TETRA TECH

March 29, 2012

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 December 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, April, July, and October, 2011 sampling events. The hydraulic gradient indicates a southwesterly direction. Groundwater gradient maps for the sampling events are included as Figures 4 and 7. 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

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 on July 28, 2011 (0.0114 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 45.4 mg/L in up gradient monitor well MW-2 on October 28, 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

1. 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 on July 28, 2011 (0.0114 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 45.4 mg/L in MW-2 on October 28, 2011 to 88,700 mg/L in MW-1 on October 11, 2010, which is near the initial source area.

TETRA TECH

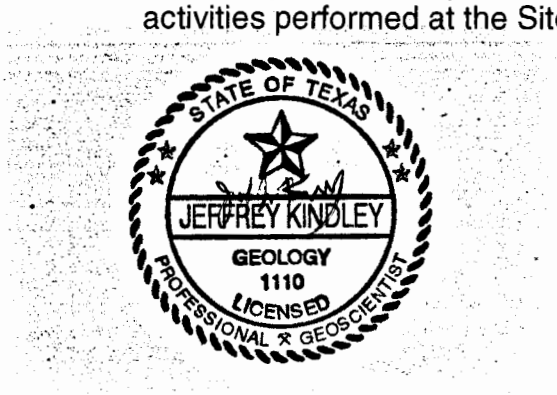
RECOMMENDATIONS

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.

3. 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.

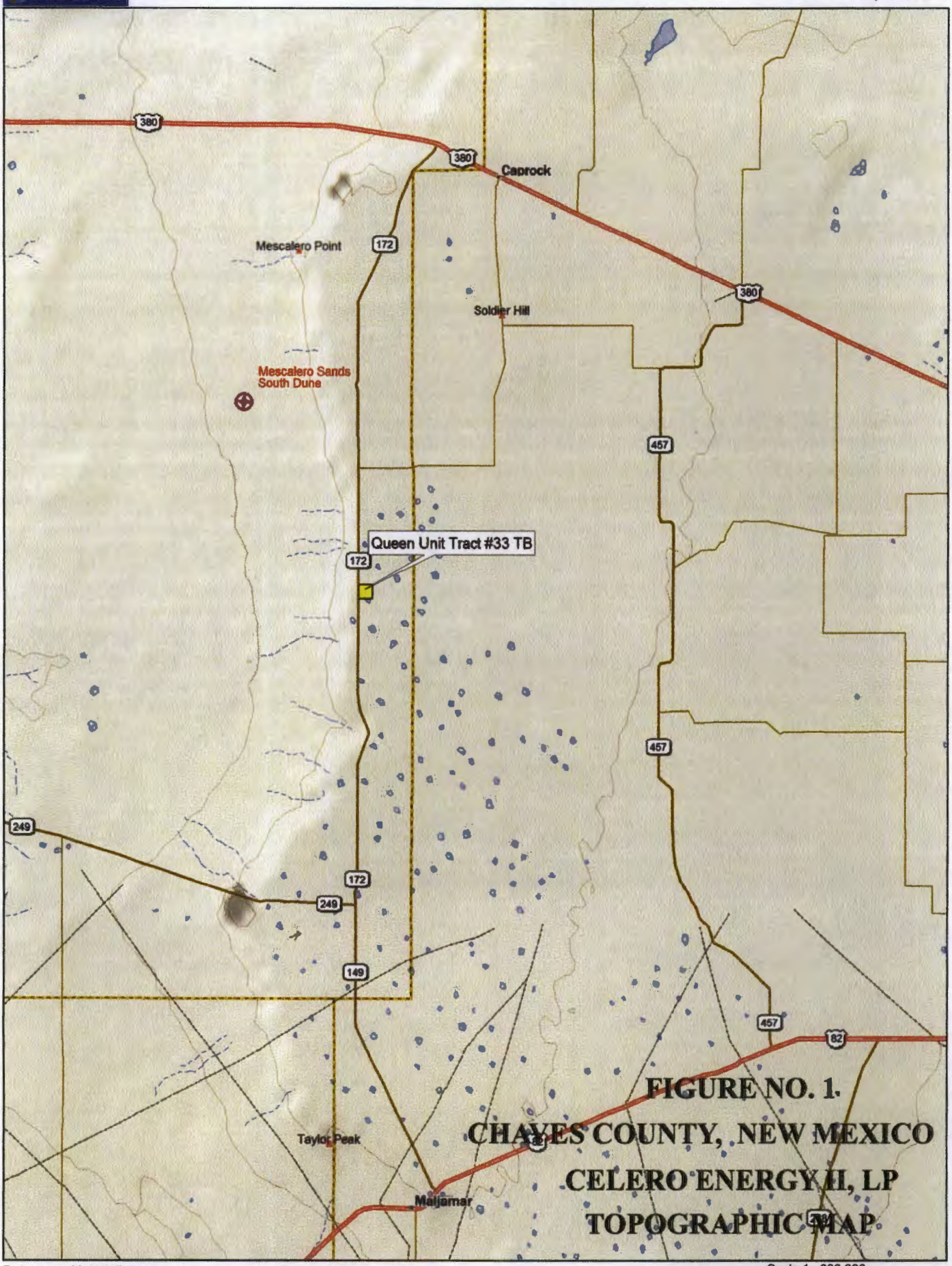


Respectfully submitted,
Tetra Tech, Inc.

Jeffrey Kindley, P.G.
Senior Environmental Geologist

cc: Bruce Woodard – Celero Energy II, LP

FIGURES



TN
MN (7.7°E)

Scale 1 : 300,000
1" = 4.73 mi
Data Zoom 9-3

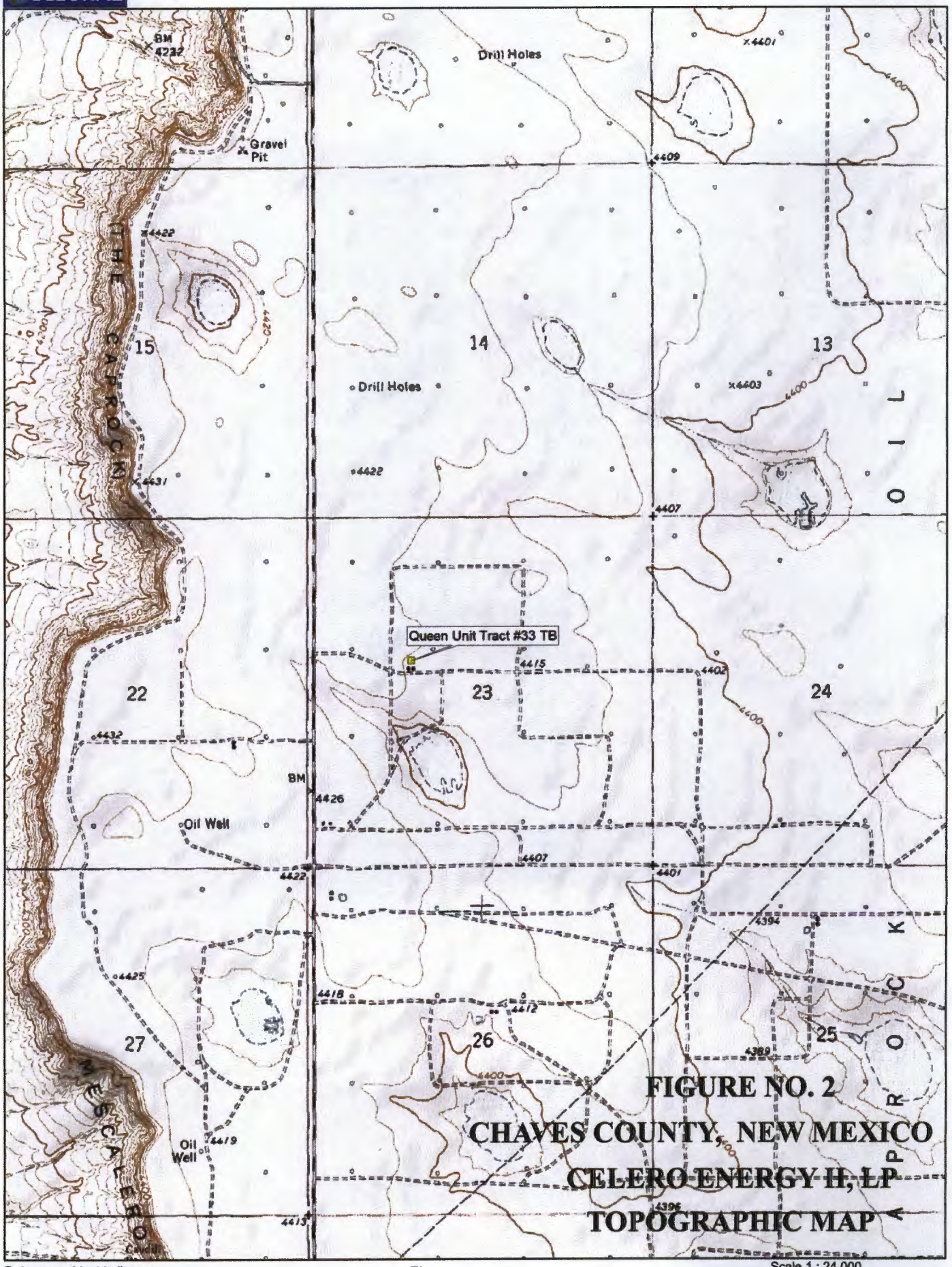


FIGURE NO. 2

CHAVES COUNTY, NEW MEXICO

CELERO ENERGY II, LP

TOPOGRAPHIC MAP

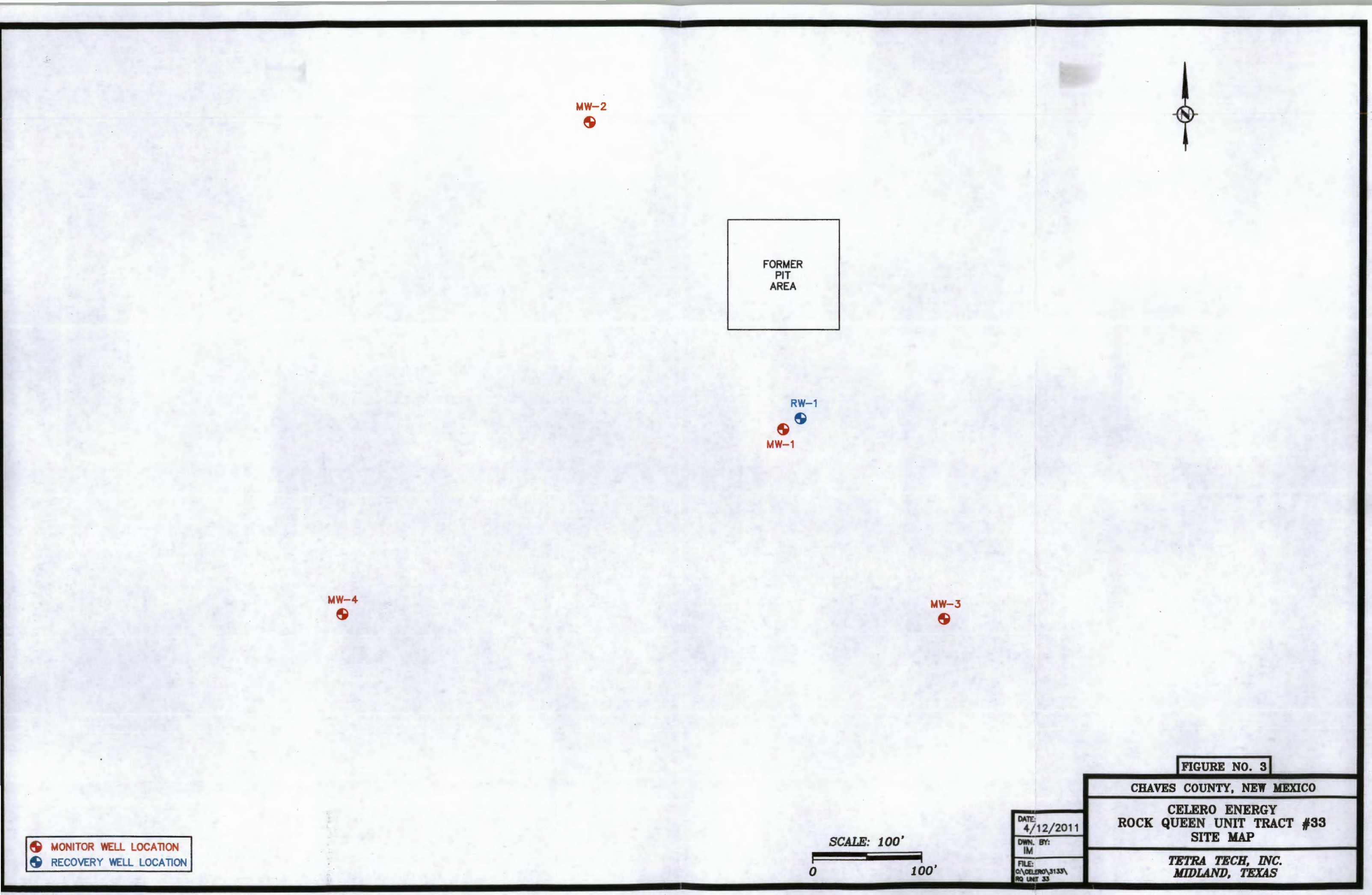
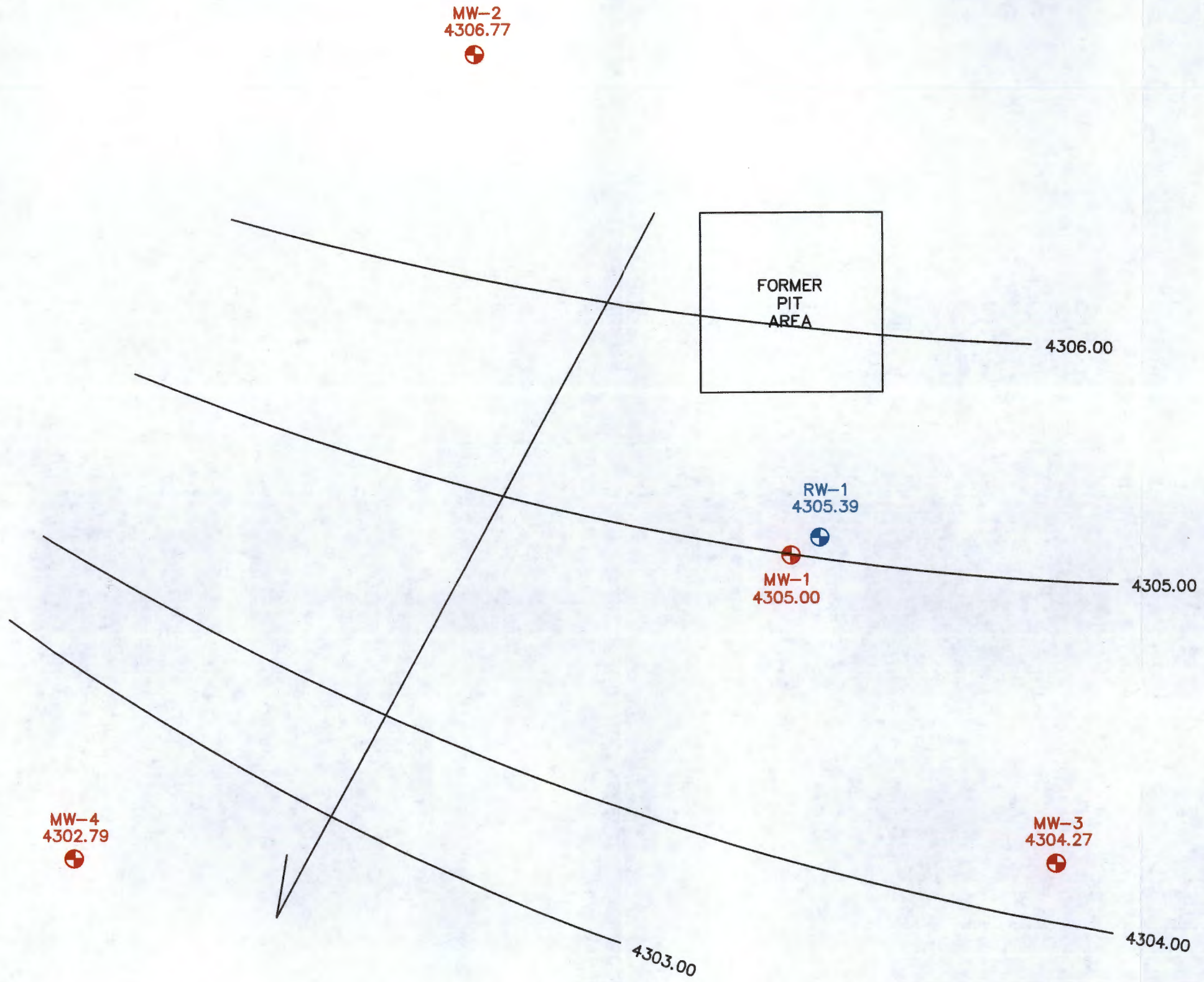


FIGURE NO. 3

CHAVES COUNTY, NEW MEXICO

CELERO ENERGY
ROCK QUEEN UNIT TRACT #33
SITE MAP

TETRA TECH, INC.
MIDLAND, TEXAS



MONITOR WELL LOCATION
RECOVERY WELL LOCATION

C.I. = 1'

SCALE: 100'
0 100'

