010-01-06
Dissolved Potassium		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		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 True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date 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		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 True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date 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		mg/L	0.300	0.295	98	80 - 120	2010-01-06

Order #: 9122911

Analysis Request of Chain of Custody Record

PAGE: 1 OF: 1

TETRA TECH
1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

CLIENT NAME: Celero

SITE MANAGER: Jeff Kindley

PROJECT NO.: 114-6403179

PROJECT NAME: Celero / Trust 1 T/B

Chaves Co NM

LAB I.D. NUMBER	DATE 2007	TIME	MATRIX	COMP	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE
218521	12/28	1520	GW		X	MW-1	4	N	X		X	
522		1530				MW-2						
523		1600				MW-3						
524		1430			X	MW-4						

ANALYSIS REQUEST (Circle or Specify Method No.)

BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
X												X				X

RELINQUISHED BY: (Signature) — Date: 12/28/07 Time: 2:00 — RECEIVED BY: (Signature) — Date: 12/29/07 Time: 12:00

SAMPLED BY: (Print & Initial) J.T.K. — Date: 12/28/07 Time:

RELINQUISHED BY: (Signature) — Date: 12/29/07 Time: 12:00 — RECEIVED BY: (Signature) — Date: Time:

SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS — AIRBILL #: — OTHER:

RELINQUISHED BY: (Signature) — Date: Time: — RECEIVED BY: (Signature) — Date: Time:

TETRA TECH CONTACT PERSON: J. If Kindley — Results by:

RECEIVING LABORATORY: Xenco

ADDRESS:

CITY: Midland STATE: TX ZIP:

CONTACT: PHONE: DATE: TIME:

RECEIVED BY: (Signature)

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 2.1°c intact

REMARKS: Midland - Btex, Chloride, Anions, pH, TDS Lubbock - Cations hardness

Please fill out all copies - Laboratory retains Yellow copy - Return Orginal copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.

KH

Cation-Anion Balance Sheet

DATE: 1/7/2010

Sample #	Calcium ppm	Magnesium ppm	Sodium ppm	Potassium ppm	Alkalinity ppm	Sulfate ppm	Chloride ppm	Nitrate ppm	Fluoride ppm	Bromide ppm	TDS ppm	EC 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	5070				9900	

Sample #	Calcium in meq/L	Magnesium in meq/L	Sodium in meq/L	Potassium in meq/L	Alkalinity in meq/L	Sulfate in meq/L	Chloride in meq/L	Nitrate in meq/L	Fluoride in meq/L	Bromide in meq/L	**Cations in meq/L**	**Anions in meq/L**	**Percentage Error**
218521	125.75	359.61	2810.10	63.69	0.00	46.43	4626.44	0	0	0	3359.15	4672.87	32.71205527
218522	81.34	31.19	59.16	0.46	2.76	0.09	154.59	0	0	0	172.15	157.44	8.921623562
218523	105.79	66.16	522.00	3.73	2.12	13.76	631.90	0	0	0	697.68	647.79	7.417159088
218524	82.83	28.72	44.37	0.36	1.98	3.08	143.02	0	0	0	156.28	148.09	5.386752571

	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

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

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
200 East Sunset Road, Suite E El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
5002 Basin Street, Suite A1 Midland, Texas 79703 432•689•6301 FAX 432•689•6313
6015 Harris Parkway, Suite 110 Ft. Worth, Texas 76132 817•201•5260
E-Mail: lab@traceanalysis.com

Certifications

WBENC: 237019 **HUB:** 1752439743100-86536 **DBE:** VN 20657
NCTRCA WFWB38444Y0909

NELAP Certifications

Lubbock: T104704219-08-TX LELAP-02003 Kansas E-10317 **El Paso:** T104704221-08-TX LELAP-02002 **Midland:** T104704392-08-TX

Analytical and Quality Control Report

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

Report Date: July 27, 2010

Work Order: 10071408

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.

