1R - 1664

2009 – 2011 GWMR

10/13/2011



October 13, 2011

Mr. Glenn von Gonten New Mexico Energy, Minerals, & Natural Resources Oil Conservation Division, Environmental Bureau 1220 S. St. Francis Drive Santa Fe, New Mexico 87504

Re: Comprehensive Groundwater Sampling Report for the Celero Energy II, LP, Rock Queen Unit Tract 33 Tank Battery, Located in Unit Letter F, Section 23, Township 13 South, Range 31 East, Chaves County, New Mexico (NMOCD 1RP#1664).

Mr. Von Gonten:

This report details the results of the groundwater sampling events performed at the Celero Energy II, LP (Celero), Rock Queen Unit Tract 33 Tank Battery (Site) for June 2009 through April 2011. The Site is located approximately 22 miles north of Maljamar, New Mexico. The Site location is shown on Figures 1 and 2.

FACILITY BACKGROUND

Pit Closure

On October 8, 2007, Highlander (Tetra Tech) submitted an Investigation and Characterization work plan (ICP) for an open pit at the Site. The ICP was subsequently approved by the New Mexico Oil Conservation Division (NMOCD).

The Tract 33 Tank Battery pit was dewatered and the residual sludge, tank bottom materials, and liner were removed in September 2007. Removed fluids were placed into an existing SWD system or taken for disposal, while the sludge, tank bottom materials, and liner were disposed of at Gandy-Marley, Inc.'s landfill site in Lovington, New Mexico. Upon completion of the removal of the fluids, sludge, and liner, the underlying soils were visually inspected for signs of impact. Approximately 460 cubic yards of soil were excavated and transported to Gandy-Marley, Inc. for disposal. The pit was excavated to a point where the subsoil would support a soil boring rig.



On October 12, 2009, a report entitled Assessment and Closure Report for the Pit located at the Rock Queen Unit Track 33 Tank Battery was submitted to the NMOCD. The report detailed the closure of the former pit at the facility.

Groundwater Investigation

Between June 2009 and December 2010, Celero installed four 2-inch monitor wells (MW-1 through MW-4) and one 5-inch recovery well (RW-1) to assess the groundwater quality at the Site. The lithology at the Site was relatively consistent with limestone to approximately 10 to 15 feet bgs and with calcareous sand to very fine grain sand to a depth of approximately 110 to 120 feet bgs. From approximately 110 feet bgs to the terminus (approximately 125 to 150 feet bgs) the soils were a gray to red clay. See Appendix A for Boring Logs.

During the investigation, groundwater was encountered at depths of approximately 111 to 115 feet bgs. Monitor Well MW-1 was drilled into the surrounding underlying clay to 150 feet bgs and installed with 60 feet of 0.02 inch slotted screen. The remaining monitor wells were drilled to depths of 125 feet bgs and installed with 30 feet of 0.02 inch slotted screen. Recovery well RW-1 was drilled to a depth of 120 feet and installed with 20 feet of 0.035 inch slotted screen. From the top of the screen to the surface of the boring, the wells were completed with blank schedule 40 PVC casing. See Appendix B for monitor well installation diagrams.

During the investigation and subsequent sampling, the only constituents of concern which were detected in the groundwater above New Mexico Water Quality Control Commission (NMWQCC) standards was chlorides, TDS, SO4, and in several wells (MW-1 and RW-1), benzene. No Phase Separated Hydrocarbons (PSH) has been measured in any of the onsite monitor wells. See Figure 3 detailing the monitor well locations.

Gauging and Monitor Well Sampling

On December 28, 2009, initial sampling began at the site. During 2010, additional monitor wells were installed and quarterly sampling initiated. During the sampling events, all monitor wells were gauged, purged, and sampled with no PSH measured. Utilizing the water level elevation calculations, groundwater gradient maps were generated for the January 21 and April 14, 2011 sampling events. The hydraulic gradient indicates a southwesterly direction. Groundwater gradient maps for the sampling events are included as Figures 4 and 5. Gauging data is summarized in Table 1.

During the sampling events, each of the wells was purged utilizing either a submersible pump or by hand bailing and subsequently sampled for BTEX utilizing method SW8021B, chlorides and sulfates utilizing method E 300.0, total dissolved solids (TDS) utilizing method SM2540C and periodically for general

TETRA TECH

chemistry using methods SM2320B, SW6010B, SM4500-H+. The samples were properly preserved and submitted under proper chain-of-custody control to Trace Analysis Inc. of Lubbock, Texas. Two samples, MW-1 on January 21, 2011 (0.0121 mg/L) and RW-1 on April 14, 2011 (0.0124 mg/L) had results which exceeded the NMWQCC standard of 0.01 milligrams per liter (mg/L) of benzene. The remainder of the samples was below the NMWQCC standards with a majority being at or below detection limits. Chlorides for the sampling period ranged from 48.5 mg/L in up gradient monitor well MW-2 on April 14, 2011 to 88,700 mg/L in monitor well MW-1 on October 11, 2010. With the exception of MW-2, all additional monitor wells exceeded the NMWQCC standard of 250 mg/L chlorides. The general chemistry and BTEX analyses are shown in Tables 2 and 3, respectively. Chloride concentration maps for the sampling events are included as Figures 6 through 11. Copies of the laboratory analyses are enclosed in Appendix C.

During purging activities, it was noted that all four monitor wells (MW-1 through MW-4) bail dry, while recovery well RW-1 does not.

CONCLUSIONS

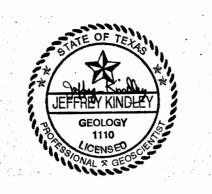
- On December 28, 2009, initial sampling began at the site. During 2010, additional monitor wells were installed and quarterly sampling initiated. During the sampling events, all monitor wells were gauged, purged, and sampled. The samples were preserved, delivered to Trace Analysis, Inc. of Midland, Texas and were analyzed for BTEX utilizing method SW8021B, chlorides and sulfates utilizing method E 300.0, total dissolved solids (TDS) utilizing method SM2540C and periodically for general chemistry using methods SM2320B, SW6010B, SM4500-H+.
- 2. The hydraulic gradient indicates a southwesterly direction.
- 3. Two samples, MW-1 on January 21, 2011 (0.0121 mg/L) and RW-1 on April 14, 2011 (0.0124 mg/L) had results which exceeded the NMWQCC standard of 0.01 milligrams per liter (mg/L) of benzene. The remainder of the samples was below the NMWQCC standards with a majority being at or below detection limits.
- 4. Chloride concentrations exceed the NMWQCC standards of 250 mg/L in all monitor/recover wells with the exception of up gradient MW-2. The chloride concentrations at the site range from 48.5 mg/L in MW-2 on April 14, 2011 to 88,700 mg/L in MW-1 on October 11, 2010, which is near the initial source area.



RECOMMENDATIONS

- 1. Quarterly groundwater monitoring and gauging will be continued throughout the year.
- 2. Additional monitor wells will be installed in order to further delineate the chloride plume at the site.
- A remediation system consisting of either a low flow solar/electric pump or a windmill system will be installed in recovery well RW-1. The recovered fluids will be collected in an above ground tank and utilized for possible water flooding purposes in the surrounding oilfield.

If you have any question or comments concerning the assessment or the activities performed at the Site, please call me at (432) 682-4559.



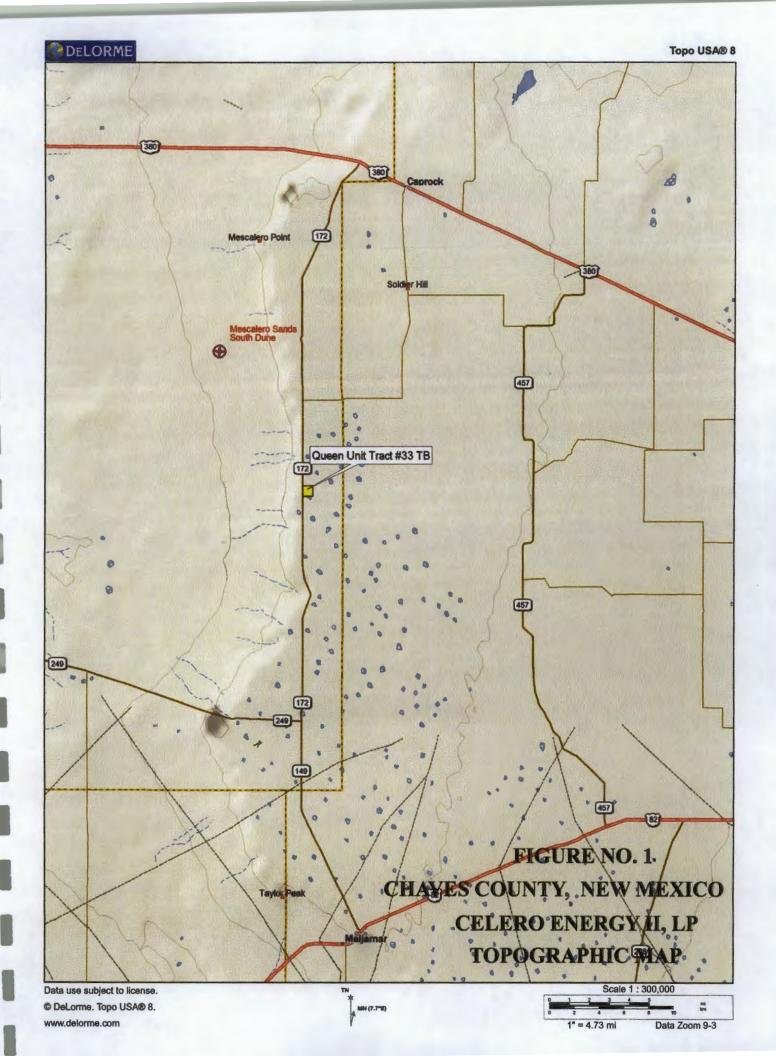
Respectfully submitted, Tetra Tech, Inc.

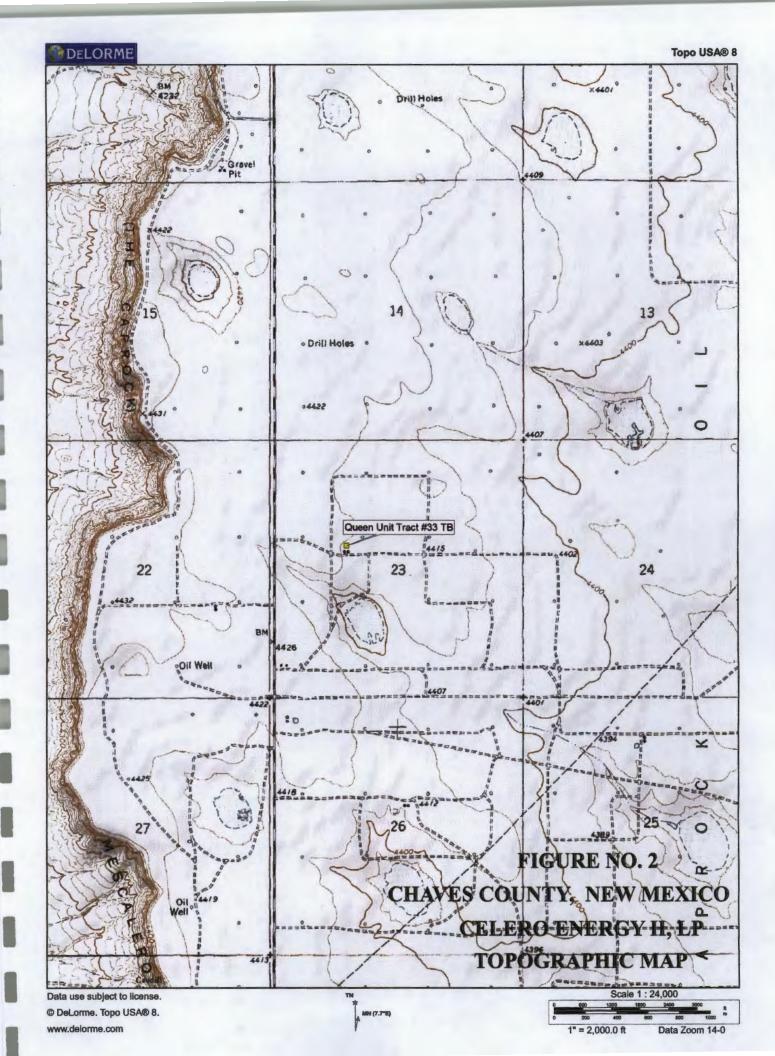
Jeffrey Kindley, P.G. Senior Environmental Geologist

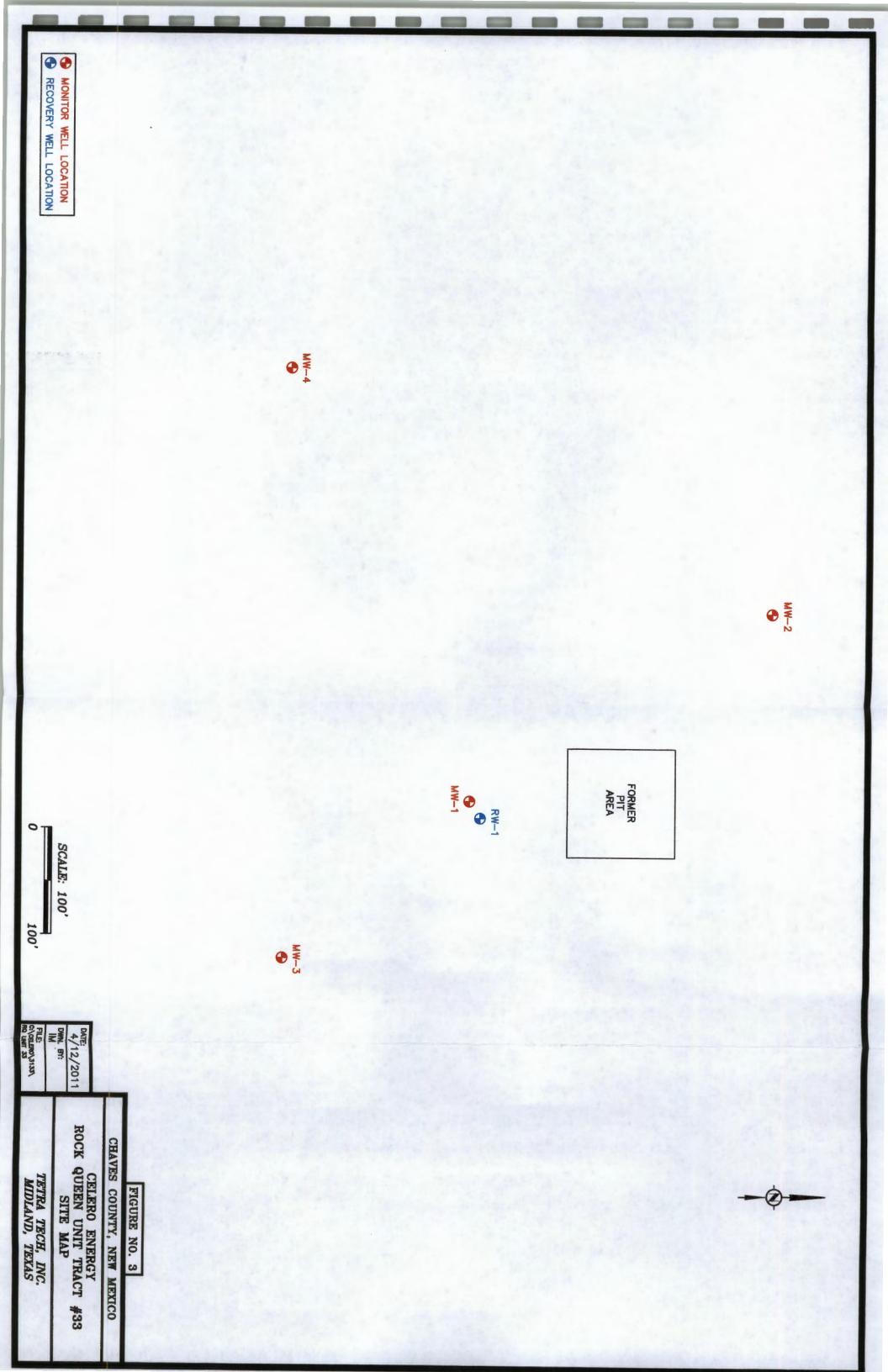
Bruce Woodard - Celero Energy II, LP

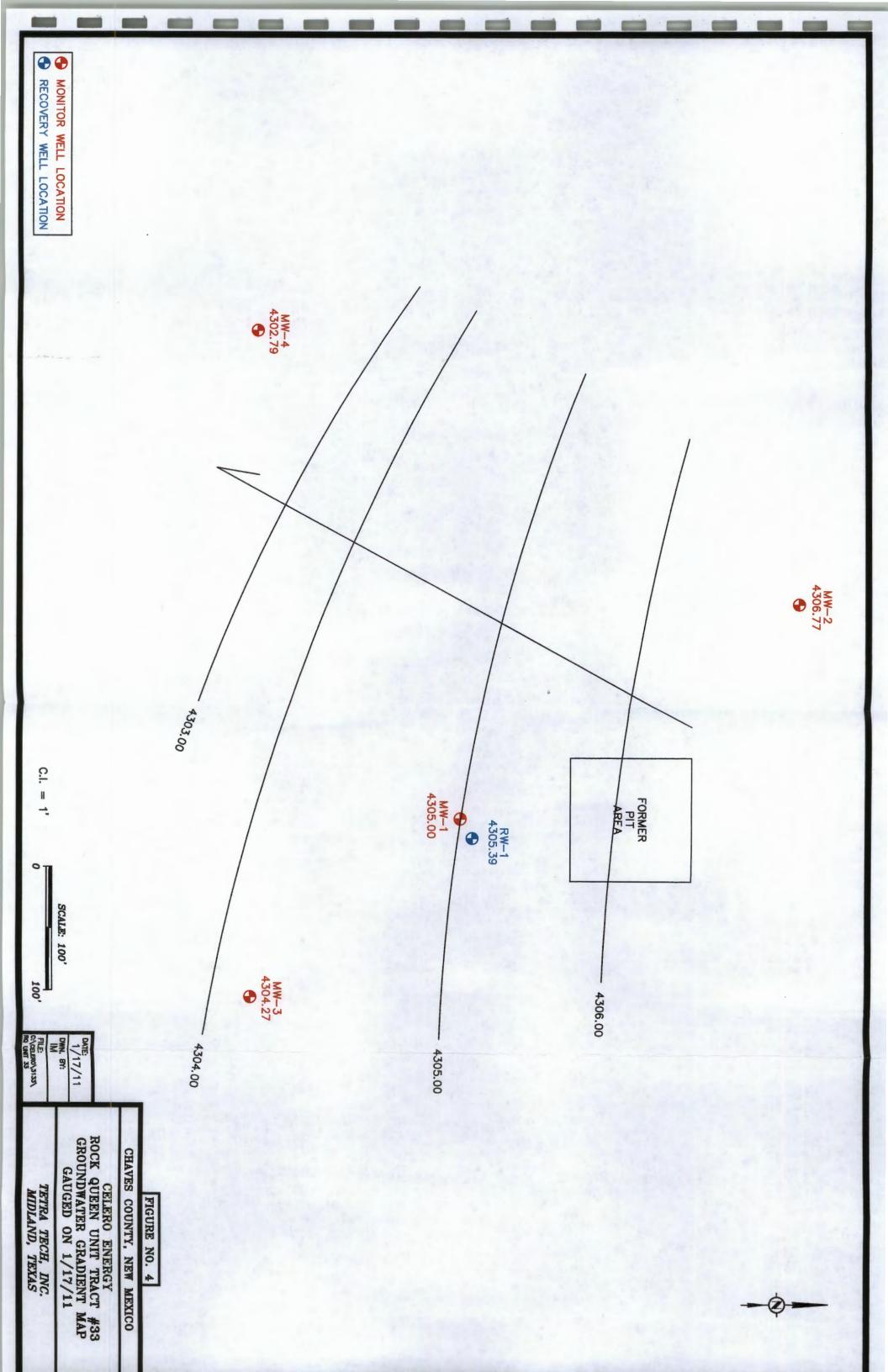
cc:

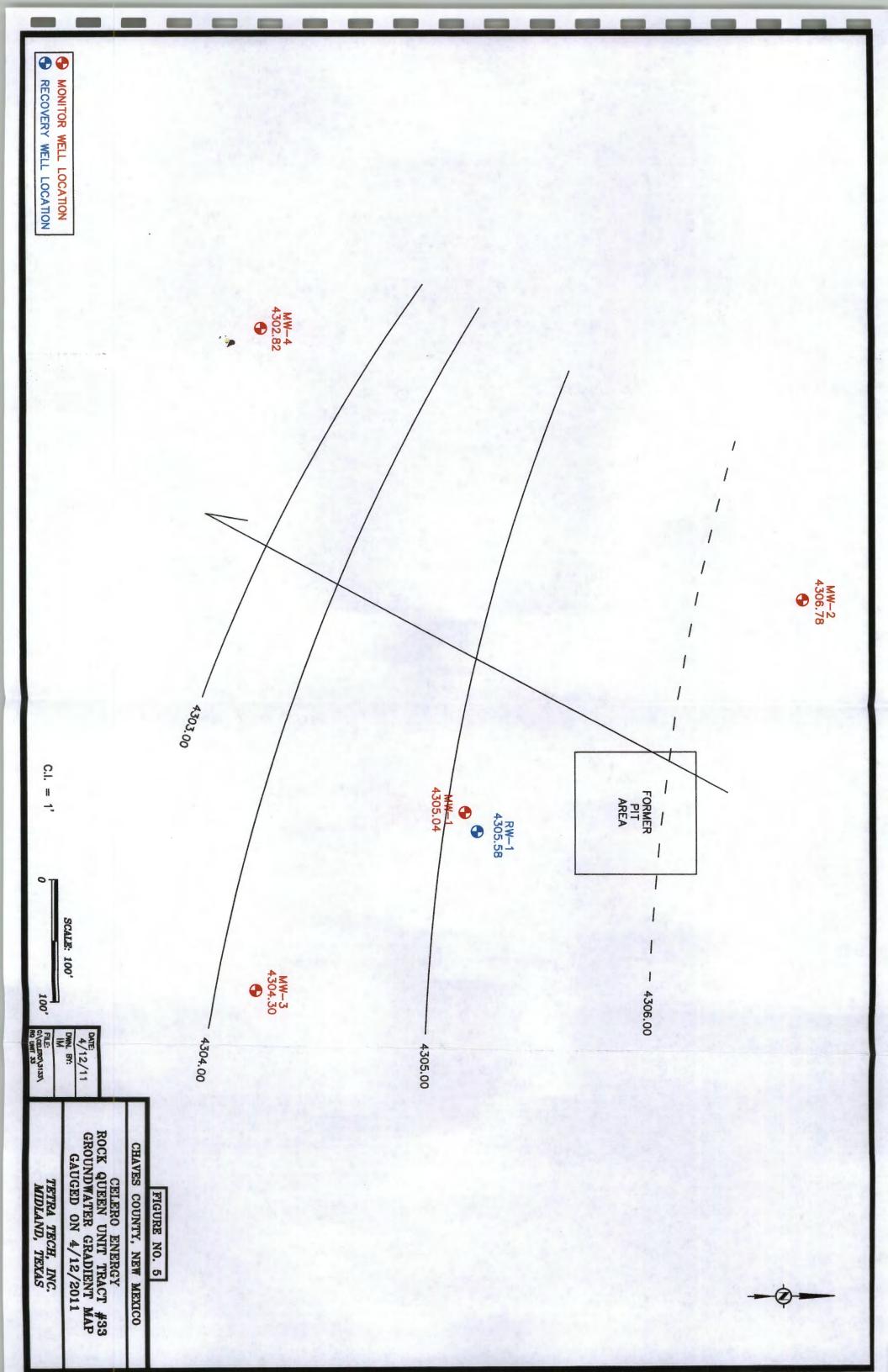
FIGURES











RESULTS IN mg/L

SCALE: 100'

100

FILE: C:\CELERO\3133\ RQ UNIT 33 DATE: 12/28/2009 DWM. BY:

TETRA TECH, INC. MIDLAND, TEXAS

CELERO ENERGY
ROCK QUEEN UNIT TRACT #33
CHLORIDE CONCENTRATION MAP
SAMPLED ON 12/28/09

CHAVES COUNTY, NEW MEXICO FIGURE NO. 6

FORMER PIT AREA

₩₩-1 3,220

CHAVES COUNTY, NEW MEXICO

CELERO ENERGY
ROCK QUEEN UNIT TRACT #33
CHLORIDE CONCENTRATION MAP

SCALE: 100'
NIM BY:
NOWN. BY:
N

₩₩-1 46,800 FORMER PIT AREA

-2-

RESULTS IN mg/L

DATE: 7/13/2010 DWN. BY: IM

CELERO ENERGY
ROCK QUEEN UNIT TRACT #33
CHLORIDE CONCENTRATION MAP
SAMPLED ON 07/13/2010 MIDLAND, TEXAS

CHAVES COUNTY, NEW MEXICO FIGURE NO. 8 MW−1 63,500

FORMER PIT AREA

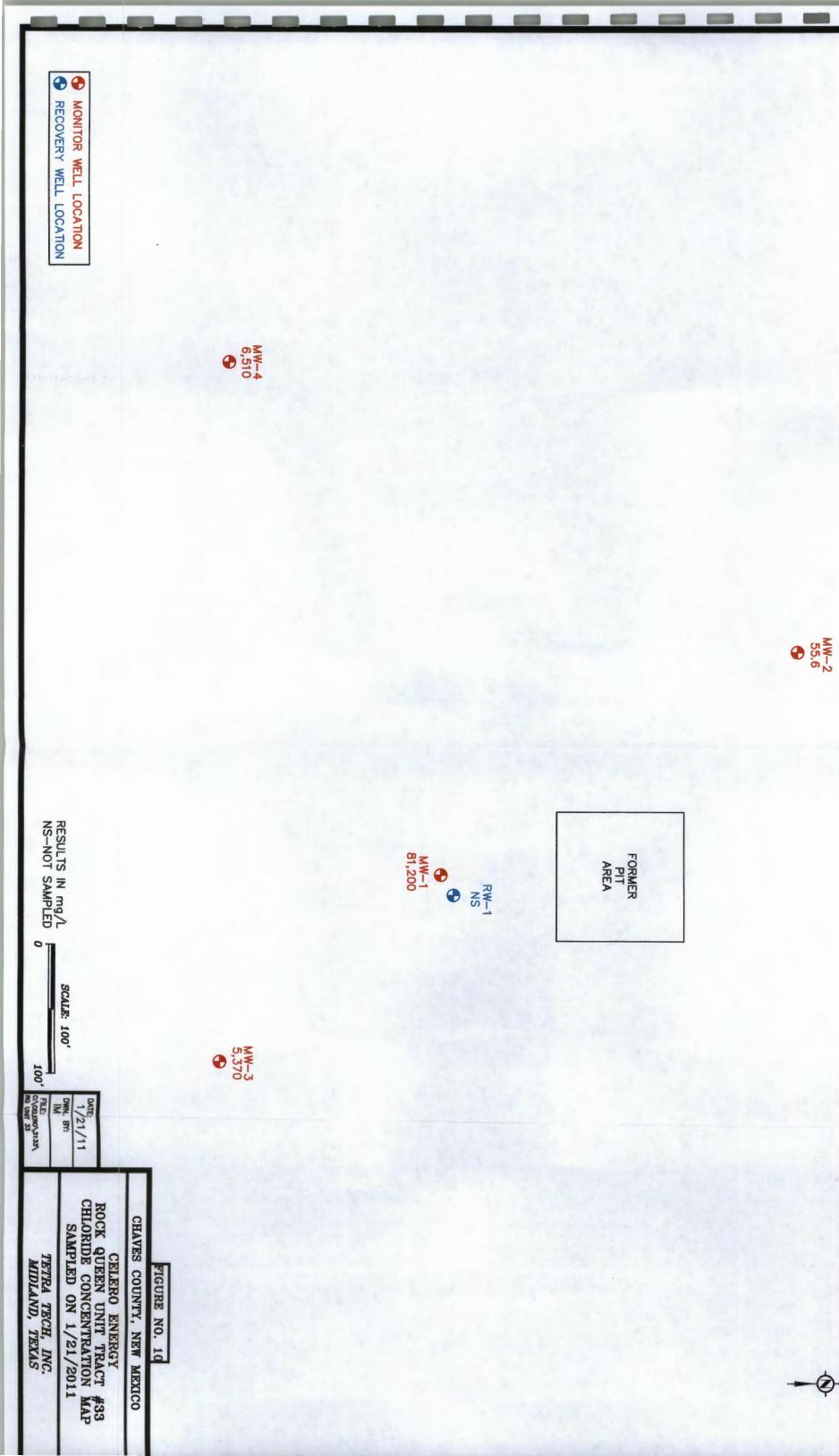
RESULTS IN mg/L SCALE: 100' DATE: 10/11/2010 DWN. BY: FILE: C:\CELERO\3133\ RQ UNT 33 CELERO ENERGY
ROCK QUEEN UNIT TRACT #33
CHLORIDE CONCENTRATION MAP
SAMPLED ON 10/11/2010 TETRA TECH, INC. MIDLAND, TEXAS