DATE: 1/17/11
DWN. BY: IM
FILE: C:\CELERO\3133\RQ UNIT 33

FIGURE NO. 4

CHAVES COUNTY, NEW MEXICO

CELERO ENERGY
ROCK QUEEN UNIT TRACT #33
GROUNDWATER GRADIENT MAP
GAUGED ON 1/17/11

TETRA TECH, INC.
MIDLAND, TEXAS

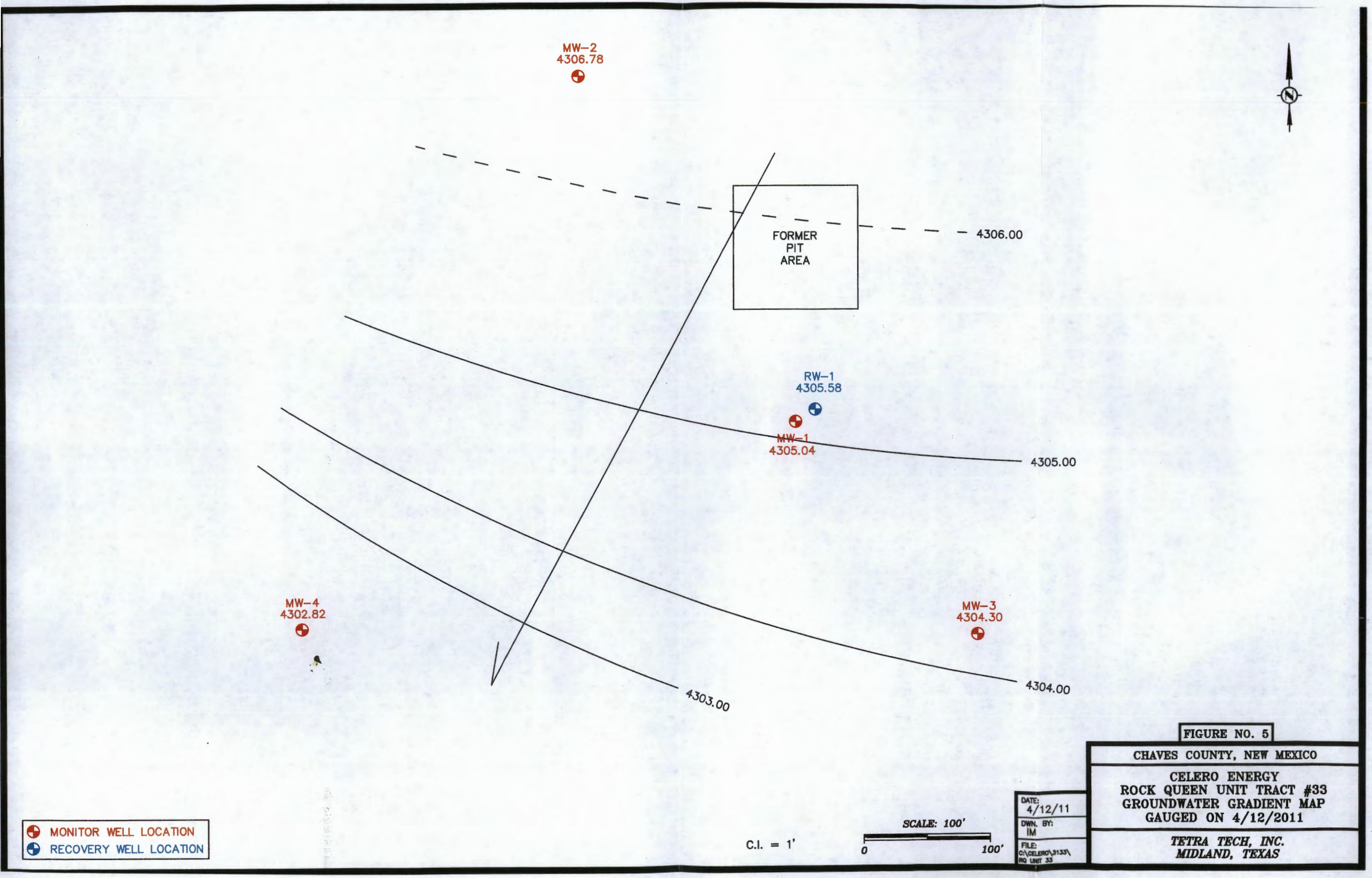
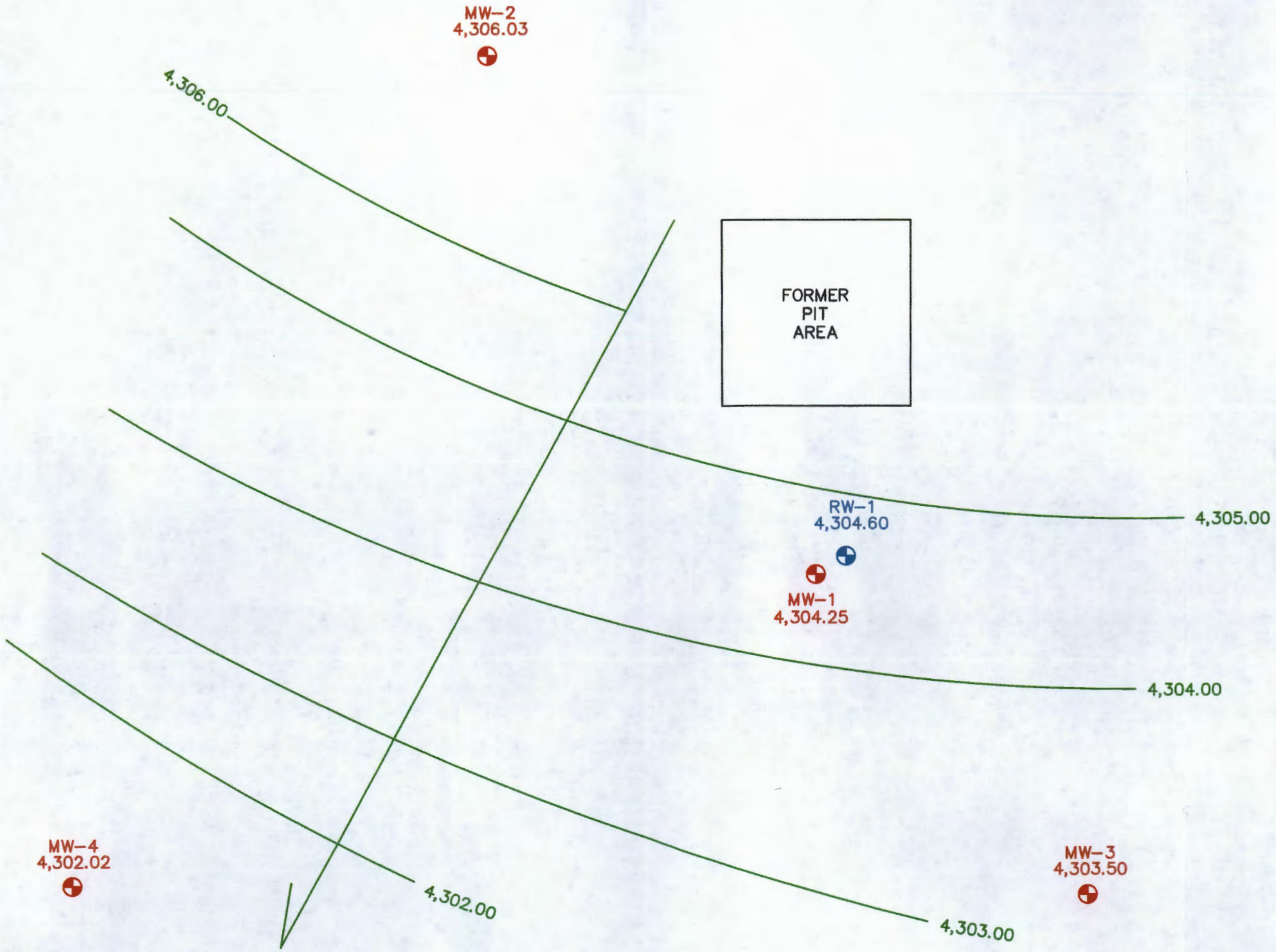


FIGURE NO. 5

CHAVES COUNTY, NEW MEXICO

CELERO ENERGY
ROCK QUEEN UNIT TRACT #33
GROUNDWATER GRADIENT MAP
GAUGED ON 4/12/2011

TETRA TECH, INC.
MIDLAND, TEXAS



MONITOR WELL LOCATION
RECOVERY WELL LOCATION

C.I. = 1'

SCALE: 100'
0 100'

DATE: 7/27/2011
DWN. BY: IM
FILE: C:\CELERO\3133\RQ UNIT 33

FIGURE NO. 6

CHAVES COUNTY, NEW MEXICO

CELERO ENERGY
ROCK QUEEN UNIT TRACT #33
GROUNDWATER GRADIENT MAP
GAUGED ON 7/27/2011

TETRA TECH, INC.
MIDLAND, TEXAS

MONITOR WELL LOCATION
RECOVERY WELL LOCATION

C.I. = 1'

SCALE: 100'
0 100'

DATE: 10/24/2011
DWN. BY: IM
FILE: C:\CELERO\3133\RQ UNIT 33

FIGURE NO. 7

CHAVES COUNTY, NEW MEXICO

CELERO ENERGY
ROCK QUEEN UNIT TRACT #33
GROUNDWATER GRADIENT MAP
GAUGED ON 10/24/2011

TETRA TECH, INC.
MIDLAND, TEXAS

FORMER
PIT
AREA

MW–1
3,220

RESULTS IN mg/L

SCALE: 100'

0 100'

DATE: 12/28/2009

DWN. BY: IM

FILE: C:\CELERO\3133\RQ UNIT 33

FIGURE NO. 8

CHAVES COUNTY, NEW MEXICO

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

TETRA TECH, INC.
MIDLAND, TEXAS

RESULTS IN mg/L

SCALE: 100'

0 100'

DATE: 2/25/2010

DWN. BY: IM

FILE: C:\CELERO\3133\RQ UNIT 33

FIGURE NO. 9

CHAVES COUNTY, NEW MEXICO

CELERO ENERGY
ROCK QUEEN UNIT TRACT #33
CHLORIDE CONCENTRATION MAP
SAMPLED ON 02/25/2010

TETRA TECH, INC.
MIDLAND, TEXAS

FORMER
PIT
AREA

MW–1
63,500

RESULTS IN mg/L

SCALE: 100'

0 100'

DATE: 7/13/2010

DWN. BY: IM

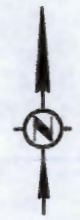
FILE: C:\CELERO\3133\RQ UNIT 33

FIGURE NO. 10

CHAVES COUNTY, NEW MEXICO

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

TETRA TECH, INC.
MIDLAND, TEXAS



FORMER
PIT
AREA

MW-1
88,700

RESULTS IN mg/L

SCALE: 100'

0 100'

DATE: 10/11/2010
DWN. BY: IM
FILE: C:\CELERO\3133\RQ UNIT 33

FIGURE NO. 11

CHAVES COUNTY, NEW MEXICO

CELERO ENERGY
ROCK QUEEN UNIT TRACT #33
CHLORIDE CONCENTRATION MAP
SAMPLED ON 10/11/2010

TETRA TECH, INC.
MIDLAND, TEXAS

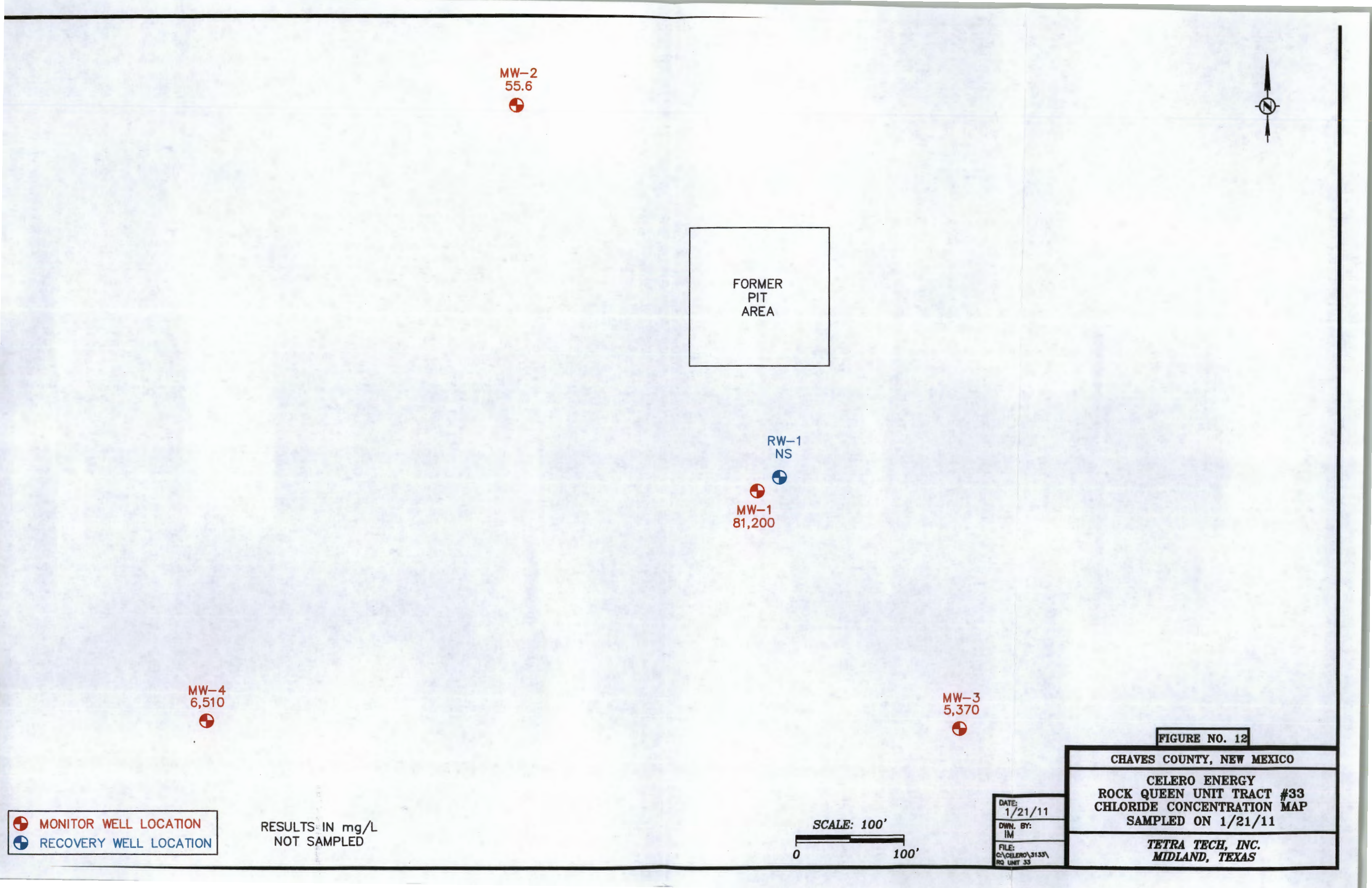


FIGURE NO. 12

CHAVES COUNTY, NEW MEXICO

CELERO ENERGY
ROCK QUEEN UNIT TRACT #33
CHLORIDE CONCENTRATION MAP
SAMPLED ON 1/21/11

TETRA TECH, INC.
MIDLAND, TEXAS

MW–2
48.5

FORMER
PIT
AREA

RW–1
83,700

MW–1
77,400

MW–4
7,410

MW–3
5,420

MONITOR WELL LOCATION
RECOVERY WELL LOCATION

RESULTS IN mg/L

SCALE: 100'
0 100'

DATE: 4/14/11
DWN. BY: IM
FILE: C:\CELERO\3133\RQ UNIT 33

FIGURE NO. 13

CHAVES COUNTY, NEW MEXICO

CELERO ENERGY
ROCK QUEEN UNIT TRACT #33
CHLORIDE CONCENTRATION MAP
SAMPLED ON 4/14/2011

TETRA TECH, INC.
MIDLAND, TEXAS

MW-2
55.1

FORMER
PIT
AREA

RW-1

MW-1
83,600

MW-4
5,450

MW-3
6,950

MONITOR WELL LOCATION
RECOVERY WELL LOCATION

RESULTS IN mg/L

SCALE: 100'
0 100'

DATE: 7/28/2011
DWN. BY: IM
FILE: C:\CELERO\3133\RQ UNIT 33

FIGURE NO. 14

CHAVES COUNTY, NEW MEXICO

CELERO ENERGY
ROCK QUEEN UNIT TRACT #33
CHLORIDE CONCENTRATION MAP
SAMPLED ON 7/28/2011

TETRA TECH, INC.
MIDLAND, TEXAS

MW–2
45.4

FORMER
PIT
AREA

RW–1
NS

MW–1
73,300

MW–4
8,170

MW–3
5,860

MONITOR WELL LOCATION
RECOVERY WELL LOCATION

RESULTS IN mg/L

SCALE: 100'
0 100'