Sample	Description	Matrix	Date Taken	Time Taken	Date 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.

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/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.

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis 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.

Analytical Report

Sample: 237445 - MW-1

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	71724	Date Analyzed:	2010-07-14	Analyzed By:	AG
Prep Batch:	61451	Sample Preparation:	2010-07-14	Prepared By:	AG

Parameter	Flag	RL 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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	[1]	0.0651	mg/L	1	0.100	65	67.8 - 126
4-Bromofluorobenzene (4-BFB)		0.0549	mg/L	1	0.100	55	51.1 - 128

Sample: 237445 - MW-1

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

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

Sample: 237445 - MW-1

Laboratory:	Midland				
Analysis:	SO4 (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

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

[1]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. •

Sample: 237445 - MW-1

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	72039	Date Analyzed:	2010-07-26	Analyzed By:	AR
Prep Batch:	61516	Sample Preparation:	2010-07-16	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		**98000**	mg/L	100	10.0

Sample: 237446 - MW-2

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	71724	Date Analyzed:	2010-07-14	Analyzed By:	AG
Prep Batch:	61451	Sample Preparation:	2010-07-14	Prepared By:	AG

Parameter	Flag	RL 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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.109	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)	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

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

Sample: 237446 - MW-2

Laboratory:	Midland				
Analysis:	SO4 (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

Parameter	Flag	Result	RL Units	Dilution	RL
Sulfate		**47.8**	mg/L	5	2.50

Sample: 237446 - MW-2

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	72039	Date Analyzed:	2010-07-26	Analyzed By:	AR
Prep Batch:	61516	Sample Preparation:	2010-07-16	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Total Dissolved Solids		**14100**	mg/L	100	10.0

Sample: 237447 - MW-3

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	71724	Date Analyzed:	2010-07-14	Analyzed By:	AG
Prep Batch:	61451	Sample Preparation:	2010-07-14	Prepared By:	AG

Parameter	Flag	Result	RL 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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	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

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

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**133000**		mg/L	5000	2.50

Sample: 237447 - MW-3

Laboratory:	Midland				
Analysis:	SO4 (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

Parameter	Flag	Result	RL	Units	Dilution	RL
Sulfate		**1970**		mg/L	50	2.50

Sample: 237447 - MW-3

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	72039	Date Analyzed:	2010-07-26	Analyzed By:	AR
Prep Batch:	61516	Sample Preparation:	2010-07-16	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Total Dissolved Solids		**237000**		mg/L	100	10.0

Sample: 237448 - MW-4

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	71724	Date Analyzed:	2010-07-14	Analyzed By:	AG
Prep Batch:	61451	Sample Preparation:	2010-07-14	Prepared By:	AG

Parameter	Flag	Result	RL	Units	Dilution	RL
Benzene		<0.00100		mg/L	1	0.00100
Toluene		<0.00100		mg/L	1	0.00100

continued ...

sample 237448 continued ...

Parameter	Flag	Result	RL	Units	Dilution	RL
Ethylbenzene		<0.00100		mg/L	1	0.00100
Xylene		<0.00100		mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.113	mg/L	1	0.100	113	67.8 - 126
4-Bromofluorobenzene (4-BFB)		0.0908	mg/L	1	0.100	91	51.1 - 128

Sample: 237448 - MW-4

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

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**1140**		mg/L	50	2.50

Sample: 237448 - MW-4

Laboratory:	Midland				
Analysis:	SO4 (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

Parameter	Flag	Result	RL	Units	Dilution	RL
Sulfate		**71.1**		mg/L	5	2.50

Sample: 237448 - MW-4

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	72039	Date Analyzed:	2010-07-26	Analyzed By:	AR
Prep Batch:	61516	Sample Preparation:	2010-07-16	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Total Dissolved Solids		**1880**		mg/L	5	10.0