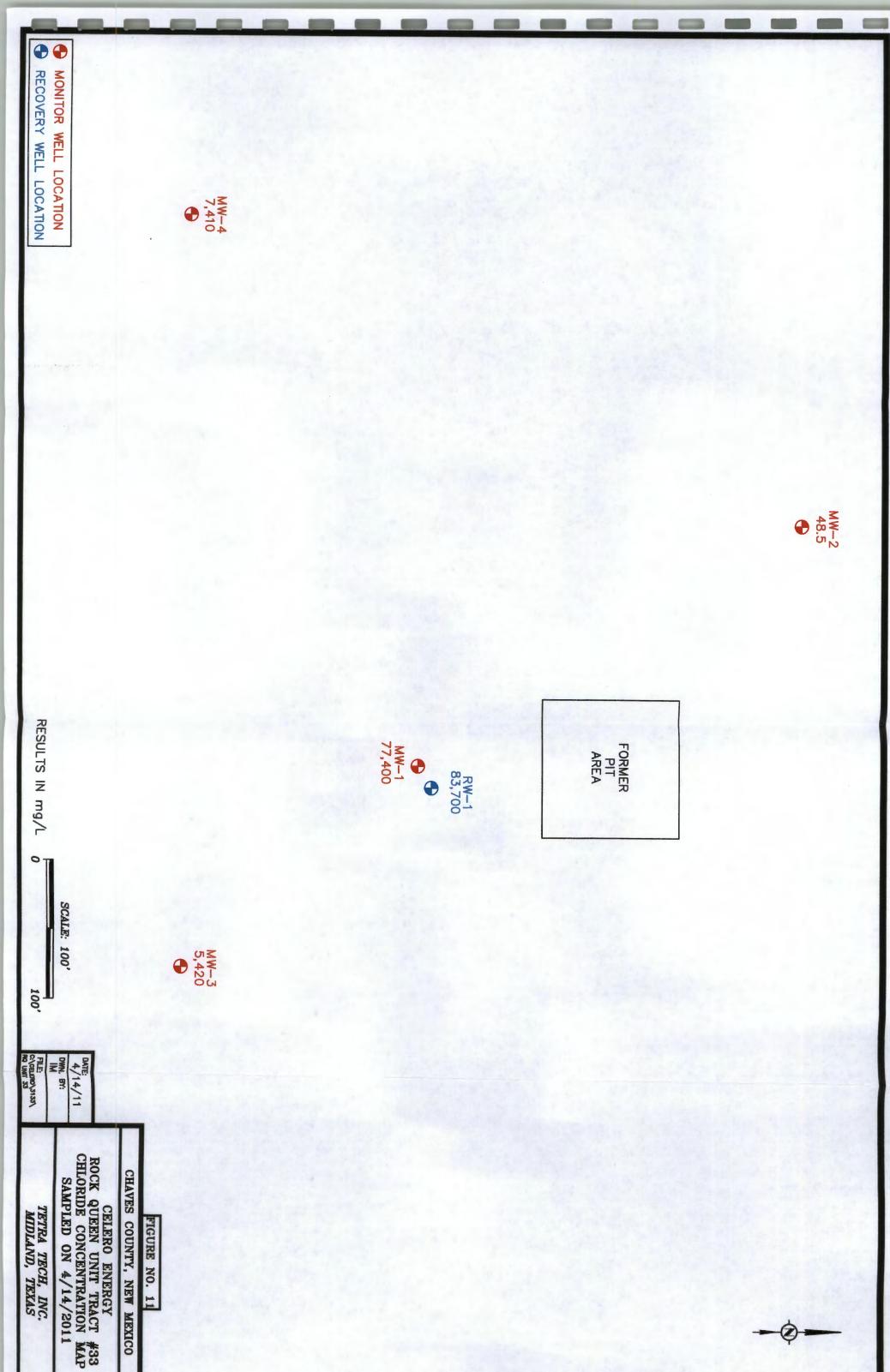
CHAVES COUNTY, NEW MEXICO

FIGURE NO. 9

MW-1 88,700

FORMER PIT AREA





TABLES

Table 1
Celero Energy II, LP
Groundwater Gauging Data
Rock Queen Unit Tract 33 Tank Battery
Chaves County, New Maxin

	ļ		Г						T	_	1	_	T		_	
		Groundwater Elevation (ft)	4,304.90	4,304.95	4,304.97	4,304.93	4,305.00	4,305.04	4,306.77	4,306.78	4,304.27	4,304.30	4,302.79	4,302.82	4,305.39	4,305.58
, vija	Depth to Groundwater	(H)	112.14	112.09	11011	110.04	110.00	111 10	D C	111.18	11.70	111.73	13.08	113.03	111 03	
Chaves County, New Mexico	Depth of Well	(bgs in ft)	153.25	153.25	153.25	153.25	153.25	129.00	129.00	129.53	129.53	128.45	128.45	128.65	123.65	
Cria	/ati	4,417.04						4,417.96		4,416.05		4,417.87		4,416.61		
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Installation	12/10/09					11/30/40	01 000	11/10/10	01/01/1	11/00/40	01/00/1	19/06/40	01/00/71		
Date	Gauged	12/28/09	02/25/10	10/11/10	01/17/11	04/12/11	01/17/11	04/12/11	01/17/11	04/12/11	01/17/11	04/12/11	01/17/11	04/12/11	•	
Monitor	Well	MW-1					MW-2		MW-3		MW-4		RW-1			

Table 2 Celero Energy II, LP

Groundwater Analytical Results
Rock Queen Unit Tract #33 Tank Battery
Chaves County New Mexico

						Chaves	Chaves County, New Mexico	exico						
		Dissolved	Dissolved	Dissolved	Dissolved	Hydroxide	Carbonate	Bicarbonate	Total		:			
Well	Sampled	Calcium	Magnesium	Sodium	Potassium	Alkalinity	Alkalinity	Alkalinity	Alkalinity	Sumare (mo/L)	Chloride (mo/L)	TDS (mg/L)	Hardness (mo/L)	五
		(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)					
MW-1	12/28/09	209	156	1,080	13.3	<1.00	<1.00	134	134	69.3	3,220	5,430	2,160	7.33
	02/25/10	8,440	3,140	13,700	185.0	<1.00	<1.00	86	86	604	46,800	90,100	34,000	6.44
	07/13/10	Ā	Ϋ́	٩	ΨN	٩	Ą	٩	Ϋ́	613	63,500	102,000	AA	Ϋ́
	10/11/10	N A	ΑN	Ą	ΑN	Ą	Ϋ́	۸	ď Z	1,070	88,700	161,000	A	Ν
	01/21/11	Υ	A A	¥	¥	Ϋ́	Ϋ́	ΑN	Ϋ́	1,050	81,200	134,000	Ϋ́	Ν
	04/14/11	NA	NA	NA	NA	NA	NA	NA	NA	1,010	77,400	116,000	Ą	Ą
MW-2	01/21/11	Ā	ΑN	ΑN	Ą	Ϋ́	Ϋ́	ΑN	٩N	124	55.6	2,010	ΑN	A A
	04/14/11	NA	NA	ΑN	ΑN	ΑN	ΝΑ	NA	٧	133	48.5	544	AA	N.
MW-3	01/21/11	N A	NA	NA	NA	AN	ΝΑ	ΑN	ΑN	132	5,370	10,600	NA	NA
	04/14/11	NA	NA	νγ	NA	NA	NA	NA	NA	126	5,420	6,180	A A	Υ
MW-4	01/21/11	A A	ΑN	Ν	NA	ΑN	VΑ	ΑN	٩N	230	6,510	18,400	AA	A A
	04/14/11	NA	NA	AN	NA	NA	ΝΑ	NA	NA	236	7,410	25,400	NA	A A
RW-1	01/21/11	A A	ΝΑ	NA	ΑN	ΥN	VΑ	ΑN	ΑN	NS	SN	SN	NA	ΑN
	04/14/11	ΑN	AN	Ϋ́	Ϋ́	¥	N A	ΑN	ΑN	1,070	83,700	122,000	A N	Ϋ́

NS - Not sampled

Table 3
Celero Energy II, LP
Groundwater Analytical Results

Rock Queen Unit Tract 33 Tank Battery

Chaves County, New Mexico

		Benzene	Toluene	Ethyl-	Xylene	Total
Monitor Well	Date Sampled	in	in	Benzene	in	BTEX
		(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
MW-1	12/28/09	<0.001	<0.001	<0.001	<0.001	<0.001
	02/25/10	<0.001	<0.001	<0.001	<0.001	<0.001
	07/13/10	0.002	0.0015	<0.001	<0.001	0.0035
	10/11/10	0.0048	<0.001	<0.001	<0.001	0.0048
	01/21/11	0.0121	0.0066	<0.001	<0.001	0.0187
	04/14/11	0.0076	<0.001	<0.001	<0.001	0.0076
MW-2	01/21/11	<0.001	<0.001	<0.001	<0.001	<0.001
	04/14/11	<0.001	<0.001	<0.001	<0.001	<0.001
MW-3	01/21/11	<0.001	<0.001	<0.001	<0.001	<0.001
	04/14/11	<0.001	<0.001	<0.001	<0.001	<0.001
MW-4	01/21/11	<0.001	<0.001	<0.001	<0.001	<0.001
	04/14/11	<0.001	<0.001	<0.001	<0.001	<0.001
RW-1	01/21/11	NS	NS	NS	NS	NS
	04/14/11	0.0124	0.007	<0.001	0.0176	0.0370

NS - Not sampled

APPENDIX A BORING LOGS

Boring/Well MW-1

GPS N33.17699° W103.79569°

Project Number 115-6403133A

Client Celero Energy II, LP

Site Name Rock Queen Unit Tract 33 Tank Battery

Site Location Chaves, New Mexico

Letter F, Section 23, Township 13 South, Range 31 East

Total Depth 150 Date Installed 12/10/09

DEPTH (Ft)	OVM	SAMPLE DESCRIPTION
5-6		Very Hard limestone with chert
10-11		Very Hard limestone with chert
15-16		Very Hard limestone with chert
20-21		Calcareous sand - very fine grain
25-26		Calcareous sand - very fine grain
30-31		Calcareous sand - very fine grain
35-36		Calcareous sand - very fine grain
40-41		Calcareous sand - very fine grain
45-46		Calcareous sand - very fine grain
50-51		Calcareous sand - very fine grain
55-56		Tan fine grain sand
60-61		Tan fine grain sand
65-66		Tan fine grain sand
70-71		Tan fine grain sand
75-76		Tan fine grain sand
80-81		Tan fine grain sand
85-86		Tan fine grain sand
90-91		Tan fine grain sand
95-96		Tan fine grain sand
100-101		Tan fine grain sand
105-106		Tan fine grain sand
110-111		Sandy grey clay <10% clay
115-116		Grey clay
120-121		Grey clay and Reddish clay mix
125-126		Grey hard pack clay

Boring/Well

MW-1

GPS

ŧ

N33.17699°

W103.79569°

Project Number

115-6403133A

Client

Celero Energy II, LP

Site Name

Rock Queen Unit Tract 33 Tank Battery

Site Location

Chaves, New Mexico

Letter F, Section 23, Township 13 South, Range 31 East

Total Depth

150

Date Installed

12/10/09

DEPTH (Ft)	OVM	SAMPLE DESCRIPTION
130-131		Grey hard pack clay
135-136		Grey hard pack clay (1st sign of red clay)
140-141		Grey and red hard pack clay mix
145-146		Grey and red hard pack clay mix
150-151		Red clay

Total Depth:

150'

Ground water depth not encountered while drilling.

Boring/Well

MW-2

GPS

N33.17770°

W103.79613°

Project Number

115-6403133A

Client

Celero Energy II, LP

Site Name

Rock Queen Unit Tract #33 Tank Battery

Site Location

Chaves, New Mexico

Letter F, Section 23, Township 13 South, Range 31 East

Total Depth

125'

Date Installed

11/30/10

Depth (Ft)	OVM	Sample Description
5-6'		Caliche and 25% Chert
10-11'		Caliche with Buff Fine Grained Sand
15-16'		Buff Tan Fine Grained Well Sorted Sand
20-21'		Buff Tan Fine Grained Well Sorted Sand
25-26'		Buff Tan Fine Grained Well Sorted Sand
30-31'		Buff Tan Fine Grained Well Sorted Sand
35-36'		Buff Tan Fine Grained Well Sorted Sand
40-41'		Light Brown Fine Grain Well Sorted Sand
45-46'		Light Brown Fine Grain Well Sorted Sand
50-51'		Light Brown Fine Grain Well Sorted Sand
55-56'		Light Brown Fine Grain Well Sorted Sand
60-61'		Light Brown Fine Grain Well Sorted Sand
65-66'		Light Brown Fine Grain Well Sorted Sand
70-71'		Light Brown Fine Grain Well Sorted Sand
75-76'		Light Brown Fine Grain Well Sorted Sand
80-81'		Light Brown Fine Grain Well Sorted Sand
85-86'		Light Brown Fine Grain Well Sorted Sand
90-91'		Light Brown Fine Grain Well Sorted Sand
95-96'		Light Brown Fine Grain Well Sorted Sand
100-101'		Light Brown Fine Grain Well Sorted Sand
105-106'		Light Brown Fine Grain Well Sorted Sand with 30% Subangular Gravel
110-111'		Light Brown Fine Grain Well Sorted Sand with Grey Clay and Gravel
115-116'		Light Brown Fine Grain Well Sorted Sand with Grey Clay and Gravel
120-121'		Grey Brown Clay
125'		Grey Brown Clay with Red Bed

Total Depth:

125

Ground water depth not encountered while drilling.

Boring/Well

MW-3

GPS

N33.17653°

W103.79504°

Project Number 115-6403133A

Client

Celero Energy II, LP

Site Name

Rock Queen Unit Tract #33 Tank Battery

Site Location

Chaves, New Mexico

Letter F, Section 23, Township 13 South, Range 31 East

Total Depth

125'

Date Installed

11/18/10

Depth (Ft)	OVM	Sample Description
5-6'		Caliche and 15% Chert
10-11'		Caliche
15-16'		Buff Fine Grain Sand with 25% Caliche
20-21'		Tan Fine Grain Well Sorted Sand with 20% Caliche
25-26'		Tan Fine Grain Well Sorted Sand with 15% Caliche
30-31'		Buff Fine Grain Well Sorted Sand with 50% Caliche
35-36'		Buff Fine Grain Well Sorted Sand with 40% Caliche
40-41'		Buff Fine Grain Well Sorted Sand with 40% Caliche
45-46'		Buff Fine Grain Well Sorted Sand with 40% Caliche
50-51'		Light Brown Fine Grain Well Sorted Sand with 20% Caliche
55-56'		Light Brown Fine Grain Well Sorted Sand
60-61'		Light Brown Fine Grain Well Sorted Sand
65-66'		Light Brown Fine Grain Well Sorted Sand
70-71'		Light Brown Fine Grain Well Sorted Sand
75-76'		Light Brown Fine Grain Well Sorted Sand
80-81'		Light Brown Fine Grain Well Sorted Sand
85-86'		Light Brown Fine Grain Well Sorted Sand
90-91'		Light Brown Fine Grain Well Sorted Sand
95-96'		Light Brown Fine Grain Well Sorted Sand
100-101'		Light Brown Fine Grain Well Sorted Sand
105-106'		Light Brown Fine Grain Well Sorted Sand with Blue Grey Clay with Lm
110-111'		Light Brown Fine Grain Well Sorted Sand with Blue Grey Clay with Lm
115-116'		Light Brown Fine Grain Well Sorted Sand with Blue Grey Clay with Lm
120-121'		Blue Grey Clay with Red Bed
125'		Red Bed with Blue Grey Clay

Total Depth:

125'

Ground water depth not encountered while drilling.

Boring/Well MW-4

GPS N33.17656° W103.79679°

Project Number 115-6403133A

Client Celero Energy II, LP

Site Name Rock Queen Unit Tract #33 Tank Battery

Site Location Chaves, New Mexico

Letter E, Section 23, Township 13 South, Range 31 East

Total Depth 125'
Date Installed 11/30/10

Depth (Ft)	OVM	Sample Description
5-6'		Caliche and 30% Chert
10-11'		Caliche and 45% Chert
15-16'		Caliche and 30% Chert
20-21'		Caliche and Chert with Buff Fine Grained Well Sorted Sand
25-26'		Buff Fine Grain Well Sorted Sand
30-31'		Buff Fine Grain Well Sorted Sand
35-36'		Buff Fine Grain Well Sorted Sand
40-41'		Buff Fine Grain Well Sorted Sand
45-46'		Buff Fine Grain Well Sorted Sand
50-51'		Light Brown Fine Grain Well Sorted Sand
55-56'		Light Brown Fine Grain Well Sorted Sand
60-61'		Light Brown Fine Grain Well Sorted Sand
65-66'		Light Brown Fine Grain Well Sorted Sand
70-71'		Light Brown Fine Grain Well Sorted Sand
75-76'		Light Brown Fine Grain Well Sorted Sand
80-81'		Light Brown Fine Grain Well Sorted Sand
85-86'		Light Brown Fine Grain Well Sorted Sand
90-91'		Light Brown Fine Grain Well Sorted Sand
95-96'		Light Brown Fine Grain Well Sorted Sand
100-101'		Light Brown Fine Grain Well Sorted Sand
105-106'		Light Brown Fine Grain Well Sorted Sand
110-111'		Light Brown Fine Grain Well Sorted Sand with Subangular Gravel
115-116'		Light Brown Fine Grain Well Sorted Sand with Subangular Gravel and Red
120-121'		Red Bed with Subangular Gravel
125'		Red Bed

Total Depth: 125' Ground water depth not encountered while drilling.

Boring/Well RW-1

GPS N33.176878° W103.794975°

Project Number 115-6403133A

Client Celero Energy II, LP

Site Location Rock Queen Unit Tract #33 Tank Battery

Location Chaves, New Mexico

Letter F, Section 23, Township 13 South, Range 31 East

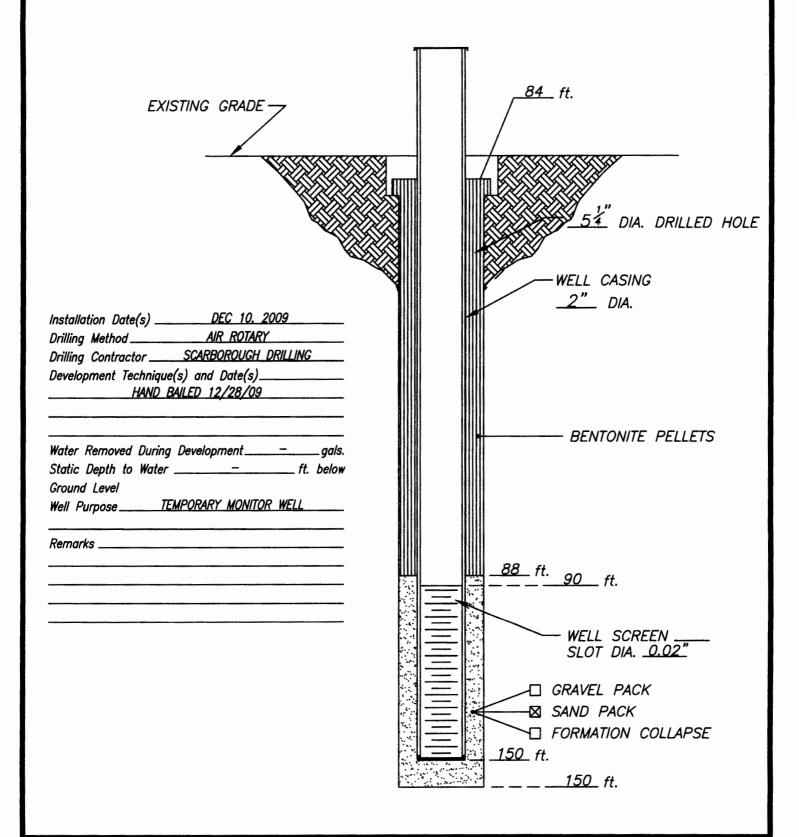
Total Depth 120'

Date Installed: 12/06/10 to 12/07/10

DEPTH (Ft)	OVM	SAMPLE DESCRIPTION
5-6		Buff hard limestone
10-11		Buff to tan sandy limestone
15-16		Buff hard limestone
20-21		Tan calcareous fine grain sand
25-26		Tan calcareous fine grain sand
30-31		Tan calcareous fine grain sand
35-36		Tan fine grain sand
40-41		Tan fine grain sand
45-46		Tan fine grain sand
50-51		Tan fine grain sand
55-56		Tan fine grain sand
60-61		Tan fine grain sand
65-66		Tan fine grain sand
70-71		Tan fine grain sand
75-76		Tan fine grain sand
80-81		Tan fine grain sand
85-86		Tan fine grain sand
90-91		Tan fine grain sand
95-96		Tan fine grain sand
100-101		Tan fine grain sand
105-106		Tan fine grain sand with gravel
110-111		Tan fine grain sand
115-116		Tan to gray clay of high plasticity
120-121		Tan to gray clay of high plasticity

Total Depth: 120' Groundwater depth not encountered while drilling.

APPENDIX B MONITOR WELL INSTALLATION DIAGRAMS



DATE: DEC. 23, 2009

TETRA TECH, INC. MIDLAND, TEXAS

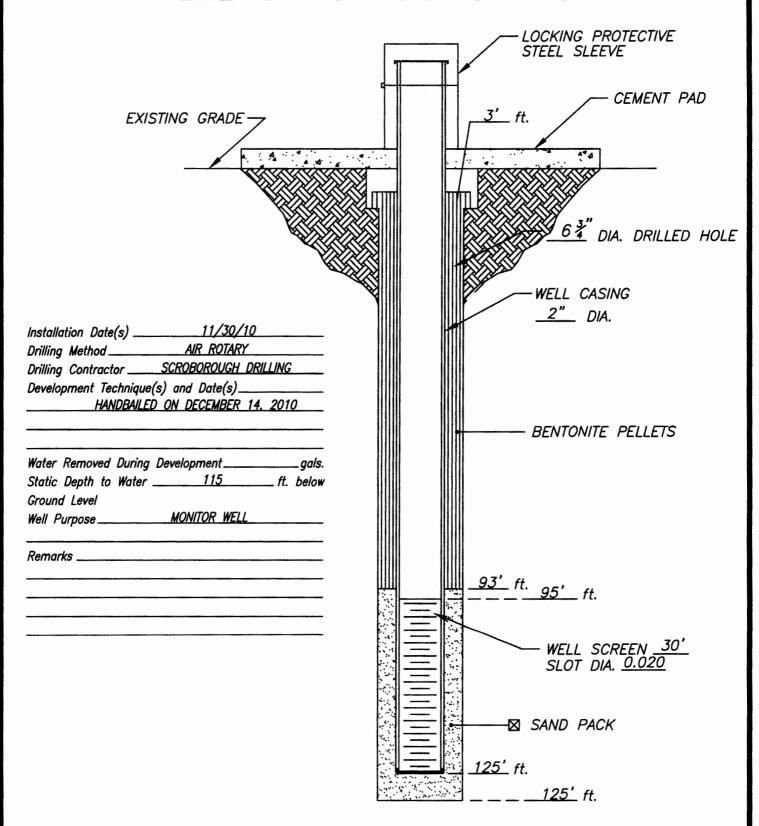
CLIENT: CELERO ENERGY II, LP

PROJECT: ROCK QUEEN UNIT TRACT #33

LOCATION: CHAVES COUNTY, NM

WELL NO.

MW-1



DATE: 11/30/10

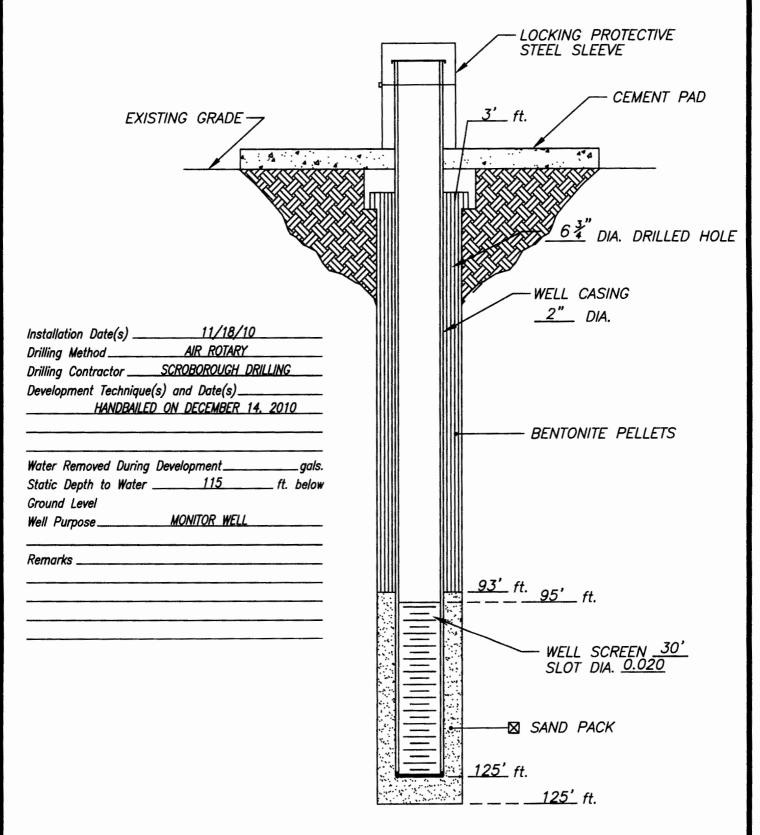
TETRA TECH, INC. MIDLAND, TEXAS CLIENT: CELERO ENERGY II, LLC

PROJECT: ROCK QUEEN UNIT TRACT #33
LOCATION: CHAVES COUNTY, NEW MEXICO

115-6403133

WELL NO.