DATE: 10/28/11
DWN. BY: IM
FILE: C:\CELERO\3133\RQ UNIT 33

FIGURE NO. 15

CHAVES COUNTY, NEW MEXICO

CELERO ENERGY
ROCK QUEEN UNIT TRACT #33
CHLORIDE CONCENTRATION MAP
SAMPLED ON 10/28/2011

TETRA TECH, INC.
MIDLAND, TEXAS

TABLES

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

Monitor Well	Date Gauged	Date Well Installation	TOC Elevation (ft)	Depth of Well (bgs in ft)	Depth to Groundwater (ft)	Groundwater Elevation (ft)
MW-1	12/28/09	12/10/09	4,417.04	153.75	112.14	4,304.90
	02/25/10			153.25	112.09	4,304.95
	07/12/10			153.25	112.07	4,304.97
	10/11/10			153.25	112.11	4,304.93
	01/17/11			153.25	112.04	4,305.00
	04/12/11			153.25	112.00	4,305.04
	07/27/11			153.25	112.79	4,304.25
	10/24/11			153.25	112.04	4,305.00
MW-2	01/17/11	11/30/10	4,417.96	129.00	111.19	4,306.77
	04/12/11			129.00	111.18	4,306.78
	07/27/11			129.00	111.93	4,306.03
	10/24/11			129.00	111.21	4,306.75
MW-3	01/17/11	11/18/10	4,416.05	129.53	111.78	4,304.27
	04/12/11			129.53	111.75	4,304.30
	07/27/11			129.53	112.55	4,303.50
	10/24/11			129.53	111.78	4,304.27
MW-4	01/17/11	11/30/10	4,417.87	128.45	115.08	4,302.79
	04/12/11			128.45	115.05	4,302.82
	07/27/11			128.45	115.85	4,302.02
	10/24/11			128.45	115.13	4,302.74
RW-1	01/17/11	12/06/10	4,416.61	128.65	111.22	4,305.39
	04/12/11			128.65	111.03	4,305.58
	07/27/11			128.65	112.01	4,304.60
	10/24/11			128.65	111.21	4,305.40

Table 2
Celero Energy II, LP
Groundwater Analytical Results
Rock Queen Unit Tract #33 Tank Battery
Chaves County, New Mexico

Monitor Well	Date Sampled	Dissolved Calcium (mg/L)	Dissolved Magnesium (mg/L)	Dissolved Sodium (mg/L)	Dissolved Potassium (mg/L)	Hydroxide Alkalinity (mg/L)	Carbonate Alkalinity (mg/L)	Bicarbonate Alkalinity (mg/L)	Total Alkalinity (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	TDS (mg/L)	Hardness (mg/L)	pH
MW-1	12/28/09	607	156	1,080	13.3	<1.00	<1.00	134	134	99.3	3,220	5,430	2,160	7.33
	02/25/10	8,440	3,140	13,700	185.0	<1.00	<1.00	98	98	604	46,800	90,100	34,000	6.44
	07/13/10	-	-	-	-	-	-	-	-	613	63,500	102,000	-	-
	10/11/10	-	-	-	-	-	-	-	-	1,070	88,700	161,000	-	-
	01/21/11	-	-	-	-	-	-	-	-	1,050	81,200	134,000	-	-
	04/14/11	-	-	-	-	-	-	-	-	1,010	77,400	116,000	-	-
	07/28/11	-	-	-	-	-	-	-	-	1,080	83,600	124,000	-	-
	10/28/11	-	-	-	-	-	-	-	-	1,070	73,300	120,000	-	-
MW-2	01/21/11	-	-	-	-	-	-	-	-	124	55.6	2,010	-	-
	04/14/11	-	-	-	-	-	-	-	-	133	48.5	544	-	-
	07/28/11									171	55.1	576		
	10/28/11	-	-	-	-	-	-	-	-	163	45.4	566	-	-
MW-3	01/21/11	-	-	-	-	-	-	-	-	132	5,370	10,600	-	-
	04/14/11	-	-	-	-	-	-	-	-	126	5,420	6,180	-	-
	07/28/11									155	6,950	9,820		
	10/28/11	-	-	-	-	-	-	-	-	143	5,860	11,100	-	-
MW-4	01/21/11	-	-	-	-	-	-	-	-	230	6,510	18,400	-	-
	04/14/11	-	-	-	-	-	-	-	-	236	7,410	25,400	-	-
	07/28/11									258	5,450	12,700		
	10/28/11	-	-	-	-	-	-	-	-	324	8,170	15,600	-	-
RW-1	01/21/11	-	-	-	-	-	-	-	-	NS	NS	NS	-	-
	04/14/11	-	-	-	-	-	-	-	-	1,070	83,700	122,000	-	-
	07/28/11	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	10/28/11	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

NS - Not sampled

(-) Not analyzed

Table 3
Celero Energy II, LP
Groundwater Analytical Results
Rock Queen Unit Tract 33 Tank Battery
Chaves County, New Mexico

Monitor Well	Date Sampled	Benzene in (mg/L)	Toluene in (mg/L)	Ethyl-Benzene (mg/L)	Xylene in (mg/L)	Total BTEX (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
	07/28/11	0.0114	<0.001	<0.001	<0.001	0.0114
	10/28/11	0.0020	<0.0010	<0.0010	0.0365	0.0385
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
	07/28/11	<0.001	<0.001	<0.001	<0.001	<0.001
	10/28/11	<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
	07/28/11	<0.001	<0.001	<0.001	<0.001	<0.001
	10/28/11	<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
	07/28/11	<0.001	<0.001	<0.001	<0.001	<0.001
	10/28/11	<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
	07/28/11	NS	NS	NS	NS	NS
	10/28/11	NS	NS	NS	NS	NS

NS - Not sampled

APPENDIX A
BORING LOGS

SAMPLE LOG

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

SAMPLE LOG

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
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.

SAMPLE LOG

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.

SAMPLE LOG

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.

SAMPLE LOG

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.

SAMPLE LOG

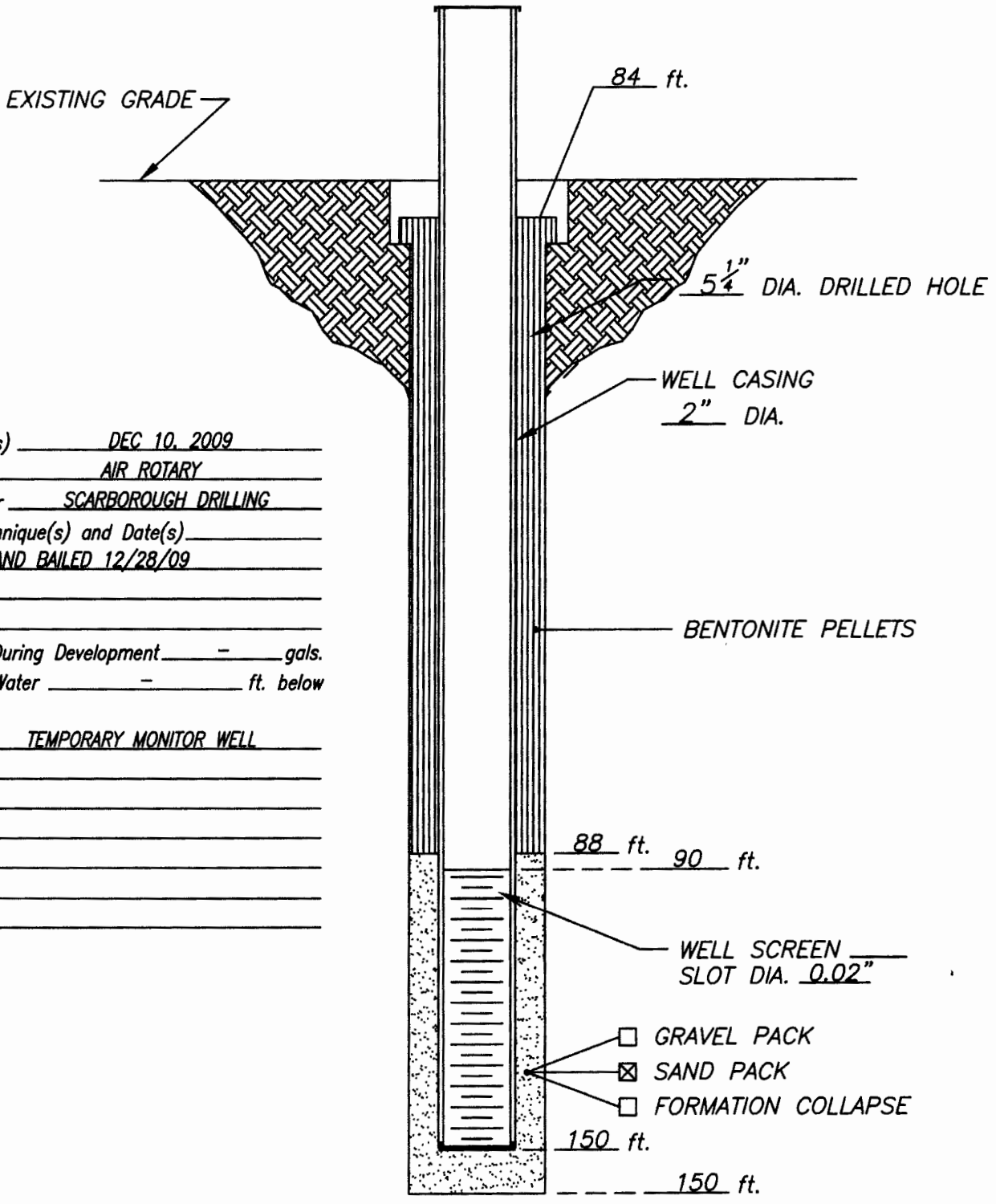
Boring/Well RW-1
GPS N33.176878° W103.794975°
Project Number 115-6403133A
Client Celero Energy II, LP
Site Location Rock Queen Unit Tract #33 Tank Battery
Location Chaves, New Mexico
Letter F, Section 23, Township 13 South, Range 31 East
Total Depth 120'
Date Installed: 12/06/10 to 12/07/10

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

WELL CONSTRUCTION LOG



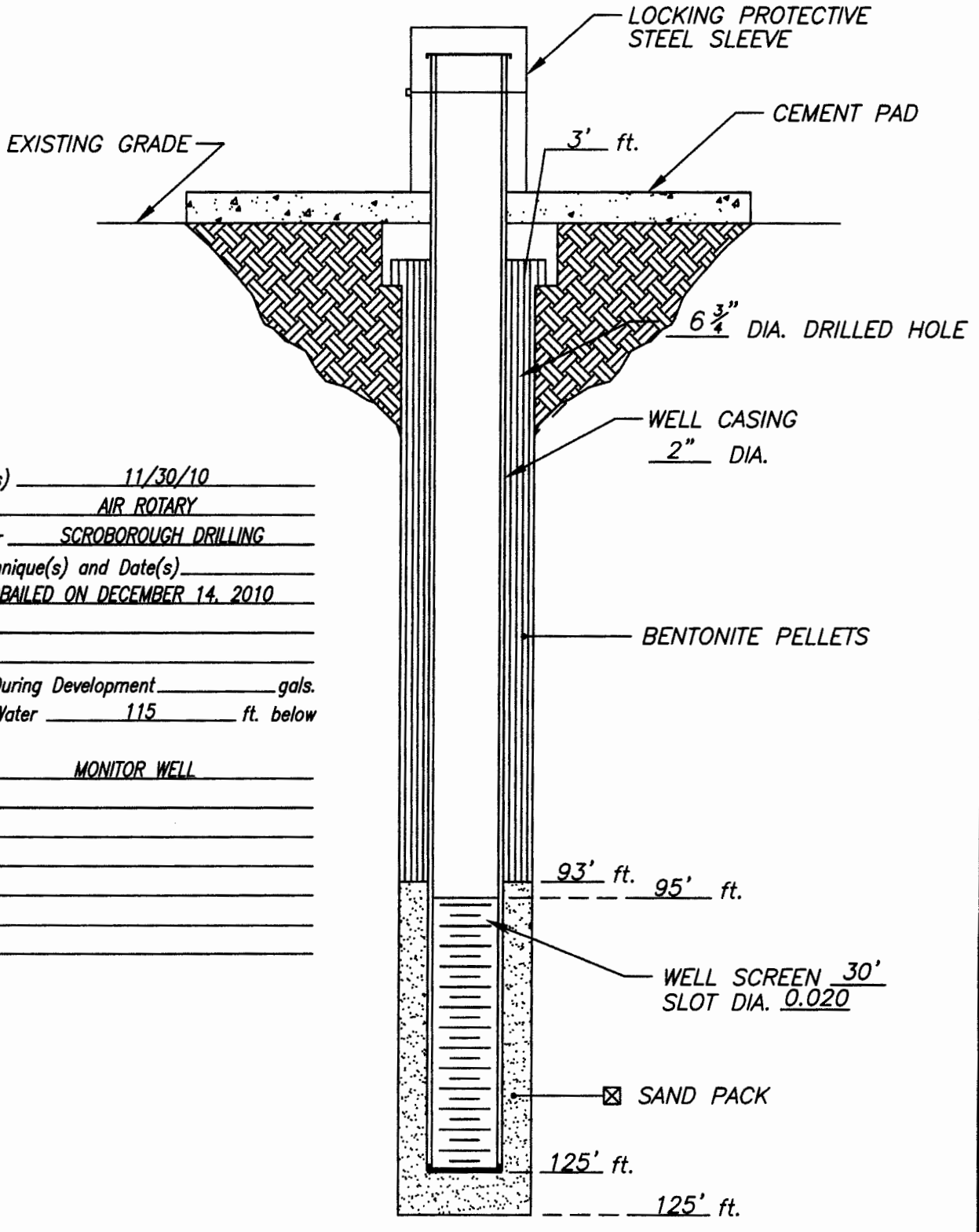
Installation Date(s) DEC 10, 2009
Drilling Method AIR ROTARY
Drilling Contractor SCARBOROUGH DRILLING
Development Technique(s) and Date(s)
HAND BAILED 12/28/09

Water Removed During Development – gals.
Static Depth to Water – ft. below Ground Level
Well Purpose TEMPORARY MONITOR WELL

Remarks

DATE: DEC. 23, 2009	CLIENT: CELERO ENERGY II, LP	WELL NO.
TETRA TECH, INC. MIDLAND, TEXAS	PROJECT: ROCK QUEEN UNIT TRACT #33	MW–1
	LOCATION: CHAVES COUNTY, NM	

WELL CONSTRUCTION LOG



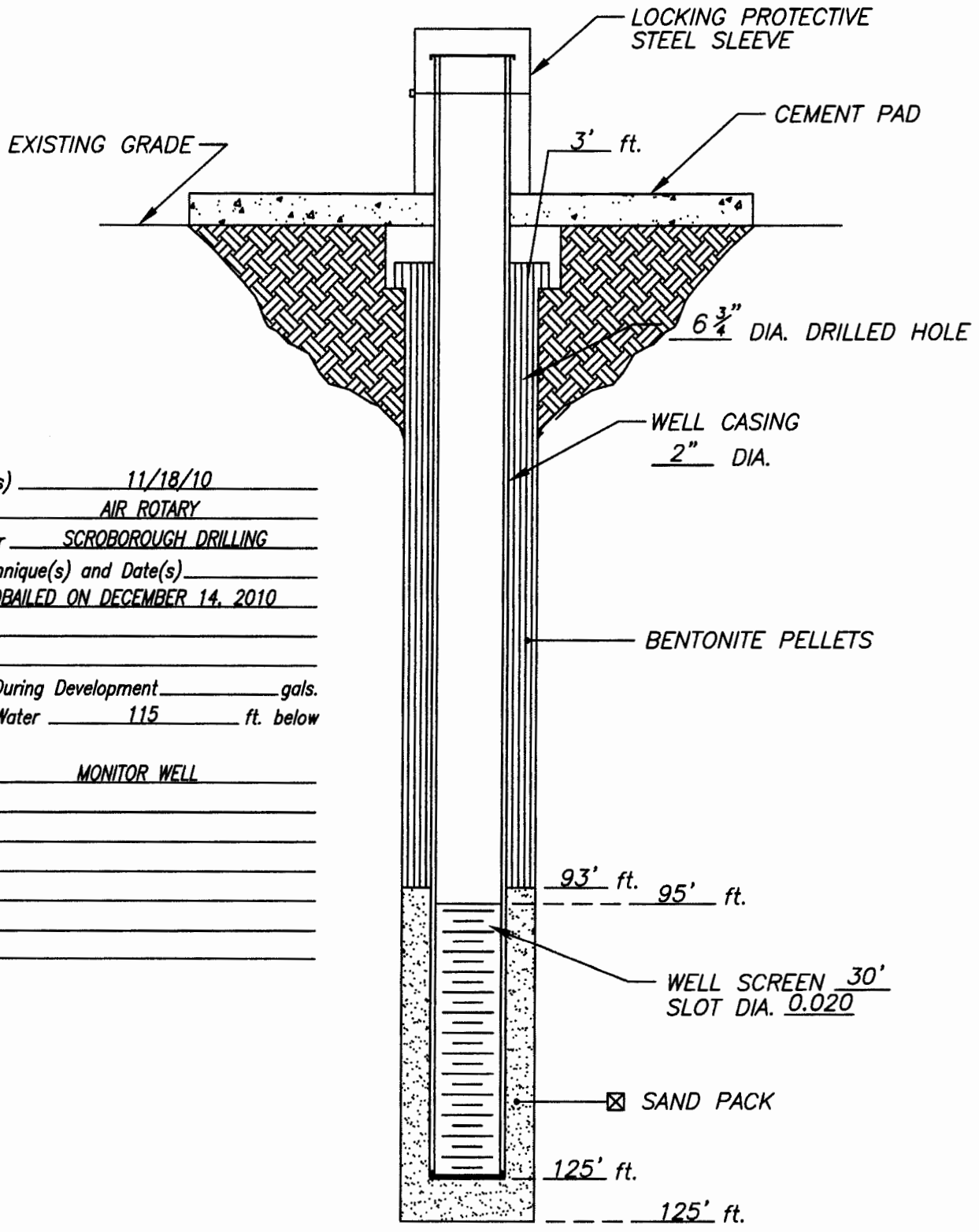
Installation Date(s) 11/30/10
Drilling Method AIR ROTARY
Drilling Contractor SCROBOROUGH DRILLING
Development Technique(s) and Date(s)
HANDBAILED ON DECEMBER 14, 2010