Method Blank (1) QC Batch: 71724

QC Batch: 71724 | Date Analyzed: 2010-07-14 | Analyzed By: AG
Prep Batch: 61451 | QC Preparation: 2010-07-14 | Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.000600	mg/L	0.001
Toluene		<0.000600	mg/L	0.001
Ethylbenzene		<0.000800	mg/L	0.001
Xylene		<0.000767	mg/L	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0973	mg/L	1	0.100	97	70.2 - 118
4-Bromofluorobenzene (4-BFB)		0.0848	mg/L	1	0.100	85	47.3 - 116

Method Blank (1) QC Batch: 71928

QC Batch: 71928 | Date Analyzed: 2010-07-15 | Analyzed By: AR
Prep Batch: 61481 | QC Preparation: 2010-07-15 | Prepared By: AR

Parameter	Flag	MDL Result	Units	RL
Chloride		0.463	mg/L	2.5

Method Blank (1) QC Batch: 71928

QC Batch: 71928 | Date Analyzed: 2010-07-15 | Analyzed By: AR
Prep Batch: 61481 | QC Preparation: 2010-07-15 | Prepared By: AR

Parameter	Flag	MDL Result	Units	RL
Sulfate		<0.177	mg/L	2.5

Method Blank (1) QC Batch: 72039

QC Batch: 72039 | Date Analyzed: 2010-07-26 | Analyzed By: AR
Prep Batch: 61516 | QC Preparation: 2010-07-15 | Prepared By: AR

Parameter	Flag	MDL Result	Units	RL
Total Dissolved Solids		10.0	mg/L	10

Duplicates (2) Duplicated Sample: 237468

QC Batch: 72039 | Date Analyzed: 2010-07-26 | Analyzed By: AR
Prep Batch: 61516 | QC Preparation: 2010-07-15 | Prepared By: AR

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Total Dissolved Solids	109000	5910	mg/L	100	7	10
Total Dissolved Solids	109000	102000	mg/L	100	7	10

Laboratory Control Spike (LCS-1)

QC Batch: 71724 | Date Analyzed: 2010-07-14 | Analyzed By: AG
Prep Batch: 61451 | QC Preparation: 2010-07-14 | Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. 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.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	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	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. 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 | Date Analyzed: 2010-07-15 | Analyzed By: AR
Prep Batch: 61481 | QC Preparation: 2010-07-15 | Prepared By: AR

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

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	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: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Sulfate	22.8	mg/L	1	25.0	<0.177	91	90 - 110

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Sulfate	23.0	mg/L	1	25.0	<0.177	92	90 - 110	1	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: 72039 | Date Analyzed: 2010-07-26 | Analyzed By: AR
Prep Batch: 61516 | QC Preparation: 2010-07-15 | Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Dissolved Solids	1030	mg/L	1	1000	<9.75	103	90 - 110

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Dissolved Solids	1040	mg/L	1	1000	<9.75	104	90 - 110	1	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 | Date Analyzed: 2010-07-14 | Analyzed By: AG
Prep Batch: 61451 | QC Preparation: 2010-07-14 | Prepared By: AG

Param		MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. 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.

Param		MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	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.

Surrogate		MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD 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: 71928 | Date Analyzed: 2010-07-15 | Analyzed By: AR
Prep Batch: 61481 | QC Preparation: 2010-07-15 | Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	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.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	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.

[2]Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.
[3]Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.
[4]MSD analyte out of range. MS/MSD has a RPD within limits. Therfore, MS shows extraction occured properly.
[5]MSD analyte out of range. MS/MSD has a RPD within limits. Therfore, MS shows extraction occured properly.
[6]MSD analyte out of range. MS/MSD has a RPD within limits. Therfore, MS shows extraction occured properly.
[7]Surrogate TFT out due to matrix interference. Sample was not reran due to lack of sample.
[8]Surrogate TFT out due to matrix interference. Sample was not reran due to lack of sample.
[9]Surrogate 4-BFB out due to matrix interference. Sample was not reran due to lack of sample.
[10]Surrogate 4-BFB out due to matrix interference. Sample was not reran due to lack of sample.