MW-2



TETRA TECH, INC. MIDLAND, TEXAS

DATE: 11/18/10

CLIENT: CELERO ENERGY II, LLC

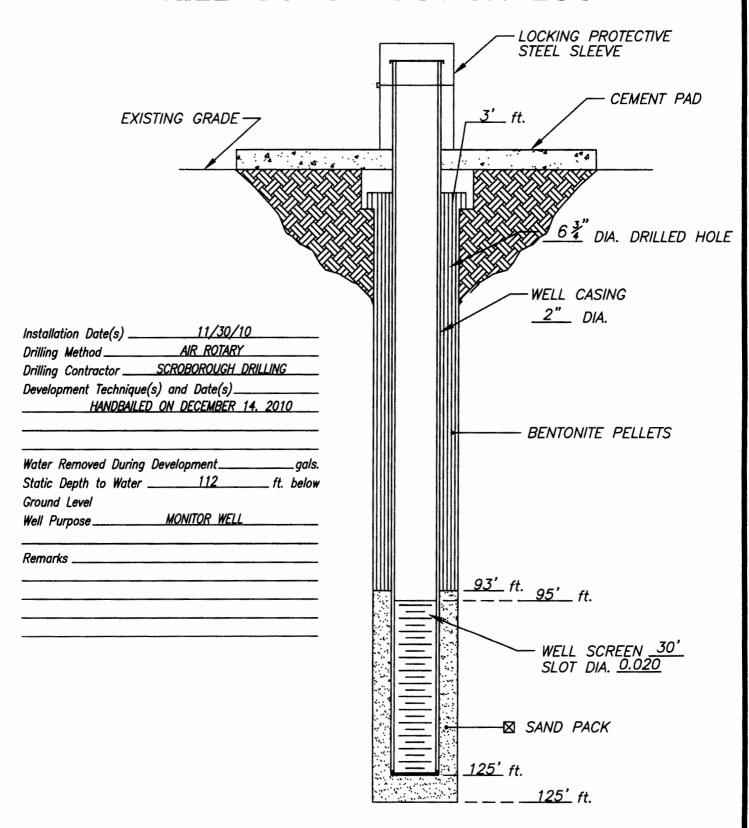
PROJECT: ROCK QUEEN UNIT TRACT #33

LOCATION: CHAVES COUNTY, NEW MEXICO

WELL NO.

MW-3

115-6403133



DATE: 11/30/10

TETRA TECH, INC. MIDLAND, TEXAS CLIENT: CELERO ENERGY II, LLC

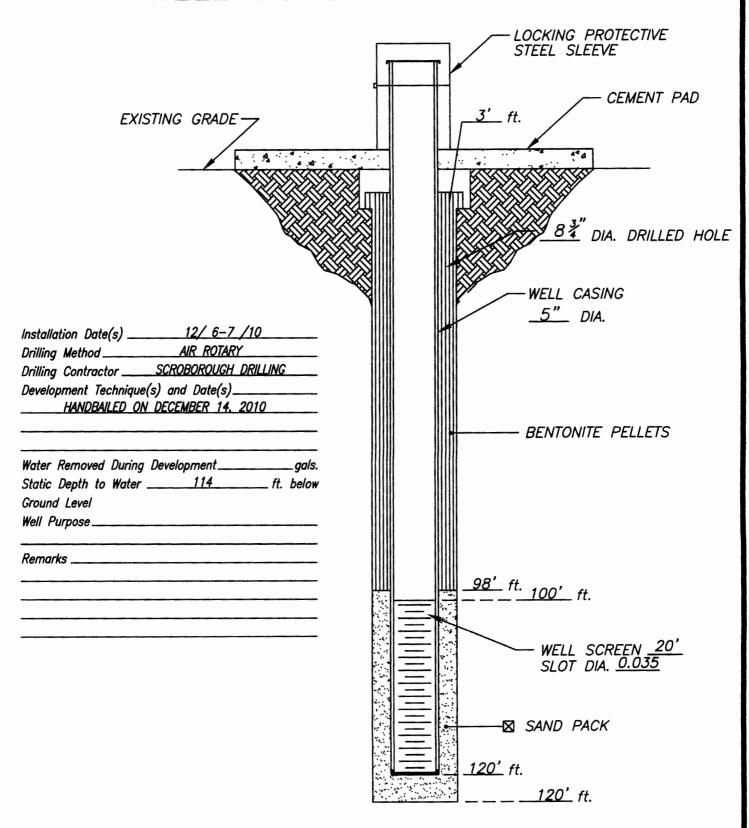
PROJECT: ROCK QUEEN UNIT TRACT #33

LOCATION: CHAVES COUNTY, NEW MEXICO

WELL NO.

MW-4

115-6403133



DATE: 12/10/10

TETRA TECH, INC. MIDLAND, TEXAS

CLIENT: CELERO ENERGY II, LLC

PROJECT: ROCK QUEEN UNIT TRACT #33

LOCATION: CHAVES COUNTY, NEW MEXICO

WELL NO.

RW-1

115-6403133

APPENDIX C LABORATORY ANALYSIS



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

Lubbock, Texas 79424 El Paso, Texas 79922

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

6015 Harris Parkway, Suite 110 Ft. Worth, Texas 76132

Midland, Texas 79703

432 • 689 • 6301

FAX 432 - 689 - 6313

817 • 201 • 5260

E-Mail: lab@traceanalysis.com

Certifications

WBENC: 237019

1752439743100-86536

DBE: VN 20657

HUB:

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:

9122910

Project Location:

Chavez County, NM Celero/Tract 33 TB

Project Name: Project Number:

114-6403133

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

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
218520	TMW-1	water	2009-12-28	14:00	2009-12-29

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

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

Michael april

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

Standard Flags

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

Case Narrative

Samples for project Celero/Tract 33 TB were received by TraceAnalysis, Inc. on 2009-12-29 and assigned to work order 9122910. Samples for work order 9122910 were received intact without headspace and at a temperature of 2.1 deg. C.

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

		Prep	Prep	$_{ m QC}$	Analysis
Test	Method	Batch	Date	Batch	Date
Alkalinity	SM 2320B	56729	2009-12-30 at 12:20	66366	2009-12-30 at 14:20
BTEX	S 8021B	56863	2010-01-06 at 11:00	66515	2010-01-06 at 12:46
Ca, Dissolved	S 6010B	56807	2010-01-05 at 13:18	66490	2010-01-06 at 14:02
Chloride (IC)	E 300.0	56732	2009-12-30 at 11:39	66392	2009-12-30 at 17:04
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
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 9122910 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.

114-6403133

Work Order: 9122910 Celero/Tract 33 TB Page Number: 4 of 15 Chavez County, NM

Analytical Report

Sample: 218520 - TMW-1

Laboratory: Midland

Analysis: Alkalinity QC Batch: 66366 Prep Batch: 56729

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

		m RL			
Parameter	Flag	Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCo3	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCo3	1	1.00
Bicarbonate Alkalinity		134	mg/L as CaCo3	1	4.00
Total Alkalinity		134	mg/L as CaCo3	1	4.00

Sample: 218520 - TMW-1

Laboratory: Midland

Analysis: BTEX Analytical Method: S 8021B
QC Batch: 66515 Date Analyzed: 2010-01-06
Prep Batch: 56863 Sample Preparation: 2009-01-06

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

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

					Spike	Percent	Recovery
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)		0.109	mg/L	1	0.100	109	70.9 - 129.8
4-Bromofluorobenzene (4-BFB)		0.101	mg/L	1	0.100	101	57.1 - 118.8

Sample: 218520 - TMW-1

Laboratory: Lubbock

Analysis: Cations
QC Batch: 66490
Prep Batch: 56807

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

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

continued ...

Chavez County, NM 114-6403133 Celero/Tract 33 TB sample 218520 continued ... RLParameter Flag Result Units Dilution RLDissolved Potassium 13.3 1.00 mg/L 1 Dissolved Magnesium 156 mg/L 1 1.00 10 1.00 Dissolved Sodium 1080 mg/L Sample: 218520 - TMW-1 Laboratory: Midland Analytical Method: Prep Method: N/A Analysis: Chloride (IC) E 300.0 QC Batch: 66392 Date Analyzed: 2009-12-30 Analyzed By: ARPrep Batch: 56732 Sample Preparation: 2009-12-30 Prepared By: ARRLParameter Flag Result Units Dilution RLChloride 3220 mg/L 100 0.500 Sample: 218520 - TMW-1 Laboratory: Lubbock Analysis: Hardness Analytical Method: S 6010B Prep Method: N/A QC Batch: 66490 Date Analyzed: 2010-01-06 Analyzed By: RR56807 Sample Preparation: Prepared By: KVPrep Batch: 2010-01-05 RLResult Dilution RLParameter Flag Units Hardness (by ICP) 2160 mg eq CaCO3/L 0.00 Sample: 218520 - TMW-1 Laboratory: Midland Analysis: рH Analytical Method: SM 4500-H+ Prep Method: N/AQC Batch: 66350 Date Analyzed: 2009-12-29 Analyzed By: AR

Sample Preparation:

RL Result

7.33

2009-12-29

Units

s.u.

Work Order: 9122910

Page Number: 5 of 15

Prepared By:

Dilution

AR

RL

0.00

Report Date: January 7, 2010

Prep Batch:

Parameter

 \overline{pH}

56717

Flag

114-6403133 Celero/Tract 33 TB Chavez County, NM Sample: 218520 - TMW-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: ARRLParameter Flag Result Units Dilution RLSulfate 99.3 mg/L 0.500 Sample: 218520 - TMW-1 Laboratory: Midland Analysis: TDS Analytical Method: SM 2540C Prep Method: N/A QC Batch: 66452 Date Analyzed: 2010-01-05 Analyzed By: ARPrep Batch: 56731 Sample Preparation: 2009-12-30 Prepared By: AR RLParameter Flag Result Dilution Units RLTotal Dissolved Solids 5430 mg/L 5 10.0 Method Blank (1) QC Batch: 66366 QC Batch: 66366 Date Analyzed: 2009-12-30 Analyzed By: ARPrep Batch: 56729 QC Preparation: 2009-12-30 Prepared By: ARMDL Parameter Flag Units Result RLHydroxide Alkalinity <1.00 mg/L as CaCo3 1 Carbonate Alkalinity mg/L as CaCo3 < 1.00 1 Bicarbonate Alkalinity mg/L as CaCo3 < 4.00 4 Total Alkalinity mg/L as CaCo3 < 4.004 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: ARMDL Parameter

Result

1.37

Units

mg/L

RL

0.5

Flag

Chloride

Work Order: 9122910

Page Number: 6 of 15

Report Date: January 7, 2010

Report Date: January 7	7, 2010	Work Order: 9122910 Page Number: 7 Celero/Tract 33 TB Chavez Count				
Method Blank (1)	QC Batch: 66392					
QC Batch: 66392 Prep Batch: 56732		Date Analyzed: QC Preparation:	2009-12-30 2009-12-30		Analyzed By: Prepared By:	AR AR
		M	I DL			
Parameter Sulfate	Flag		sult .217	Units mg/L		RL 0.5
Method Blank (1)	QC Batch: 66452					
QC Batch: 66452 Prep Batch: 56731	·	Date Analyzed: QC Preparation:	2010-01-05 2009-12-30		Analyzed By: Prepared By:	AR AR
Parameter	Fla	ag	MDL Result	Units		RL
Total Dissolved Solids	- AMARAN -		<9.75	mg/L	PULL TO THE PURL T	10
Method Blank (1) QC Batch: 66490 Prep Batch: 56807	QC Batch: 66490	Date Analyzed: QC Preparation:	2010-01-06 2010-01-05		Analyzed By: Prepared By:	RR KV
Parameter	Flaj	g	MDL Result	Units		RL
Dissolved Calcium Dissolved Potassium Dissolved Magnesium Dissolved Sodium			<0.117 <0.172 <0.160 <0.0500	mg/L mg/L mg/L mg/L		1 1 1 1
Method Blank (1)	QC Batch: 66515					
QC Batch: 66515 Prep Batch: 56863		Date Analyzed: QC Preparation:	2010-01-06 2010-01-06		Analyzed By: Prepared By:	AG AG
Parameter	Flag	I	MDL Result	Units		RL
Benzene Toluene Ethylbenzene		< 0.0	00300 00200 00200	mg/L mg/L mg/L		0.001 0.001 0.001

Report Date: January 7, 2010 114-6403133

Work Order: 9122910 Celero/Tract 33 TB Page Number: 8 of 15 Chavez County, NM

method	l $blank$	continued		
11000000	0 00001010	COMMINGUE		

		MDL		
Parameter	Flag	Result	Units	RL
Xylene		< 0.000900	mg/L	0.001

					Spike	Percent	Recovery
Surrogate	Flag	Result	Units	Dilution	Amount	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 Prep Batch: 56717 Date Analyzed: 2009-12-29 QC Preparation: 2009-12-29 Analyzed By: AR Prepared By: AR

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

Duplicates (1) Duplicated Sample: 218524

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

Analyzed By: AR Prepared By: AR

	Duplicate	Sample				RPD
Param	Result	Result	Units	Dilution	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 Prep Batch: 56731 Date Analyzed: 2010-01-05 QC Preparation: 2009-12-30 Analyzed By: AR Prepared By: AR

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

114-6403133

Work Order: 9122910 Celero/Tract 33 TB

Page Number: 9 of 15 Chavez County, NM

Laboratory Control Spike (LCS-1)

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

2009-12-30

Analyzed By: AR Prepared By: AR

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

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

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

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

Laboratory Control Spike (LCS-1)

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

Analyzed By: AR Prepared By: AR

Prep Batch: 56732

QC Preparation: 2009-12-30

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

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

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

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

Laboratory Control Spike (LCS-1)

QC Batch: 66452 Prep Batch: 56731

Date Analyzed: 2010-01-05 QC Preparation: 2009-12-30

Analyzed By: AR Prepared By: AR

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

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

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

114-6403133

Work Order: 9122910 Celero/Tract 33 TB Page Number: 10 of 15 Chavez County, NM

Laboratory Control Spike (LCS-1)

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

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

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

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

	LCS			Spike	Matrix		${ m Rec.}$
Param	Result	Units	Dil.	Amount	Result	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.

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Benzene	0.0978	mg/L	1	0.100	< 0.000300	98	79.4 - 111.8	4	20
Toluene	0.0980	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.

	LCS	LCSD			Spike	LCS	LCSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	0.0867	0.103	mg/L	1	0.100	87	103	76.2 - 129.6

continued ...

114-6403133

Work Order: 9122910 Celero/Tract 33 TB Page Number: 11 of 15 Chavez County, NM

control spikes continued ...

	LCS	LCSD			Spike	LCS	LCSD	${ m Rec.}$
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
4-Bromofluorobenzene (4-BFB)	0.0872	0.104	mg/L	1	0.100	87	104	77.9 - 119.8

Matrix Spike (MS-1) Spiked Sample: 218522

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

Analyzed By: AR Prepared By: AR

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

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

		MSD			Spike	Matrix		Rec.		RPD
Param		Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride	2	8350	mg/L	50	1380	591 0	177	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: 218522

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

Analyzed By: AR Prepared By: AR

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

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

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

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

Matrix Spike (MS-1) Spiked Sample: 218384

QC Batch: 66490 Prep Batch: 56807 Date Analyzed: 2010-01-06 QC Preparation: 2010-01-05

Analyzed By: RR Prepared By: KV

¹Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

²MSD analyte out of range. MS/MSD has a RPD within limits. Therfore, MS shows extraction occured properly.

114-6403133

Work Order: 9122910 Celero/Tract 33 TB Page Number: 12 of 15 Chavez County, NM

Param	$rac{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.

	MSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Dissolved Calcium	171	mg/L	1	50.0	121	100	75 - 125	2	20
Dissolved Potassium	51.4	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) Spik

Spiked Sample: 218565

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

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

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

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

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

Date Analyzed: 2009-12-29 Analyzed By: AR

114-6403133

Work Order: 9122910 Celero/Tract 33 TB Page Number: 13 of 15 Chavez County, NM

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

Standard (CCV-1)

QC Batch: 66350

Date Analyzed: 2009-12-29

Analyzed By: AR

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

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

Standard (CCV-1)

QC Batch: 66366

Date Analyzed: 2009-12-30

Analyzed By: AR

			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Hydroxide Alkalinity		mg/L as CaCo3	0.00	<1.00		0 - 200	2009-12-30
Carbonate Alkalinity		mg/L as CaCo3	0.00	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

Report Date: January 7, 2010 114-6403133

Work Order: 9122910 Celero/Tract 33 TB Page Number: 14 of 15 Chavez County, NM

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

			ICVs	ICVs	ICVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Sulfate		mg/L	25.0	24.1	96	90 - 110	2009-12-30

Standard (CCV-1)

QC Batch: 66392

Date Analyzed: 2009-12-30

Analyzed By: AR

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

Standard (CCV-1)

QC Batch: 66392

Date Analyzed: 2009-12-30

Analyzed By: AR

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

Standard (ICV-1)

QC Batch: 66490

Date Analyzed: 2010-01-06

Analyzed By: RR

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

Report Date: January 7, 2010 Work Order: 9122910 Page Number: 15 of 15 114-6403133 Celero/Tract 33 TB Chavez County, NM

Standard (CCV-1)

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

			\mathbf{CCVs}	CCVs	CCVs	Percent	
			\mathbf{True}	Found	Percent	Recovery	Date
Param	\mathbf{Flag}	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Dissolved Calcium		mg/L	50.0	52.3	105	90 - 110	2010-01-06
Dissolved Potassium		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

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

Standard (CCV-2)

QC Batch: 66515 Date Analyzed: 2010-01-06 Analyzed By: AG

			CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date
						v	_
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	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 #-. 9122910

PAGE: OF:	ANALYSIS REQUEST (Circle or Specify Method No.)	d Vr Pd Hg Se	220/625	A BA all Ag A all Ag A g A all Ag A all Ag A all Ag A all Ag	PAH 8270 RCRA Meta	X X X						12405 SAMPLED By: (Print & Initial) 37 / 2/2 Time: Time:		TETRA TECH CONTACT PERSON: Results by:	RUSH Charges	H, TDS, BTEX Aubbout-Cations hardwest
188710 108110	st of chain of custody Record	TETRA TECH 1910 N. Big Spring St. Midland, Texas 79705 (432) 682-4559 • Fax (432) 682-3946	SITE MANAGER;	The 28 113	SAMPLE IDENTIFICATION NUMBER OF	TAILU-I					, ,	1500 RECEIVED BY (Signature)	konEle;	RECEIVED BY: (Signature)	RECEIVED BY: (Signature) Court TOY	Whatde, Arrions, p
# TO	Ariarysis Request	#	CLIENT NAME	PROJECT NO.: PROJECT NAME:	LAB I.D. DATE TIME BIX NUMBER COMP. COMP. COMP.	218520 12/26 1400 CP X						ZX		REGINOUGHED BY: (Signature) Day	LABORATORY: T. STATE: TY	N RECEIVED:

Cation-Anion Balance Sheet

	0.55-0.77	S/Anion 0.57 needs to be 0.55-0.77	TDS/Anion 0.57	TDS/Cat 0.60	TDS/EC #DIV/01		0	2	0	range	EC/Anion 9558.3626	EC/Cation 9044.6754	218520
5.522616252	95.58	90.45	0	0	0	90.84	2.07	2.68	0.34	46.98	12.84	30.29	218520
Error	in meq/L	in meq/L in meq/L in meq/L in meq/L	in meq/L	in mea/L	in meq/L	- 1	in meq/L	in meq/L	in mea/L	in meq/L	in mea/L	in mea/L	
Percentage	Anions	Cations	Bromide	Fluoride	Nitrate	Chloride	Sulfate	Alkalinity	Potassium	Sodium	Magnesium	Calcium	Sample #
		5430				3220	99.3	134	13.3	1080	156	607	218520
	μMHOs/cm	mdd	mdd	mdd	mdd	mdd	mdd	mdd	mdd	mdd	mdd	mdd	
	<u></u>	TDS	Bromide	Fluoride	Nitrate	Chloride	Sulfate	Alkalinity	Potassium	Sodium	Magnesium	Calcium	Sample #
												1/7/2010	DATE:



6701 Aberdeen Avenue, Suite 9 200 East Sunset Road, Suite E 5002 Basin Street, Suite A1 6015 Harris Parkway, Suite 110 Ft. Worth, Texas 76132

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

800 • 378 • 1296 888 • 588 • 3443

806 • 794 • 1296 FAX 806 • 794 • 1298 915 • 585 • 3443 FAX 915 - 585 - 4944 432 • 689 • 6301 FAX 432 • 689 • 6313

817 • 201 • 5260

E-Mail. lab@traceanalysis.com

Certifications

WBENC: 237019

HUB:

1752439743100-86536

DBE: VN 20657

NCTRCA WFWB38444Y0909

NELAP Certifications

T104704219-08-TX

El Paso: T104704221-08-TX LELAP-02002

Midland: T104704392-08-TX

LELAP-02003

Kansas E-10317

Analytical and Quality Control Report

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

Lubbock:

Report Date: March 9, 2010

Work Order: 10022630

Project Location: Chavez County, NM Project Name: Celero/Rock Queen #33

Project Number: 115-6403133A

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

			Date	rime	Date
Sample	Description	Matrix	Taken	Taken	Received
223828	MW-1	water	2010-02-25	17:30	2010-02-26

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

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

Michael april

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

Standard Flags

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

Case Narrative

Samples for project Celero/Rock Queen #33 were received by TraceAnalysis, Inc. on 2010-02-26 and assigned to work order 10022630. Samples for work order 10022630 were received intact without headspace and at a temperature of 2.6 C.

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

		\mathbf{Prep}	\mathbf{Prep}	\mathbf{QC}	Analysis
Test	Method	Batch	Date	Batch	Date
Alkalinity	SM 2320B	58086	2010-03-01 at 08:24	67894	2010-03-01 at 15:26
BTEX	S 8021B	58101	2010-03-01 at 15:45	67911	2010-03-01 at 17:11
Ca, Dissolved	S 6010B	58109	2010-03-02 at 12:55	67940	2010-03-02 at 16:17
Chloride (IC)	E 300.0	58087	2010-03-01 at 12:28	67932	2010-03-02 at 11:58
Hardness	S 6010B	58109	2010-03-02 at 12:55	67940	2010-03-02 at 16:17
K, Dissolved	S 6010B	58109	2010-03-02 at 12:55	67940	2010-03-02 at 16:17
Mg, Dissolved	S 6010B	58109	2010-03-02 at 12:55	67940	2010-03-02 at 16:17
Na, Dissolved	S 6010B	58109	2010-03-02 at 12:55	67940	2010-03-02 at 16:17
pН	SM 4500-H+	58060	2010-02-26 at 16:00	67873	2010-02-26 at 17:15
SO4 (IC)	E 300.0	58087	2010-03-01 at 12:28	67932	2010-03-02 at 11:58
TDS	SM 2540C	58103	2010-03-02 at 09:11	68098	2010-03-09 at 15:05

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 10022630 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

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

115-6403133A

Work Order: 10022630 Celero/Rock Queen #33 Page Number: 4 of 15 Chavez County, NM

Analytical Report

Sample: 223828 - MW-1

Laboratory: Midland

Analysis: Alkalinity QC Batch: 67894 Prep Batch: 58086 Analytical Method: SM 2320B Date Analyzed: 2010-03-01 Sample Preparation: 2010-03-01 Prep Method: N/A
Analyzed By: AR
Prepared By: AR

		m RL			
Parameter	Flag	Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCo3	1	1.00
Carbonate Alkalinity		< 1.00	mg/L as CaCo3	1	1.00
Bicarbonate Alkalinity		98.0	mg/L as CaCo3	1	4.00
Total Alkalinity		98.0	mg/L as CaCo3	1	4.00

Sample: 223828 - MW-1

Laboratory: Midland

Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5030B QC Batch: 67911 Date Analyzed: 2010-03-01 Analyzed By: AG Prep Batch: 58101 Prepared By: \mathbf{AG} Sample Preparation: 2010-03-01

		RL			
Parameter	Flag	Result	Units	Dilution	RL
Benzene		< 0.00100	mg/L	1	0.00100
Toluene		< 0.00100	${\sf mg/L}$	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)		0.0683	mg/L	1	0.100	68	65.9 - 129.8
4-Bromofluorobenzene (4-BFB)		0.0645	mg/L	1	0.100	64	51.1 - 118.8

Sample: 223828 - MW-1

Laboratory: Lubbock

Analysis: Cations Analytical Method: S 6010B Prep Method: S 3005A QC Batch: 67940 Date Analyzed: 2010-03-02 Analyzed By: RR Prep Batch: 58109 Sample Preparation: 2010-03-02 Prepared By: KV

continued ...