Water Removed During Development ____ gals.
Static Depth to Water 115 ft. below Ground Level
Well Purpose MONITOR WELL

Remarks

DATE: 11/30/10	CLIENT: CELERO ENERGY II, LLC	WELL NO.
TETRA TECH, INC. MIDLAND, TEXAS	PROJECT: ROCK QUEEN UNIT TRACT #33	MW-2
	LOCATION: CHAVES COUNTY, NEW MEXICO	
	115-6403133	

WELL CONSTRUCTION LOG



Installation Date(s) 11/18/10
Drilling Method AIR ROTARY
Drilling Contractor SCROBOROUGH DRILLING
Development Technique(s) and Date(s)
HANDBAILED ON DECEMBER 14, 2010

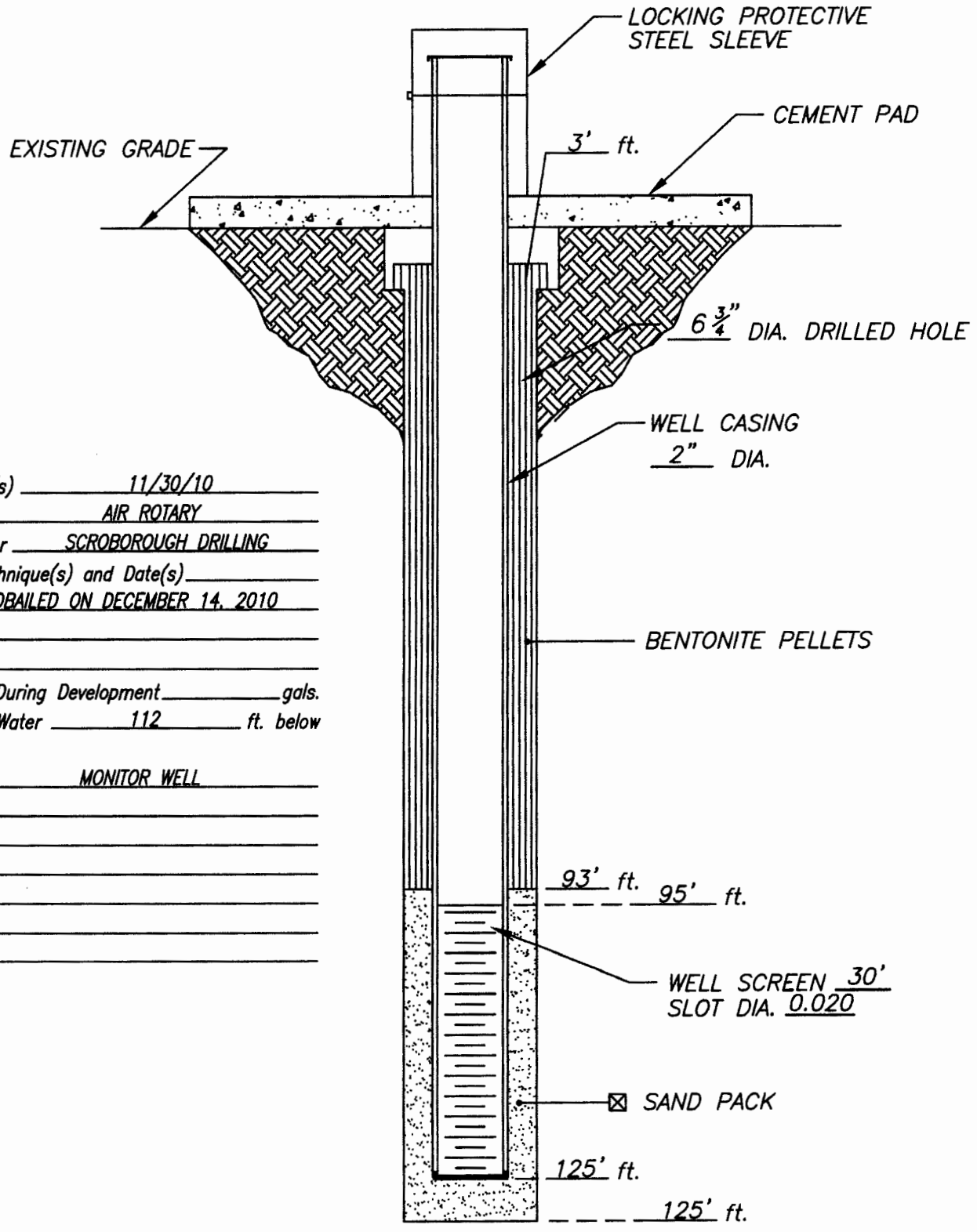
Water Removed During Development ____ gals.
Static Depth to Water 115 ft. below Ground Level
Well Purpose MONITOR WELL

Remarks

DATE: 11/18/10	CLIENT: CELERO ENERGY II, LLC	WELL NO.
TETRA TECH, INC. MIDLAND, TEXAS	PROJECT: ROCK QUEEN UNIT TRACT #33	MW-3
	LOCATION: CHAVES COUNTY, NEW MEXICO	

115-6403133

WELL CONSTRUCTION LOG



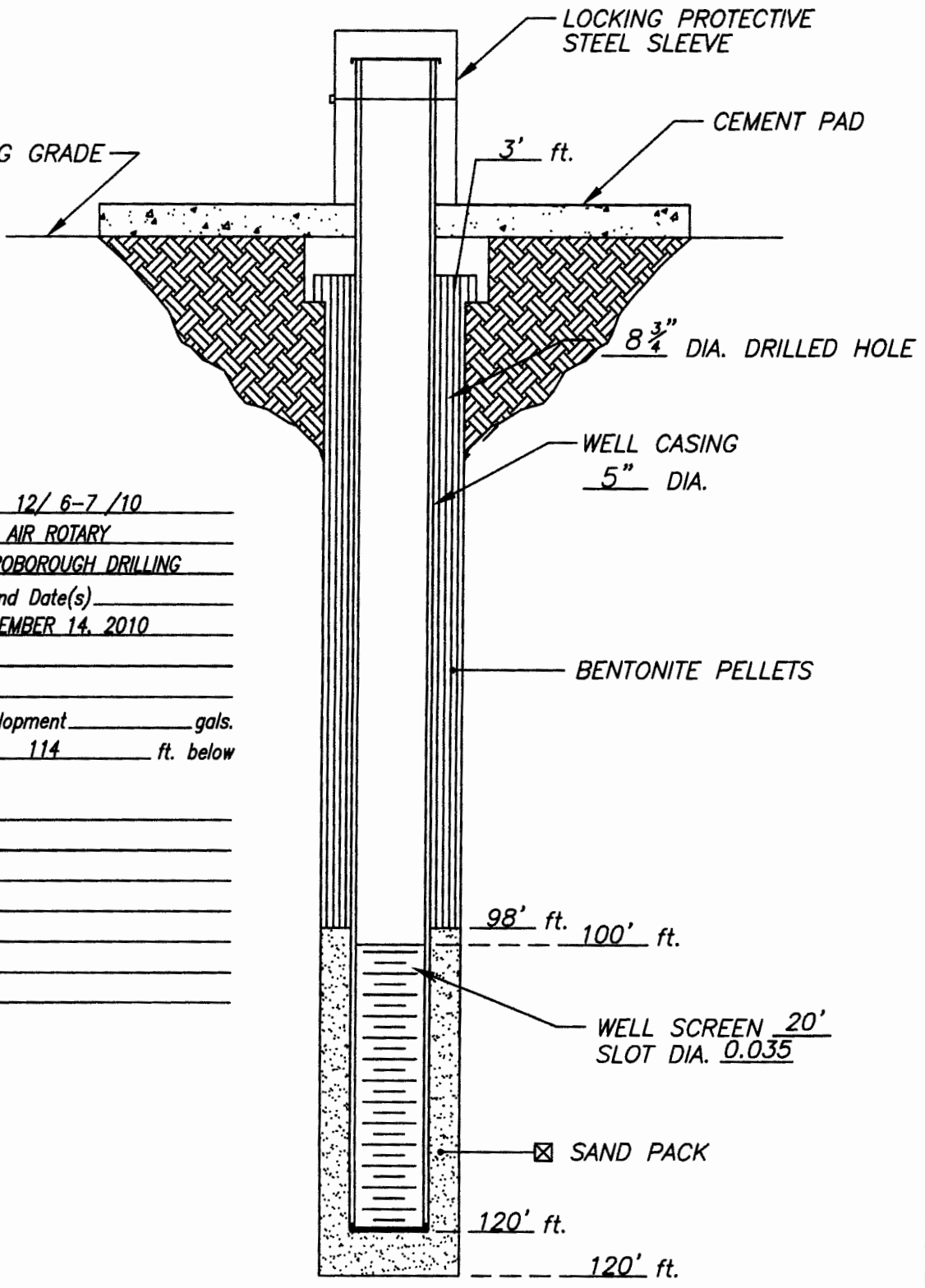
Installation Date(s) 11/30/10
Drilling Method AIR ROTARY
Drilling Contractor SCROBOROUGH DRILLING
Development Technique(s) and Date(s)
HANDBAILED ON DECEMBER 14, 2010

Water Removed During Development _____ gals.
Static Depth to Water 112 ft. below Ground Level
Well Purpose MONITOR WELL

Remarks

DATE: 11/30/10	CLIENT: CELERO ENERGY II, LLC	WELL NO.
TETRA TECH, INC. MIDLAND, TEXAS	PROJECT: ROCK QUEEN UNIT TRACT #33	MW-4
	LOCATION: CHAVES COUNTY, NEW MEXICO	
	115-6403133	

WELL CONSTRUCTION LOG



Installation Date(s) 12/ 6-7 /10
Drilling Method AIR ROTARY
Drilling Contractor SCROBOROUGH DRILLING
Development Technique(s) and Date(s)
HANDBAILED ON DECEMBER 14, 2010

Water Removed During Development _____ gals.
Static Depth to Water 114 ft. below *Ground Level*
Well Purpose _____

Remarks _____

DATE: 12/10/10	CLIENT: *CELERO ENERGY II, LLC*	WELL NO.
TETRA TECH, INC. ***MIDLAND, TEXAS***	PROJECT: *ROCK QUEEN UNIT TRACT #33*	RW-1
	LOCATION: *CHAVES COUNTY, NEW MEXICO*	

115-6403133

APPENDIX C
LABORATORY ANALYSIS

TRACEANALYSIS, INC.

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

Certifications

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

NELAP Certifications

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

Analytical and Quality Control Report

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

Report Date: January 7, 2010

Work Order: 9122910

Project Location: Chavez County, NM
Project Name: Celero/Tract 33 TB
Project Number: 114-6403133

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

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
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.

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

Standard Flags

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

Case Narrative

Samples for project Celero/Tract 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.

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

Analytical Report

Sample: 218520 - TMW-1

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

Parameter	Flag	Result	RL	Units	Dilution	RL
Hydroxide Alkalinity		<1.00		mg/L as CaCo3	1	1.00
Carbonate Alkalinity		<1.00		mg/L as CaCo3	1	1.00
Bicarbonate Alkalinity		**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	Prep Method:	S 5030B
QC Batch:	66515	Date Analyzed:	2010-01-06	Analyzed By:	AG
Prep Batch:	56863	Sample Preparation:	2009-01-06	Prepared By:	AG

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.109	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	Analytical Method:	S 6010B	Prep Method:	S 3005A
QC Batch:	66490	Date Analyzed:	2010-01-06	Analyzed By:	RR
Prep Batch:	56807	Sample Preparation:	2010-01-05	Prepared By:	KV

Parameter	Flag	Result	RL	Units	Dilution	RL
Dissolved Calcium		**607**		mg/L	10	1.00

continued ...

sample 218520 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Dissolved Potassium		**13.3**	mg/L	1	1.00
Dissolved Magnesium		**156**	mg/L	1	1.00
Dissolved Sodium		**1080**	mg/L	10	1.00

Sample: 218520 - TMW-1

Laboratory:	Midland				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	66392	Date Analyzed:	2009-12-30	Analyzed By:	AR
Prep Batch:	56732	Sample Preparation:	2009-12-30	Prepared By:	AR

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

Parameter	Flag	RL Result	Units	Dilution	RL
Hardness (by ICP)		**2160**	mg eq CaCO3/L	1	0.00

Sample: 218520 - TMW-1

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

Parameter	Flag	RL Result	Units	Dilution	RL
pH		**7.33**	s.u.	1	0.00

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:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Sulfate		**99.3**	mg/L	5	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:	AR
Prep Batch:	56731	Sample Preparation:	2009-12-30	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		**5430**	mg/L	5	10.0

Method Blank (1) QC Batch: 66366

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

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

Method Blank (1) QC Batch: 66392

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

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

Method Blank (1) QC Batch: 66392

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

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

Method Blank (1) QC Batch: 66452

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

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

Method Blank (1) QC Batch: 66490

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

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

Method Blank (1) QC Batch: 66515

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

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

continued ...

method blank continued ...

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

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

Duplicates (1) Duplicated Sample: 218524

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

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

Duplicates (1) Duplicated Sample: 218524

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

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

Duplicates (1) Duplicated Sample: 218524

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

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

Laboratory Control Spike (LCS-1)

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

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

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

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

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

Laboratory Control Spike (LCS-1)

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

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

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

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

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

Laboratory Control Spike (LCS-1)

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

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

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

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

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

Laboratory Control Spike (LCS-1)

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

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

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

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

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

Laboratory Control Spike (LCS-1)

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

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.102	mg/L	1	0.100	<0.000300	102	79.4 - 111.8
Toluene	0.103	mg/L	1	0.100	<0.000200	103	79.3 - 110
Ethylbenzene	0.101	mg/L	1	0.100	<0.000200	101	73.8 - 113.1
Xylene	0.307	mg/L	1	0.300	<0.000900	102	73.9 - 113.6

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

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

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

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

continued ...

control spikes continued ...

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD 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 | Date Analyzed: 2009-12-30 | Analyzed By: AR
Prep Batch: 56732 | QC Preparation: 2009-12-30 | Prepared By: AR

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

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

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

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

Matrix Spike (MS-1) Spiked Sample: 218522

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

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

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

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

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

Matrix Spike (MS-1) Spiked Sample: 218384

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

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

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

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

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

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

Matrix Spike (MS-1) Spiked Sample: 218565

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

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

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	0.104	mg/L	1	0.100	<0.000300	104	77.3 - 117.4	2	20
Toluene	0.104	mg/L	1	0.100	<0.000200	104	75 - 111.8	3	20
Ethylbenzene	0.103	mg/L	1	0.100	<0.000200	103	78.8 - 106.6	2	20
Xylene	0.310	mg/L	1	0.300	<0.000900	103	68.9 - 114	2	20

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

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

Standard (ICV-1)

QC Batch: 66350 | Date Analyzed: 2009-12-29 | Analyzed By: AR

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

Standard (CCV-1)

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

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

Standard (ICV-1)

QC Batch: 66366 Date Analyzed: 2009-12-30 Analyzed By: AR

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

Standard (CCV-1)

QC Batch: 66366 Date Analyzed: 2009-12-30 Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hydroxide Alkalinity		mg/L as CaCo3	0.00	<1.00		0 - 200	2009-12-30
Carbonate Alkalinity		mg/L as CaCo3	0.00	180		0 - 200	2009-12-30
Bicarbonate Alkalinity		mg/L as CaCo3	0.00	73.0		0 - 200	2009-12-30
Total Alkalinity		mg/L as CaCo3	250	253	101	90 - 110	2009-12-30

Standard (ICV-1)

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

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	25.0	23.6	94	90 - 110	2009-12-30

Standard (ICV-1)

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

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

Standard (CCV-1)

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

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

Standard (CCV-1)

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

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

Standard (ICV-1)

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

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	50.0	53.0	106	90 - 110	2010-01-06
Dissolved Potassium		mg/L	50.0	49.6	99	90 - 110	2010-01-06
Dissolved Magnesium		mg/L	50.0	52.9	106	90 - 110	2010-01-06
Dissolved Sodium		mg/L	50.0	50.2	100	90 - 110	2010-01-06

Standard (CCV-1)

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

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	50.0	52.3	105	90 - 110	2010-01-06
Dissolved Potassium		mg/L	50.0	49.4	99	90 - 110	2010-01-06
Dissolved Magnesium		mg/L	50.0	52.3	105	90 - 110	2010-01-06
Dissolved Sodium		mg/L	50.0	51.2	102	90 - 110	2010-01-06

Standard (CCV-1)

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

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

Standard (CCV-2)

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

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

Order #: 9122910

Analysis Request of Chain of Custody Record

PAGE: 1 OF: 1

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

CLIENT NAME: Celero
SITE MANAGER: Jeff Kindley
PROJECT NO.: 114-6403133
PROJECT NAME: Celero / Test 33 TB
Chaves Co, NM

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB I.D. NUMBER	DATE 2009	TIME	MATRIX	COMP	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	HCL	HNO3	ICE	NONE	BTEX 8021B (circled)	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride (circled)	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS (TDS circled)
218520	12/28	1400	GW		X	TMW-1	4	N	X		X		X												X				X

RELINQUISHED BY: (Signature) [signature] Date: 12/29/09 Time: 1200
RECEIVED BY: (Signature) [signature] Date: 12/29/09 Time: 12:00

RELINQUISHED BY: (Signature) [signature] Date: 12/29/09 Time: 17:00
RECEIVED BY: (Signature) [signature] Date: Time:

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

RECEIVING LABORATORY: Trace
ADDRESS:
CITY: Midland STATE: TX ZIP:
CONTACT: PHONE:

RECEIVED BY: (Signature) Carol Fox
DATE: 12-30-09 TIME: 9:45 Am

SAMPLED BY: (Print & Initial) JK / JK Date: 12/28/09 Time:

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

TETRA TECH CONTACT PERSON: Jeff Kindley
4.6
5.0 IR

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 2.1°c intact

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

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

KK

Cation-Anion Balance Sheet

DATE: 1/7/2010

Sample #	Calcium ppm	Magnesium ppm	Sodium ppm	Potassium ppm	Alkalinity ppm	Sulfate ppm	Chloride ppm	Nitrate ppm	Fluoride ppm	Bromide ppm	TDS ppm	EC µMHOs/cm
218520	607	156	1080	13.3	134	99.3	3220				5430	

Sample #	Calcium in meq/L	Magnesium in meq/L	Sodium in meq/L	Potassium in meq/L	Alkalinity in meq/L	Sulfate in meq/L	Chloride in meq/L	Nitrate in meq/L	Fluoride in meq/L	Bromide in meq/L	**Cations in meq/L**	**Anions in meq/L**	**Percentage Error**
218520	30.29	12.84	46.98	0.34	2.68	2.07	90.84	0	0	0	90.45	95.58	5.522616252

	EC/Cation	EC/Anion
218520	9044.6754	9558.3626

range 0 to 0

TDS/EC	TDS/Cat	TDS/Anion
#DIV/0!	0.60	0.57

needs to be 0.55-0.77

TRACEANALYSIS, INC.