Matrix Spike (MS-1) Spiked Sample: 237448

QC Batch: 71928 | Date Analyzed: 2010-07-15 | Analyzed By: AR
Prep Batch: 61481 | QC Preparation: 2010-07-15 | Prepared By: AR

Param		MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	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.

Param		MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	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

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0999	100	80 - 120	2010-07-14
Toluene		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 True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date 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

[11] Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.
[12] MSD analyte out of range. MS/MSD has a RPD within limits. Therfore, MS shows extraction occured properly.

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	25.0	26.8	107	90 - 110	2010-07-15

Standard (ICV-1)

QC Batch: 71928 Date Analyzed: 2010-07-15 Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Sulfate		mg/L	25.0	26.2	105	90 - 110	2010-07-15

Standard (CCV-1)

QC Batch: 71928 Date Analyzed: 2010-07-15 Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	25.0	27.3	109	90 - 110	2010-07-15

Standard (CCV-1)

QC Batch: 71928 Date Analyzed: 2010-07-15 Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Sulfate		mg/L	25.0	23.9	96	90 - 110	2010-07-15

Order #: 10071408

Analysis Request of Chain of Custody Record

PAGE: 1 OF: 1

TETRA TECH
1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

CLIENT NAME: Celero
SITE MANAGER: Jeff Kindley
PROJECT NO.: 115-6403129
PROJECT NAME: Celero / Rak Queen #1 TB
Chaves Co, NM

LAB I.D. NUMBER	DATE 2010	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH (TDS)	Sulfate
237445	7/13	1405	W		X	MW-1	4	N	X		X		X											X				X	X
446		1410				MW-2																							
447		1-100				MW-3																							
448		1415				MW-4																							

RELINQUISHED BY: (Signature)	Date: 7/14/2010 Time:	RECEIVED BY: (Signature)	Date: Time: 9:25
SAMPLED BY: (Print & Initial) ST/GP	Date: 7/13/10 Time:		
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:
SAMPLE SHIPPED BY: (Circle) FEDEX HAND DELIVERED BUS UPS	AIRBILL #: OTHER:		
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:
TETRA TECH CONTACT PERSON: Jeff Kindley	Results by:		
RECEIVING LABORATORY: Trace ADDRESS: CITY: Midland STATE: TX ZIP: CONTACT: PHONE:	RECEIVED BY: (Signature) DATE: TIME:		RUSH Charges Authorized: Yes No
SAMPLE CONDITION WHEN RECEIVED: 3.9°c intact	REMARKS: *All tests Midland		

Please fill out all copies - Laboratory retains Yellow copy - Return Orginal copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
200 East Sunset Road, Suite E El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
5002 Basin Street, Suite A1 Midland, Texas 79703 432•689•6301 FAX 432•689•6313
6015 Harris Parkway, Suite 110 Ft. Worth, Texas 76132 817•201•5260
E-Mail: lab@traceanalysis.com

Certifications

WBENC: 237019 **HUB:** 1752439743100-86536 **DBE:** VN 20657
NCTRCA WFWB38444Y0909

NELAP Certifications

Lubbock: T104704219-08-TX LELAP-02003 Kansas E-10317 **El Paso:** T104704221-08-TX LELAP-02002 **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: 10101405

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.

Sample	Description	Matrix	Date Taken	Time Taken	Date 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.

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/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.

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis 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.