Report Date: March 9, 2010 115-6403133A		Work Order: Celero/Rock Q		Page Number: 5 of 15 Chavez County, NM		
sample 2238.	28 continued					
			RL			
Parameter		Flag	Result	Units	Dilution	RL
Dissolved Po	tassium		185	mg/L	10	0.100
Dissolved Ma	0		3140	mg/L	1000	0.100
Dissolved So	dium		13700	mg/L	1000	0.100
Sample: 22	3828 - MW-1					
Laboratory:	Midland					
Analysis:	Chloride (IC)		Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	67932		Date Analyzed:	2010-03-02	Analyzed By:	AR
Prep Batch:	58087		Sample Preparation		Prepared By:	AR
			RL			
Parameter	Flag		Result	Units	Dilution	RL
Chloride			46800	mg/L	5000	0.500
Sample: 22	3828 - MW-1					
Laboratory:	Lubbock					
Analysis:	Hardness		Analytical Method:	S 6010B	Prep Method:	N/A
QC Batch:	67940		Date Analyzed:	2010-03-02	Analyzed By:	RR
Prep Batch:	58109		Sample Preparation:	2010-03-02	Prepared By:	KV
			RL			
Parameter		Flag	Result	Units	Dilution	RL
Hardness (by			34000	mg eq CaCO3/L	1	0.00

Sample: 22	3828 - MW-1				
Laboratory: Analysis: QC Batch: Prep Batch:	pH 67873	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-H+ 2010-02-26 2010-02-26	Prep Method: Analyzed By: Prepared By:	ÁĞ
Parameter	Flag	RL Result	Units	Dilution	RL
рН	2 1005	6.44	s.u.	1	0.00

Report Date: March 9, 2010 115-6403133A		Work Order: Celero/Rock (Page Number: 6 of 1 Chavez County, N		
Sample: 2238	828 - MV	V-1				
Laboratory:	Midland					
Analysis:	SO4 (IC)		Analytical Method:	E 300.0	Prep Method:	
QC Batch: 6	67932		Date Analyzed:	2010-03-02	Analyzed By:	AR
Prep Batch:	58087		Sample Preparation:	2010-03-01	Prepared By:	AR
			RL			
Parameter		Flag	Result	Units	Dilution	RL
Sulfate			604	mg/L	50	0.500
Sample: 2238	828 - MV	V-1				
•	Midland					
Analysis:	TDS		Analytical Method:	SM 2540C	Prep Method	
QC Batch: 6	680 9 8		Date Analyzed:	2010-03-09	Analyzed By:	AR
Prep Batch:	58103		Sample Preparation:	2010-03-02	Prepared By:	AR
			RL			
Parameter		Flag	Result	Units	Dilution	RL
Total Dissolved	d Solids		90100	mg/L	100	10.0
Method Blan	nk (1) 67894	QC Batch: 67894	Date Analyzed: 2	010-03-01	Analyzed By	·: AR
•	58086		•	010-03-01	Prepared By	
-			• • • • •			
			ME			
Parameter		Flag			Units	RI
Hydroxide Alka			<1.		mg/L as CaCo3	1
Carbonate Alk	•		<1.		mg/L as CaCo3	1
Bicarbonate Al			<4.		mg/L as CaCo3	4
Total Alkalinit	<u>y</u>		<4.	00	mg/L as CaCo3	4
Method Blan	nk (1)	QC Batch: 67911				
	, ,	-	Data Analysis 0	010 02 01	Analyzed By	: AG
•	67911 68101		•	010-03-01 010-03-01	Prepared By	
•			•		- •	
				DL	••	D.
Parameter		Flag		sult	Units	RL
Benzene			< 0.000	300	mg/L	0.00

continued ...

Report Date: March 9, 2010 115-6403133A

Work Order: 10022630 Celero/Rock Queen #33 Page Number: 7 of 15 Chavez County, NM

method	hi	lank	continued	
11606161714	171	ILLIAN.	LUILLAILILEIL	

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

					Spike	Percent	Recovery
Surrogate	\mathbf{Flag}	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)		0.0991	mg/L	1	0.100	99	73.6 - 126.6
4-Bromofluorobenzene (4-BFB)		0.102	mg/L	1	0.100	102	62.6 - 117.5

Method Blank (1)

QC Batch: 67932

QC Batch: 67932 Prep Batch: 58087 Date Analyzed: 2010-03-02 QC Preparation: 2010-03-01 Analyzed By: AR Prepared By: AR

MDL

Parameter	Flag	Result	Units	RL
Chloride		< 0.475	mg/L	0.5

Method Blank (1)

QC Batch: 67932

QC Batch: 67932 Prep Batch: 58087 Date Analyzed: 2010-03-02 QC Preparation: 2010-03-01 Analyzed By: AR Prepared By: AR

MDL

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

Method Blank (1)

QC Batch: 67940

QC Batch: 67940 Prep Batch: 58109 Date Analyzed: 2010-03-02 QC Preparation: 2010-03-02 Analyzed By: RR Prepared By: KV

MDL
MINIT

Parameter	Flag	Result	Units	RL
Dissolved Calcium		< 0.00216	mg/L	0.1
Dissolved Potassium		< 0.00645	m mg/L	0.1
Dissolved Magnesium		< 0.00594	mg/L	0.1
Dissolved Sodium		< 0.00548	mg/L	0.1

115-6403133A

Work Order: 10022630 Celero/Rock Queen #33 Page Number: 8 of 15 Chavez County, NM

Method Blank (1)

QC Batch: 68098

Flag

QC Batch: 68098 Prep Batch: 58103 Date Analyzed: 2010-03-09 QC Preparation: 2010-03-02 Analyzed By: AR Prepared By: AR

MDL

Parameter Total Dissolved Solids Result Units <9.75 mg/L RL10

Duplicates (1) Duplicated Sample: 223824

QC Batch: 67873 Date Analyzed: 2010-02-26

Analyzed By: AG Prepared By: AG

Prep Batch: 58060

QC Preparation: 2010-02-26

	Duplicate	Sample				RPD
Param	Result	Result	Units	Dilution	RPD	Limit
pН	6.22	6.24	s.u.	1	0	1.5

Duplicated Sample: 223818 Duplicates (1)

QC Batch: Prep Batch: 58086

67894

Date Analyzed: QC Preparation: 2010-03-01

2010-03-01

Analyzed By: AR Prepared By: AR

	Duplicate	Sample				RPD
Param	Result	Result	Units	Dilution	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	192	194	mg/L as CaCo3	1	1	20
Total Alkalinity	192	194	mg/L as $CaCo3$	1	1	20

Duplicates (1) Duplicated Sample: 223828

QC Batch: 68098 Prep Batch: 58103 Date Analyzed: 2010-03-09 QC Preparation: 2010-03-02 Analyzed By: AR Prepared By: AR

	Duplicate	Sample				RPD
Param	Result	Result	Units	Dilution	RPD	Limit
Total Dissolved Solids	90600	90100	mg/L	100	1	10

Laboratory Control Spike (LCS-1)

QC Batch: 67911 Prep Batch: 58101 Date Analyzed: 2010-03-01 QC Preparation: 2010-03-01

Analyzed By: AG Prepared By: AG

115-6403133A

Work Order: 10022630 Celero/Rock Queen #33 Page Number: 9 of 15 Chavez County, NM

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.0949	mg/L	1	0.100	< 0.000300	95	79.4 - 112.4
Toluene	0.0942	mg/L	1	0.100	< 0.000200	94	79.3 - 110
Ethylbenzene	0.0935	mg/L	1	0.100	< 0.000200	94	73.8 - 113.1
Xylene	0.282	mg/L	1	0.300	< 0.000900	94	73.9 - 113.6

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

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Benzene	0.0957	mg/L	1	0.100	< 0.000300	96	79.4 - 112.4	1	20
Toluene	0.0954	mg/L	1	0.100	< 0.000200	95	79.3 - 110	1	20
Ethylbenzene	0.0952	mg/L	1	0.100	< 0.000200	95	73.8 - 113.1	2	20
Xylene	0.287	mg/L	1	0.300	< 0.000900	96	73.9 - 113.6	2	20

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

	LCS	LCSD			Spike	LCS	LCSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	0.0954	0.0943	mg/L	1	0.100	95	94	76.2 - 129.6
4-Bromofluorobenzene (4-BFB)	0.112	0.111	m mg/L	1	0.100	112	111	77.9 - 119.8

Laboratory Control Spike (LCS-1)

QC Batch: 67932 Prep Batch: 58087 Date Analyzed: 2010-03-02 QC Preparation: 2010-03-01 Analyzed By: AR Prepared By: AR

	LCS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Chloride	23.7	mg/L	1	25.0	< 0.475	95	90 - 110

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

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride	23.7	mg/L	1	25.0	< 0.475	95	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: 67932 Prep Batch: 58087 Date Analyzed: 2010-03-02 QC Preparation: 2010-03-01 Analyzed By: AR Prepared By: AR

	LCS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Sulfate	23.2	mg/L	1	25.0	< 0.217	93	90 - 110

115-6403133A

Work Order: 10022630 Celero/Rock Queen #33 Page Number: 10 of 15 Chavez County, NM

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

	LCSD			Spike	Matrix		Rec .		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Sulfate	23.1	mg/L	1	25.0	< 0.217	92	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: 67940 Prep Batch: 58109 Date Analyzed: 2010-03-02 QC Preparation: 2010-03-02

Analyzed By: RR Prepared By: KV

	LCS			Spike	Matrix	_	Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Dissolved Calcium	52.9	mg/L	1	50.0	< 0.00216	106	85 - 115
Dissolved Potassium	51.6	mg/L	1	50.0	< 0.00645	103	85 - 115
Dissolved Magnesium	53.9	mg/L	1	50.0	< 0.00594	108	85 - 115
Dissolved Sodium	50.6	mg/L	1	50.0	< 0.00548	101	85 - 115

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

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Dissolved Calcium	51.0	mg/L	1	50.0	< 0.00216	102	85 - 115	4	20
Dissolved Potassium	49.7	mg/L	1	50.0	< 0.00645	99	85 - 115	4	20
Dissolved Magnesium	51.5	mg/L	1	50.0	< 0.00594	103	85 - 115	5	20
Dissolved Sodium	49.0	mg/L	1	50.0	< 0.00548	98	85 - 115	3	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: 68098 Prep Batch: 58103 Date Analyzed: 2010-03-09 QC Preparation: 2010-03-02 Analyzed By: AR Prepared By: AR

	$_{ m LCS}$			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	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.

	LCSD			\mathbf{Spike}	Matrix		${ m Rec.}$		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Total Dissolved Solids	1020	mg/L	1	1000	<9.75	102	90 - 110	0	10

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

115-6403133A

Work Order: 10022630 Celero/Rock Queen #33 Page Number: 11 of 15 Chavez County, NM

Matrix Spike (MS-1) Spiked Sample: 223853

QC Batch: 67911 Prep Batch: 58101 Date Analyzed: 2010-03-01 QC Preparation: 2010-03-01 Analyzed By: AG Prepared By: AG

	MS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Benzene	10.9	mg/L	50	5.00	5.9567	99	77.3 - 117.4
Toluene	6.30	mg/L	50	5.00	1.5038	96	75 - 111.8
Ethylbenzene	5.23	mg/L	50	5.00	0.5072	94	78.8 - 106.6
Xylene	14.6	mg/L	50	15.0	0.6358	93	68.9 - 114

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

	MSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Benzene	10.6	mg/L	50	5.00	5.9567	93	77.3 - 117.4	3	20
Toluene	5.98	mg/L	50	5.00	1.5038	90	75 - 111.8	5	20
Ethylbenzene	4.79	mg/L	50	5.00	0.5072	86	78.8 - 106.6	9	20
Xylene	13.5	mg/L	50	15.0	0.6358	86	68.9 - 114	8	20

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

	MS	MSD			Spike	MS	MSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	4.41	4.27	mg/L	50	5	88	85	76.3 - 129.8
4-Bromofluorobenzene (4-BFB)	5.17	4.98	mg/L	50	5	103	100	75.2 - 112.8

Matrix Spike (MS-1) Spiked Sample: 223829

QC Batch: 67932 Prep Batch: 58087 Date Analyzed: 2010-03-02 QC Preparation: 2010-03-01 Analyzed By: AR Prepared By: AR

		MS			Spike	Matrix		Rec .
Param		Result	Units	Dil.	Amount	Result	Rec.	Limit
Chloride	1	27200	mg/L	50	1380	24013	232	90 - 110

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

		MSD			Spike	Matrix		Rec.		RPD
Param		Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride	2	27300	mg/L	50	1380	24013	239	90 - 110	0	

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

¹Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

²MSD analyte out of range. MS/MSD has a RPD within limits. Therfore, MS shows extraction occured properly.

115-6403133A

Work Order: 10022630 Celero/Rock Queen #33 Page Number: 12 of 15 Chavez County, NM

Matrix Spike (MS-1)

Spiked Sample: 223829

QC Batch:

67932

Date Analyzed:

2010-03-02

Analyzed By: AR

Prep Batch:

58087

QC Preparation:

Units

mg/L

2010-03-01

Prepared By: AR

Param	
Sulfate	

MS
Result
1500

Spike Dil. Amount 1380 50

Matrix Result 463

Rec. Limit

Rec. 90 - 110 75

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

Param	
Sulfate	

MSD	
Result	
1590	

Spike Units Dil. Amount 50 1380 mg/L

Matrix Result 463

Rec.

82

Rec. Limit 90 - 110

RPD RPD Limit

6

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

Matrix Spike (MS-1)

Spiked Sample: 223817

QC Batch: Prep Batch: 58109

67940

Date Analyzed: QC Preparation:

2010-03-02 2010-03-02 Analyzed By: RR

Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Dissolved Calcium	366	mg/L	1	50.0	306	120	75 - 125
Dissolved Potassium	72.6	mg/L	1	50.0	20.6	104	75 - 125
Dissolved Magnesium	117	m mg/L	1	50.0	71	92	75 - 125
Dissolved Sodium	485	ma/I.	1	50.0	430	02	75 - 195

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

Param	$rac{ ext{MSD}}{ ext{Result}}$	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Dissolved Calcium	356	mg/L	1	50.0	306	100	75 - 125	3	20
Dissolved Potassium	75.6	mg/L	1	50.0	20.6	110	75 - 125	4	20
Dissolved Magnesium	120	mg/L	1	50.0	71	98	75 - 125	2	20
Dissolved Sodium	486	mg/L	1	50.0	439	94	75 - 125	0	20

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

Standard (ICV-1)

QC Batch: 67873

Date Analyzed: 2010-02-26

Analyzed By: AG

³Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

⁴MSD analyte out of range. MS/MSD has a RPD within limits. Therfore, MS shows extraction occured properly.

115-6403133A

Work Order: 10022630 Celero/Rock Queen #33 Page Number: 13 of 15 Chavez County, NM

			ICVs True	ICVs Found	ICVs Percent	Percent Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
pН		s.u.	7.00	6.99	100	98 - 102	2010-02-26

Standard (CCV-1)

QC Batch: 67873

Date Analyzed: 2010-02-26

Analyzed By: AG

			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
pН		s.u.	7.00	6.93	99	98 - 102	2010-02-26

Standard (ICV-1)

QC Batch: 67894

Date Analyzed: 2010-03-01

Analyzed By: AR

			ICVs	ICVs	ICVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Hydroxide Alkalinity		mg/L as CaCo3	0.00	17.0		0 - 200	2010-03-01
Carbonate Alkalinity		mg/L as CaCo3	0.00	244		0 - 200	2010-03-01
Bicarbonate Alkalinity		mg/L as CaCo3	0.00	< 4.00		0 - 200	2010-03-01
Total Alkalinity		mg/L as CaCo3	250	261	104	90 - 110	2010-03-01

Standard (CCV-1)

QC Batch: 67894

Date Analyzed: 2010-03-01

Analyzed By: AR

			\mathbf{CCVs}	\mathbf{CCVs}	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Hydroxide Alkalinity		mg/L as CaCo3	0.00	29.0		0 - 200	2010-03-01
Carbonate Alkalinity		mg/L as CaCo3	0.00	224		0 - 200	2010-03-01
Bicarbonate Alkalinity		mg/L as CaCo3	0.00	< 4.00		0 - 200	2010-03-01
Total Alkalinity		mg/L as CaCo3	250	253	101	90 - 110	2010-03-01

Standard (CCV-2)

QC Batch: 67911 Date Analyzed: 2010-03-01 Analyzed By: AG

115-6403133A

Work Order: 10022630 Celero/Rock Queen #33 Page Number: 14 of 15 Chavez County, NM

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0945	94	80 - 120	2010-03-01
Toluene		mg/L	0.100	0.0943	94	80 - 120	2010-03-01
Ethylbenzene		mg/L	0.100	0.0941	94	80 - 120	2010-03-01
Xylene		mg/L	0.300	0.283	94	80 - 120	2010-03-01

Standard (CCV-3)

QC Batch: 67911

Date Analyzed: 2010-03-01

Analyzed By: AG

			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Benzene		mg/L	0.100	0.0957	96	80 - 120	2010-03-01
Toluene		mg/L	0.100	0.0944	94	80 - 120	2010-03-01
Ethylbenzene		mg/L	0.100	0.0932	93	80 - 120	2010-03-01
Xylene		mg/L	0.300	0.281	94	80 - 120	2010-03-01

Standard (ICV-1)

QC Batch: 67932

Date Analyzed: 2010-03-02

Analyzed By: AR

			ICVs	ICVs	ICVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride		mg/L	25.0	23.4	94	90 - 110	2010-03-02

Standard (ICV-1)

QC Batch: 67932

Date Analyzed: 2010-03-02

Analyzed By: AR

			ICVs	ICVs	ICVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Sulfate		mg/L	25.0	25.3	101	90 - 110	2010-03-02

Standard (CCV-1)

QC Batch: 67932

Date Analyzed: 2010-03-02

Analyzed By: AR

115-6403133A

Work Order: 10022630 Celero/Rock Queen #33 Page Number: 15 of 15 Chavez County, NM

			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride		mg/L	25.0	23.0	92	90 - 110	2010-03-02

Standard (CCV-1)

QC Batch: 67932

Date Analyzed: 2010-03-02

Analyzed By: AR

			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	\mathbf{Flag}	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Sulfate		mg/L	25.0	24.9	100	90 - 110	2010-03-02

Standard (ICV-1)

QC Batch: 67940

Date Analyzed: 2010-03-02

Analyzed By: RR

			ICVs	ICVs	ICVs	Percent	
			\mathbf{True}	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Dissolved Calcium		m mg/L	50.0	51.3	103	90 - 110	2010-03-02
Dissolved Potassium		mg/L	50.0	50.3	101	90 - 110	2010-03-02
Dissolved Magnesium		mg/L	50.0	51.6	103	90 - 110	2010-03-02
Dissolved Sodium		mg/L	50.0	49.8	100	90 - 110	2010-03-02

Standard (CCV-1)

QC Batch: 67940

Date Analyzed: 2010-03-02

Analyzed By: RR

			CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Dissolved Calcium		mg/L	51.0	50.5	99	90 - 110	2010-03-02
Dissolved Potassium		mg/L	55.0	55.3	100	90 - 110	2010-03-02
Dissolved Magnesium		mg/L	51.0	50.6	99	90 - 110	2010-03-02
Dissolved Sodium		mg/L	51.0	51.2	100	90 - 110	2010-03-02

Olobode-Carina hardung Š RUSH Charges Authorized: Results by: Major Anlons/Cations, pH, TDS AIRBILL #: OF: Project Manager retains Pink copy - Accounting receives Gold copy. OTHER (sotesdeA) MJ9 (Circle or Specify Method No.) (niA) steB andlA ANALYSIS REQUEST 909/808 .tze9 PAGE: SAMPLE SHIPPED BY: (Circle)
FEDEX
HAND DELIVERED
TETRA TECH CONTACT PERSON: PCB's 8080/608 -GC:MS Semi: Vol. 8270/625 Juff Kind lay SAMPLED BY: (Print & initial) CC:W2 AOI: 8540/8560/654 TCLP Semi Volatiles TCLP Metals Ag As Ba Cd Vr Pd Hg Se BCRA Metals Ag As Ba Cd Cr Pb Hg Se (EXT to C32) 2001XT 8015 MOD. × (BIEX 8021B) PRESERVATIVE METHOD NONE Analysis Request of Chain of Custody Record × CE Time:
Date:
Time: EONH I 3 HCF <u>Z</u> TIME Please fill out all copies - Laboratory retains Yellow copy - Return Orginal copy to Tetra Tech FILTERED (Y/N) NUMBER OF CONTAINERS (432) 682-4559 • Fax (432) 682-3946 RECEIVED BY: (Signature) SAMPLE IDENTIFICATION **TETRA TECH** 1910 N. Big Spring St. Midland, Texas 79705 Leck Quem DATE SITE MANAGER: んとうだ Time: 2/26//2 ME. d N PROJECT NAME: Time: Dete: Dete: PHONE BARĐ ~ COMP 2 17516 XIRTAM STATE SAMPLE CONDITION WHEN RECEIVED: 73 4 TIME 1 RELINOUISMED PY: (Signature) RELINQUISHED BY: (Signature) RELINQUISHED BY: (Signature) CLIENT NAME: 115-6403133A RECEIVING LABORATORY: DATE 52/2 20,05 CITY: M'dlawd PROJECT NO.: 22382B LAB I.D. NUMBER

000 A 10000

lone star 7 6030145 5.2°C



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

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

800 • 378 • 1296 888 • 588 • 3443

806 • 794 • 1296 915 • 585 • 3443 432 • 689 • 6301 817 - 201 - 5260

FAX 806 • 794 • 1298 FAX 915 - 585 - 4944 FAX 432 • 689 • 6313

6015 Harris Parkway, Suite 110 Ft. Worth, Texas 76132

E-Mail: lab@traceanalysis.com

Certifications

WBENC: 237019

HUB:

1752439743100-86536

DBE: VN 20657

Report Date: July 27, 2010

10071418

Work Order:

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

Project Location:

Project Name:

Chavez County, NM Celero/Rock Queen #33

115-6403133A Project Number:

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

Date Time Date Description Taken Taken Received Sample Matrix 2010-07-13 237468 MW-1 water 13:00 2010-07-14

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

This report consists of a total of 10 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Michael april

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

Standard Flags

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

Case Narrative

Samples for project Celero/Rock Queen #33 were received by TraceAnalysis, Inc. on 2010-07-14 and assigned to work order 10071418. Samples for work order 10071418 were received intact without headspace and at a temperature of 3.9 C.

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

		Prep	Prep	\mathbf{QC}	Analysis
Test	Method	Batch	Date	Batch	Date
BTEX	S 8021B	61451	2010-07-14 at 16:00	71724	2010-07-14 at 16:42
Chloride (IC)	E 300.0	61518	2010-07-16 at 08:56	71932	2010-07-16 at 18:32
SO4 (IC)	E 300.0	61518	2010-07-16 at 08:56	71932	2010-07-16 at 18:32
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 10071418 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

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

Report Date: July 27, 2010

115-6403133A

Work Order: 10071418 Celero/Rock Queen #33 Page Number: 4 of 10 Chavez County, NM

Analytical Report

Sample: 237468 - MW-1

Laboratory: Midland

Analysis: BTEX QC Batch: 71724 Prep Batch: 61451

Analytical Method: S 8021B
Date Analyzed: 2010-07-14
Sample Preparation: 2010-07-14

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

RL

		1013			
Parameter	Flag	Result	Units	Dilution	RL
Benzene		0.00200	mg/L	1	0.00100
Toluene		0.00150	m mg/L	1	0.00100
Ethylbenzene		< 0.00100	mg/L	1	0.00100
Xylene		< 0.00100	mg/L	1	0.00100

					Spike	Percent	Recovery
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)		0.0741	mg/L	1	0.100	74	67.8 - 126
4-Bromofluorobenzene (4-BFB)		0.0643	mg/L	1	0.100	64	51.1 - 128

Sample: 237468 - MW-1

Laboratory: Midland

Analysis: Chloride (IC) QC Batch: 71932 Prep Batch: 61518 Analytical Method: E 300.0
Date Analyzed: 2010-07-16
Sample Preparation: 2010-07-16

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

RL

Parameter	Flag	Result	Units	Dilution	RL
Chloride		63500	mg/L	500	2.50

Sample: 237468 - MW-1

Laboratory: Midland

Analysis: SO4 (IC) QC Batch: 71932 Prep Batch: 61518 Analytical Method: E 300.0 Date Analyzed: 2010-07-16 Sample Preparation: 2010-07-16

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

RL

Parameter	Flag	Result	Units	Dilution	RL
Sulfate		613	mg/L	50	2.50_

Report Date: July 27, 2010 115-6403133A Work Order: 10071418 Celero/Rock Queen #33 Page Number: 5 of 10 Chavez County, NM

Sample: 237468 - MW-1

Laboratory: Midland

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

RL

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		102000	mg/L	100	10.0

Method Blank (1) QC Batch: 71724

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

MDL

		MIDE		
Parameter	Flag	Result	Units	RL
Benzene		< 0.000600	mg/L	0.001
Toluene		< 0.000600	$_{ m mg/L}$	0.001
Ethylbenzene		< 0.000800	mg/L	0.001
Xylene		< 0.000767	mg/L	0.001

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

Method Blank (1) QC Batch: 71932

QC Batch: 71932 Prep Batch: 61518 Date Analyzed: 2010-07-16 QC Preparation: 2010-07-16 Analyzed By: AR Prepared By: AR

Method Blank (1) QC Batch: 71932

 QC Batch:
 71932
 Date Analyzed:
 2010-07-16

 Prep Batch:
 61518
 QC Preparation:
 2010-07-16

Analyzed By: AR Prepared By: AR

115-6403133A

Work Order: 10071418 Celero/Rock Queen #33 Page Number: 6 of 10 Chavez County, NM

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

Method Blank (1) QC Batch: 72039

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

RL

10

Duplicates (2) Duplicated Sample: 237468

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

	Duplicate	Sample				RPD
Param	Result	Result	\mathbf{Units}	Dilution	RPD	\mathbf{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 Prep Batch: 61451 Date Analyzed: 2010-07-14 QC Preparation: 2010-07-14 Analyzed By: AG Prepared By: AG

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

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

115-6403133A

Work Order: 10071418 Celero/Rock Queen #33 Page Number: 7 of 10 Chavez County, NM

Surrogate	$\begin{array}{c} \text{LCS} \\ \text{Result} \end{array}$	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: 71932 Prep Batch: 61518 Date Analyzed: 2010-07-16 QC Preparation: 2010-07-16 Analyzed By: AR Prepared By: AR

LCS Matrix Rec. Spike Result Dil. Result Limit Param Units Amount Rec. < 0.265 90 - 110 27.2 25.0 109 Chloride mg/L 1

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

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride	27.0	mg/L	1	25.0	< 0.265	108	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: 71932 Prep Batch: 61518 Date Analyzed: 2010-07-16 QC Preparation: 2010-07-16 Analyzed By: AR Prepared By: AR

	LCS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Sulfate	25.7	mg/L	1	25.0	< 0.177	103	90 - 110

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

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Sulfate	26.2	mg/L	1	25.0	< 0.177	105	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-2)

QC Batch: 72039 Prep Batch: 61516 Date Analyzed: 2010-07-26 QC Preparation: 2010-07-15

Analyzed By: AR Prepared By: AR

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

115-6403133A

Work Order: 10071418 Celero/Rock Queen #33 Page Number: 8 of 10 Chavez County, NM

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

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Total Dissolved Solids	1050	mg/L	1	1000	< 9.75	105	90 - 110	2	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 Prep Batch: 61451

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

		MS			Spike	Matrix		Rec.
Param		Result	\mathbf{Units}	Dil.	Amount	Result	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	1	0.0695	mg/L	1	0.100	< 0.000800	70	75.3 - 110
Xylene	2	0.211	mg/L	1	0.300	< 0.000767	70	75.7 - 109

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

		MSD			Spike	Matrix		Rec.		RPD
Param		Result	Units	Dil.	Amount	Result	Rec.	\mathbf{Limit}	RPD	Limit
Benzene		0.0908	mg/L	1	0.100	0.0031	88	77.9 - 114	10	20
Toluene	3	0.0719	mg/L	1	0.100	< 0.000600	72	78.3 - 111	11	20
Ethylbenzene	4	0.0623	mg/L	1	0.100	< 0.000800	62	75.3 - 110	11	20
Xylene	5	0.189	mg/L	1	0.300	< 0.000767	63	75.7 - 109	11	20

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

		MS	MSD			Spike	MS	MSD	Rec.
Surrogate		Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	6 7	0.0434	0.0551	mg/L	1	0.1	43	55	68.3 - 107
4-Bromofluorobenzene (4-BFB)	8 9	0.0418	0.0525	mg/L	1	0.1	42	52	60.1 - 135

Matrix Spike (MS-1) Spiked Sample: 237531

QC Batch: 71932 Date Analyzed: 2010-07-16 Analyzed By: AR
Prep Batch: 61518 QC Preparation: 2010-07-16 Prepared By: AR

¹ Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

²Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

³MSD analyte out of range. MS/MSD has a RPD within limits. Therfore, MS shows extraction occurred properly.