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

Certifications

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

NELAP Certifications

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

Analytical and Quality Control Report

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

Report Date: 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.

Sample	Description	Matrix	Date Taken	Time Taken	Date 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.

Michael Abel

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

Standard Flags

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

Case Narrative

Samples for project Celero/Rock Queen #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.

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis 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
pH	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.

Analytical Report

Sample: 223828 - MW-1

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

Parameter	Flag	RL Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCo3	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCo3	1	1.00
Bicarbonate Alkalinity		**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	Sample Preparation:	2010-03-01	Prepared By:	AG

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0683	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

Parameter	Flag	RL Result	Units	Dilution	RL
Dissolved Calcium		**8440**	mg/L	1000	0.100

continued ...

sample 223828 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Dissolved Potassium		**185**	mg/L	10	0.100
Dissolved Magnesium		**3140**	mg/L	1000	0.100
Dissolved Sodium		**13700**	mg/L	1000	0.100

Sample: 223828 - 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:	2010-03-01	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**46800**	mg/L	5000	0.500

Sample: 223828 - 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

Parameter	Flag	RL Result	Units	Dilution	RL
Hardness (by ICP)		**34000**	mg eq CaCO3/L	1	0.00

Sample: 223828 - MW-1

Laboratory:	Midland				
Analysis:	pH	Analytical Method:	SM 4500-H+	Prep Method:	N/A
QC Batch:	67873	Date Analyzed:	2010-02-26	Analyzed By:	AG
Prep Batch:	58060	Sample Preparation:	2010-02-26	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
pH		**6.44**	s.u.	1	0.00

Sample: 223828 - MW-1

Laboratory:	Midland				
Analysis:	SO4 (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:	2010-03-01	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Sulfate		**604**	mg/L	50	0.500

Sample: 223828 - MW-1

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	68098	Date Analyzed:	2010-03-09	Analyzed By:	AR
Prep Batch:	58103	Sample Preparation:	2010-03-02	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Total Dissolved Solids		**90100**	mg/L	100	10.0

Method Blank (1) QC Batch: 67894

QC Batch:	67894	Date Analyzed:	2010-03-01	Analyzed By:	AR
Prep Batch:	58086	QC Preparation:	2010-03-01	Prepared By:	AR

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

Method Blank (1) QC Batch: 67911

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

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.000300	mg/L	0.001

continued ...

method blank continued ...

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0991	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 | Date Analyzed: 2010-03-02 | Analyzed By: AR
Prep Batch: 58087 | QC Preparation: 2010-03-01 | Prepared By: AR

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

Method Blank (1) QC Batch: 67932

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

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

Method Blank (1) QC Batch: 67940

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

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

Method Blank (1) QC Batch: 68098

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

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

Duplicates (1) Duplicated Sample: 223824

QC Batch: 67873 | Date Analyzed: 2010-02-26 | Analyzed By: AG
Prep Batch: 58060 | QC Preparation: 2010-02-26 | Prepared By: AG

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

Duplicates (1) Duplicated Sample: 223818

QC Batch: 67894 | Date Analyzed: 2010-03-01 | Analyzed By: AR
Prep Batch: 58086 | QC Preparation: 2010-03-01 | Prepared By: AR

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Hydroxide Alkalinity	<1.00	<1.00	mg/L as CaCo3	1	0	20
Carbonate Alkalinity	<1.00	<1.00	mg/L as CaCo3	1	0	20
Bicarbonate Alkalinity	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 | Date Analyzed: 2010-03-09 | Analyzed By: AR
Prep Batch: 58103 | QC Preparation: 2010-03-02 | Prepared By: AR

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

Laboratory Control Spike (LCS-1)

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

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.

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD 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	mg/L	1	0.100	112	111	77.9 - 119.8

Laboratory Control Spike (LCS-1)

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

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	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 | Date Analyzed: 2010-03-02 | Analyzed By: AR
Prep Batch: 58087 | QC Preparation: 2010-03-01 | Prepared By: AR

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

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Sulfate	23.1	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 | Date Analyzed: 2010-03-02 | Analyzed By: RR
Prep Batch: 58109 | QC Preparation: 2010-03-02 | Prepared By: KV

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	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 | Date Analyzed: 2010-03-09 | Analyzed By: AR
Prep Batch: 58103 | QC Preparation: 2010-03-02 | Prepared By: AR

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

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

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

Matrix Spike (MS-1) Spiked Sample: 223853

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

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

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD 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 | Date Analyzed: 2010-03-02 | Analyzed By: AR
Prep Batch: 58087 | QC Preparation: 2010-03-01 | Prepared By: AR

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

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

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

Matrix Spike (MS-1) Spiked Sample: 223829

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

Param		MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Sulfate	[3]	1500	mg/L	50	1380	463	75	90 - 110

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

Param		MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Sulfate	[4]	1590	mg/L	50	1380	463	82	90 - 110	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: 67940 | Date Analyzed: 2010-03-02 | Analyzed By: RR
Prep Batch: 58109 | QC Preparation: 2010-03-02 | 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	mg/L	1	50.0	71	92	75 - 125
Dissolved Sodium	485	mg/L	1	50.0	439	92	75 - 125

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

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

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

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

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

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hydroxide Alkalinity		mg/L as CaCo3	0.00	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

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hydroxide Alkalinity		mg/L as CaCo3	0.00	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

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

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

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

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

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

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

Standard (ICV-1)

QC Batch: 67940 Date Analyzed: 2010-03-02 Analyzed By: RR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	50.0	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

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

Order #: 100226130

Analysis Request of Chain of Custody Record

PAGE: 1 OF: 1

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

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME: Celero Energy

SITE MANAGER: Jeff Kindley

PROJECT NO.: 115-6403137A

PROJECT NAME: Celero Energy / Rock Quarry #33 Chaves Co, NM

LAB I.D. NUMBER	DATE 2010	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
223828	2/25	1730	W		X	MW-1	4	N	3		X	1	X															X

RELINQUISHED BY: (Signature) Date: 2/26/10 Time: 1500
RECEIVED BY: (Signature) Date: 2/26/10 Time: 1730
SAMPLED BY: (Print & initial) JT/TH Date: 2/25/10 Time:

RELINQUISHED BY: (Signature) Date: Time:
RECEIVED BY: (Signature) Date: 2/27/10 Time: 10:10
SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS AIRBILL #: OTHER:

RELINQUISHED BY: (Signature) Date: Time:
RECEIVED BY: (Signature) Date: Time:
TETRA TECH CONTACT PERSON: Jeff Kindley
Results by:

RECEIVING LABORATORY: Trace
ADDRESS:
CITY: Midland STATE: TX ZIP:
CONTACT: PHONE: DATE: TIME:
RECEIVED BY: (Signature)
RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 2.6°C intact

REMARKS: Midland - Anions, TDS, pH, BTEX Lubbock - Cations, hardness

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

Lone Star 760301145 5.2°C

TRACEANALYSIS, INC.

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Certifications

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

NELAP Certifications

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

Analytical and Quality Control Report

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

Report Date: July 27, 2010

Work Order: 10071418

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.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
237468	MW-1	water	2010-07-13	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.

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

Standard Flags

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

Case Narrative

Samples for project Celero/Rock Queen #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.

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	61451	2010-07-14 at 16:00	71724	2010-07-14 at 16:42
Chloride (IC)	E 300.0	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.

Analytical Report

Sample: 237468 - MW-1

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

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		**0.00200**	mg/L	1	0.00100
Toluene		**0.00150**	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)		0.0741	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)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	71932	Date Analyzed:	2010-07-16	Analyzed By:	AR
Prep Batch:	61518	Sample Preparation:	2010-07-16	Prepared By:	AR

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

Sample: 237468 - MW-1

Laboratory:	Midland				
Analysis:	SO4 (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	71932	Date Analyzed:	2010-07-16	Analyzed By:	AR
Prep Batch:	61518	Sample Preparation:	2010-07-16	Prepared By:	AR

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

Sample: 237468 - MW-1

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

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

Method Blank (1) QC Batch: 71724

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

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

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

Method Blank (1) QC Batch: 71932

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

Parameter	Flag	MDL Result	Units	RL
Chloride		<0.265	mg/L	2.5

Method Blank (1) QC Batch: 71932

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

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

Method Blank (1) QC Batch: 72039

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

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

Duplicates (2) Duplicated Sample: 237468

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

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

Laboratory Control Spike (LCS-1)

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

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

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

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

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.103	0.0996	mg/L	1	0.100	103	100	67.3 - 113
4-Bromofluorobenzene (4-BFB)	0.0966	0.0941	mg/L	1	0.100	97	94	68.2 - 124

Laboratory Control Spike (LCS-1)

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

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	27.2	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.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	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 | Date Analyzed: 2010-07-16 | Analyzed By: AR
Prep Batch: 61518 | QC Preparation: 2010-07-16 | Prepared By: AR

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	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 | Date Analyzed: 2010-07-26 | Analyzed By: AR
Prep Batch: 61516 | QC Preparation: 2010-07-15 | Prepared By: AR

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

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Dissolved Solids	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 | Date Analyzed: 2010-07-14 | Analyzed By: AG
Prep Batch: 61451 | QC Preparation: 2010-07-14 | Prepared By: AG

Param		MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		0.100	mg/L	1	0.100	0.0031	97	77.9 - 114
Toluene		0.0800	mg/L	1	0.100	<0.000600	80	78.3 - 111
Ethylbenzene	[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.

Param		MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		0.0908	mg/L	1	0.100	0.0031	88	77.9 - 114	10	20
Toluene	[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.

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

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

Param		MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	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
Prep Batch: 61518 | QC Preparation: 2010-07-16 | Prepared By: AR

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

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

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

Standard (CCV-3)

QC Batch: 71724 | Date Analyzed: 2010-07-14 | Analyzed By: AG

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

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

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

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

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

Order #: 10071418

Analysis Request of Chain of Custody Record

PAGE: 1 OF: 2

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

CLIENT NAME: Celero

SITE MANAGER: Jeff Kindley

PROJECT NO.: 115-6403133

PROJECT NAME: Celero / Rock Quern #33 Chavez Co, NM

LAB I.D. NUMBER	DATE 2016	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 8081/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH (TDS)	Sulfates
237468	7/13	1300	W		X	MW-1	4	N	X		X		X											X				X	X

ANALYSIS REQUEST (Circle or Specify Method No.)

RELINQUISHED BY: (Signature) — Date: 7/14/2016 Time:
RECEIVED BY: (Signature) — Date: 7/14/16 Time: 925
SAMPLED BY: (Print & Initial) JT / GP — Date: 7/13/16 Time:

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

RELINQUISHED BY: (Signature) — Date: Time:
RECEIVED BY: (Signature) — Date: Time:
TETRA TECH CONTACT PERSON: Jeff Kindley — Results by:

RECEIVING LABORATORY: Trace
ADDRESS:
CITY: Midland STATE: TX ZIP:
CONTACT: PHONE: DATE: TIME:
RECEIVED BY: (Signature)
RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 3.9°C intact

REMARKS: All tests Midland

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

TRACEANALYSIS, INC.

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

Certifications

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

NELAP Certifications

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

Analytical and Quality Control Report

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

Report Date: November 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.

Sample	Description	Matrix	Date Taken	Time Taken	Date 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.

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

Standard Flags

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

Case Narrative

Samples for project Celero/Rock Queen #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.

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	63840	2010-10-14 at 13:40	74557	2010-10-14 at 18:04
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.

Analytical Report

Sample: 247532 - MW-1

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

Parameter	Flag	Result	RL	Units	Dilution	RL
Benzene		**0.00480**		mg/L	1	0.00100
Toluene		<0.00100		mg/L	1	0.00100
Ethylbenzene		<0.00100		mg/L	1	0.00100
Xylene		<0.00100		mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	[1]	0.323	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)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	75072	Date Analyzed:	2010-11-03	Analyzed By:	PG
Prep Batch:	64403	Sample Preparation:	2010-11-03	Prepared By:	PG

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**88700**		mg/L	10000	2.50

Sample: 247532 - MW-1

Laboratory:	Lubbock				
Analysis:	SO4 (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	75231	Date Analyzed:	2010-11-09	Analyzed By:	PG
Prep Batch:	64531	Sample Preparation:	2010-11-09	Prepared By:	PG

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

[1] High surrogate recovery due to peak interference.

Sample: 247532 - MW-1

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

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

Method Blank (1) QC Batch: 74557

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

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.000400	mg/L	0.001
Toluene		<0.000800	mg/L	0.001
Ethylbenzene		<0.000400	mg/L	0.001
Xylene		<0.000400	mg/L	0.001

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

Method Blank (1) QC Batch: 74622

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

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

Method Blank (1) QC Batch: 75072

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

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

Method Blank (1) QC Batch: 75231

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

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

Duplicates (2) Duplicated Sample: 247533

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

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

Laboratory Control Spike (LCS-1)

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

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

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

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

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

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

Laboratory Control Spike (LCS-2)

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

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

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

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

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

Laboratory Control Spike (LCS-1)

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

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	23.8	mg/L	1	25.0	<0.0350	95	90 - 110	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 | Date Analyzed: 2010-11-09 | Analyzed By: PG
Prep Batch: 64531 | QC Preparation: 2010-11-09 | Prepared By: PG

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

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Sulfate	23.9	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 | Date Analyzed: 2010-10-14 | Analyzed By: AG
Prep Batch: 63840 | QC Preparation: 2010-10-14 | Prepared By: AG

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

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

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

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

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

Matrix Spike (MS-1) Spiked Sample: 248210

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

continued ...

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

matrix spikes continued ...

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.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	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 | Date Analyzed: 2010-11-09 | Analyzed By: PG
Prep Batch: 64531 | QC Preparation: 2010-11-09 | Prepared By: PG

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

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

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

Standard (CCV-3)

QC Batch: 74557 | Date Analyzed: 2010-10-14 | Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0998	100	80 - 120	2010-10-14
Toluene		mg/L	0.100	0.100	100	80 - 120	2010-10-14
Ethylbenzene		mg/L	0.100	0.0964	96	80 - 120	2010-10-14
Xylene		mg/L	0.300	0.288	96	80 - 120	2010-10-14

Standard (CCV-1)

QC Batch: 75072 Date Analyzed: 2010-11-03 Analyzed By: PG

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

Standard (CCV-2)

QC Batch: 75072 Date Analyzed: 2010-11-03 Analyzed By: PG

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

Standard (CCV-1)

QC Batch: 75231 Date Analyzed: 2010-11-09 Analyzed By: PG

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

Standard (CCV-2)

QC Batch: 75231 Date Analyzed: 2010-11-09 Analyzed By: PG

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

WO#: 1010413

Analysis Request of Chain of Custody Record

PAGE: 1 OF: 1

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

CLIENT NAME: Celero

SITE MANAGER: Jeff Kindley

PROJECT NO.: 115-6400-3133

PROJECT NAME: Celero / Rock Queen # 33 Chaves Co. NM

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB I.D. NUMBER	DATE 2010	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS	Sulfate
247532	10/3	0900	W		X	MW-1	4	N	3		X	1	X												X				X	X

PRESERVATIVE METHOD: HCL, HNO3, ICE, NONE

RELINQUISHED BY: (Signature) [signature] Date: 10/12/10 Time: 1:45

RECEIVED BY: (Signature) [signature] Date: 10/13/10 Time: 10:45

RELINQUISHED BY: (Signature) [signature] Date: 10/14/10 Time: 10:30

RECEIVED BY: (Signature) Carol Fox Date: 10-15-10 Time: 9:50 am

RELINQUISHED BY: (Signature) Date: Time:

RECEIVED BY: (Signature) Date: Time:

RECEIVING LABORATORY: Trace
ADDRESS:
CITY: Midland STATE: TX ZIP:
CONTACT: PHONE:

RECEIVED BY: (Signature)
DATE: TIME:

SAMPLED BY: (Print & Initial) JK / JD Date: 10/3/10 Time:

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

TETRA TECH CONTACT PERSON: Jeff Kindley

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 3.3°C intact / 3.1/3.0 TR

REMARKS: Midland - BTEX TDS Lubbock - Chloride SO4

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

LS ZK566164

TRACEANALYSIS, INC.

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

Certifications

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

NELAP Certifications

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

Analytical and Quality Control Report

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

Report Date: February 7, 2011

Work Order: 11012134

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.