Analytical Report

Sample: 247501 - MW-1

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	74590	Date Analyzed:	2010-10-20	Analyzed By:	AG
Prep Batch:	63988	Sample Preparation:	2010-10-19	Prepared By:	AG

Parameter	Flag	Result	RL	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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	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)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	74818	Date Analyzed:	2010-10-26	Analyzed By:	PG
Prep Batch:	64180	Sample Preparation:	2010-10-26	Prepared By:	SS

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

Sample: 247501 - MW-1

Laboratory:	Lubbock				
Analysis:	SO4 (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	75341	Date Analyzed:	2010-11-12	Analyzed By:	PG
Prep Batch:	64638	Sample Preparation:	2010-11-12	Prepared By:	PG

Parameter	Flag	Result	RL	Units	Dilution	RL
Sulfate		**1870**		mg/L	50	2.50

[1]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. •

Sample: 247501 - MW-1

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:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Total Dissolved Solids		**260000**	mg/L	100	10.0

Sample: 247502 - MW-2

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	74557	Date Analyzed:	2010-10-14	Analyzed By:	AG
Prep Batch:	63840	Sample Preparation:	2010-10-14	Prepared By:	AG

Parameter	Flag	Result	RL 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

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

Sample: 247502 - MW-2

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	75734	Date Analyzed:	2010-11-29	Analyzed By:	PG
Prep Batch:	64963	Sample Preparation:	2010-11-29	Prepared By:	PG

Parameter	Flag	Result	RL 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:	PG
Prep Batch:	64528	Sample Preparation:	2010-11-09	Prepared By:	PG

Parameter	Flag	Result	RL	Units	Dilution	RL
Sulfate		**88.9**		mg/L	5	2.50

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:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Total 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
Prep Batch:	63840	Sample Preparation:	2010-10-14	Prepared By:	AG

Parameter	Flag	Result	RL	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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0742	mg/L	1	0.100	74	66.2 - 107
4-Bromofluorobenzene (4-BFB)		0.0468	mg/L	1	0.100	47	39 - 138

Sample: 247503 - MW-3

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	74823	Date Analyzed:	2010-10-26	Analyzed By:	PG
Prep Batch:	64185	Sample Preparation:	2010-10-26	Prepared By:	SS

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**57300**	mg/L	10000	2.50

Sample: 247503 - MW-3

Laboratory:	Lubbock				
Analysis:	SO4 (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	75341	Date Analyzed:	2010-11-12	Analyzed By:	PG
Prep Batch:	64638	Sample Preparation:	2010-11-12	Prepared By:	PG

Parameter	Flag	Result	RL Units	Dilution	RL
Sulfate		**1630**	mg/L	50	2.50

Sample: 247503 - MW-3

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:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Total Dissolved Solids		**110000**	mg/L	100	10.0

Sample: 247504 - MW-4

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	74557	Date Analyzed:	2010-10-14	Analyzed By:	AG
Prep Batch:	63840	Sample Preparation:	2010-10-14	Prepared By:	AG

Parameter	Flag	Result	RL Units	Dilution	RL
Benzene		<0.00100	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100

continued ...

sample 247504 continued ...

Parameter	Flag	Result	RL	Units	Dilution	RL
Ethylbenzene		<0.00100		mg/L	1	0.00100
Xylene		<0.00100		mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.101	mg/L	1	0.100	101	66.2 - 107
4-Bromofluorobenzene (4-BFB)		0.0836	mg/L	1	0.100	84	39 - 138

Sample: 247504 - MW-4

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	74823	Date Analyzed:	2010-10-26	Analyzed By:	PG
Prep Batch:	64185	Sample Preparation:	2010-10-26	Prepared By:	SS

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**16500**		mg/L	1000	2.50

Sample: 247504 - MW-4

Laboratory:	Lubbock				
Analysis:	SO4 (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	75341	Date Analyzed:	2010-11-12	Analyzed By:	PG
Prep Batch:	64638	Sample Preparation:	2010-11-12	Prepared By:	PG

Parameter	Flag	Result	RL	Units	Dilution	RL
Sulfate		**238**		mg/L	50	2.50

Sample: 247504 - MW-4

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:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Total Dissolved Solids		**43800**		mg/L	100	10.0