⁴MSD analyte out of range. MS/MSD has a RPD within limits. Therfore, MS shows extraction occured properly. ⁵MSD analyte out of range. MS/MSD has a RPD within limits. Therfore, MS shows extraction occured properly.

⁶Surrogate TFT out due to matrix interference. Sample was not reran due to lack of sample.

⁷Surrogate TFT out due to matrix interference. Sample was not reran due to lack of sample.

⁸Surrogate 4-BFB out due to matrix interference. Sample was not reran due to lack of sample.

⁹Surrogate 4-BFB out due to matrix interference. Sample was not reran due to lack of sample.

115-6403133A

Work Order: 10071418 Celero/Rock Queen #33 Page Number: 9 of 10 Chavez County, NM

		MS			Spike	Matrix		Rec.
Param		Result	Units	Dil.	Amount	Result	Rec.	Limit
Chloride	10	4330	mg/L	100	2750	2320	73	90 - 110

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

		MSD			Spike	Matrix		Rec.		RPD
Param		Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride	11	4320	mg/L	100	2750	2320	73	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: 237531

QC Batch: 71932

Date Analyzed:

2010-07-16

Analyzed By: AR Prepared By: AR

Prep Batch: 61518 QC Preparation: 2010-07-16

		MS			Spike	Matrix		Rec.
Param		Result	Units	Dil.	Amount	Result	Rec.	Limit
Sulfate	12	3600	mg/L	100	2750	1750	67	90 - 110

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

		MSD			Spike	Matrix		Rec.		RPD
Param		Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Sulfate	13	3600	mg/L	100	2750	1750	67	90 - 110	0	20

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

Standard (CCV-2)

QC Batch: 71724

Date Analyzed: 2010-07-14

Analyzed By: AG

			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	\mathbf{Date}
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	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

¹⁰ Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

¹¹MSD analyte out of range. MS/MSD has a RPD within limits. Therfore, MS shows extraction occured properly.

¹² Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

¹³MSD analyte out of range. MS/MSD has a RPD within limits. Therfore, MS shows extraction occured properly.

Report Date: July 27, 2010 115-6403133A

Work Order: 10071418 Celero/Rock Queen #33 Page Number: 10 of 10 Chavez County, NM

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: 71932

Date Analyzed: 2010-07-16

Analyzed By: AR

			ICVs	ICVs	ICVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride		mg/L	25.0	25.9	104	90 - 110	2010-07-16

Standard (ICV-1)

QC Batch: 71932

Date Analyzed: 2010-07-16

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	26.1	104	90 - 110	2010-07-16

Standard (CCV-1)

QC Batch: 71932

Date Analyzed: 2010-07-16

Analyzed By: AR

			CCVs True	CCVs Found	$rac{ ext{CCVs}}{ ext{Percent}}$	Percent Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride		mg/L	25.0	24.9	100	90 - 110	2010-07-16

Standard (CCV-1)

QC Batch: 71932

Date Analyzed: 2010-07-16

Analyzed By: AR

			\mathbf{CCVs}	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Sulfate		mg/L	25.0	26.3	105	90 - 110	2010-07-16

RUSH Charges Authorized: Oath: 7/13/ Sulfalles Results by: Najor Anions/Catlons, pH(Catlons, <u>P</u> AIRBILL #: OTHER (sotsedsA) MJ9 (Circle or Specify Method No.) Alpha Beta (Air) дашия 2bec ANALYSIS REQUEST 17/GP PAGE PCB's 8080/608 SAMPLE SHIPPED BY; (Circle)
FEDEX
BUS
GAND DELVERED > UPS
TETRA TECH CONTACT PERSON: GC.MS Semi. Vol. 8270/625 Jeft Kindlay CC:W2 A91 8540/8560/654 SAMPLED BY: (Print & Initial) TCLP Semi Volatiles TCLP Metals Ag As Ba Cd Vr Pd Hg Se RCRA Metals Ag As Ba Cd Cr Pb (Ext. to C35) GOM BIOS. 3001XT HdT GTEX 8027B PRESERVATIVE METHOD NONE Analysis Request of Chain of Custody Record KCE メ Time:
Time:
Time:
Time: EONH × 2 НСГ FILTERED (YA) NUMBER OF CONTAINERS 7 18573- Midland (432) 682-4559 • Fax (432) 682-3946 RECEIVED BY: (Signature) SAMPLE IDENTIFICATION RECEIVED BY: (Signature) Orches #: 1007441R **TETRA TECH** 1910 N. Big Spring St. Midland, Texas 79705 Rock Owern #33 SITE MANAGER: Jeff Kindley DATE Date: 7/14/2016 REMARKS: ZP. IN I PROJECT NAME: 8ARD × COMP 3 XIRTAM 11017 STATE SAMPLE CONDITION WHEN RECEIVED: 350 TIME 3.9° c ratter Ct RELINCUISHED BY: (Signature) RELINQUISHED BY: (Signature) RELINQUISHED BY: (Signature) 15-6403133 RECENING LABORATORY:
ADDRESS:
CITY:
CONTACT: DATE 2/13 202 CLIENT NAME: PROJECT NO.: 337468 LAB I.D. NUMBER

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

ş



6701 Aberdeen Avenue, Suite 9 200 East Sunset Road, Suite E 5002 Basin Street, Suite A1 Lubbock, Texas 79424 El Paso, Texas 79922 Midland, Texas 79703 800 • 378 • 1296 888 • 588 • 3443

806 • 794 • 1296 FAX 806 • 794 • 1298 915 • 585 • 3443 FAX 915 • 585 • 4944 432 • 689 • 6301 FAX 432 • 689 • 6313

5015 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

El Paso: T104704221-08-TX LELAP-02002 Midland: T104704392-08-TX

LELAP-02003 Kansas E-10317

Analytical and Quality Control Report

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

Report Date: November 10, 2010

Work Order: 10101413

Project Location: Chavez County, NM
Project Name: Celero/Rock Queen #33

Project Number: 115-6403133A

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

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
247532	MW-1	water	2010-10-13	09:00	2010-10-13

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

This report consists of a total of 10 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Michael april

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

Standard Flags

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

Case Narrative

Samples for project Celero/Rock Queen #33 were received by TraceAnalysis, Inc. on 2010-10-13 and assigned to work order 10101413. Samples for work order 10101413 were received intact without headspace and at a temperature of 3.5 C.

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

		Prep	Prep	$\mathbf{Q}\mathbf{C}$	Analysis
Test	Method	Batch	Date	Batch	Date
BTEX	S 8021B	63840	2010-10-14 at 13:40	74557	2010-10-14 at 18:04
Chloride (IC)	E 300.0	64403	2010-11-03 at 10:35	75072	2010-11-03 at 20:21
SO4 (IC)	E 300.0	64531	2010-11-09 at 10:50	75231	2010-11-09 at 22:48
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 10101413 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

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

115-6403133A

Work Order: 10101413 Celero/Rock Queen #33 Page Number: 4 of 10 Chavez County, NM

Analytical Report

Sample: 247532 - MW-1

Laboratory: Midland

Analysis: BTEX QC Batch: 74557 Prep Batch: 63840 Analytical Method: S 8021B
Date Analyzed: 2010-10-14
Sample Preparation: 2010-10-14

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

RL neter Flag Result

Parameter Result Units Dilution RL0.00100 Benzene 0.00480 mg/L Toluene < 0.00100 mg/L 1 0.001001 0.00100Ethylbenzene < 0.00100 mg/L 0.00100< 0.00100 mg/L 1 Xylene

					Spike	Percent	Recovery
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)	1	0.323	mg/L	1	0.100	323	66.2 - 107
4-Bromofluorobenzene (4-BFB)		0.0494	mg/L	1	0.100	49	39 - 138

Sample: 247532 - MW-1

Laboratory: Lubbock

Analysis: Chloride (IC) QC Batch: 75072 Prep Batch: 64403 Analytical Method: E 300.0 Date Analyzed: 2010-11-03 Sample Preparation: 2010-11-03

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

Sample: 247532 - MW-1

Laboratory: Lubbock

Analysis: SO4 (IC) QC Batch: 75231 Prep Batch: 64531 Analytical Method: E 300.0
Date Analyzed: 2010-11-09
Sample Preparation: 2010-11-09

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

RL

Parameter	Flag	Result	Units	Dilution	RL
Sulfate		1070	mg/L	50	2.50

¹ High surrogate recovery due to peak interference.

Report Date: November 10, 2010 115-6403133A

Work Order: 10101413 Celero/Rock Queen #33 Page Number: 5 of 10 Chavez County, NM

Sample: 247532 - MW-1

Laboratory: Midland

Analysis: TDS QC Batch: 74622 Prep Batch: 63873 Analytical Method: SM 2540C Date Analyzed: 2010-10-21 Sample Preparation: 2010-10-15 Prep Method: N/A Analyzed By: AR Prepared By: AR

RL

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		161000	mg/L	100	10.0

Method Blank (1) QC Batch: 74557

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

MDL Plan Payelt

Parameter	Flag	Result	Units	$\mathbf{R} \mathbf{L}$
Benzene		< 0.000400	mg/L	0.001
Toluene		< 0.000800	${ m mg/L}$	0.001
Ethylbenzene		< 0.000400	$_{ m mg/L}$	0.001
Xylene		< 0.000400	m 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: 74622

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

Analyzed By: AR Prepared By: AR

Method Blank (1) QC Batch: 75072

QC Batch: 75072 Prep Batch: 64403 Date Analyzed: 2010-11-03 QC Preparation: 2010-11-03 Analyzed By: PG Prepared By: PG

Work Order: 10101413 Celero/Rock Queen #33 Page Number: 6 of 10 Chavez County, NM

115-6403133A

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

QC Batch: 75231 Method Blank (1)

QC Batch: 75231 Prep Batch: 64531

Sulfate

Date Analyzed: 2010-11-09 QC Preparation: 2010-11-09

Analyzed By: PG Prepared By: PG

MDL Parameter Flag

Result Units RL< 0.5962.5 mg/L

Duplicated Sample: 247533 Duplicates (2)

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

Analyzed By: AR Prepared By: AR

Duplicate Sample RPD Param Result Result Dilution RPD Units Limit Total Dissolved Solids 46600 11700 mg/L 100 4 10 Total Dissolved Solids 46600 48400 mg/L 100 4 10

Laboratory Control Spike (LCS-1)

QC Batch: 74557 Prep Batch: 63840

Date Analyzed: 2010-10-14 QC Preparation: 2010-10-14

Analyzed By: AG Prepared By: AG

	LCS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Benzene	0.0939	mg/L	1	0.100	< 0.000400	94	80.7 - 117
Toluene	0.0947	$_{ m mg/L}$	1	0.100	< 0.000800	95	80.5 - 117
Ethylbenzene	0.0947	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.

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

115-6403133A

Work Order: 10101413 Celero/Rock Queen #33 Page Number: 7 of 10 Chavez County, NM

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-2)

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

Analyzed By: AR
Prepared By: AR

	LCS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	\mathbf{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.

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

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

Laboratory Control Spike (LCS-1)

QC Batch: 75072 Prep Batch: 64403 Date Analyzed: 2010-11-03 QC Preparation: 2010-11-03 Analyzed By: PG Prepared By: PG

	LCS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Chloride	24.4	mg/L	1	25.0	< 0.0350	98	90 - 110

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

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride	23.8	mg/L	1	25.0	< 0.0350	95	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: 75231 Prep Batch: 64531 Date Analyzed: 2010-11-09 QC Preparation: 2010-11-09 Analyzed By: PG Prepared By: PG

	LCS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	\mathbf{Limit}
Sulfate	24.0	mg/L	1	25.0	< 0.596	96	90 - 110

115-6403133A

Work Order: 10101413 Celero/Rock Queen #33 Page Number: 8 of 10 Chavez County, NM

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

	$_{ m LCSD}$			\mathbf{Spike}	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Sulfate	23.9	mg/L	1	25.0	< 0.596	96	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: 247532

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

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

		MSD			$_{ m Spike}$	Matrix		${ m Rec}.$		RPD
Param		Result	Units	Dil.	Amount	Result	Rec.	Limit	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.

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

Matrix Spike (MS-1) Spiked Sample: 248210

QC Batch: 75072 Prep Batch: 64403 Date Analyzed: 2010-11-03 QC Preparation: 2010-11-03 Analyzed By: PG Prepared By: PG

continued ...

 $^{^2 \}mathrm{MS}/\mathrm{MSD}$ RPD out of RPD Limits. Use LCS/LCSD to demonstrate analysis is under control.

³MS/MSD RPD out of RPD Limits. Use LCS/LCSD to demonstrate analysis is under control.

⁴MS/MSD RPD out of RPD Limits. Use LCS/LCSD to demonstrate analysis is under control.

⁵ High surrogate recovery due to peak interference.

⁶High surrogate recovery due to peak interference.

115-6403133A

Work Order: 10101413 Celero/Rock Queen #33 Page Number: 9 of 10 Chavez County, NM

matrix	snikes	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
Chloride	1300	mg/L	50	1250	<1.75	104	90 - 110

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

	MSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride	1300	mg/L	50	1250	<1.75	104	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: 249831

QC Batch: 75231 Prep Batch: 64531 Date Analyzed: 2010-11-09 QC Preparation: 2010-11-09

Analyzed By: PG Prepared By: PG

	MS			Spike	Matrix		Rec.
Param	Result	\mathbf{Units}	Dil.	Amount	Result	Rec.	Limit
Sulfate	1290	mg/L	50	1250	<29.8	103	90 - 110

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

	MSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Sulfate	1290	mg/L	50	1250	<29.8	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-2)

QC Batch: 74557

Date Analyzed: 2010-10-14

Analyzed By: AG

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

Report Date: November 10, 2010 115-6403133A

Work Order: 10101413 Celero/Rock Queen #33 Page Number: 10 of 10 Chavez County, NM

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: 75072

Date Analyzed: 2010-11-03

Analyzed By: PG

			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride		mg/L	25.0	25.0	100	90 - 110	2010-11-03

Standard (CCV-2)

QC Batch: 75072

Date Analyzed: 2010-11-03

Analyzed By: PG

			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	\mathbf{Flag}	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride		mg/L	25.0	24.7	99	90 - 110	2010-11-03

Standard (CCV-1)

QC Batch: 75231

Date Analyzed: 2010-11-09

Analyzed By: PG

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

Standard (CCV-2)

QC Batch: 75231

Date Analyzed: 2010-11-09

Analyzed By: PG

			CCVs	CCVs	CCVs	$\operatorname{Percent}$	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Sulfate		mg/L	25.0	24.3	97	90 - 110	2010-11-09

Date: 1/2///2
RECEIVING LABORATORY: 7.1.1 ADDRESS. ADDRESS. ALTHOUGH STATE. CONTACT. STATE. PHONE: DATE. AMANUE GONOTTON WHEN RECEIVED BY: (Signalum) The No. The N



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

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

800 • 378 • 1296 888 • 588 • 3443 806 • 794 • 1296 915 • 585 • 3443 432 • 689 • 6301 FAX 806 • 794 • 1298 FAX 915 • 585 • 4944 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

El Paso: T104704221-08-TX

LELAP-02002

Midland: T104704392-08-TX

Kansas E-10317

Analytical and Quality Control Report

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

Report Date: February 7, 2011

Work Order: 11012134

Project Location:

Chavez County, NM Celero/Rock Queen #33

Project Name: Project Number:

115-6403133A

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

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
255921	MW-1	water	2011-01-21	11:30	2011-01-21
255922	MW-2	water	2011-01-21	11:55	2011-01-21
255923	MW-3	water	2011-01-21	12:15	2011-01-21
255924	MW-4	water	2011-01-21	12:05	2011-01-21

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(cs) in which your sample(s) were analyzed.

This report consists of a total of 20 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Michael april

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

Standard Flags

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

Samples for project Celero/Rock Queen #33 were received by TraceAnalysis, Inc. on 2011-01-21 and assigned to work order 11012134. Samples for work order 11012134 were received intact without headspace and at a temperature of 12.5 C.

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

		Prep	Prep	\mathbf{QC}	Analysis
Test	Method	Batch	Date	Batch	Date
BTEX	S 8021B	66157	2011-01-24 at 11:00	77124	2011-01-24 at 13:17
BTEX	S 8021B	66196	2011-01-25 at 10:00	77170	2011-01-25 at 14:57
Chloride (IC)	E 300.0	66370	2011-02-02 at 13:00	77371	2011-02-02 at 17:19
Chloride (IC)	E 300.0	66371	2011-02-02 at 13:00	77372	2011-02-02 at 22:06
SO4 (IC)	E 300.0	66371	2011-02-02 at 13:00	77372	2011-02-02 at 22:06
SO4 (IC)	E 300.0	66413	2011-02-06 at 10:00	77426	2011-02-06 at 12:17
TDS	SM 2540C	66142	2011-01-24 at 11:30	77255	2011-01-31 at 10:09
TDS	SM 2540C	66164	2011-01-25 at 12:00	77317	2011-02-01 at 15:04

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 11012134 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

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

115-6403133A

Work Order: 11012134 Celero/Rock Queen #33 Page Number: 4 of 20 Chavez County, NM

Analytical Report

Sample: 255921 - MW-1

Laboratory: Midland

Analysis: BTEX QC Batch: 77124 Prep Batch: 66157 Analytical Method: S 8021B
Date Analyzed: 2011-01-24
Sample Preparation: 2011-01-24

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

RL

		+023			
Parameter	Flag	Result	Units	Dilution	RL
Benzene		0.0121	mg/L	1	0.00100
Toluene		0.00660	${ m mg/L}$	1	0.00100
Ethylbenzene		< 0.00100	${ m mg/L}$	1	0.00100
Xylene		< 0.00100	m mg/L	1	0.00100

					Spike	Percent	Recovery
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)		0.0742	mg/L	1	0.100	74	67.8 - 126
4-Bromofluorobenzene (4-BFB)		0.0737	mg/L	1	0.100	74	51.1 - 128

Sample: 255921 - MW-1

Laboratory: Lubbock

Analysis: Chloride (IC) QC Batch: 77371 Prep Batch: 66370 Analytical Method: E 300.0 Date Analyzed: 2011-02-02 Sample Preparation: 2011-02-02

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

RL

Parameter	Flag	Result	Units	Dilution	RL
Chloride		81200	mg/L	10000	2.50

Sample: 255921 - MW-1

Laboratory: Lubbock

Analysis: SO4 (IC) QC Batch: 77426 Prep Batch: 66413 Analytical Method: E 300.0
Date Analyzed: 2011-02-06
Sample Preparation: 2011-02-06

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

RL

Parameter	Flag	Result	Units	Dilution	RL
Sulfate	***************************************	1050	mg/L	50	2.50

115-6403133A

Work Order: 11012134 Celero/Rock Queen #33 Page Number: 5 of 20 Chavez County, NM

Sample: 255921 - MW-1

Laboratory: Midland

Analysis: TDS QC Batch: 77255 Prep Batch: 66142 Analytical Method: SM 2540C Date Analyzed: 2011-01-31 Sample Preparation: 2011-01-25 Prep Method: N/A Analyzed By: AR Prepared By: AR

RL

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		134000	mg/L	100	10.0

Sample: 255922 - MW-2

Laboratory: Midland

Analysis: BTEX QC Batch: 77170 Prep Batch: 66196 Analytical Method: S 8021B
Date Analyzed: 2011-01-25
Sample Preparation: 2011-01-25

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

RL

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

					\mathbf{Spike}	Percent	Recovery
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)		0.112	mg/L	1	0.100	112	75.4 - 119.4
4-Bromofluorobenzene (4-BFB)		0.0961	mg/L	1	0.100	96	78.6 - 122.8

Sample: 255922 - MW-2

Laboratory: Lubbock

Analysis: Chloride (IC) QC Batch: 77372 Prep Batch: 66371 Analytical Method: E 300.0
Date Analyzed: 2011-02-02
Sample Preparation: 2011-02-02

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

RL

Parameter	Flag	Result	Units	Dilution	RL
Chloride		55.6	mg/L	5	2.50

Report Date: February 7, 2011 Work Order: 11012134
115-6403133A Celero/Rock Queen #33

Sample: 255922 - MW-2 Laboratory: Lubbock Analysis: SO4 (IC) Analytical Method: Prep Method: E 300.0 N/A QC Batch: 77372 Date Analyzed: 2011-02-02 Analyzed By: PGPrep Batch: 66371 Sample Preparation: 2011-02-02 Prepared By: PG RLFlag Parameter Result Units Dilution RLSulfate 124 mg/L 5 2.50

Page Number: 6 of 20

Chavez County, NM

Sample: 255922 - MW-2

Laboratory: Midland

Analysis: TDS Analytical Method: SM 2540C Prep Method: N/A QC Batch: 77317 Date Analyzed: 2011-02-01 Analyzed By: AR Prep Batch: 66164 Sample Preparation: 2011-01-26 Prepared By: AR

Sample: 255923 - MW-3

Laboratory: Midland

Analysis: **BTEX** Analytical Method: S 8021B Prep Method: S 5030B QC Batch: 77170 Date Analyzed: 2011-01-25 Analyzed By: \mathbf{AG} Prep Batch: 66196 Sample Preparation: 2011-01-25 Prepared By: AG

RLFlag Parameter Result Units Dilution RLBenzene < 0.00100 mg/L 1 0.00100 Toluene < 0.00100 mg/L 1 0.00100 Ethylbenzene 1 < 0.00100 mg/L 0.00100 Xylene < 0.00100 mg/L 1 0.00100

					Spike	Percent	Recovery
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)		0.112	mg/L	1	0.100	112	75.4 - 119.4
4-Bromofluorobenzene (4-BFB)		0.100	mg/L	1	0.100	100	78.6 - 122.8

Report Date: February 7, 2011 115-6403133A				Work Order Celero/Rock			Page Number: 7 of 20 Chavez County, NM		
Sample: 25	5923 - MW	-3							
Laboratory:	Lubbock								
Analysis:	Chloride (I	C)		Analytical Method	: E 300.0	Prep Method:	N/A		
QC Batch:	77372	,		Date Analyzed:	2011-02-02	Analyzed By:	m PG		
Prep Batch:	66371			Sample Preparatio		Prepared By:	\mathbf{PG}		
				m RL					
Parameter		Flag		Result	Units	Dilution	RL		
Chloride				5370	mg/L	500	2.50		
Sample: 25		-3							
Laboratory: Analysis:	Lubbock SO4 (IC)			Analytical Method:	E 300.0	Duan Mathada	TNT / Å		
	, ,					Prep Method:			
QC Batch:	77426			Date Analyzed:	2011-02-06	Analyzed By:	PG		
Prep Batch:	66413			Sample Preparation:	2011-02-06	Prepared By:	PG		
				RL					
Parameter		Flag		Result	Units	Dilution	RL		
Sulfate				132	mg/L	5	2.50		
Sample: 25 Laboratory: Analysis: QC Batch:	Midland TDS 77317	-3		Analytical Method: Date Analyzed:	SM 2540C 2011-02-01	Prep Method: Analyzed By:	AR		
Prep Batch:	66164			Sample Preparation:	2011-01-26	Prepared By:	AR		
				RL					
Parameter			Flag	Result	Units	Dilution	RL		
Total Dissolv	red Solids			10600	mg/L	20	10.0		
Sample: 25	5924 - MW	-4							
Laboratory:	Midland								
				Analytical Method: S	8 8021B	Prep Method: S	5030B		
Analysis:	BTEX						α		
	BTEX 77170			Date Analyzed: 2	011-01-25	Analyzed By: A	.Ur		
Analysis: QC Batch: Prep Batch:				-	011-01-25 011-01-25	Prepared By: A			
QC Batch:	77170			Sample Preparation: 2	011-01-25				
QC Batch:	77170	Flag		Sample Preparation: 2					
QC Batch: Prep Batch:	77170	Flag		Sample Preparation: 2	011-01-25	Prepared By: A Dilution	G		

continued ...

Report Date: February 7, 2011 Work Order: 11012134 Page Number: 8 of 20 Celero/Rock Queen #33 Chavez County, NM

sample 255924 continued ...