Sample	Description	Matrix	Date Taken	Time Taken	Date 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(es) in which your sample(s) were analyzed.

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

Standard Flags

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

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.

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis 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.

Analytical Report

Sample: 255921 - MW-1

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	77124	Date Analyzed:	2011-01-24	Analyzed By:	AG
Prep Batch:	66157	Sample Preparation:	2011-01-24	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		**0.0121**	mg/L	1	0.00100
Toluene		**0.00660**	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0742	mg/L	1	0.100	74	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)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	77371	Date Analyzed:	2011-02-02	Analyzed By:	PG
Prep Batch:	66370	Sample Preparation:	2011-02-02	Prepared By:	PG

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

Sample: 255921 - MW-1

Laboratory:	Lubbock				
Analysis:	SO4 (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	77426	Date Analyzed:	2011-02-06	Analyzed By:	PG
Prep Batch:	66413	Sample Preparation:	2011-02-06	Prepared By:	PG

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

Sample: 255921 - MW-1

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

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

Sample: 255922 - MW-2

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	77170	Date Analyzed:	2011-01-25	Analyzed By:	AG
Prep Batch:	66196	Sample Preparation:	2011-01-25	Prepared By:	AG

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.112	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)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	77372	Date Analyzed:	2011-02-02	Analyzed By:	PG
Prep Batch:	66371	Sample Preparation:	2011-02-02	Prepared By:	PG

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

Sample: 255922 - MW-2

Laboratory:	Lubbock				
Analysis:	SO4 (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	77372	Date Analyzed:	2011-02-02	Analyzed By:	PG
Prep Batch:	66371	Sample Preparation:	2011-02-02	Prepared By:	PG

Parameter	Flag	Result	RL	Units	Dilution	RL
Sulfate		**124**		mg/L	5	2.50

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

Parameter	Flag	Result	RL	Units	Dilution	RL
Total Dissolved Solids		**2010**		mg/L	2	10.0

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:	AG
Prep Batch:	66196	Sample Preparation:	2011-01-25	Prepared By:	AG

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.112	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

Sample: 255923 - MW-3

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

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**5370**	mg/L	500	2.50

Sample: 255923 - MW-3

Laboratory:	Lubbock				
Analysis:	SO4 (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	77426	Date Analyzed:	2011-02-06	Analyzed By:	PG
Prep Batch:	66413	Sample Preparation:	2011-02-06	Prepared By:	PG

Parameter	Flag	Result	RL Units	Dilution	RL
Sulfate		**132**	mg/L	5	2.50

Sample: 255923 - MW-3

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

Parameter	Flag	Result	RL Units	Dilution	RL
Total Dissolved Solids		**10600**	mg/L	20	10.0

Sample: 255924 - MW-4

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	77170	Date Analyzed:	2011-01-25	Analyzed By:	AG
Prep Batch:	66196	Sample Preparation:	2011-01-25	Prepared By:	AG

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

continued ...

sample 255924 continued ...

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.115	mg/L	1	0.100	115	75.4 - 119.4
4-Bromofluorobenzene (4-BFB)		0.101	mg/L	1	0.100	101	78.6 - 122.8

Sample: 255924 - MW-4

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

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**6510**		mg/L	500	2.50

Sample: 255924 - MW-4

Laboratory:	Lubbock				
Analysis:	SO4 (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	77426	Date Analyzed:	2011-02-06	Analyzed By:	PG
Prep Batch:	66413	Sample Preparation:	2011-02-06	Prepared By:	PG

Parameter	Flag	Result	RL	Units	Dilution	RL
Sulfate		**230**		mg/L	5	2.50

Sample: 255924 - MW-4

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

Parameter	Flag	Result	RL	Units	Dilution	RL
Total Dissolved Solids		**18400**		mg/L	100	10.0

Method Blank (1) QC Batch: 77124

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

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.115	mg/L	1	0.100	115	70.2 - 118
4-Bromofluorobenzene (4-BFB)		0.111	mg/L	1	0.100	111	47.3 - 116

Method Blank (1) QC Batch: 77170

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

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.000400	mg/L	0.001
Toluene		<0.000300	mg/L	0.001
Ethylbenzene		<0.000300	mg/L	0.001
Xylene		<0.000333	mg/L	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	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: 77255

QC Batch: 77255 | Date Analyzed: 2011-01-31 | Analyzed By: AR
Prep Batch: 66142 | QC Preparation: 2011-01-24 | Prepared By: AR

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

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

Parameter	Flag	MDL Result	Units	RL
Total Dissolved Solids		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:	2011-02-02	Prepared By:	PG

Parameter	Flag	MDL Result	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

Parameter	Flag	MDL Result	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

Parameter	Flag	MDL Result	Units	RL
Sulfate		<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

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

Duplicates (1) Duplicated Sample: 255921

QC Batch: 77255 | Date Analyzed: 2011-01-31 | Analyzed By: AR
Prep Batch: 66142 | QC Preparation: 2011-01-24 | Prepared By: AR

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

Duplicates (1) Duplicated Sample: 255931

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

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

Laboratory Control Spike (LCS-1)

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

Param	LCS Result	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.

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

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.110	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 | Date Analyzed: 2011-01-25 | Analyzed By: AG
Prep Batch: 66196 | QC Preparation: 2011-01-25 | Prepared By: AG

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

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD 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 | Date Analyzed: 2011-01-31 | Analyzed By: AR
Prep Batch: 66142 | QC Preparation: 2011-01-24 | Prepared By: AR

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

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

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

Laboratory Control Spike (LCS-1)

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

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	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 | Date Analyzed: 2011-02-02 | Analyzed By: PG
Prep Batch: 66370 | QC Preparation: 2011-02-02 | Prepared By: PG

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	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 | Date Analyzed: 2011-02-02 | Analyzed By: PG
Prep Batch: 66371 | QC Preparation: 2011-02-02 | Prepared By: PG

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	24.0	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 | Date Analyzed: 2011-02-02 | Analyzed By: PG
Prep Batch: 66371 | QC Preparation: 2011-02-02 | Prepared By: PG

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	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 | Date Analyzed: 2011-02-06 | Analyzed By: PG
Prep Batch: 66413 | QC Preparation: 2011-02-06 | Prepared By: PG

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	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 | Date Analyzed: 2011-01-24 | Analyzed By: AG
Prep Batch: 66157 | QC Preparation: 2011-01-24 | Prepared By: AG

Param		MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	[1]	0.0669	mg/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 ...

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

matrix spikes continued ...

Param		MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Xylene	[4]	0.145	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.

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

Surrogate		MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD 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 | Date Analyzed: 2011-01-25 | Analyzed By: AG
Prep Batch: 66196 | QC Preparation: 2011-01-25 | Prepared By: AG

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

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

[4]Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.
[5]Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.
[6]Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.
[7]Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.
[8]Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.
[9]Surrogate out due to peak interference.
[10]Surrogate 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.
[12]MSD analyte out of range. MS/MSD has a RPD within limits. Therfore, MS shows extraction occured properly.

matrix spikes continued ...

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

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

Matrix Spike (MS-1) Spiked Sample: 255921

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

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	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 | Date Analyzed: 2011-02-02 | Analyzed By: PG
Prep Batch: 66371 | QC Preparation: 2011-02-02 | Prepared By: PG

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

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

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

[13] Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.
[14] Matrix spike ran with batch but spiked sample was reported in another batch •
[15] Matrix spike ran with batch but spiked sample was reported in another batch •

Matrix Spike (MS-1) Spiked Sample: 256247

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

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

Param		MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	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 | Date Analyzed: 2011-02-06 | Analyzed By: PG
Prep Batch: 66413 | QC Preparation: 2011-02-06 | Prepared By: PG

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

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

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

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

Standard (CCV-3)

QC Batch: 77124 | Date Analyzed: 2011-01-24 | Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0820	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

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0857	86	80 - 120	2011-01-25
Toluene		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

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

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

Standard (CCV-2)

QC Batch: 77371 Date Analyzed: 2011-02-02 Analyzed By: PG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	25.0	24.0	96	90 - 110	2011-02-02

Standard (CCV-1)

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

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	25.0	24.0	96	90 - 110	2011-02-02

Standard (CCV-1)

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

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

Standard (CCV-2)

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

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	25.0	24.1	96	90 - 110	2011-02-02

Standard (CCV-2)

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

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

Standard (CCV-1)

QC Batch: 77426 Date Analyzed: 2011-02-06 Analyzed By: PG

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

Standard (CCV-2)

QC Batch: 77426 Date Analyzed: 2011-02-06 Analyzed By: PG

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

xWO #: 11012134

Analysis Request of Chain of Custody Record

PAGE: 1 OF: 1

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

CLIENT NAME: Celero
SITE MANAGER: Jeff Kindley
PROJECT NO.: 115 6403133
PROJECT NAME: Celero / Rock Queen Unit Tract 33 Chaves Co. NM

LAB I.D. NUMBER	DATE 2011	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	HCL	HNO3	ICE	NONE
255921	1/21	1130	W		X	MW 1	4	N	X		X	X
922	↓	1155	↓		↓	MW 2	↓	↓	↓		↓	↓
923	↓	1215	↓		↓	MW 3	↓	↓	↓		↓	↓
924	↓	1205	↓		↓	MW 4	↓	↓	↓		↓	↓

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB I.D. NUMBER	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS	SO4
255921	X												X				X	X
922	↓												↓				↓	↓
923	↓												↓				↓	↓
924	↓												↓				↓	↓

RELINQUISHED BY: (Signature) [signature] Date: 1/21/11 Time: [illegible]
RECEIVED BY: (Signature) [signature] Date: 1/21/11 Time: 5:15

RELINQUISHED BY: (Signature) [signature] Date: 1/24/11 Time: 16:00
RECEIVED BY: (Signature) Date: Time:

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

SAMPLED BY: (Print & Initial) JT/TF Date: 1/21/11 Time:

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

TETRA TECH CONTACT PERSON: Jeff Kindley
Results by:
RUSH Charges Authorized: Yes No

RECEIVING LABORATORY: TA
ADDRESS:
CITY: Midland STATE: TX ZIP:
CONTACT: PHONE:
RECEIVED BY: (Signature) [signature] TA LS ZK951497
DATE: 01/25/11 TIME: 10:10 Temp 3.5/3.2

SAMPLE CONDITION WHEN RECEIVED: 12.5°c intact

REMARKS: xMidland - BTEX, TDS xLubbock - Chlorides, SO4

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

TRACEANALYSIS, INC.

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

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

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

Report Date: May 4, 2011

Work Order: 11041529

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.

Sample	Description	Matrix	Date Taken	Time Taken	Date 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.

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

Report Contents

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.

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis 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.

Analytical Report

Sample: 263904 - MW-1

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		1	**0.00760**	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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	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				
Analysis:	Chloride (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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		1	**77400**	mg/L	5000	2.50

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Sulfate		1	**1010**	mg/L	50	2.50

Sample: 263904 - MW-1

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	80826	Date Analyzed:	2011-04-29	Analyzed By:	AR
Prep Batch:	68432	Sample Preparation:	2011-04-25	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Total Dissolved Solids		1	**116000**	mg/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

Parameter	Flag	Cert	Result	RL Units	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		1	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	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				
Analysis:	Chloride (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

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

Sample: 263905 - MW-2

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

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Sulfate		1	**133**	mg/L	5	2.50

Sample: 263905 - MW-2

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	80869	Date Analyzed:	2011-05-02	Analyzed By:	AR
Prep Batch:	68433	Sample Preparation:	2011-04-26	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Total Dissolved Solids		1	**544**	mg/L	2	10.0

Sample: 263906 - MW-3

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

Parameter	Flag	Cert	Result	RL Units	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		1	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	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

Sample: 263906 - MW-3

Laboratory:	Midland				
Analysis:	Chloride (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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		1	**5420**	mg/L	1000	2.50

Sample: 263906 - MW-3

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Sulfate		1	**126**	mg/L	5	2.50

Sample: 263906 - MW-3

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	80869	Date Analyzed:	2011-05-02	Analyzed By:	AR
Prep Batch:	68433	Sample Preparation:	2011-04-26	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Total Dissolved Solids		1	**6180**	mg/L	20	10.0

Sample: 263907 - MW-4

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

continued ...

sample 263907 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL

Parameter	Flag	Cert	RL Result	Units	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		1	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	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	Analyzed By:	AR
Prep Batch:	68439	Sample Preparation:	2011-04-25	Prepared By:	AR

Parameter	Flag	Cert	RL 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

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

Sample: 263907 - MW-4

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	80869	Date Analyzed:	2011-05-02	Analyzed By:	AR
Prep Batch:	68433	Sample Preparation:	2011-04-26	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Total Dissolved Solids		1	**25400**	mg/L	100	10.0

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
Prep Batch:	68300	Sample Preparation:	2011-04-19	Prepared By:	ME

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		1	**0.0124**	mg/L	1	0.00100
Toluene		1	**0.00700**	mg/L	1	0.00100
Ethylbenzene		1	<0.00100	mg/L	1	0.00100
Xylene		1	**0.0176**	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	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
Prep Batch:	68439	Sample Preparation:	2011-04-25	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		1	**83700**	mg/L	5000	2.50

Sample: 263908 - RW-1

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Sulfate		1	**1070**	mg/L	50	2.50

Sample: 263908 - RW-1

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	80869	Date Analyzed:	2011-05-02	Analyzed By:	AR
Prep Batch:	68433	Sample Preparation:	2011-04-26	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Total Dissolved Solids		1	**122000**	mg/L	100	10.0

Method Blanks

Method Blank (1) QC Batch: 80420

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

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	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	Date Analyzed:	2011-04-20	Analyzed By:	ME
Prep Batch:	68300	QC Preparation:	2011-04-19	Prepared By:	ME

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	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

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

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride		1	0.513	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

Parameter	Flag	Cert	MDL Result	Units	RL
Sulfate		1	<0.177	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

Parameter	Flag	Cert	MDL 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

Parameter	Flag	Cert	MDL Result	Units	RL
Sulfate		1	<0.177	mg/L	2.5

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: AR

Parameter	Flag	Cert	MDL Result	Units	RL
Total Dissolved Solids		1	<9.75	mg/L	10

Method Blank (1) QC Batch: 80869

QC Batch: 80869 | Date Analyzed: 2011-05-02 | Analyzed By: AR
Prep Batch: 68433 | QC Preparation: 2011-04-25 | Prepared By: AR

Parameter	Flag	Cert	MDL Result	Units	RL
Total Dissolved Solids		1	<9.75	mg/L	10

Duplicates (1) Duplicated Sample: 263904

QC Batch: 80826 | Date Analyzed: 2011-04-29 | Analyzed By: AR
Prep Batch: 68432 | QC Preparation: 2011-04-22 | Prepared By: AR

Param		Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Total Dissolved Solids	1	121000	116000	mg/L	100	4	10

Duplicates (1) Duplicated Sample: 263914

QC Batch: 80869 | Date Analyzed: 2011-05-02 | Analyzed By: AR
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

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

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

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	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		1	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.

Surrogate		LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD 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 | Date Analyzed: 2011-04-20 | Analyzed By: ME
Prep Batch: 68300 | QC Preparation: 2011-04-19 | Prepared By: ME

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.0942	mg/L	1	0.100	<0.000400	94	76.8 - 110
Toluene		1	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

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

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

Surrogate		LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD 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 | Date Analyzed: 2011-04-26 | Analyzed By: AR
Prep Batch: 68438 | QC Preparation: 2011-04-25 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		1	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.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	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 | Date Analyzed: 2011-04-26 | Analyzed By: AR
Prep Batch: 68438 | QC Preparation: 2011-04-25 | Prepared By: AR

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

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Sulfate		1	23.1	mg/L	1	25.0	<0.177	92	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

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

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

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

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

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Dissolved Solids		1	1050	mg/L	1	1000	<9.75	105	90 - 110

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Dissolved Solids		1	954	mg/L	1	1000	<9.75	95	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 | Date Analyzed: 2011-05-02 | Analyzed By: AR
Prep Batch: 68433 | QC Preparation: 2011-04-25 | Prepared By: AR

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

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Dissolved Solids		1	990	mg/L	1	1000	<9.75	99	90 - 110	4	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 | Date Analyzed: 2011-04-26 | Analyzed By: AR
Prep Batch: 68438 | QC Preparation: 2011-04-25 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		1	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.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		1	5580	mg/L	100	2750	3010	93	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: 263903

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

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

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

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

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

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

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

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

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

Calibration Standards

Standard (CCV-1)

QC Batch: 80420 Date Analyzed: 2011-04-18 Analyzed By: ME

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

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

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

Standard (CCV-2)

QC Batch: 80470 | Date Analyzed: 2011-04-20 | Analyzed By: ME

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.0907	91	80 - 120	2011-04-20
Toluene		1	mg/L	0.100	0.0978	98	80 - 120	2011-04-20
Ethylbenzene		1	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

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

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

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

Standard (CCV-1)

QC Batch: 80665 | Date Analyzed: 2011-04-26 | Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Sulfate		1	mg/L	25.0	24.2	97	90 - 110	2011-04-26

Standard (ICV-1)

QC Batch: 80666 | Date Analyzed: 2011-04-26 | Analyzed By: AR

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date 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 | Analyzed By: AR

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Sulfate		1	mg/L	25.0	24.2	97	90 - 110	2011-04-26

Standard (CCV-1)

QC Batch: 80666 | Date Analyzed: 2011-04-26 | Analyzed By: AR

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

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

Appendix

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	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 #: 11041529

Analysis Request of Chain of Custody Record

PAGE: 1 OF: 1

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

CLIENT NAME: Celero
SITE MANAGER: Jeff Kindley
PROJECT NO.: 115-6403133
PROJECT NAME: Rock Queen Unit Tract #3

LAB I.D. NUMBER	DATE 2011	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS	Sulfates
263904	4/14	1815	W		X	MW-1	4	N	X		X	X	X											X				X	X
905	"	1845	"		"	MW-2	"	"	"		"	"	"											"				"	"
906	"	1845	"		"	MW-3	"	"	"		"	"	"											"				"	"
907	4/14	1830	W		X	MW-4	4	N	X		X	X	X											X				X	X
908	4/14	1830	W		X	RW-1	4	N	X		X	X	X											X				X	X

RELINQUISHED BY: (Signature) — Date: 4-15-11 Time:
RECEIVED BY: (Signature) — Date: 4/15/11 Time: 13:50
SAMPLED BY: (Print & Initial) James Kennedy JK — Date: 4-14-11 Time:

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

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

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

TETRA TECH CONTACT PERSON: Jeff Kindley
Results by:
RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 0.6° cintact
REMARKS: Xall tests Midland

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

TRACEANALYSIS, INC.