Method Blank (1) QC Batch: 74557

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

Parameter	Flag	MDL Result	Units	RL
Benzene		<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	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0893	mg/L	1	0.100	89	61.8 - 106
4-Bromofluorobenzene (4-BFB)		0.0784	mg/L	1	0.100	78	48.5 - 129

Method Blank (1) QC Batch: 74590

QC Batch: 74590 | Date Analyzed: 2010-10-20 | Analyzed By: AG
Prep Batch: 63988 | QC Preparation: 2010-10-19 | Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
Benzene		<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	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0970	mg/L	1	0.100	97	61.8 - 106
4-Bromofluorobenzene (4-BFB)		0.0870	mg/L	1	0.100	87	48.5 - 129

Method Blank (1) QC Batch: 74622

QC Batch: 74622 | Date Analyzed: 2010-10-21 | Analyzed By: AR
Prep Batch: 63873 | QC Preparation: 2010-10-15 | Prepared By: AR

Parameter	Flag	MDL Result	Units	RL
Total Dissolved Solids		11.0	mg/L	10

Method Blank (1) QC Batch: 74818

QC Batch: 74818 | Date Analyzed: 2010-10-26 | Analyzed By: PG
Prep Batch: 64180 | QC Preparation: 2010-10-26 | Prepared By: PG

Parameter	Flag	MDL Result	Units	RL
Chloride		<0.0350	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

Parameter	Flag	MDL Result	Units	RL
Chloride		<0.0350	mg/L	2.5

Method Blank (1) QC Batch: 75227

QC Batch: 75227 | Date Analyzed: 2010-11-09 | Analyzed By: PG
Prep Batch: 64528 | QC Preparation: 2010-11-09 | Prepared By: PG

Parameter	Flag	MDL Result	Units	RL
Sulfate		<0.596	mg/L	2.5

Method Blank (1) QC Batch: 75341

QC Batch: 75341 | Date Analyzed: 2010-11-12 | Analyzed By: PG
Prep Batch: 64638 | QC Preparation: 2010-11-12 | Prepared By: PG

Parameter	Flag	MDL Result	Units	RL
Sulfate		<0.596	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

Parameter	Flag	MDL Result	Units	RL
Chloride		<0.0350	mg/L	2.5

Duplicates (2) Duplicated Sample: 247533

QC Batch: 74622 | Date Analyzed: 2010-10-21 | Analyzed By: AR
Prep Batch: 63873 | QC Preparation: 2010-10-15 | Prepared By: AR

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD 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 | Date Analyzed: 2010-10-14 | Analyzed By: AG
Prep Batch: 63840 | QC Preparation: 2010-10-14 | Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.0939	mg/L	1	0.100	<0.000400	94	80.7 - 117
Toluene	0.0947	mg/L	1	0.100	<0.000800	95	80.5 - 117
Ethylbenzene	0.0947	mg/L	1	0.100	<0.000400	95	79.2 - 117
Xylene	0.277	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.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	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.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD 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 | Date Analyzed: 2010-10-20 | Analyzed By: AG
Prep Batch: 63988 | QC Preparation: 2010-10-19 | Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. 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	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.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	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.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD 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 | Date Analyzed: 2010-10-21 | Analyzed By: AR
Prep Batch: 63873 | QC Preparation: 2010-10-15 | Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	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.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	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: 74622 | Date Analyzed: 2010-10-21 | Analyzed By: AR
Prep Batch: 63873 | QC Preparation: 2010-10-15 | Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Dissolved Solids	1020	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.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	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

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	24.0	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.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	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 | Date Analyzed: 2010-10-26 | Analyzed By: PG
Prep Batch: 64185 | QC Preparation: 2010-10-26 | Prepared By: PG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	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.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	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: 75227 | Date Analyzed: 2010-11-09 | Analyzed By: PG
Prep Batch: 64528 | QC Preparation: 2010-11-09 | Prepared By: PG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	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.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	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

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	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.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	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

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	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.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	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: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. 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.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene [2]	0.0817	mg/L	1	0.100	0.0048	77	60.9 - 132	27	20
Toluene [3]	0.0712	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.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD 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 | Date Analyzed: 2010-10-20 | Analyzed By: AG
Prep Batch: 63988 | QC Preparation: 2010-10-19 | Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. 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 Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD 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.