			RL				
Parameter	Flag	R	esult	Units		Dilution	$_{ m RL}$
Ethylbenzene		< 0.0	0100	mg/L		1	0.00100
Xylene		< 0.0	0100	mg/L		1	0.00100
					Spike	Percent	Recovery
Surrogate	Fla	ig Resul	t Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)		0.11	5 mg/L	1	0.100	115	75.4 - 119.4
4-Bromofluorobenzene (4-B	FB)	0.10	l mg/L	1	0.100	101	78.6 - 122.8

Sample: 255924 - MW-4

Laboratory: Lubbock

Prep Method: N/A Chloride (IC) Analytical Method: E 300.0Analysis: PGAnalyzed By: QC Batch: 77372 Date Analyzed: 2011-02-02 PGPrep Batch: 66371 Sample Preparation: 2011-02-02 Prepared By:

Sample: 255924 - MW-4

Laboratory: Lubbock

Analysis: SO4 (IC) Analytical Method: E 300.0 Prep Method: N/AQC Batch: 77426 Date Analyzed: 2011-02-06 Analyzed By: PGPrepared By: PGPrep Batch: 66413 Sample Preparation: 2011-02-06

Sample: 255924 - MW-4

Laboratory: Midland

Prep Method: N/A Analysis: TDS Analytical Method: SM 2540C Analyzed By: ARQC Batch: Date Analyzed: 2011-02-01 77317 Prepared By: ARSample Preparation: 2011-01-26 Prep Batch: 66164

Report Date: February 7, 2011 115-6403133A			:: 11012134 Queen #33	Page Number: 9 of 20 Chavez County, NM		
Method Blank (1) QC Batch: 77	124					
QC Batch: 77124	Date Ana	•	011-01-24			zed By: AG
Prep Batch: 66157	QC Prep	aration: 2	011-01-24		Prepa	red By: AG
		М	DL			
Parameter Flag			sult	Un		RL
Benzene		< 0.000		mg		0.001
Toluene		< 0.000		mg	•	0.001
Ethylbenzene		< 0.000		mg		0.001
Xylene		<0.000	767	mg	<u>/L</u>	0.001
				Spike	Percent	Recovery
Surrogate Fla	g Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)	0.115	mg/L	1	0.100	115	70.2 - 118
4-Bromofluorobenzene (4-BFB)	0.111	${ m mg/L}$	1	0.100	111	47.3 - 116
Prep Batch: 66196	QC Prepa		011-01-25		Prepa	red By: AG
Parameter Flag		Res	$\mathrm{DL}_{\mathrm{sult}}$	Un	its	RL
Benzene		< 0.000	400	mg	/L	0.001
Toluene		< 0.000	300	mg	/L	0.001
Ethylbenzene		< 0.000	300	mg	/L	0.001
Xylene		< 0.000	333	mg	/L	0.001
				Spike	Percent	Recovery
Surrogate Flag		Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)	0.111	mg/L	1	0.100	111	70.8 - 117.4
4-Bromofluorobenzene (4-BFB)	0.0994	mg/L	1	0.100	99	79 - 113.4
Method Blank (1) QC Batch: 77	255					
QC Batch: 77255	Date Ana	alyzed: 2	011-01-31			zed By: AR
Prep Batch: 66142	QC Prepa	•	011-01-24		Prepa	red By: AR
			MDL			
Parameter	Flag		Result		Units	RL

10.0

Total Dissolved Solids

10

mg/L

Report Date: February 115-6403133A	7, 2011		ler: 11012134 Page Number: ck Queen #33 Chavez Cor				
Method Blank (1)	QC Batch: 77317						
QC Batch: 77317		Date Analyzed:	2011-02-01		Analyzed By:	AR	
Prep Batch: 66164		QC Preparation:	2011-01-25		Prepared By:	AR	
			MDL				
Parameter	Fla	ag	Result	Units		RL	
Total Dissolved Solids		PHOTO A PARTICULAR AND A	10.0	mg/L		10	
Method Blank (1)	QC Batch: 77371						
QC Batch: 77371		Date Analyzed:	2011-02-02		Analyzed By:	PG	
Prep Batch: 66370		QC Preparation:			Prepared By:	PG	
			MDL				
Parameter	Flag		esult	Units		RL	
Chloride		<0.	0142	mg/L		2.5	
Method Blank (1) QC Batch: 77372 Prep Batch: 66371	QC Batch: 77372	Date Analyzed: QC Preparation:	2011-02-02 2011-02-02		Analyzed By: Prepared By:	PG PG	
		N	MDL				
Parameter	Flag		esult	Units		RL	
Chloride		<0.	0142	mg/L		2.5	
Method Blank (1)	QC Batch: 77372						
QC Batch: 77372		Date Analyzed:	2011-02-02		Analyzed By:	PG	
Prep Batch: 66371		QC Preparation:	2011-02-02		Prepared By:	PG	
			IDL				
Parameter	Flag		sult	Units		RL	
Sulfate	CONTRACTOR OF THE PROPERTY OF	<0.	.126	mg/L		2.5	
Method Blank (1)	QC Batch: 77426						
QC Batch: 77426		Date Analyzed:	2011-02-06		Analyzed By:	PG	
Prep Batch: 66413		QC Preparation:	2011-02-06		Prepared By:	PG	

115-6403133A

Work Order: 11012134 Celero/Rock Queen #33 Page Number: 11 of 20 Chavez County, NM

		MDL		
Parameter	Flag	Result	Units	RL
Sulfate		< 0.126	mg/L	2.5

Duplicates (1) Duplicated Sample: 255921

QC Batch: 77255 Prep Batch: 66142

Date Analyzed: 2011-01-31 QC Preparation: 2011-01-24 Analyzed By: AR Prepared By: AR

	Duplicate	Sample				RPD
Param	Result	Result	Units	Dilution	RPD	Limit
Total Dissolved Solids	147000	134000	mg/L	100	9	10

Duplicates (1) Duplicated Sample: 255931

QC Batch: 77317 Prep Batch: 66164 Date Analyzed: 2011-02-01 QC Preparation: 2011-01-25 Analyzed By: AR Prepared By: AR

	Duplicate	Sample				RPD
Param	Result	Result	Units	Dilution	RPD	\mathbf{Limit}
Total Dissolved Solids	70500	75700	mg/L	100	7	10

Laboratory Control Spike (LCS-1)

QC Batch: 77124 Prep Batch: 66157 Date Analyzed: 2011-01-24 QC Preparation: 2011-01-24

Analyzed By: AG Prepared By: AG

Param	$egin{array}{c} ext{LCS} \ ext{Result} \end{array}$	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.0885	mg/L	1	0.100	< 0.000600	88	82.9 - 118
Toluene	0.0989	mg/L	1	0.100	< 0.000600	99	82.7 - 117
Ethylbenzene	0.102	mg/L	1	0.100	< 0.000800	102	78.8 - 116
Xylene	0.308	mg/L	1	0.300	< 0.000767	103	79.3 - 116

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

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Benzene	0.0906	mg/L	1	0.100	< 0.000600	91	82.9 - 118	2	20
Toluene	0.102	mg/L	1	0.100	< 0.000600	102	82.7 - 117	3	20
Ethylbenzene	0.106	mg/L	1	0.100	< 0.000800	106	78.8 - 116	4	20
Xylene	0.320	mg/L	1	0.300	< 0.000767	107	79.3 - 116	4	20

115-6403133A

Work Order: 11012134 Celero/Rock Queen #33 Page Number: 12 of 20 Chavez County, NM

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.110	0.111	mg/L	1	0.100	110	111	67.3 - 113
4-Bromofluorobenzene (4-BFB)	0.110	0.113	mg/L	1	0.100	110	113	68.2 - 134

Laboratory Control Spike (LCS-1)

QC Batch: 77170 Prep Batch: 66196 Date Analyzed: 2011-01-25 QC Preparation: 2011-01-25 Analyzed By: AG Prepared By: AG

	LCS			Spike	Matrix		Rec.
Param	Result	\mathbf{Units}	Dil.	Amount	Result	Rec.	Limit
Benzene	0.0891	mg/L	1	0.100	< 0.000400	89	76.8 - 110.3
Toluene	0.103	mg/L	1	0.100	< 0.000300	103	81 - 108.2
Ethylbenzene	0.108	mg/L	1	0.100	< 0.000300	108	78.8 - 111
Xylene	0.328	mg/L	1	0.300	< 0.000333	109	80.3 - 111.4

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

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Benzene	0.0843	mg/L	1	0.100	< 0.000400	84	76.8 - 110.3	6	20
Toluene	0.0988	mg/L	1	0.100	< 0.000300	99	81 - 108.2	4	20
Ethylbenzene	0.103	mg/L	1	0.100	< 0.000300	103	78.8 - 111	5	20
Xylene	0.312	mg/L	1	0.300	< 0.000333	104	80.3 - 111.4	5	20

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

	LCS	LCSD			Spike	LCS	LCSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	0.112	0.111	mg/L	1	0.100	112	111	66.6 - 114.5
4-Bromofluorobenzene (4-BFB)	0.108	0.106	mg/L	1	0.100	108	106	77.1 - 114.4

Laboratory Control Spike (LCS-1)

QC Batch: 77255 Prep Batch: 66142 Date Analyzed: 2011-01-31 QC Preparation: 2011-01-24

Analyzed By: AR Prepared By: AR

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

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Total Dissolved Solids	1020	mg/L	1	1000	< 9.75	102	90 - 110	0	10

115-6403133A

Work Order: 11012134 Celero/Rock Queen #33 Page Number: 13 of 20 Chavez County, NM

Laboratory Control Spike (LCS-1)

QC Batch: 77317 Prep Batch: 66164 Date Analyzed: 2011-02-01 QC Preparation: 2011-01-25 Analyzed By: AR Prepared By: AR

	LCS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Total Dissolved Solids	1080	mg/L	1	1000	< 9.75	108	90 - 110

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

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Total Dissolved Solids	1050	mg/L	1	1000	< 9.75	105	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: 77371 Prep Batch: 66370 Date Analyzed: 2011-02-02 QC Preparation: 2011-02-02 Analyzed By: PG Prepared By: PG

	LCS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Chloride	24.1	mg/L	1	25.0	< 0.0142	96	90 - 110

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

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride	24.1	mg/L	1	25.0	< 0.0142	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: 77372 Prep Batch: 66371 Date Analyzed: 2011-02-02 QC Preparation: 2011-02-02 Analyzed By: PG Prepared By: PG

	LCS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Chloride	24.0	mg/L	1	25.0	< 0.0142	96	90 - 110

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

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride	24.0	mg/L	1	25.0	< 0.0142	96	90 - 110	0	20

115-6403133A

Work Order: 11012134 Celero/Rock Queen #33 Page Number: 14 of 20 Chavez County, NM

Laboratory Control Spike (LCS-1)

QC Batch: Prep Batch: 66371

77372

Date Analyzed: QC Preparation:

2011-02-02 2011-02-02 Analyzed By: PG

Prepared By: PG

	LCS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	\mathbf{Limit}
Sulfate	24.5	mg/L	1	25.0	< 0.126	98	90 - 110

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

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Sulfate	24.5	mg/L	1	25.0	< 0.126	98	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: 77426 Prep Batch: 66413

Date Analyzed: QC Preparation:

2011-02-06 2011-02-06

Analyzed By: PG Prepared By: PG

	LCS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Sulfate	24.7	mg/L	1	25.0	< 0.126	99	90 - 110

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

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Sulfate	24.7	mg/L	1	25.0	< 0.126	99	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: 255921

QC Batch: 77124 Prep Batch: 66157 Date Analyzed: 2011-01-24 QC Preparation: 2011-01-24 Analyzed By: AG Prepared By: AG

		MS			Spike	Matrix		Rec.
Param		Result	Units	Dil.	Amount	Result	Rec.	Limit
Benzene	1	0.0669	ing/L	1	0.100	0.0121	55	77.9 - 114
Toluene	2	0.0633	mg/L	1	0.100	0.0066	57	78.3 - 111
Ethylbenzene	3	0.0573	mg/L	1	0.100	< 0.000800	57	75.3 - 110

 $continued \dots$

¹Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

²Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

³Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

Report Date: February 7, 2011 115-6403133A

Work Order: 11012134 Celero/Rock Queen #33 Page Number: 15 of 20 Chavez County, NM

matrix spikes continued ...

		MS			Spike	Matrix		${ m Rec.}$
Param		Result	Units	Dil.	Amount	Result	Rec.	Limit
Xylene	4	0.145	$_{ m mg/L}$	1	0.300	< 0.000767	48	75.7 - 109

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

		MSD			Spike	Matrix		Rec.		RPD
Param		Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Benzene	5	0.0811	mg/L	1	0.100	0.0121	69	77.9 - 114	19	20
Toluene	6	0.0774	mg/L	1	0.100	0.0066	71	78.3 - 111	20	20
Ethylbenzene	7	0.0693	mg/L	1	0.100	< 0.000800	69	75.3 - 110	19	20
Xylene	8	0.180	mg/L	1	0.300	< 0.000767	60	75.7 - 109	22	20

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

		MS	MSD			Spike	MS	MSD	Rec.
Surrogate		Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	9	0.0705	0.0437	mg/L	1	0.1	70	44	68.3 - 107
4-Bromofluorobenzene (4-BFB)	10	0.0736	0.0449	mg/L	1	0.1	74	45	60.1 - 135

Matrix Spike (MS-1) Spiked Sample: 256101

QC Batch: 77170 Prep Batch: 66196 Date Analyzed: 2011-01-25 QC Preparation: 2011-01-25 Analyzed By: AG Prepared By: AG

		MS			Spike	Matrix		Rec.
Param		Result	Units	Dil.	Amount	Result	Rec.	Limit
Benzene		0.0827	mg/L	1	0.100	< 0.000400	83	68.2 - 119.3
Toluene		0.0851	mg/L	1	0.100	< 0.000300	85	74.6 - 110.8
Ethylbenzene		0.0786	mg/L	1	0.100	< 0.000300	79	71.6 - 111.9
Xylene	11	0.204	mg/L	1	0.300	< 0.000333	68	71.3 - 113.4

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

		MSD			\mathbf{Spike}	Matrix		Rec.		RPD
Param		Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Benzene		0.0777	mg/L	1	0.100	< 0.000400	78	68.2 - 119.3	6	20
Toluene		0.0814	mg/L	1	0.100	< 0.000300	81	74.6 - 110.8	4	20
Ethylbenzene	12	0.0750	mg/L	1	0.100	< 0.000300	75	71.6 - 111.9	5	20

continued ...

⁴Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

⁵Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

⁶Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

⁷Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

⁸Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

⁹Surrogate out due to peak interference.

¹⁰Surrogate out due to peak interference.

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

¹²MSD analyte out of range. MS/MSD has a RPD within limits. Therfore, MS shows extraction occured properly.

Work Order: 11012134 115-6403133A Celero/Rock Queen #33 Page Number: 16 of 20 Chavez County, NM

matrix	snikes	continued		

		MSD			Spike	Matrix		Rec.		RPD
Param		Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Xylene	13	0.193	mg/L	1	0.300	< 0.000333	64	71.3 - 113.4	6	20

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

	MS	MSD			Spike	MS	MSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	0.0829	0.0831	mg/L	1	0.1	83	83	68.2 - 110.1
4-Bromofluorobenzene (4-BFB)	0.0830	0.0816	mg/L	1	0.1	83	82	78.7 - 116.2

Spiked Sample: 255921 Matrix Spike (MS-1)

QC Batch: 77371 Prep Batch: 66370 Date Analyzed: 2011-02-02 QC Preparation: 2011-02-02 Analyzed By: PG Prepared By: PG

	MS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Chloride	341000	mg/L	10000	250000	81200	104	90 - 110

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

	MSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride	341000	mg/L	10000	250000	81200	104	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: 256247

QC Batch: 77372 Prep Batch: 66371 Date Analyzed: 2011-02-02 QC Preparation: 2011-02-02

Analyzed By: PG Prepared By: PG

		MS			Spike	Matrix		Rec.
Param		Result	Units	Dil.	Amount	Result	Rec.	Limit
Chloride	14	852	mg/L	10	250	795	23	90 - 110

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

		MSD			Spike	Matrix		Rec.		RPD
Param		Result	Units	Dil.	Amount	Result	Rec.	\mathbf{Limit}	RPD	Limit
Chloride	15	881	mg/L	10	2500	795	35	90 - 110	3	20

¹³Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

¹⁴Matrix spike ran with batch but spiked sample was reported in another batch •

 $^{^{15}\}mathrm{Matrix}$ spike ran with batch but spiked sample was reported in another batch \bullet

115-6403133A

Work Order: 11012134 Celero/Rock Queen #33 Page Number: 17 of 20 Chavez County, NM

Matrix Spike (MS-1) Spiked

MS-1) Spiked Sample: 256247

QC Batch: 77372 Prep Batch: 66371 Date Analyzed: 2011-02-02 QC Preparation: 2011-02-02 Analyzed By: PG Prepared By: PG

		MS			Spike	Matrix		Rec.
Param		Result	Units	Dil.	Amount	Result	Rec.	Limit
Sulfate	16	3380	mg/L	10	250	2750	252	90 - 110

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

		MSD			Spike	Matrix		Rec.		RPD
Param		Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Sulfate	17	3400	mg/L	10	2500	2750	136	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: 255931

QC Batch: 77426 Prep Batch: 66413 Date Analyzed: 2011-02-06 QC Preparation: 2011-02-06 Analyzed By: PG Prepared By: PG

	MS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Sulfate	1780	mg/L	50	1250	478	104	90 - 110

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

	MSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	\mathbf{Limit}
Sulfate	1790	mg/L	50	1250	478	105	90 - 110	1	20

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

Standard (CCV-2)

QC Batch: 77124

Date Analyzed: 2011-01-24

Analyzed By: AG

			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Benzene		mg/L	0.100	0.0858	86	80 - 120	2011-01-24
Toluene		mg/L	0.100	0.0989	99	80 - 120	2011-01-24
Ethylbenzene		mg/L	0.100	0.103	103	80 - 120	2011-01-24
Xylene		mg/L	0.300	0.308	103	80 - 120	2011-01-24

¹⁶Matrix spike ran with batch but spiked sample was reported in another batch •

¹⁷Matrix spike ran with batch but spiked sample was reported in another batch •

Report Date: February 7, 2011 115-6403133A

Work Order: 11012134 Celero/Rock Queen #33 Page Number: 18 of 20 Chavez County, NM

QC Batch: 77124

Date Analyzed: 2011-01-24

Analyzed By: AG

			CCVs	\mathbf{CCVs}	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Benzene		mg/L	0.100	0.0820	82	80 - 120	2011-01-24
Toluene		mg/L	0.100	0.0952	95	80 - 120	2011-01-24
Ethylbenzene		mg/L	0.100	0.0976	98	80 - 120	2011-01-24
Xylene		mg/L	0.300	0.294	98	80 - 120	2011-01-24

Standard (CCV-1)

QC Batch: 77170

Date Analyzed: 2011-01-25

Analyzed By: AG

			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Benzene		mg/L	0.100	0.0857	86	80 - 120	2011-01-25
Toluene		$_{ m mg/L}$	0.100	0.100	100	80 - 120	2011-01-25
Ethylbenzene		mg/L	0.100	0.104	104	80 - 120	2011-01-25
Xylene		mg/L	0.300	0.314	105	80 - 120	2011-01-25

Standard (CCV-2)

QC Batch: 77170

Date Analyzed: 2011-01-25

Analyzed By: AG

			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Benzene		mg/L	0.100	0.0873	87	80 - 120	2011-01-25
Toluene		mg/L	0.100	0.101	101	80 - 120	2011-01-25
Ethylbenzene		mg/L	0.100	0.105	105	80 - 120	2011-01-25
Xylene		mg/L	0.300	0.315	105	80 - 120	2011-01-25

Standard (CCV-1)

QC Batch: 77371

Date Analyzed: 2011-02-02

Analyzed By: PG

			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride		mg/L	25.0	24.5	98	90 - 110	2011-02-02

Report Date: February 7, 2011 Work Order: 11012134 Page Number: 19 of 20 115-6403133A Chavez County, NM Celero/Rock Queen #33 Standard (CCV-2) QC Batch: 77371 Date Analyzed: 2011-02-02 Analyzed By: PG CCVs **CCVs CCVs** Percent True Found Percent Recovery Date Param Flag Units Limits Analyzed Conc. Conc. Recovery 90 - 110 Chloride mg/L 25.0 24.0 96 2011-02-02 Standard (CCV-1) Analyzed By: PG QC Batch: 77372 Date Analyzed: 2011-02-02 **CCVs CCVs CCVs** Percent True Found Percent Recovery Date Limits Analyzed Param Flag Units Conc. Conc. Recovery 2011-02-02 90 - 110 Chloride mg/L 25.0 24.0 Standard (CCV-1) Analyzed By: PG QC Batch: 77372 Date Analyzed: 2011-02-02 **CCVs CCVs CCVs** Percent True Found Percent Recovery Date Param Flag Units Conc. Conc. Recovery Limits Analyzed 90 - 110 2011-02-02 Sulfate mg/L 25.024.598 Standard (CCV-2) Analyzed By: PG QC Batch: 77372 Date Analyzed: 2011-02-02 **CCVs CCVs CCVs** Percent Date Recovery True Found Percent Param Flag Units Limits Analyzed Conc. Conc. Recovery Chloride 90 - 110 2011-02-02 25.0 24.1 96 mg/L

Standard (CCV-2)

QC Batch: 77372 Date Analyzed: 2011-02-02

CCVs CCVs**CCVs** Percent Date True Found Percent Recovery Analyzed Flag Limits Param Units Conc. Conc. Recovery Sulfate mg/L 25.0 24.6 98 90 - 110 2011-02-02

Analyzed By: PG

Report Date: February 7, 2011 115-6403133A

Work Order: 11012134

Page Number: 20 of 20 Chavez County, NM

Celero/Rock Queen #33

Standard (CCV-1)

QC Batch: 77426

Date Analyzed: 2011-02-06

Analyzed By: PG

			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Sulfate		mg/L	25.0	25.2	101	90 - 110	2011-02-06

Standard (CCV-2)

QC Batch: 77426

Date Analyzed: 2011-02-06

Analyzed By: PG

			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Sulfate		mg/L	25.0	24.7	99	90 - 110	2011-02-06

2004: 11012134

PAGE: / OF: /	ANALYSIS HEQUEST	(Circle or Specify Method No.)	J Cr Pb Hg Se	\$ 8\$ CS	MOD. a Ag A Age Age Age Age Age Age Age Age Ag	MH 8510 LIM 8012 RELEX 8033 NONE NONE	XX X X X							1/11	HAMPLE SHIPPED BY GREEN AIRBILL P. TITME: HAMPLED DELIVERED LUPS GTHER.		15 ZK951497 J.	L. Wat - (Klinides, Soy
	Rec					HCF HILEHED (J HCF	\$ € \$			\$ 				3 6			The C	
	Analysis Request of Chain of Custody Record		TETRA TECH 1910 N. Big Spring St. Midland, Texas 79705 (432) 682-4559 • Fax (432) 682-3846	SITE MANAGER:	1	SAMPLE IDENTIFICATION	7 :	2	1 24	h			į	RESERVED STATES	1/24/1	MOCENCE BY (Square)	The man of the property of the party of the	1-61
	sent	1	7		PROJECT NAME	4700	×	₹ 	1	Ž V				Zime:	Time	Times	TA MONE	
	Rec	L			PRO OF	COWE	3	2	1.5	≯			=				3	e \
ŀ	Sis			4	2	TIME	1135	1155	1215	5021				7			SAVE	1 Ta C
1	ialy				JEGT NO.: /** (* 4€ 3 / 3	DATE	1/21	Mary Property and Control of the Con		-				200	30 00	and the control	W FOR	T. T
	A			CLIENT NAME	PROJECT NO.:	LAB I.D. NUMBER	18000	CBb	SPb	helb				RELINCUISHED BY: (Signature)	RECHOUSING BY SIgnature		ADONERS: OTTY:	RAINTE CONDITION WITH RECEIVED.



6701 Aberdeen Avenue, Suite 9 200 East Sunset Road, Suite E 5002 Basin Street, Suite A1 6015 Harris Parkway, Suite 110 Ft. Worth, Texas 76132

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

800 • 378 • 1296 888 • 588 • 3443

806 • 794 • 1296 915 • 585 • 3443 432 • 689 • 6301

FAX 806 • 794 • 1298 FAX 915 • 585 • 4944 FAX 432 • 689 • 6313

817-201-5260

E-Mail: lab@traceanalysis.com

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

Jeff Kindley Report Date: May 4, 2011

Tetra Tech

1910 N. Big Spring Street Work Order: 11041529 Midland, TX, 79705

Project Name: Celero/Rock Queen Unit Tract #33

Project Number: 115-6403133

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

			Date	\mathbf{Time}	Date
Sample	Description	Matrix	Taken	Taken	Received
263904	MW-1	water	2011-04-14	18:15	2011-04-15
263905	MW-2	water	2011-04-14	18:45	2011-04-15
263906	MW-3	water	2011-04-14	18:45	2011-04-15
263907	MW-4	water	2011-04-14	18:30	2011-04-15
263908	RW-1	water	2011-04-14	18:30	2011-04-15