5301 Aberdeen Avenue, Suite 9 | Lubbock, Texas 79424 | 800•378•1296 | 806•794•1296 | FAX 806•794•1298
2501 East Sunset Road, Suite 2 | El Paso, Texas 79922 | 888•588•3443 | 915•585•3443 | FAX 915•585•4944
5002 Basin Street, Suite A1 | Midland, Texas 79703 | | 432•689•6301 | FAX 432•689•6313
6015 Harris Parkway, Suite 110 | Ft Worth, Texas 76132 | | 817•201•5260 |

E-Mail: info@traceanalysis.com

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

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

Report Date: August 25, 2011

Work Order: 11080108

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.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
273221	MW-1	water	2011-07-28	16:30	2011-07-29
273222	MW-2	water	2011-07-28	16:20	2011-07-29
273223	MW-3	water	2011-07-28	16:40	2011-07-29
273224	MW-4	water	2011-07-28	16:10	2011-07-29

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.

Michael Abel

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

Report Contents

Case Narrative

Samples for project Celero/Rock Queen #33 were received by TraceAnalysis, Inc. on 2011-07-29 and assigned to work order 11080108. Samples for work order 11080108 were received intact without headspace and at a temperature of 10.8 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	70958	2011-08-03 at 09:47	83538	2011-08-03 at 09:47
Chloride (IC)	E 300.0	70900	2011-08-02 at 10:10	83582	2011-08-03 at 15:07
Chloride (IC)	E 300.0	71505	2011-08-22 at 09:26	84218	2011-08-22 at 14:27
SO4 (IC)	E 300.0	70900	2011-08-02 at 10:10	83582	2011-08-03 at 15:07
SO4 (IC)	E 300.0	71505	2011-08-22 at 09:26	84218	2011-08-22 at 14:27
TDS	SM 2540C	71017	2011-08-05 at 12:42	83880	2011-08-15 at 15:06

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 11080108 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

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

Analytical Report

Sample: 273221 - MW-1

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	83538	Date Analyzed:	2011-08-03	Analyzed By:	ME
Prep Batch:	70958	Sample Preparation:	2011-08-03	Prepared By:	ME

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		1	**0.0114**	mg/L	1	0.00100
Toluene	U	1	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	1	<0.00100	mg/L	1	0.00100
Xylene	U	1	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0904	mg/L	1	0.100	90	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)			0.0926	mg/L	1	0.100	93	67.5 - 140.8

Sample: 273221 - MW-1

Laboratory:	Midland				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	83582	Date Analyzed:	2011-08-03	Analyzed By:	AR
Prep Batch:	70900	Sample Preparation:	2011-08-02	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		1	**83600**	mg/L	5000	2.50

Sample: 273221 - MW-1

Laboratory:	Midland				
Analysis:	SO4 (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	83582	Date Analyzed:	2011-08-03	Analyzed By:	AR
Prep Batch:	70900	Sample Preparation:	2011-08-02	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Sulfate		1	**1080**	mg/L	50	2.50

Sample: 273221 - MW-1

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	83880	Date Analyzed:	2011-08-15	Analyzed By:	AR
Prep Batch:	71017	Sample Preparation:	2011-08-08	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Total Dissolved Solids	H	1	**124000**	mg/L	100	10.0

Sample: 273222 - MW-2

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	83538	Date Analyzed:	2011-08-03	Analyzed By:	ME
Prep Batch:	70958	Sample Preparation:	2011-08-03	Prepared By:	ME

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.109	mg/L	1	0.100	109	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)			0.103	mg/L	1	0.100	103	67.5 - 140.8

Sample: 273222 - MW-2

Laboratory:	Midland				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	83582	Date Analyzed:	2011-08-03	Analyzed By:	AR
Prep Batch:	70900	Sample Preparation:	2011-08-02	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride		1	**55.1**	mg/L	5	2.50

Sample: 273222 - MW-2

Laboratory:	Midland				
Analysis:	SO4 (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	83582	Date Analyzed:	2011-08-03	Analyzed By:	AR
Prep Batch:	70900	Sample Preparation:	2011-08-02	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Sulfate		1	**171**	mg/L	5	2.50

Sample: 273222 - MW-2

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	83880	Date Analyzed:	2011-08-15	Analyzed By:	AR
Prep Batch:	71017	Sample Preparation:	2011-08-08	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Total Dissolved Solids	H	1	**576**	mg/L	1	10.0

Sample: 273223 - MW-3

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	83538	Date Analyzed:	2011-08-03	Analyzed By:	ME
Prep Batch:	70958	Sample Preparation:	2011-08-03	Prepared By:	ME

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.101	mg/L	1	0.100	101	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)			0.0953	mg/L	1	0.100	95	67.5 - 140.8

Sample: 273223 - MW-3

Laboratory:	Midland				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	83582	Date Analyzed:	2011-08-03	Analyzed By:	AR
Prep Batch:	70900	Sample Preparation:	2011-08-02	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		1	**6950**	mg/L	500	2.50

Sample: 273223 - MW-3

Laboratory:	Midland				
Analysis:	SO4 (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	83582	Date Analyzed:	2011-08-03	Analyzed By:	AR
Prep Batch:	70900	Sample Preparation:	2011-08-02	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Sulfate		1	**155**	mg/L	5	2.50

Sample: 273223 - MW-3

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	83880	Date Analyzed:	2011-08-15	Analyzed By:	AR
Prep Batch:	71017	Sample Preparation:	2011-08-08	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Total Dissolved Solids	H	1	**9820**	mg/L	20	10.0

Sample: 273224 - MW-4

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	83538	Date Analyzed:	2011-08-03	Analyzed By:	ME
Prep Batch:	70958	Sample Preparation:	2011-08-03	Prepared By:	ME

continued ...

sample 273224 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.105	mg/L	1	0.100	105	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)			0.0990	mg/L	1	0.100	99	67.5 - 140.8

Sample: 273224 - MW-4

Laboratory:	Midland				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	84218	Date Analyzed:	2011-08-22	Analyzed By:	AR
Prep Batch:	71505	Sample Preparation:	2011-08-22	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		1	**5450**	mg/L	500	2.50

Sample: 273224 - MW-4

Laboratory:	Midland				
Analysis:	SO4 (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	84218	Date Analyzed:	2011-08-22	Analyzed By:	AR
Prep Batch:	71505	Sample Preparation:	2011-08-22	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Sulfate		1	**258**	mg/L	50	2.50

Sample: 273224 - MW-4

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	83880	Date Analyzed:	2011-08-15	Analyzed By:	AR
Prep Batch:	71017	Sample Preparation:	2011-08-08	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Total Dissolved Solids	H	1	**12700**	mg/L	5	10.0

Method Blanks

Method Blank (1) QC Batch: 83538

QC Batch: 83538 | Date Analyzed: 2011-08-03 | Analyzed By: ME
Prep Batch: 70958 | QC Preparation: 2011-08-03 | Prepared By: ME

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.103	mg/L	1	0.100	103	61.1 - 118.4
4-Bromofluorobenzene (4-BFB)			0.0946	mg/L	1	0.100	95	45.9 - 126.4

Method Blank (1) QC Batch: 83582

QC Batch: 83582 | Date Analyzed: 2011-08-03 | Analyzed By: AR
Prep Batch: 70900 | QC Preparation: 2011-08-02 | Prepared By: AR

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride		1	2.94	mg/L	2.5

Method Blank (1) QC Batch: 83582

QC Batch: 83582 | Date Analyzed: 2011-08-03 | Analyzed By: AR
Prep Batch: 70900 | QC Preparation: 2011-08-02 | Prepared By: AR

Parameter	Flag	Cert	MDL Result	Units	RL
Sulfate		1	<0.177	mg/L	2.5

Method Blank (1) QC Batch: 83880

QC Batch: 83880 | Date Analyzed: 2011-08-15 | Analyzed By: AR
Prep Batch: 71017 | QC Preparation: 2011-08-05 | Prepared By: AR

Parameter	Flag	Cert	MDL Result	Units	RL
Total Dissolved Solids		1	<9.75	mg/L	10

Method Blank (1) QC Batch: 84218

QC Batch: 84218 | Date Analyzed: 2011-08-22 | Analyzed By: AR
Prep Batch: 71505 | QC Preparation: 2011-08-22 | Prepared By: AR

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride		1	<0.265	mg/L	2.5

Method Blank (1) QC Batch: 84218

QC Batch: 84218 | Date Analyzed: 2011-08-22 | Analyzed By: AR
Prep Batch: 71505 | QC Preparation: 2011-08-22 | Prepared By: AR

Parameter	Flag	Cert	MDL Result	Units	RL
Sulfate		1	<0.177	mg/L	2.5

Duplicates (1) Duplicated Sample: 273246

QC Batch: 83880 | Date Analyzed: 2011-08-15 | Analyzed By: AR
Prep Batch: 71017 | QC Preparation: 2011-08-05 | Prepared By: AR

Param		Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Total Dissolved Solids	1	614	648	mg/L	2	5	10

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 83538 | Date Analyzed: 2011-08-03 | Analyzed By: ME
Prep Batch: 70958 | QC Preparation: 2011-08-03 | Prepared By: ME

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.101	mg/L	1	0.100	<0.000400	101	76.8 - 110.3
Toluene		1	0.0979	mg/L	1	0.100	<0.000300	98	90.9 - 122.2
Ethylbenzene		1	0.0919	mg/L	1	0.100	<0.000300	92	72.7 - 120.2
Xylene		1	0.276	mg/L	1	0.300	<0.000333	92	72.1 - 121.5

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	0.103	mg/L	1	0.100	<0.000400	103	76.8 - 110.3	2	20
Toluene		1	0.0996	mg/L	1	0.100	<0.000300	100	90.9 - 122.2	2	20
Ethylbenzene		1	0.0942	mg/L	1	0.100	<0.000300	94	72.7 - 120.2	2	20
Xylene		1	0.282	mg/L	1	0.300	<0.000333	94	72.1 - 121.5	2	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0992	0.0894	mg/L	1	0.100	99	89	61.9 - 119.2
4-Bromofluorobenzene (4-BFB)	0.0986	0.0880	mg/L	1	0.100	99	88	56.4 - 127.9

Laboratory Control Spike (LCS-1)

QC Batch: 83582 | Date Analyzed: 2011-08-03 | Analyzed By: AR
Prep Batch: 70900 | QC Preparation: 2011-08-02 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		1	26.3	mg/L	1	25.0	<0.265	105	90.9 - 113.9

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

continued ...

control spikes continued ...

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		1	26.0	mg/L	1	25.0	<0.265	104	90.9 - 113.9	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: 83582 | Date Analyzed: 2011-08-03 | Analyzed By: AR
Prep Batch: 70900 | QC Preparation: 2011-08-02 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Sulfate		1	25.2	mg/L	1	25.0	<0.177	101	99 - 113.6

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Sulfate		1	25.3	mg/L	1	25.0	<0.177	101	99 - 113.6	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: 83880 | Date Analyzed: 2011-08-15 | Analyzed By: AR
Prep Batch: 71017 | QC Preparation: 2011-08-05 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Dissolved Solids		1	1020	mg/L	1	1000	<9.75	102	85.5 - 112.7

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Dissolved Solids		1	1040	mg/L	1	1000	<9.75	104	85.5 - 112.7	2	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: 84218 | Date Analyzed: 2011-08-22 | Analyzed By: AR
Prep Batch: 71505 | QC Preparation: 2011-08-22 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		1	24.3	mg/L	1	25.0	<0.265	97	90.9 - 113.9

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		1	24.0	mg/L	1	25.0	<0.265	96	90.9 - 113.9	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: 84218 | Date Analyzed: 2011-08-22 | Analyzed By: AR
Prep Batch: 71505 | QC Preparation: 2011-08-22 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Sulfate		1	26.0	mg/L	1	25.0	<0.177	104	99 - 113.6

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Sulfate		1	26.1	mg/L	1	25.0	<0.177	104	99 - 113.6	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: 273037

QC Batch: 83538 | Date Analyzed: 2011-08-03 | Analyzed By: ME
Prep Batch: 70958 | QC Preparation: 2011-08-03 | Prepared By: ME

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.587	mg/L	5	0.500	0.127	92	66.9 - 128.2
Toluene		1	0.544	mg/L	5	0.500	0.1205	85	81.6 - 122.9
Ethylbenzene		1	0.421	mg/L	5	0.500	<0.00150	84	62.7 - 117.9

continued ...

matrix spikes continued ...

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Xylene		1	1.29	mg/L	5	1.50	0.1543	76	62.9 - 118.2

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	0.607	mg/L	5	0.500	0.127	96	66.9 - 128.2	3	20
Toluene		1	0.563	mg/L	5	0.500	0.1205	88	81.6 - 122.9	3	20
Ethylbenzene		1	0.438	mg/L	5	0.500	<0.00150	88	62.7 - 117.9	4	20
Xylene		1	1.34	mg/L	5	1.50	0.1543	79	62.9 - 118.2	4	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.511	0.468	mg/L	5	0.5	102	94	58.6 - 119.7
4-Bromofluorobenzene (4-BFB)	0.502	0.461	mg/L	5	0.5	100	92	52.2 - 135.8

Matrix Spike (MS-1) Spiked Sample: 273222

QC Batch: 83582 | Date Analyzed: 2011-08-03 | Analyzed By: AR
Prep Batch: 70900 | QC Preparation: 2011-08-02 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		1	312	mg/L	10	275	73	87	48.4 - 143.2

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		1	318	mg/L	10	275	73	89	48.4 - 143.2	2	20

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

Matrix Spike (MS-1) Spiked Sample: 273222

QC Batch: 83582 | Date Analyzed: 2011-08-03 | Analyzed By: AR
Prep Batch: 70900 | QC Preparation: 2011-08-02 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Sulfate		1	464	mg/L	10	275	173	106	59.7 - 115.4

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Sulfate		1	466	mg/L	10	275	173	106	59.7 - 115.4	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: 273206

QC Batch: 84218 | Date Analyzed: 2011-08-22 | Analyzed By: AR
Prep Batch: 71505 | QC Preparation: 2011-08-22 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		1	2200	mg/L	50	1380	1010	86	48.4 - 143.2

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		1	2150	mg/L	50	1380	1010	83	48.4 - 143.2	2	20

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

Matrix Spike (MS-1) Spiked Sample: 273206

QC Batch: 84218 | Date Analyzed: 2011-08-22 | Analyzed By: AR
Prep Batch: 71505 | QC Preparation: 2011-08-22 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Sulfate		1	1270	mg/L	50	1380	103	85	59.7 - 115.4

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Sulfate		1	1230	mg/L	50	1380	103	82	59.7 - 115.4	3	20

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

Calibration Standards

Standard (CCV-1)

QC Batch: 83538 | Date Analyzed: 2011-08-03 | Analyzed By: ME

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.0989	99	80 - 120	2011-08-03
Toluene		1	mg/L	0.100	0.0948	95	80 - 120	2011-08-03
Ethylbenzene		1	mg/L	0.100	0.0892	89	80 - 120	2011-08-03
Xylene		1	mg/L	0.300	0.271	90	80 - 120	2011-08-03

Standard (CCV-2)

QC Batch: 83538 | Date Analyzed: 2011-08-03 | Analyzed By: ME

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.102	102	80 - 120	2011-08-03
Toluene		1	mg/L	0.100	0.0980	98	80 - 120	2011-08-03
Ethylbenzene		1	mg/L	0.100	0.0920	92	80 - 120	2011-08-03
Xylene		1	mg/L	0.300	0.276	92	80 - 120	2011-08-03

Standard (ICV-1)

QC Batch: 83582 | Date Analyzed: 2011-08-03 | Analyzed By: AR

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		1	mg/L	25.0	26.0	104	90 - 110	2011-08-03

Standard (ICV-1)

QC Batch: 83582 | Date Analyzed: 2011-08-03 | Analyzed By: AR

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Sulfate		1	mg/L	25.0	25.5	102	90 - 110	2011-08-03

Standard (CCV-1)

QC Batch: 83582 Date Analyzed: 2011-08-03 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		1	mg/L	25.0	27.5	110	90 - 110	2011-08-03

Standard (CCV-1)

QC Batch: 83582 Date Analyzed: 2011-08-03 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Sulfate		1	mg/L	25.0	25.6	102	90 - 110	2011-08-03

Standard (ICV-1)

QC Batch: 84218 Date Analyzed: 2011-08-22 Analyzed By: AR

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		1	mg/L	25.0	24.8	99	90 - 110	2011-08-22

Standard (ICV-1)

QC Batch: 84218 Date Analyzed: 2011-08-22 Analyzed By: AR

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Sulfate		1	mg/L	25.0	25.0	100	90 - 110	2011-08-22

Standard (CCV-1)

QC Batch: 84218 Date Analyzed: 2011-08-22 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		1	mg/L	25.0	24.3	97	90 - 110	2011-08-22

Standard (CCV-1)

QC Batch: 84218 Date Analyzed: 2011-08-22 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Sulfate		1	mg/L	25.0	27.4	110	90 - 110	2011-08-22

Appendix

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	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.