[2] MS/MSD RPD out of RPD Limits. Use LCS/LCSD to demonstrate analysis is under control.
[3] MS/MSD RPD out of RPD Limits. Use LCS/LCSD to demonstrate analysis is under control.
[4] MS/MSD RPD out of RPD Limits. Use LCS/LCSD to demonstrate analysis is under control.
[5] High surrogate recovery due to peak interference.
[6] High surrogate recovery due to peak interference.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. 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

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	244000	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.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	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

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	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.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	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 ...

matrix spikes continued ...

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit

Param		MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. 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.

Param		MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	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

Param		MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Sulfate	[9]	274	mg/L	5	125	<2.98	219	90 - 110

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

Param		MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	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

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

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

[7]matrix spikes run with batch but spiked sample was reported in another run •
[8]matrix spikes run with batch but spiked sample was reported in another run •
[9]matrix spikes run with batch but spiked sample was reported in another run •
[10]matrix spikes run with batch but spiked sample was reported in another run •

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	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

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date 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 True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date 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

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date 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

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date 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		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 True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date 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

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date 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

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		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

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date 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 Analyzed By: PG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	25.0	23.5	94	90 - 110	2010-10-26

Standard (CCV-1)

QC Batch: 75227 Date Analyzed: 2010-11-09 Analyzed By: PG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Sulfate		mg/L	25.0	24.9	100	90 - 110	2010-11-09

Standard (CCV-2)

QC Batch: 75227 Date Analyzed: 2010-11-09 Analyzed By: PG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Sulfate		mg/L	25.0	23.7	95	90 - 110	2010-11-09

Standard (CCV-1)

QC Batch: 75341 Date Analyzed: 2010-11-12 Analyzed By: PG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date 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

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date 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

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date 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

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

WO #. 10101405

Analysis Request of Chain of Custody Record

PAGE: 1 OF: 1

TETRA TECH
1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

CLIENT NAME: Celero
SITE MANAGER: Jeff Kindley
PROJECT NO.: 115-240 3129
PROJECT NAME: Celero / Rock Queen #1 TB Chaves Co. NM

LAB I.D. NUMBER	DATE 2010	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/824	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 608/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS	3 Metals
247501	10/12	1445	W		X	MW-1	4	N	3		X	1	X												X				X	X
502		1435				MW-2																								
503		1455				MW-3																								
504		1425				MW-4																								

RELINQUISHED BY: (Signature) Date: 10/13/10 Time: 1645
RECEIVED BY: (Signature) Date: 10/13/10 Time: 1645
RELINQUISHED BY: (Signature) Date: 10/14/10 Time: 10:00
RECEIVED BY: (Signature) Courier Fox Date: 10-15-10 Time: 9:50 AM
RELINQUISHED BY: (Signature) Date: Time:
RECEIVED BY: (Signature) Date: Time:

SAMPLED BY: (Print & Initial) JT/JD Date: 10/12/10 Time:
SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS
AIRBILL #:
OTHER:

RECEIVING LABORATORY: Xenco
ADDRESS:
CITY: Midland STATE: TX ZIP:
CONTACT: PHONE:
RECEIVED BY: (Signature)
DATE: TIME:

TETRA TECH CONTACT PERSON: Jeff Kindley

Results by:
RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 3.5c intact / 3.1 / 3.0 IR

REMARKS: Midland - Btex, TDS Lubbock - Chlorides, 3 Metals

Please fill out all copies - Laboratory retains Yellow copy - Return Orginal copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.

IS 785(01)11