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

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

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

Report Contents

Sample 263906 (MW-1) Sample 263906 (MW-2) Sample 263906 (MW-3) Sample 263907 (MW-4) Sample 263907 (MW-4) Sample 263907 (MW-4) Sample 263908 (RW-1) 1 Method Blanks 1 QC Batch 80420 - Method Blank (1) 1 QC Batch 80470 - Method Blank (1) 1 QC Batch 80665 - Method Blank (1) 1 QC Batch 80666 - Method Blank (1) 1 QC Batch 80669 - Method Blank (1) 1 QC Batch 80869 - Method Blank (1) 1 QC Batch 80869 - Duplicate (1) 1 QC Batch 80869 - Duplicate (1) 1 QC Batch 80869 - Duplicate (1) 1 QC Batch 80860 - LCS (1) 1 QC Batch 80665 - LCS (1) 1 QC Batch 80665 - LCS (1) 1 QC Batch 80666 - LCS (1) 2 QC Batch 80470 - CCV (2) 2 QC Batch 80470 - CCV (2) 2 QC Batch 80470 - CCV (2) 2 QC Batch 80665 - LCV (1) 2 QC Bat	Case Narrative	
Sample 263906 (MW-2) Sample 263907 (MW-4) Sample 263907 (MW-4) Sample 263907 (MW-4) Sample 263908 (RW-1) 1	Analytical Report	
Sample 263906 (MW-3) Sample 263908 (RW-1) 1		
Sample 263907 (MW-4) Sample 263908 (RW-1) 1		
Sample 263908 (RW-1) 1 1	Sample 263906 (MW-3)	
Method Blanks 1 QC Batch 80420 - Method Blank (1) 1 QC Batch 80665 - Method Blank (1) 1 QC Batch 80665 - Method Blank (1) 1 QC Batch 80666 - Method Blank (1) 1 QC Batch 80666 - Method Blank (1) 1 QC Batch 80826 - Method Blank (1) 1 QC Batch 80826 - Method Blank (1) 1 QC Batch 80826 - Duplicate (1) 1 QC Batch 80829 - Duplicate (1) 1 QC Batch 80869 - Duplicate (1) 1 QC Batch 80869 - Duplicate (1) 1 QC Batch 80869 - LCS (1) 1 QC Batch 80869 - LCS (1) 1 QC Batch 80865 - LCS (1) 1 QC Batch 80665 - LCS (1) 1 QC Batch 80869 - LCS (1) 1 QC Batch 80665 - MS (1) 1 QC Batch 80666 - MS (1	Sample 263907 (MW-4)	
QC Batch 80420 - Method Blank (1) QC Batch 80470 - Method Blank (1) QC Batch 80665 - Method Blank (1) QC Batch 80665 - Method Blank (1) QC Batch 80666 - Method Blank (1) QC Batch 80666 - Method Blank (1) QC Batch 80666 - Method Blank (1) QC Batch 80866 - Method Blank (1) QC Batch 80826 - Method Blank (1) QC Batch 80826 - Method Blank (1) QC Batch 80826 - Duplicate (1) QC Batch 80826 - Duplicate (1) QC Batch 80826 - Duplicate (1) QC Batch 80420 - LCS (1) QC Batch 80420 - LCS (1) QC Batch 80420 - LCS (1) QC Batch 80665 - LCS (1) QC Batch 80666 - MS (1) QC Batch 80665 - CCV (1) QC Batch 80666 - CCV (1)	Sample 263908 (RW-1)	
QC Batch 80470 - Method Blank (1) QC Batch 80665 - Method Blank (1) QC Batch 80666 - Method Blank (1) QC Batch 80666 - Method Blank (1) QC Batch 80666 - Method Blank (1) QC Batch 80866 - Method Blank (1) QC Batch 80869 - Method Blank (1) QC Batch 80869 - Method Blank (1) QC Batch 80869 - Duplicate (1) QC Batch 80470 - LCS (1) QC Batch 80470 - LCS (1) QC Batch 80470 - LCS (1) QC Batch 80665 - LCS (1) QC Batch 80666 - MS (1) QC Batch 80666 - MS (1) QC Batch 80665 - MS (1) QC Batch 80666 - MS (1) QC Batch 80665 - LCV (1) QC Batch 80470 - CCV (2) QC Batch 80665 - LCV (1) QC Batch 80665 - LCV (1) QC Batch 80665 - CCV (1) QC Batch 80666 - CCV (1) QC Batch 80665 - CCV (1) QC Batch 80666 - CCV (1)	Method Blanks	1
QC Batch 80470 - Method Blank (1) QC Batch 80665 - Method Blank (1) QC Batch 80666 - Method Blank (1) QC Batch 80666 - Method Blank (1) QC Batch 80666 - Method Blank (1) QC Batch 80866 - Method Blank (1) QC Batch 80869 - Method Blank (1) QC Batch 80869 - Method Blank (1) QC Batch 80869 - Duplicate (1) QC Batch 80470 - LCS (1) QC Batch 80470 - LCS (1) QC Batch 80470 - LCS (1) QC Batch 80665 - LCS (1) QC Batch 80666 - MS (1) QC Batch 80666 - MS (1) QC Batch 80665 - MS (1) QC Batch 80666 - MS (1) QC Batch 80665 - LCV (1) QC Batch 80470 - CCV (2) QC Batch 80665 - LCV (1) QC Batch 80665 - LCV (1) QC Batch 80665 - CCV (1) QC Batch 80666 - CCV (1) QC Batch 80665 - CCV (1) QC Batch 80666 - CCV (1)	QC Batch 80420 - Method Blank (1)	
QC Batch 80665 - Method Blank (1) QC Batch 80666 - Method Blank (1) QC Batch 80666 - Method Blank (1) QC Batch 80666 - Method Blank (1) QC Batch 80820 - Method Blank (1) QC Batch 80820 - Method Blank (1) QC Batch 80820 - Duplicate (1) QC Batch 80820 - Duplicate (1) QC Batch 80860 - Duplicate (1) QC Batch 80860 - Duplicate (1) QC Batch 80860 - Duplicate (1) QC Batch 80420 - LCS (1) QC Batch 80420 - LCS (1) QC Batch 80420 - LCS (1) QC Batch 80665 - LCS (1) QC Batch 80665 - LCS (1) QC Batch 80666 - MS (1) QC Batch 80665 - LCS (1) QC Batch 80420 - CCV (1) QC Batch 80420 - CCV (2) QC Batch 80470 - CCV (2) QC Batch 80470 - CCV (2) QC Batch 80665 - LCV (1) QC Batch 80665 - LCV (1) QC Batch 80665 - CCV (1)		
QC Batch 80666 - Method Blank (1) QC Batch 808666 - Method Blank (1) QC Batch 808666 - Method Blank (1) QC Batch 80869 - Method Blank (1) QC Batch 80869 - Method Blank (1) QC Batch 80869 - Duplicate (1) QC Batch 80869 - Duplicate (1) QC Batch 80869 - Duplicate (1) QC Batch 80420 - LCS (1) QC Batch 80470 - LCS (1) QC Batch 80470 - LCS (1) QC Batch 80665 - LCS (1) QC Batch 80666 - MS (1) QC Batch 80470 - CCV (2) QC Batch 80470 - CCV (2) QC Batch 80665 - ICV (1) QC Batch 80665 - ICV (1) QC Batch 80665 - CCV (1)		
QC Batch 80666 - Method Blank (1) 1 QC Batch 80826 - Method Blank (1) 1 QC Batch 80829 - Method Blank (1) 1 QC Batch 80826 - Duplicate (1) 1 QC Batch 80826 - Duplicate (1) 1 Laboratory Control Spikes 1 QC Batch 80420 - LCS (1) 1 QC Batch 80470 - LCS (1) 1 QC Batch 80665 - LCS (1) 1 QC Batch 80665 - LCS (1) 1 QC Batch 80666 - LCS (1) 1 QC Batch 80666 - LCS (1) 1 QC Batch 80866 - LCS (1) 1 QC Batch 80866 - MS (1) 1 QC Batch 80665 - MS (1) 1 QC Batch 80666 - MS (1) 2 QC Batch 80666 - MS (1) 2 QC Batch 80400 - CCV (2) 2 QC Batch 80470 - CCV (2) 2 QC Batch 80665 - ICV (1) 2 QC Batch 80665 - ICV (1) 2 QC Batch 80665 - ICV (1) 2 QC Batch 80666 - ICV (1) 2 QC Bat	QC Batch 80665 - Method Blank (1)	
QC Batch 80826 - Method Blank (1) QC Batch 80826 - Duplicate (1) Laboratory Control Spikes QC Batch 80420 - LCS (1) QC Batch 80470 - LCS (1) QC Batch 80665 - LCS (1) QC Batch 80665 - LCS (1) QC Batch 80666 - MS (1) QC Batch 80665 - CCV (1) QC Batch 80420 - CCV (2) QC Batch 80470 - CCV (2) QC Batch 80470 - CCV (2) QC Batch 80665 - ICV (1) QC Batch 80665 - ICV (1) QC Batch 80665 - CCV (1) QC Batch 80666 - ICV (1) QC Batch 80666 - ICV (1)	QC Batch 80666 - Method Blank (1)	
QC Batch 80826 - Method Blank (1) QC Batch 80826 - Duplicate (1) Laboratory Control Spikes QC Batch 80420 - LCS (1) QC Batch 80470 - LCS (1) QC Batch 80665 - LCS (1) QC Batch 80665 - LCS (1) QC Batch 80666 - MS (1) QC Batch 80665 - CCV (1) QC Batch 80420 - CCV (2) QC Batch 80470 - CCV (2) QC Batch 80470 - CCV (2) QC Batch 80665 - ICV (1) QC Batch 80665 - ICV (1) QC Batch 80665 - CCV (1) QC Batch 80666 - ICV (1) QC Batch 80666 - ICV (1)	QC Batch 80666 - Method Blank (1)	
QC Batch 80826 - Duplicate (1) QC Batch 80869 - Duplicate (1) Laboratory Control Spikes QC Batch 80420 - LCS (1) QC Batch 80420 - LCS (1) QC Batch 80470 - LCS (1) QC Batch 80665 - LCS (1) QC Batch 80665 - LCS (1) QC Batch 80666 - LCS (1) QC Batch 80666 - LCS (1) QC Batch 80666 - LCS (1) QC Batch 80826 - LCS (1) QC Batch 80826 - LCS (1) QC Batch 80869 - LCS (1) QC Batch 80869 - LCS (1) QC Batch 80665 - MS (1) QC Batch 80665 - MS (1) QC Batch 80666 - MS (1) QC Batch 80666 - MS (1) QC Batch 80666 - MS (1) QC Batch 80420 - CCV (1) QC Batch 80420 - CCV (2) QC Batch 80470 - CCV (1) QC Batch 804665 - ICV (1) QC Batch 80665 - ICV (1) QC Batch 80666 - ICV (1)		
QC Batch 80869 - Duplicate (1) Laboratory Control Spikes QC Batch 80420 - LCS (1) QC Batch 80470 - LCS (1) QC Batch 80665 - LCS (1) QC Batch 80665 - LCS (1) QC Batch 80666 - LCS (1) QC Batch 80666 - LCS (1) QC Batch 80866 - LCS (1) QC Batch 80866 - LCS (1) QC Batch 80869 - LCS (1) QC Batch 80869 - LCS (1) QC Batch 80869 - LCS (1) QC Batch 80665 - MS (1) QC Batch 80665 - MS (1) QC Batch 80666 - MS (1) QC Batch 80470 - CCV (2) QC Batch 804665 - ICV (1) QC Batch 80665 - ICV (1) QC Batch 80666 - ICV (1)	QC Batch 80869 - Method Blank (1)	
Laboratory Control Spikes 1 QC Batch 80420 - LCS (1)	QC Batch 80826 - Duplicate (1)	
QC Batch 80420 - LCS (1) QC Batch 80470 - LCS (1) QC Batch 80665 - LCS (1) QC Batch 80665 - LCS (1) QC Batch 80666 - LCS (1) QC Batch 80666 - LCS (1) QC Batch 80666 - LCS (1) QC Batch 80826 - LCS (1) QC Batch 80826 - LCS (1) QC Batch 80869 - LCS (1) QC Batch 80665 - MS (1) QC Batch 80665 - MS (1) QC Batch 80666 - MS (1) QC Batch 80420 - CCV (1) QC Batch 80420 - CCV (2) QC Batch 80470 - CCV (2) QC Batch 80470 - CCV (2) QC Batch 80470 - CCV (2) QC Batch 80665 - ICV (1) QC Batch 80665 - ICV (1) QC Batch 80665 - CCV (1) QC Batch 80665 - CCV (1) QC Batch 80666 - ICV (1)	QC Batch 80869 - Duplicate (1)	
QC Batch 80420 - LCS (1)	Laboratory Control Spikes	1
QC Batch 80470 - LCS (1) QC Batch 80665 - LCS (1) QC Batch 80665 - LCS (1) QC Batch 80666 - LCS (1) QC Batch 80666 - LCS (1) QC Batch 80666 - LCS (1) QC Batch 80826 - LCS (1) QC Batch 80869 - LCS (1) QC Batch 80665 - MS (1) QC Batch 80665 - MS (1) QC Batch 80666 - MS (1) QC Batch 80666 - MS (1) QC Batch 80666 - MS (1) QC Batch 80420 - CCV (1) QC Batch 80420 - CCV (2) QC Batch 80470 - CCV (2) QC Batch 80470 - CCV (2) QC Batch 80470 - CCV (2) QC Batch 80665 - ICV (1) QC Batch 80665 - ICV (1) QC Batch 80665 - CCV (1) QC Batch 80665 - CCV (1) QC Batch 80665 - CCV (1) QC Batch 806665 - CCV (1)		
QC Batch 80665 - LCS (1)	· ,	
QC Batch 80665 - LCS (1) QC Batch 80666 - LCS (1) QC Batch 80666 - LCS (1) QC Batch 80826 - LCS (1) QC Batch 80826 - LCS (1) QC Batch 80869 - LCS (1) QC Batch 80665 - MS (1) QC Batch 80665 - MS (1) QC Batch 80665 - MS (1) QC Batch 80666 - MS (1) QC Batch 80666 - MS (1) QC Batch 80420 - CCV (1) QC Batch 80420 - CCV (2) QC Batch 80470 - CCV (2) QC Batch 80665 - ICV (1) QC Batch 80665 - ICV (1) QC Batch 80665 - CCV (1) QC Batch 80665 - CCV (1) QC Batch 80665 - CCV (1) QC Batch 80666 - CCV (1) QC Batch 80666 - CCV (1)	•	
QC Batch 80666 - LCS (1) QC Batch 80666 - LCS (1) QC Batch 80826 - LCS (1) QC Batch 80826 - LCS (1) QC Batch 80869 - LCS (1) QC Batch 80665 - MS (1) QC Batch 80665 - MS (1) QC Batch 80666 - MS (1) QC Batch 80666 - MS (1) QC Batch 80666 - MS (1) QC Batch 80420 - CCV (1) QC Batch 80420 - CCV (2) QC Batch 80470 - CCV (2) QC Batch 80470 - CCV (2) QC Batch 80470 - CCV (2) QC Batch 804665 - ICV (1) QC Batch 80665 - ICV (1) QC Batch 80665 - CCV (1) QC Batch 80666 - ICV (1)		
QC Batch 80666 - LCS (1) 1 QC Batch 80826 - LCS (1) 1 QC Batch 80869 - LCS (1) 1 QC Batch 80665 - MS (1) 1 QC Batch 80666 - MS (1) 1 QC Batch 80666 - MS (1) 1 QC Batch 80400 - CCV (1) 2 QC Batch 80420 - CCV (2) 2 QC Batch 80470 - CCV (2) 2 QC Batch 80470 - CCV (2) 2 QC Batch 80470 - CCV (2) 2 QC Batch 80665 - ICV (1) 2 QC Batch 80665 - CCV (1) 2 QC Batch 80665 - CCV (1) 2 QC Batch 80666 - ICV (1) 2 QC Batch 80666 - ICV (1) 2 QC Batch 80666 - ICV (1) 2		
QC Batch 80826 - LCS (1) QC Batch 80869 - LCS (1) QC Batch 80665 - MS (1) QC Batch 80665 - MS (1) QC Batch 80666 - MS (1) QC Batch 80666 - MS (1) QC Batch 80666 - MS (1) Calibration Standards QC Batch 80420 - CCV (1) QC Batch 80420 - CCV (2) QC Batch 80470 - CCV (1) QC Batch 80470 - CCV (2) QC Batch 80470 - CCV (2) QC Batch 80665 - ICV (1) QC Batch 80665 - ICV (1) QC Batch 80665 - CCV (1) QC Batch 80665 - CCV (1) QC Batch 80666 - CCV (1)		
QC Batch 80869 - LCS (1) QC Batch 80665 - MS (1) QC Batch 80665 - MS (1) QC Batch 80666 - MS (1) QC Batch 80666 - MS (1) QC Batch 80666 - MS (1) Calibration Standards QC Batch 80420 - CCV (1) QC Batch 80420 - CCV (2) QC Batch 80470 - CCV (1) QC Batch 80470 - CCV (2) QC Batch 80470 - CCV (2) QC Batch 80665 - ICV (1) QC Batch 80665 - ICV (1) QC Batch 80665 - CCV (1) QC Batch 80665 - CCV (1) QC Batch 80666 - CCV (1)		
QC Batch 80665 - MS (1) QC Batch 80665 - MS (1) QC Batch 80666 - MS (1) QC Batch 80666 - MS (1) Calibration Standards QC Batch 80420 - CCV (1) QC Batch 80420 - CCV (2) QC Batch 80470 - CCV (1) QC Batch 80470 - CCV (2) QC Batch 80470 - CCV (2) QC Batch 80470 - CCV (2) QC Batch 80665 - ICV (1) QC Batch 80665 - ICV (1) QC Batch 80665 - CCV (1) QC Batch 80665 - CCV (1) QC Batch 80666 - ICV (1)	•	
QC Batch 80665 - MS (1) QC Batch 80666 - MS (1) QC Batch 80666 - MS (1) Calibration Standards QC Batch 80420 - CCV (1) QC Batch 80420 - CCV (2) QC Batch 80470 - CCV (1) QC Batch 80470 - CCV (2) QC Batch 80470 - CCV (1) QC Batch 80665 - ICV (1) QC Batch 80665 - ICV (1) QC Batch 80665 - CCV (1) QC Batch 80665 - CCV (1) QC Batch 80666 - ICV (1)		
QC Batch 80666 - MS (1) QC Batch 80666 - MS (1) Calibration Standards QC Batch 80420 - CCV (1) QC Batch 80420 - CCV (2) QC Batch 80470 - CCV (1) QC Batch 80470 - CCV (2) QC Batch 80470 - CCV (2) QC Batch 80665 - ICV (1) QC Batch 80665 - ICV (1) QC Batch 80665 - CCV (1) QC Batch 80665 - CCV (1) QC Batch 80666 - ICV (1)		
QC Batch 80666 - MS (1) Calibration Standards QC Batch 80420 - CCV (1) QC Batch 80420 - CCV (2) QC Batch 80470 - CCV (1) QC Batch 80470 - CCV (2) QC Batch 80470 - CCV (2) QC Batch 8065 - ICV (1) QC Batch 80665 - ICV (1) QC Batch 80665 - CCV (1) QC Batch 80665 - CCV (1) QC Batch 80665 - CCV (1) QC Batch 80666 - ICV (1)		
QC Batch 80420 - CCV (1) QC Batch 80420 - CCV (2) QC Batch 80470 - CCV (1) QC Batch 80470 - CCV (2) QC Batch 80470 - CCV (2) QC Batch 80665 - ICV (1) QC Batch 80665 - ICV (1) QC Batch 80665 - CCV (1) QC Batch 80665 - CCV (1) QC Batch 80666 - ICV (1)		
QC Batch 80420 - CCV (1) QC Batch 80420 - CCV (2) QC Batch 80470 - CCV (1) QC Batch 80470 - CCV (2) QC Batch 80470 - CCV (2) QC Batch 80665 - ICV (1) QC Batch 80665 - ICV (1) QC Batch 80665 - CCV (1) QC Batch 80665 - CCV (1) QC Batch 80666 - ICV (1)	Calibration Standards	2
QC Batch 80420 - CCV (2) QC Batch 80470 - CCV (1) QC Batch 80470 - CCV (2) QC Batch 80665 - ICV (1) QC Batch 80665 - ICV (1) QC Batch 80665 - CCV (1) QC Batch 80665 - CCV (1) QC Batch 80665 - CCV (1) QC Batch 80666 - ICV (1)		
QC Batch 80470 - CCV (1) QC Batch 80470 - CCV (2) QC Batch 80665 - ICV (1) QC Batch 80665 - ICV (1) QC Batch 80665 - CCV (1) QC Batch 80665 - CCV (1) QC Batch 80665 - CCV (1) QC Batch 80666 - ICV (1)		
QC Batch 80470 - CCV (2) 2 QC Batch 80665 - ICV (1) 2 QC Batch 80665 - ICV (1) 2 QC Batch 80665 - CCV (1) 2 QC Batch 80665 - CCV (1) 2 QC Batch 80666 - ICV (1) 2		
QC Batch 80665 - ICV (1) 2 QC Batch 80665 - ICV (1) 2 QC Batch 80665 - CCV (1) 2 QC Batch 80665 - CCV (1) 2 QC Batch 80666 - ICV (1) 2		
QC Batch 80665 - ICV (1)		• • • • • • • • • • • • • • • • • • • •
QC Batch 80665 - CCV (1)		
QC Batch 80665 - CCV (1)		
QC Batch 80666 - ICV (1)		
40 Dated 60000 10 (1) 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
CAC DALCO ADDOO + 3C V 111		

QC Batch 80666 - CCV (1)	 	 	
QC Batch 80666 - CCV (1)	 	 	
Appendix			2
Laboratory Certifications			-
Standard Flags	 	 <i></i>	
Attachmente			9

Case Narrative

Samples for project Celero/Rock Queen Unit Tract #33 were received by TraceAnalysis, Inc. on 2011-04-15 and assigned to work order 11041529. Samples for work order 11041529 were received intact without headspace and at a temperature of 0.6 C.

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

		Prep	Prep	QC	Analysis
Test	Method	Batch	Date	Batch	Date
BTEX	S 8021B	68258	2011-04-18 at 08:51	80420	2011-04-18 at 23:21
BTEX	S 8021B	68300	2011-04-19 at 09:52	80470	2011-04-20 at 01:20
Chloride (IC)	E 300.0	68438	2011-04-25 at 11:24	80665	2011-04-26 at 15:32
Chloride (IC)	E 300.0	68439	2011-04-25 at 14:24	80666	2011-04-26 at 15:33
SO4 (IC)	E 300.0	68438	2011-04-25 at 11:24	80665	2011-04-26 at 15:32
SO4 (IC)	E 300.0	68439	2011-04-25 at 14:24	80666	2011-04-26 at 15:33
TDS	SM 2540C	68432	2011-04-22 at 12:00	80826	2011-04-29 at 14:31
TDS	SM 2540C	68433	2011-04-25 at 12:18	80869	2011-05-02 at 09:35

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 11041529 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

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

Report Date: May 4, 2011 115-6403133 Work Order: 11041529 Celero/Rock Queen Unit Tract #33 Page Number: 5 of 25

Analytical Report

Sample: 263904 - MW-1

Laboratory: Midland

Analysis: Analytical Method: Prep Method: S 5030B BTEX S 8021B QC Batch: 80420 Date Analyzed: 2011-04-18 Analyzed By: ME Prep Batch: Prepared By: ME68258 Sample Preparation: 2011-04-18

RLFlag Parameter Cert Result Units Dilution RLBenzene 0.00100 0.00760 mg/L 1 Toluene < 0.00100 mg/L1 0.00100Ethylbenzene < 0.00100 mg/L 1 0.00100 < 0.00100 mg/L 0.00100 **Xylene** 1

						Spike	Percent	Recovery
Surrogate	\mathbf{Flag}	Cert	Result	\mathbf{Units}	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)		1	0.0763	mg/L	1	0.100	76	67.8 - 129
4-Bromofluorobenzene (4-BFB)		1	0.0949	mg/L	1	0.100	95	51.1 - 128

Sample: 263904 - MW-1

Laboratory: Midland

Analytical Method: Prep Method: N/A Analysis: Chloride (IC) E 300.0 QC Batch: 80665 Date Analyzed: 2011-04-26 Analyzed By: ARPrep Batch: 68438 Sample Preparation: 2011-04-25 Prepared By:

Sample: 263904 - MW-1

Laboratory: Midland

Analysis: SO4 (IC) Analytical Method: E 300.0 Prep Method: N/A QC Batch: 80665 Date Analyzed: 2011-04-26 Analyzed By: AR Prep Batch: 68438 Sample Preparation: 2011-04-25 Prepared By: AR

Report Date: May 4, 2011 Work Order: 11041529 Page Number: 6 of 25

115-6403133 Celero/Rock Queen Unit Tract #33 Sample: 263904 - MW-1 Laboratory: Midland Analytical Method: SM 2540C Prep Method: N/A Analysis: TDS QC Batch: 80826 Date Analyzed: 2011-04-29 Analyzed By: AR Prep Batch: 68432 Prepared By: ARSample Preparation: 2011-04-25 RLUnits Dilution RLParameter Flag Cert Result Total Dissolved Solids 116000 nıg/L 100 10.0

Sample: 263905 - MW-2

Laboratory: Midland
Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5030B

QC Batch: 80420 Date Analyzed: 2011-04-18 Analyzed By: ME
Prep Batch: 68258 Sample Preparation: 2011-04-18 Prepared By: ME

			RL			
Parameter	\mathbf{Flag}	Cert	Result	Units	Dilution	RL
Benzene		A	< 0.00100	mg/L	1	0.00100
Toluene		1	< 0.00100	mg/L	1	0.00100
Ethylbenzene		1	< 0.00100	mg/L	1	0.00100
Xylene		1	< 0.00100	mg/L	1	0.00100

						Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)		1	0.0964	mg/L	1	0.100	96	67.8 - 129
4-Bromofluorobenzene (4-BFB)		1	0.0993	mg/L	1	0.100	99	51.1 - 128

Sample: 263905 - MW-2

Laboratory: Midland

Prep Method: N/A Analysis: Chloride (IC) Analytical Method: E 300.0 QC Batch: 80665 Date Analyzed: 2011-04-26 Analyzed By: AR Sample Preparation: Prepared By: Prep Batch: 68438 2011-04-25 AR

			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride		1	48.5	mg/L	5	2.50

Report Date 115-6403133	Report Date: May 4, 2011 115-6403133			Work Order: o/Rock Queen	Page Number:	7 of 25		
Sample: 26	3905 - MW-2							
Laboratory: Analysis: QC Batch: Prep Batch:	Midland SO4 (IC) 80665 68438		Date	tical Method: Analyzed: le Preparation	E 300.0 2011-04-26 2011-04-25		Prep Method: Analyzed By: Prepared By:	N/A AR AR
			~		RL	**	5 0	D.1
Parameter		Flag	Ce	rt R	esult	Units	Dilution	RL
Sulfate			1		133	mg/L	5	2.50
Sample: 26	3905 - MW-2							
Laboratory:	Midland							
Analysis:	TDS		Analy	tical Method:	SM 2540C		Prep Method:	N/A
QC Batch:	80869			Analyzed:	2011-05-02		Analyzed By:	AR
Prep Batch:	68433			e Preparation:	2011-03-02		Prepared By:	AR
Parameter			Flag	Cert	RL Result	Units	Dilution	RL
Total Dissolv	ed Solids		0	1	544	mg/L	2	10.0
TOTAL DESCRIPTION						6/2		

Sample:	263906 -	MW-3
---------	----------	------

La	DOI	ratory:	Mid.	lanc
			TOTAL	37F

Analysis: BTEX QC Batch: 80420 Prep Batch: 68258 Analytical Method: Date Analyzed: Prep Method: S 5030B Analyzed By: ME S 8021B 2011-04-18 BTEXSample Preparation: 2011-04-18 Prepared By: ME

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

						Spike	Percent	Recovery
Surrogate	\mathbf{Flag}	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)		1	0.0962	mg/L	1	0.100	96	67.8 - 129
4-Bromofluorobenzene (4-BFB)		1	0.105	mg/L	1	0.100	105	51.1 - 128

Report Date: 115-6403133	May 4, 2011	, 2011 Work Order: 11041529 Celero/Rock Queen Unit Tract #33				33	Page Number: 8 of 25			
Sample: 263	3906 - MW-3									
Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (IC) 80665 68438		Dε	nalytical Metho ate Analyzed: mple Preparat	2011-04-2		Prep Method: Analyzed By: Prepared By:	N/A AR AR		
					RL					
Parameter		Flag	C	ert	Result	Units	Dilution	RL		
Chloride				1	5420	mg/L	1000	2.50		
Sample: 263	3906 - MW-3									
Laboratory:	Midland									
Analysis:	SO4 (IC)			ytical Method			Prep Method:	N/A		
QC Batch:	80665			Analyzed:	2011-04-26		Analyzed By:	AR		
Prep Batch:	68438		Sam	ple Preparation	n: 2011-04-25		Prepared By:	AR		
_			_		RL					
Parameter		Flag	C	ert	Result	Units	Dilution	RL		
Sulfate				1	126	mg/L	5	2.50		
Sample: 263	3906 - MW-3									
Laboratory:	Midland									
Analysis:	TDS			ytical Method:			Prep Method:	N/A		
QC Batch:	80869			Analyzed:	2011-05-02		Analyzed By:	AR		
Prep Batch:	68433		Samp	ole Preparation	1: 2011-04-26		Prepared By:	AR		
					RL					
Parameter			Flag	Cert	Result	Units	Dilution	RL		
Total Dissolve	ed Solids			1	6180	mg/L	20	10.0		
Sample: 263	8907 - MW-4									
Laboratory:	Midland									
Analysis:	BTEX			ical Method:	S 8021B		Prep Method: S	5030B		
•	80420			nalyzed:	2011-04-18		Analyzed By: Ml			
Prep Batch:	68258		Sample	Preparation:	2011-04-18		Prepared By: Ml	E		

continued ...

115 - 6403133

Work Order: 11041529 Celero/Rock Queen Unit Tract #33 Page Number: 9 of 25

sample 263907 continued ...

				RL				
Parameter	Flag	Cert		Result	Unit	s	Dilution	RL
				RL				
Parameter	Flag	Cert		Result	Unit	S	Dilution	RL
Benzene		1	<	0.00100	mg/	L	1	0.00100
Toluene		1	<	0.00100	mg/	L	1	0.00100
Ethylbenzene		1	<	0.00100	mg/	L	1	0.00100
Xylene		J	<	0.00100	mg/	L	1	0.00100
						Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)		1	0.0885	mg/L	1	0.100	88	67.8 - 129
4-Bromofluorobenzene (4-BFB)		1	0.0952	mg/L	1	0.100	95	51.1 - 128

Sample: 263907 - MW-4

Laboratory: Midland

Analysis: Chloride (IC)

Analytical Method: E 300.0

Prep Method: N/A

QC Batch: 80666

Date Analyzed: 2011-04-26

Prep Batch: 68439

Sample Preparation: 2011-04-25

Prep Repared By: AR

			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride		1	7410	mg/L	1000	2.50

Sample: 263907 - MW-4

Laboratory: Midland

Analysis: SO4 (IC) Analytical Method: E 300.0 Prep Method: N/A QC Batch: 80666 Date Analyzed: 2011-04-26 Analyzed By: AR Prep Batch: 68439 Sample Preparation: 2011-04-25 Prepared By: AR

			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
Sulfate		1	236	mg/L	5	2.50

Work Order: 11041529

115-6403133

Celero/Rock Queen Unit Tract #33

Page Number: 10 of 25

Sample: 263907 - MW-4

Laboratory: Midland

Analytical Method: SM 2540C Analysis: TDS Prep Method: N/A QC Batch: 80869 Date Analyzed: 2011-05-02 Analyzed By: AR68433 Sample Preparation: 2011-04-26 Prep Batch: Prepared By: AR

RL

Parameter Flag Cert Result Units Dilution RL25400 10.0 Total Dissolved Solids mg/L 100

Sample: 263908 - RW-1

Laboratory: Midland

Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5030B QC Batch: 80470 Date Analyzed: 2011-04-20 Analyzed By: ME Sample Preparation: 68300 2011-04-19 Prepared By: ME Prep Batch:

RLParameter Flag Cert Result Units Dilution RLBenzene 0.0124mg/L 1 0.00100 Toluene 0.00700mg/L1 0.00100 Ethylbenzene < 0.00100 mg/L 1 0.001001 Xylene 0.0176mg/L 1 0.00100

						\mathbf{Spike}	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)		1	0.0794	mg/L	1	0.100	79	67.8 - 129
4-Bromofluorobenzene (4-BFB)		1	0.0910	mg/L	1	0.100	91	51.1 - 128

Sample: 263908 - RW-1

Laboratory: Midland

Analysis: Chloride (IC) Analytical Method: E 300.0 Prep Method: N/A QC Batch: 80666 Date Analyzed: 2011-04-26 Analyzed By: AR Sample Preparation: 2011-04-25 Prepared By: Prep Batch: 68439 AR

RLFlag Cert Result Units Dilution RLParameter 83700 5000 2.50 Chloride 1 mg/L

Report Date: May 4, 2011 115-6403133		Work Celero/Rock	Order: 11 Queen U	3	Page Number: 11 of 25			
Sample: 263908 - RW-1								
Laboratory: Midland								
Analysis: SO4 (IC)		Analytical M		E 300.0		Prep Method:	N/A	
QC Batch: 80666		Date Analyzed: 2011-04-26				Analyzed By:	AR	
Prep Batch: 68439		Sample Prep	aration:	2011-04-25		Prepared By:	AR.	
				RL				
Parameter	Flag	Cert	Re	sult Units		Dilution	RL	
Sulfate		1	10	070	mg/L	50	2.50	
Sample: 263908 - RW-1								
Laboratory: Midland								
Analysis: TDS		Analytical M	ethod:	SM 2540C		Prep Method:	N/A	
QC Batch: 80869		Date Analyze		2011-05-02		Analyzed By:	Α̈́R	
Prep Batch: 68433		Sample Prepa	aration:	2011-04-26		Prepared By:	AR.	
				RL				
Parameter	\mathbf{F}	lag Cer	t	Result	Units	Dilution	RL	
Total Dissolved Solids		1		122000	mg/L	100	10.0	

Report Date: May 4, 2011 115-6403133

Work Order: 11041529 Celero/Rock Queen Unit Tract #33 Page Number: 12 of 25

Method Blanks

Method Blank (1)

QC Batch: 80420

QC Batch: 80420 Prep Batch: 68258 Date Analyzed: 2011-04-18 QC Preparation: 2011-04-18 Analyzed By: ME Prepared By: ME

		MDL								
Parameter	Flag	Cert	Result	Units	$_{ m RL}$					
Benzene		1	< 0.000400	m mg/L	0.001					
Toluene		1	< 0.000300	m mg/L	0.001					
Ethylbenzene		1	< 0.000300	m mg/L	0.001					
Xylene		1	< 0.000333	m mg/L	0.001					

						Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)		1	0.0862	mg/L	1	0.100	86	70.2 - 118
4-Bromofluorobenzene (4-BFB)		1	0.0861	mg/L	1	0.100	86	47.3 - 116

Method Blank (1)

QC Batch: 80470

QC Batch: 80470 Prep Batch: 68300 Date Analyzed: 2011-04-20 QC Preparation: 2011-04-19

Analyzed By: ME Prepared By: ME

			\mathtt{MDL}		
Parameter	Flag	Cert	Result	Units	m RL
Benzene		1	< 0.000400	mg/L	0.001
Toluene		1	< 0.000300	m mg/L	0.001
Ethylbenzene		1	< 0.000300	m mg/L	0.001
Xylene		1	< 0.000333	mg/L	0.001

						Spike	Percent	Recovery
Surrogate	\mathbf{Flag}	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)		1	0.0880	mg/L	1	0.100	88	70.2 - 118
4-Bromofluorobenzene (4-BFB)		1	0.0959	mg/L	1	0.100	96	47.3 - 116

Report Date: May 4, 2 115-6403133	2011	Work Order Celero/Rock Quee		Page Number: 13	of 25	
Method Blank (1)	QC Batch: 80665					
QC Batch: 80665 Prep Batch: 68438		Date Analyzed: QC Preparation:	2011-04-26 2011-04-25		Analyzed By: Prepared By:	AR AR
Demonstra	D)	Cont		MDL	Timita	RL
Parameter Chloride	Flag	Cert		Result 0.513	Units mg/L	2.5
Method Blank (1)	QC Batch: 80665					
QC Batch: 80665		Date Analyzed:	2011-04-26		Analyzed By:	AR
Prep Batch: 68438		QC Preparation:	2011-04-25		Prepared By:	AR
				MDL		
Parameter	Flag	Cert		Result	Units	$\frac{\mathrm{RL}}{2.5}$
Sulfate		1		<0.177	mg/L	
Method Blank (1)	QC Batch: 80666					
QC Batch: 80666		Date Analyzed:	2011-04-26		Analyzed By:	AR
Prep Batch: 68439		QC Preparation:	2011-04-25		Prepared By:	AR
				MDL		
Parameter	Flag	Cert		Result	Units	RL
Chloride		1		0.724	mg/L	2.5
Method Blank (1)	QC Batch: 80666					
QC Batch: 80666		Date Analyzed:	2011-04-26		Analyzed By:	AR
Prep Batch: 68439		QC Preparation:	2011-04-25		Prepared By:	AR
				MDL		
Parameter	Flag	Cert		Result	Units	RL
Sulfate	- 100	1		< 0.177	mg/L	2.5

Report Date: May 4, 2011 115-6403133	Work Orde Celero/Rock Quee	r: 11041529 en Unit Tract	Page Number: 14 of 25			
Method Blank (1) QC Batch:	80826					
QC Batch: 80826	Date Analyzed:	2011-04-29			Analyzed By:	: AR
Prep Batch: 68432	QC Preparation:	2011-04-22			Prepared By:	
			MDL			
Parameter	Flag	Cert	Result		Units	RL
Total Dissolved Solids		1	<9.75		ing/L	10
Method Blank (1) QC Batch: 8	80869					
QC Batch: 80869	Date Analyzed:	2011-05-02			Analyzed By:	AR
Prep Batch: 68433	QC Preparation:	2011-04-25			Prepared By:	
			MDL			
Parameter	Flag	Cert	Result		Units	RL
Total Dissolved Solids		1	< 9.75		mg/L	10
Duplicates (1) Duplicated Sample QC Batch: 80826 Prep Batch: 68432	e: 263904 Date Analyzed: QC Preparation:	2011-04-29 2011-04-22			Analyzed By: Prepared By:	
Пер Выки. 004.02	Q∪ r reparation.	2011-04-22			Frepared by:	An
	Duplicate	Sample				RPD
Param	Result	Result	Units	Dilution	RPD	Limit
Total Dissolved Solids	1 121000	116000	mg/L	100	4	
Duplicates (1) Duplicated Sample QC Batch: 80869	Date Analyzed:	2011-05-02			Analyzed By:	
Prep Batch: 68433	QC Preparation:	2011-04-25			Prepared By:	AR
Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Total Dissolved Solids	1 151000	146000	mg/L	100	3	10

115-6403133

Work Order: 11041529 Celero/Rock Queen Unit Tract #33

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 80420 Prep Batch: 68258 Date Analyzed: QC Preparation: 2011-04-18

2011-04-18

Analyzed By: ME Prepared By: ME

Page Number: 15 of 25

			LCS			Spike	Matrix		Rec.
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit
Benzene		1	0.0962	mg/L	1	0.100	< 0.000400	96	76.8 - 110
Toluene		1	0.100	mg/L	1	0.100	< 0.000300	100	81 - 108
Ethylbenzene		1	0.0993	mg/L	1	0.100	< 0.000300	99	78.8 - 118
Xylene		1	0.297	mg/L	1	0.300	< 0.000333	99	80.3 - 119

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

			LCSD			Spike	Matrix		Rec.		RPD
Param	F	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Benzene		1	0.0930	mg/L	1	0.100	< 0.000400	93	76.8 - 110	3	20
Toluene		1	0.0981	mg/L	1	0.100	< 0.000300	98	81 - 108	2	20
Ethylbenzene		ı	0.0969	mg/L	1	0.100	< 0.000300	97	78.8 - 118	2	20
Xylene		1	0.292	mg/L	1	0.300	< 0.000333	97	80.3 - 119	2	20

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

		LCS	LCSD			Spike	LCS	LCSD	Rec.
Surrogate		Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	1	0.0921	0.0869	mg/L	1	0.100	92	87	66.6 - 114
4-Bromofluorobenzene (4-BFB)	1	0.0975	0.0930	mg/L	1	0.100	98	93	68.2 - 124

Laboratory Control Spike (LCS-1)

QC Batch: 80470 Prep Batch: 68300 Date Analyzed: 2011-04-20 QC Preparation: 2011-04-19 Analyzed By: ME Prepared By: ME

			LCS			Spike	Matrix		Rec.
Param	\mathbf{F}	$^{\rm C}$	Result	Units	Dil.	Amount	Result	Rec.	Limit
Benzene		1	0.0942	mg/L	1	0.100	< 0.000400	94	76.8 - 110
Toluene		ì	0.101	mg/L	1	0.100	< 0.000300	101	81 - 108
Ethylbenzene		1	0.101	mg/L	1	0.100	< 0.000300	101	78.8 - 118
Xylene		1	0.304	mg/L	1	0.300	< 0.000333	101	80.3 - 119

115 - 6403133

Work Order: 11041529 Celero/Rock Queen Unit Tract #33

			LCSD			Spike	Matrix		Rec.		RPD
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Benzene		1	0.0870	mg/L	1	0.100	< 0.000400	87	76.8 - 110	8	20
Toluene		1	0.0940	mg/L	1	0.100	< 0.000300	94	81 - 108	7	20
Ethylbenzene		1	0.0934	mg/L	1	0.100	< 0.000300	93	78.8 - 118	8	20
Xylene		1	0.284	mg/L	1	0.300	< 0.000333	95	80.3 - 119	7	20

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

		LCS	LCSD			Spike	LCS	LCSD	Rec.
Surrogate		Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	1	0.0920	0.0856	mg/L	1	0.100	92	86	66.6 - 114
4-Bromofluorobenzene (4-BFB)	1	0.108	0.0993	mg/L	1	0.100	108	99	68.2 - 124

Laboratory Control Spike (LCS-1)

QC Batch: 80665 Prep Batch: 68438 Date Analyzed: 2011-04-26 QC Preparation: 2011-04-25 Analyzed By: AR Prepared By: AR

Page Number: 16 of 25

			LCS			Spike	Matrix		Rec.
Param	F	C	Result	Units	Dil.	Amount	Result	Rec.	Limit
Chloride		ı	24.9	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.

			LCSD			Spike	Matrix		Rec.		RPD
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride		1	24.8	mg/L	1	25.0	< 0.265	99	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: 80665 Prep Batch: 68438

Date Analyzed:
OC Preparation

Date Analyzed: 2011-04-26 Analyzed By: AR QC Preparation: 2011-04-25 Prepared By: AR

			LCS			Spike	Matrix		Rec.
Param	\mathbf{F}	C	Result	\mathbf{Units}	Dil.	Amount	Result	Rec.	Limit
Sulfate		1	23.1	mg/L	1	25.0	< 0.177	92	90 - 110

			LCSD			Spike	Matrix		Rec.		RPD
Param	F	C	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Sulfate		1	23.1	ıng/L	1	25.0	< 0.177	92	90 - 110	0	20

Work Order: 11041529 Celero/Rock Queen Unit Tract #33

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:

115-6403133

80666

Date Analyzed:

2011-04-26

Analyzed By: AR

Page Number: 17 of 25

Prep Batch: 68439

QC Preparation: 2011-04-25

Prepared By: AR

			LCS			Spike	Matrix		Rec.
Param	F	C	Result	Units	Dil.	Amount	Result	Rec.	Limit
Chloride		1	27.3	mg/L	1	25.0	< 0.265	109	90 - 110

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

			LCSD			Spike	Matrix		Rec.		RPD
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride		1	27.4	mg/L	1	25.0	< 0.265	110	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:

80666

Date Analyzed:

2011-04-26

Analyzed By: AR

Prep Batch:

68439

QC Preparation: 2011-04-25

Prepared By: AR

			LCS			Spike	Matrix		Rec.
Param	F	C	Result	Units	Dil.	Amount	Result	Rec.	Limit
Sulfate		1	25.8	mg/L	1	25.0	< 0.177	103	90 - 110

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

			LCSD			Spike	Matrix		Rec.		RPD
Param	F	C	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Sulfate		1	25.6	mg/L	1	25.0	< 0.177	102	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:

80826

Date Analyzed:

2011-04-29

Analyzed By: AR

Prep Batch: 68432

QC Preparation: 2011-04-22

Prepared By: AR.

115-6403133

Work Order: 11041529 Celero/Rock Queen Unit Tract #33

LCS Spike Matrix Rec. F Param C Result Dil. Units Amount Result Rec. Limit Total Dissolved Solids 1050 1000 90 - 110 mg/L < 9.75 105

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

LCSD Spike Matrix RPD Rec. Param F \mathbf{C} Result Units Dil. Amount Result Limit **RPD** Rec. Limit Total Dissolved Solids 954 mg/L 1000 1 < 9.7595 90 - 110 10 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: 80869 Prep Batch: 68433 Date Analyzed: 2011-05-02 QC Preparation: 2011-04-25

Analyzed By: AR Prepared By: AR

Page Number: 18 of 25

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

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

LCSD Spike RPD Matrix Rec. Param F C Result Dil. Units Amount Result Rec. Limit RPD Limit Total Dissolved Solids 990 mg/L 1000 < 9.7590 - 110 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: 263903

QC Batch: 80665 Prep Batch: 68438 Date Analyzed: 2011-04-26 QC Preparation: 2011-04-25 Analyzed By: AR Prepared By: AR

MS Spike Matrix Rec. Result Param F C Units Dil. Amount Result Rec. Limit Chloride 5530 mg/L 100 2750 3010 92 90 - 110

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

Spike MSD RPD Matrix Rec. Param C Result Dil. Units Amount Result Rec. Limit RPD Limit Chloride 5580 mg/L 100 2750 3010 93 90 - 110 1 20

Work Order: 11041529

115-6403133

Celero/Rock Queen Unit Tract #33

Page Number: 19 of 25

Matrix Spike (MS-1)

Spiked Sample: 263903

QC Batch:

80665

Date Analyzed:

2011-04-26

Analyzed By: AR

Prep Batch:

68438

QC Preparation:

2011-04-25

Prepared By: AR

			MS			Spike	Matrix		Rec.
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit
Sulfate		1	2680	mg/L	100	2750	136	92	90 - 110

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

			MSD			Spike	Matrix		Rec.		RPD
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Sulfate		1	2680	mg/L	100	2750	136	92	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: 263910

QC Batch:

80666

Date Analyzed:

2011-04-26

Analyzed By: AR

Prep Batch: 68439

QC Preparation: 2011-04-25

Prepared By: AR

			MS			Spike	Matrix		Rec.
Param	\mathbf{F}	$^{\rm C}$	Result	Units	Dil.	Amount	Result	Rec.	Limit
Chloride		1	10400	mg/L	100	2750	8280	77	90 - 110

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

			MSD			Spike	Matrix		Rec.		RPD
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	\mathbf{Limit}	RPD	Limit
Chloride		1	10400	mg/L	100	2750	8280	77	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: 263910

QC Batch:

80666

Date Analyzed:

2011-04-26

Analyzed By: AR

Prep Batch: 68439

QC Preparation: 2011-04-25

Prepared By: AR

			MS			Spike	Matrix		Rec.
Param	F	C	Result	Units	Dil.	Amount	Result	Rec.	Limit
Sulfate		1	2470	mg/L	100	2750	167	84	90 - 110

Report Date: May 4, 2011 115-6403133

Work Order: 11041529

Page Number: 20 of 25

403133 Celero/Rock Queen Unit Tract #33

			MSD			Spike	Matrix		Rec.		RPD
Param	F	C	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Sulfate		1	2490	mg/L	100	2750	167	84	90 - 110	1	20

Report Date: May 4, 2011 115-6403133

Work Order: 11041529 Celero/Rock Queen Unit Tract #33

Calibration Standards

Standard (CCV-1)

QC Batch: 80420

Date Analyzed: 2011-04-18

Analyzed By: ME

Page Number: 21 of 25

				CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Benzene		1	mg/L	0.100	0.0933	93	80 - 120	2011-04-18
Toluene		1	mg/L	0.100	0.0975	98	80 - 120	2011-04-18
Ethylbenzene		1	mg/L	0.100	0.0974	97	80 - 120	2011-04-18
Xylene		1	mg/L	0.300	0.291	97	80 - 120	2011-04-18

Standard (CCV-2)

QC Batch: 80420

Date Analyzed: 2011-04-18

Analyzed By: ME

				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Benzene		1	mg/L	0.100	0.0951	95	80 - 120	2011-04-18
Toluene		1	mg/L	0.100	0.0993	99	80 - 120	2011-04-18
Ethylbenzene		1	mg/L	0.100	0.0998	100	80 - 120	2011-04-18
Xylene		1	nig/L	0.300	0.298	99	80 - 120	2011-04-18

Standard (CCV-1)

QC Batch: 80470

Date Analyzed: 2011-04-20

Analyzed By: ME

				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Benzene		1	mg/L	0.100	0.0916	92	80 - 120	2011-04-20
Toluene		1	mg/L	0.100	0.0996	100	80 - 120	2011-04-20
Ethylbenzene		1	mg/L	0.100	0.0983	98	80 - 120	2011-04-20
Xylene		1	mg/L	0.300	0.298	99	80 - 120	2011-04-20

Work Order: 11041529

Celero/Rock Queen Unit Tract #33

Page Number: 22 of 25

Standard (CCV-2)

QC Batch: 80470

115-6403133

Date Analyzed: 2011-04-20

Analyzed By: ME

				CCVs	CCVs	CCVs	Percent	
				\mathbf{True}	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Benzene		1	$_{ m mg/L}$	0.100	0.0907	91	80 - 120	2011-04-20
Toluene		1	$_{ m mg/L}$	0.100	0.0978	98	80 - 120	2011-04-20
Ethylbenzene		1	$_{ m mg/L}$	0.100	0.0964	96	80 - 120	2011-04-20
Xylene		1	mg/L	0.300	0.290	97	80 - 120	2011-04-20

Standard (ICV-1)

QC Batch: 80665

Date Analyzed: 2011-04-26

Analyzed By: AR

				ICVs	ICVs	ICV s	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride		1	mg/L	25.0	23.3	93	90 - 110	2011-04-26

Standard (ICV-1)

QC Batch: 80665

Date Analyzed: 2011-04-26

Analyzed By: AR

				ICVs	ICVs	ICVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Sulfate		1	mg/L	25.0	23.3	93	90 - 110	2011-04-26

Standard (CCV-1)

QC Batch: 80665

Date Analyzed: 2011-04-26

Analyzed By: AR

				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride		1	mg/L	25.0	23.1	92	90 - 110	2011-04-26

Report Date: May 4 115-6403133	1, 2011		Work Order: 11041529 Celero/Rock Queen Unit Tract #33				Page Number: 23 of 25			
Standard (CCV-1)									
QC Batch: 80665			Date	Analyzed:	2011-04-26		Analy	zed By: AR		
D	171	G . 1	TTutt	CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date		
Param Sulfate	Flag	Cert ₁	Units mg/L	Conc. 25.0	Conc. 24.2	Recovery 97	Limits 90 - 110	Analyzed 2011-04-26		
Standard (ICV-1)										
QC Batch: 80666			Date Analyzed: 2011-04-2			4-26 Analyzed By:				
				ICVs True	ICVs Found	ICVs Percent	Percent Recovery	Date		
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed		
Chloride		1	mg/L	25.0	23.1	92	90 - 110	2011-04-26		
Standard (ICV-1)										
QC Batch: 80666			Date	Analyzed:	2011-04-26		Analy	zed By: AR		
_		~ ·		ICVs True	ICVs Found	ICVs Percent	Percent Recovery	Date		
Param Sulfate	Flag	Cert	Units mg/L	Conc. 25.0	Conc. 24.2	Recovery 97	Limits 90 - 110	Analyzed 2011-04-26		
Standard (CCV-1))		Date	Analyzed:	2011-04-26		A na lv	zed By: AR		
Q D D D D D D D D D D D D D D D D D D D			Date .	•		CCV	_	2 2j. 111		
				CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date		
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed		
Chloride		1	mg/L	25.0	23.1	92	90 - 110	2011-04-26		

Standard (CCV-1)

QC Batch: 80666

Date Analyzed: 2011-04-26

Analyzed By: AR

Report Date: May 4, 2011 115-6403133

Work Order: 11041529

Celero/Rock Queen Unit Tract #33

Page Number: 24 of 25

				CCVs	CCVs	CCVs	Percent	
				${\bf True}$	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Sulfate		1	mg/L	25.0	24.0	96	90 - 110	2011-04-26

Report Date: May 4, 2011 Work Order: 11041529

115-6403133 Celero/Rock Queen Unit Tract #33 Page Number: 25 of 25

Appendix

Laboratory Certifications

	Certifying	Certification	Laboratory
\mathbf{C}	Authority	Number	Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	$\mathbf{W}\mathbf{B}\mathbf{E}$	237019	TraceAnalysis
1	NELAP	T104704392-10-TX	Midland

Standard Flags

- F Description
- B Analyte detected in the corresponding method blank above the method detection limit
- H Analyzed out of hold time
- J Estimated concentration
- Jb The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less then ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
- Je Estimated concentration exceeding calibration range.
- Qc Calibration check outside of laboratory limits.
- Qr RPD outside of laboratory limits
- Qs Spike recovery outside of laboratory limits.
- Qsr Surrogate recovery outside of laboratory limits.
- U The analyte is not detected above the SDL

Attachments

The scanned attachments will follow this page.

Please note, each attachment may consist of more than one page.

Xwo #: 1641529

SAMPLE CONDITION WHEN RECEIVED: REMARKS: C. (6 C.) V. 40 C. X.	CONTACT: DATE: TIME: TIM	Truck	RELINQUISHED BY: (Signature) Time: RECEIVED BY: (Signature)	Time:	Time: Off	RELINOUISHED BY: (Stonature)				908 4/14 1830 M X RW-1	905 4/14 1830 M X MW4	906 \ 1845 \ mw-3	205 (1845 (M) 1500 (262804 4/14 1818 M X MW-1	NUMBER 2.0 II TIME TRIX COMP. SAMPLE IDENTIFICATION BER COMP. SUMBER COMP.	Rock Queen Unit Tract #3	elero site Manager: Kindley	1910 N. Big Spring St. Midland, Texas 79705 (432) 682-4559 • Fax (432) 682-3946		Analysis Request of Chain of Custody Record
ch .	ME		= 0	, .						XNA	N X			Z	FILTERED HCL		ı			R
rojec			Date: _	Time:	Time:	Date:									HNO3		PRESERVATIVE METHOD			8
<u>×</u>					2			-	<u> </u>	×	×	\succeq	\sim	*	ICE		32			اھ
nag					7	J	<u> </u>	-		<u> </u>	_	\sim		<u> </u>	NONE		P S			
8					M	*	 			×	×	=		×	BTEX 8021	В	1	<u> </u>		$\neg \dashv$
nager retains Pink copy -			1		1											5 MOD.	TX10	05 (Ext. to C35)		
멀	1) a §						_	-			_	PAH 8270	ala 6 - A		od Ov Bb 11- O-		
<u>8</u>	9	`		Ž	2			 		-	 			-	4			Cd Cr Pb Hg Se		
٧	ett macy	3	THECH CONTACT PERSON:	FEDEX	Sames ke	ED RV.									TCLP Vola					
	,	~	MIN	1											TCLP Sem	i Volatile	s		Cin	
ğ	3	`	314	/ · ·	Kennedy	Drint & Intial					L			<u> </u>	RCI	004545	000:		Ø ₹	
Accounting receives Gold copy	0	_	PERSO	88	FO !	1	 	_		-	-				GC.MS Vol				ALS/	_
9 8	3		7		15										PCB's 808		, z., 0/02:		Sis	PAGE:
ceiv				,	1 ر										Pest. 808/6		***********		ANALYSIS REQUEST (Circle or Specify Method No.)	
es					K	1				×	×			×	Chloride				eth.	
ğ				3 ≥	14	-	 	 							Gamma Sp				γ ν TS	i
8	¥3	ī	뒭	AIRBILL #	Time:	\vdash	 				<u> </u>			-	Alpha Beta PLM (Asbe				5	
×	Yes	3	Results by:	 !		\vdash	 			×	×			200	Major Anio		ns, pH.	(DS)		유
	Authorized: Yes	f	by:							×	×		~	25	Sulfa		, 12. 4	-		H
	1																			
	№					\vdash	 	$\vdash \vdash$												

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

Roswell Field Office (575) 627-0272 Field Manager: Chuck Schmidt (Acting) (575) 627-0276 FAX 2909 W. Second Street Roswell, NM 88201-2019

Roswell Field Office Directory

Name	Title	Phone Number	Email Address
Arnold, Kyle	Range	(575) 627-0329	bbb KArnold@blm.gov
Ashley, Larry	Supv. Fire Operations Specialist	(575) 627-0314	bbb lashley@blm.gov
Baggao, Dan	Wildlife Biologist	(575) 627-0264	hhh <u>dbaggao@blm.gov</u>
Bell, Dominic L	Engine Operator (E- 661)	(575) 627-0327	bbb dibell@blm.gov
Beyerlein, Christine		(575) 234-5947	hhh cbeyerle@blm.gov
Brooks, Cassandra R		(575)	bbb crbrooks@blm.gov
Burger, Guadalupe S	Natural Resource Specialist	(575) 627-0248	bbb gsburger@blm.gov
Bussell, Kevin	Petroleum Engineering Technician	(575) 627-0229	bbb KBussell@blm.gov
Carrillo, Peggy		(575) 627-0253	hbb pcarrill@blm.gov
Collar, Al	Geologist	(575) 627-0270	bbb acollar@blm.gov
Curnutt, Lindsey			bbb lcurnutt@blm.gov
Desmond, Janell A	Administrative Officer	(575) 627-0255	hbh jdesmond@blm.gov
Dutchover, Jerry	Geologist	(575) 627-0272	hbb <u>idutchov@blm.gov</u>
Ellis, Saren G	Legal Instruments Examiner	(575) 234 5953	hbb sgellis@blm.gov
Finch Nicolo B	Contor Managor	(E7E) 434-73E4	kkk nfinch@hlm anv

Last updated: 01-13-2011

USA.GOV | No Fear Act | DOI | Disclaimer | About BLM | Notices | Get Adobe Reader®
Privacy Policy | FOIA | Kids Policy | Contact Us | Accessibility | Site Map | Home

THE PROPERTY OF A LATE