Work Order #: 11080108

Analysis Request of Chain of Custody Record

PAGE: 1 OF: 1

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

CLIENT NAME: Celero

SITE MANAGER: Jeff Kindley

PROJECT NO.: 115-6403133

PROJECT NAME: Celero / Rock Queen #33 Chevez Co. NM

LAB I.D. NUMBER	DATE 2011	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS	TDS Sulfates Sulfates
273221	7/28	1630	W		X	MW-1	4	N	X		X		X											X					
222		1620				MW-2																							
223		1640				MW-3																							
224		1610				MW-4																							

ANALYSIS REQUEST (Circle or Specify Method No.)

RELINQUISHED BY: (Signature)	Date: 7/29/11 Time: 1535	RECEIVED BY: (Signature)	Date: 7/29/11 Time: 15:35
SAMPLED BY: (Print & Initial) JT/RS	Date: 7/28/11 Time:		
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:
SAMPLE SHIPPED BY: (Circle) FEDEX HAND DELIVERED BUS UPS	AIRBILL #: OTHER:		
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:
TETRA TECH CONTACT PERSON: Jeff Kindley	Results by:		
RECEIVING LABORATORY: Trace ADDRESS: Midland CITY: STATE: TX ZIP: CONTACT: PHONE:	RECEIVED BY: (Signature) DATE: TIME:		RUSH Charges Authorized: Yes No
SAMPLE CONDITION WHEN RECEIVED: 10.8c iMacd	REMARKS: All tests - Midland		

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

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
2501 East Sunset Road Suite E El Paso, Texas 79922 915•585•3443 FAX 915•585•4944
5002 Basin Street, Suite A1 Midland, Texas 79703 432•689•6301 FAX 432•689•6313
6015 Harris Parkway, Suite 110 Ft Worth, Texas 76132 817•201•5260

E-Mail: lab@traceanalysis.com

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

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

Report Date: November 4, 2011

Work Order: 11103125

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.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
281143	MW-2	water	2011-10-28	14:20	2011-10-31
281144	MW-4	water	2011-10-28	14:30	2011-10-31
281145	MW-3	water	2011-10-28	14:10	2011-10-31
281146	MW-1	water	2011-10-28	14:40	2011-10-31

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

This report consists of a total of 17 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

Case Narrative

Samples for project Celero/Rock Queen Unit Tract #33 were received by TraceAnalysis, Inc. on 2011-10-31 and assigned to work order 11103125. Samples for work order 11103125 were received intact without headspace and at a temperature of 3.9 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	73013	2011-11-01 at 15:26	85998	2011-11-01 at 15:26
BTEX	S 8021B	73038	2011-11-02 at 12:52	86025	2011-11-02 at 12:52
Chloride (IC)	E 300.0	73087	2011-11-02 at 10:34	86078	2011-11-02 at 21:51
Chloride (IC)	E 300.0	73088	2011-11-02 at 10:34	86079	2011-11-03 at 02:52

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 11103125 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

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

Analytical Report

Sample: 281143 - MW-2

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	85998	Date Analyzed:	2011-11-01	Analyzed By:	ZLM
Prep Batch:	73013	Sample Preparation:	2011-11-01	Prepared By:	ZLM

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.105	mg/L	1	0.100	105	70 - 130
4-Bromofluorobenzene (4-BFB)			0.104	mg/L	1	0.100	104	70 - 130

Sample: 281143 - MW-2

Laboratory:	Midland				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	86078	Date Analyzed:	2011-11-02	Analyzed By:	AR
Prep Batch:	73087	Sample Preparation:	2011-11-02	Prepared By:	AR

Parameter		Flag	Cert	RL Result	Units	Dilution	RL
Chloride	Qs	Qs	2	**45.4**	mg/L	5	2.50

Sample: 281144 - MW-4

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	85998	Date Analyzed:	2011-11-01	Analyzed By:	ZLM
Prep Batch:	73013	Sample Preparation:	2011-11-01	Prepared By:	ZLM

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0968	mg/L	1	0.100	97	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0992	mg/L	1	0.100	99	70 - 130

Sample: 281144 - MW-4

Laboratory:	Midland				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	86078	Date Analyzed:	2011-11-02	Analyzed By:	AR
Prep Batch:	73087	Sample Preparation:	2011-11-02	Prepared By:	AR

Parameter		Flag	Cert	RL Result	Units	Dilution	RL
Chloride	Qs	Qs	2	**8170**	mg/L	500	2.50

Sample: 281145 - MW-3

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	85998	Date Analyzed:	2011-11-01	Analyzed By:	ZLM
Prep Batch:	73013	Sample Preparation:	2011-11-01	Prepared By:	ZLM

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.109	mg/L	1	0.100	109	70 - 130
4-Bromofluorobenzene (4-BFB)			0.110	mg/L	1	0.100	110	70 - 130

Sample: 281145 - MW-3

Laboratory:	Midland				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	86079	Date Analyzed:	2011-11-03	Analyzed By:	AR
Prep Batch:	73088	Sample Preparation:	2011-11-02	Prepared By:	AR

Parameter		Flag	Cert	RL Result	Units	Dilution	RL
Chloride	Qs	Qs	2	**5860**	mg/L	500	2.50

Sample: 281146 - MW-1

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	86025	Date Analyzed:	2011-11-02	Analyzed By:	MT
Prep Batch:	73038	Sample Preparation:	2011-11-02	Prepared By:	MT

Parameter		Flag	Cert	RL Result	Units	Dilution	RL
Benzene			1	**0.00200**	mg/L	1	0.00100
Toluene	U	U	1	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	U	1	<0.00100	mg/L	1	0.00100
Xylene			1	**0.0365**	mg/L	1	0.00100

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	Qsr	Qsr		0.244	mg/L	1	0.100	244	70 - 130
4-Bromofluorobenzene (4-BFB)				0.103	mg/L	1	0.100	103	70 - 130

Sample: 281146 - MW-1

Laboratory:	Midland				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	86079	Date Analyzed:	2011-11-03	Analyzed By:	AR
Prep Batch:	73088	Sample Preparation:	2011-11-02	Prepared By:	AR

Parameter		Flag	Cert	RL Result	Units	Dilution	RL
Chloride	Qs	Qs	2	**73300**	mg/L	5000	2.50

Method Blanks

Method Blank (1) QC Batch: 85998

QC Batch: 85998 | Date Analyzed: 2011-11-01 | Analyzed By: ZLM
Prep Batch: 73013 | QC Preparation: 2011-11-01 | Prepared By: ZLM

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1	<0.000765	mg/L	0.001
Toluene		1	<0.000719	mg/L	0.001
Ethylbenzene		1	<0.000860	mg/L	0.001
Xylene		1	<0.000942	mg/L	0.001

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0927	mg/L	1	0.100	93	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0945	mg/L	1	0.100	94	70 - 130

Method Blank (1) QC Batch: 86025

QC Batch: 86025 | Date Analyzed: 2011-11-02 | Analyzed By: MT
Prep Batch: 73038 | QC Preparation: 2011-11-02 | Prepared By: MT

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1	<0.000765	mg/L	0.001
Toluene		1	<0.000719	mg/L	0.001
Ethylbenzene		1	<0.000860	mg/L	0.001
Xylene		1	<0.000942	mg/L	0.001

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.111	mg/L	1	0.100	111	70 - 130
4-Bromofluorobenzene (4-BFB)			0.113	mg/L	1	0.100	113	70 - 130

Method Blank (1) QC Batch: 86078

QC Batch:	86078	Date Analyzed:	2011-11-02	Analyzed By:	AR
Prep Batch:	73087	QC Preparation:	2011-11-02	Prepared By:	AR

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride		2	0.685	mg/L	2.5

Method Blank (1) QC Batch: 86079

QC Batch:	86079	Date Analyzed:	2011-11-03	Analyzed By:	AR
Prep Batch:	73088	QC Preparation:	2011-11-02	Prepared By:	AR

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride		2	0.677	mg/L	2.5

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 85998 | Date Analyzed: 2011-11-01 | Analyzed By: ZLM
Prep Batch: 73013 | QC Preparation: 2011-11-01 | Prepared By: ZLM

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.0989	mg/L	1	0.100	<0.000765	99	70 - 130
Toluene		1	0.0957	mg/L	1	0.100	<0.000719	96	70 - 130
Ethylbenzene		1	0.0945	mg/L	1	0.100	<0.000860	94	70 - 130
Xylene		1	0.279	mg/L	1	0.300	<0.000942	93	70 - 130

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	0.0991	mg/L	1	0.100	<0.000765	99	70 - 130	0	20
Toluene		1	0.0949	mg/L	1	0.100	<0.000719	95	70 - 130	1	20
Ethylbenzene		1	0.0941	mg/L	1	0.100	<0.000860	94	70 - 130	0	20
Xylene		1	0.280	mg/L	1	0.300	<0.000942	93	70 - 130	0	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0935	0.0945	mg/L	1	0.100	94	94	70 - 130
4-Bromofluorobenzene (4-BFB)	0.0948	0.0979	mg/L	1	0.100	95	98	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 86025 | Date Analyzed: 2011-11-02 | Analyzed By: MT
Prep Batch: 73038 | QC Preparation: 2011-11-02 | Prepared By: MT

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.109	mg/L	1	0.100	<0.000765	109	70 - 130
Toluene		1	0.103	mg/L	1	0.100	<0.000719	103	70 - 130
Ethylbenzene		1	0.101	mg/L	1	0.100	<0.000860	101	70 - 130
Xylene		1	0.301	mg/L	1	0.300	<0.000942	100	70 - 130

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	0.106	mg/L	1	0.100	<0.000765	106	70 - 130	3	20
Toluene		1	0.102	mg/L	1	0.100	<0.000719	102	70 - 130	1	20
Ethylbenzene		1	0.0990	mg/L	1	0.100	<0.000860	99	70 - 130	2	20
Xylene		1	0.295	mg/L	1	0.300	<0.000942	98	70 - 130	2	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.105	0.102	mg/L	1	0.100	105	102	70 - 130
4-Bromofluorobenzene (4-BFB)	0.103	0.101	mg/L	1	0.100	103	101	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 86078 | Date Analyzed: 2011-11-02 | Analyzed By: AR
Prep Batch: 73087 | QC Preparation: 2011-11-02 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		2	23.2	mg/L	1	25.0	<0.265	93	90 - 110

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		2	23.7	mg/L	1	25.0	<0.265	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: 86079 | Date Analyzed: 2011-11-03 | Analyzed By: AR
Prep Batch: 73088 | QC Preparation: 2011-11-02 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		2	23.8	mg/L	1	25.0	<0.265	95	90 - 110

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		2	23.8	mg/L	1	25.0	<0.265	95	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: 281133

QC Batch: 85998 | Date Analyzed: 2011-11-01 | Analyzed By: ZLM
Prep Batch: 73013 | QC Preparation: 2011-11-01 | Prepared By: ZLM

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.104	mg/L	1	0.100	<0.000765	104	70 - 130
Toluene		1	0.0987	mg/L	1	0.100	<0.000719	99	70 - 130
Ethylbenzene		1	0.0972	mg/L	1	0.100	<0.000860	97	70 - 130
Xylene		1	0.290	mg/L	1	0.300	<0.000942	97	70 - 130

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	0.104	mg/L	1	0.100	<0.000765	104	70 - 130	0	20
Toluene		1	0.100	mg/L	1	0.100	<0.000719	100	70 - 130	1	20
Ethylbenzene		1	0.0979	mg/L	1	0.100	<0.000860	98	70 - 130	1	20
Xylene		1	0.294	mg/L	1	0.300	<0.000942	98	70 - 130	1	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.101	0.0978	mg/L	1	0.1	101	98	70 - 130
4-Bromofluorobenzene (4-BFB)	0.0984	0.0961	mg/L	1	0.1	98	96	70 - 130

Matrix Spike (MS-1) Spiked Sample: 281232

QC Batch: 86025 | Date Analyzed: 2011-11-02 | Analyzed By: MT
Prep Batch: 73038 | QC Preparation: 2011-11-02 | Prepared By: MT

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	5.41	mg/L	50	5.00	<0.0382	108	70 - 130
Toluene		1	5.16	mg/L	50	5.00	<0.0360	103	70 - 130
Ethylbenzene		1	5.11	mg/L	50	5.00	<0.0430	102	70 - 130
Xylene		1	15.1	mg/L	50	15.0	<0.0471	101	70 - 130

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	5.26	mg/L	50	5.00	<0.0382	105	70 - 130	3	20
Toluene		1	5.06	mg/L	50	5.00	<0.0360	101	70 - 130	2	20
Ethylbenzene		1	5.03	mg/L	50	5.00	<0.0430	101	70 - 130	2	20
Xylene		1	14.9	mg/L	50	15.0	<0.0471	99	70 - 130	1	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	5.33	5.12	mg/L	50	5	107	102	70 - 130
4-Bromofluorobenzene (4-BFB)	5.13	5.06	mg/L	50	5	103	101	70 - 130

Matrix Spike (MS-1) Spiked Sample: 281141

QC Batch: 86078 | Date Analyzed: 2011-11-02 | Analyzed By: AR
Prep Batch: 73087 | QC Preparation: 2011-11-02 | Prepared By: AR

Param		F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	Qs	Qs	2	16100	mg/L	100	2750	14800	47	90 - 110

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

Param		F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	Qs	Qs	2	15800	mg/L	100	2750	14800	36	90 - 110	2	20

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

Matrix Spike (MS-1) Spiked Sample: 281145

QC Batch: 86079 | Date Analyzed: 2011-11-03 | Analyzed By: AR
Prep Batch: 73088 | QC Preparation: 2011-11-02 | Prepared By: AR

Param		F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	Qs	Qs	2	7210	mg/L	50	1380	6710	36	90 - 110

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

Param		F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	Qs	Qs	2	7250	mg/L	50	1380	6710	39	90 - 110	1	20

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

Calibration Standards

Standard (CCV-2)

QC Batch: 85998 | Date Analyzed: 2011-11-01 | Analyzed By: ZLM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.104	104	80 - 120	2011-11-01
Toluene		1	mg/L	0.100	0.0999	100	80 - 120	2011-11-01
Ethylbenzene		1	mg/L	0.100	0.0984	98	80 - 120	2011-11-01
Xylene		1	mg/L	0.300	0.292	97	80 - 120	2011-11-01

Standard (CCV-3)

QC Batch: 85998 | Date Analyzed: 2011-11-01 | Analyzed By: ZLM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.105	105	80 - 120	2011-11-01
Toluene		1	mg/L	0.100	0.100	100	80 - 120	2011-11-01
Ethylbenzene		1	mg/L	0.100	0.0986	99	80 - 120	2011-11-01
Xylene		1	mg/L	0.300	0.290	96	80 - 120	2011-11-01

Standard (CCV-1)

QC Batch: 86025 | Date Analyzed: 2011-11-02 | Analyzed By: MT

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.109	109	80 - 120	2011-11-02
Toluene		1	mg/L	0.100	0.104	104	80 - 120	2011-11-02
Ethylbenzene		1	mg/L	0.100	0.103	103	80 - 120	2011-11-02
Xylene		1	mg/L	0.300	0.301	100	80 - 120	2011-11-02

Standard (CCV-2)

QC Batch: 86025 | Date Analyzed: 2011-11-02 | Analyzed By: MT

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.107	107	80 - 120	2011-11-02
Toluene		1	mg/L	0.100	0.102	102	80 - 120	2011-11-02
Ethylbenzene		1	mg/L	0.100	0.0986	99	80 - 120	2011-11-02
Xylene		1	mg/L	0.300	0.296	99	80 - 120	2011-11-02

Standard (CCV-1)

QC Batch: 86078 | Date Analyzed: 2011-11-02 | Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		2	mg/L	25.0	23.6	94	90 - 110	2011-11-02

Standard (CCV-2)

QC Batch: 86078 | Date Analyzed: 2011-11-02 | Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		2	mg/L	25.0	23.8	95	90 - 110	2011-11-02

Standard (CCV-1)

QC Batch: 86079 | Date Analyzed: 2011-11-03 | Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		2	mg/L	25.0	23.8	95	90 - 110	2011-11-03

Standard (CCV-2)

QC Batch: 86079 | Date Analyzed: 2011-11-03 | Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		2	mg/L	25.0	23.2	93	90 - 110	2011-11-03

Appendix

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	NELAP	T104704219-11-4	Lubbock
2	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.

WO # 11103125

Analysis Request of Chain of Custody Record

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

PAGE: 1 of 1

CLIENT NAME: Celero

SITE MANAGER: Jeff Kindley

PROJECT NO.: 115-G403133

PROJECT NAME: Celero | Rock Queen #33

LAB I.D. NUMBER	DATE 2011	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
281143	10/28	1420	W		X	MW-2	4	N	X		X		X											X				
144		1430				MW-4																						
145		1410				MW-3																						
146		1440				MW-1																						

ANALYSIS REQUEST (Circle or Specify Method No.)

ANALYSIS REQUEST (Circle or Specify Method No.)

RELINQUISHED BY: (Signature) — Date: 10/31/11 Time: 1140
RECEIVED BY: (Signature) — Date: 10/31/11 Time: 1145

RELINQUISHED BY: (Signature) — Date: 10/31/11 Time: 1600
RECEIVED BY: (Signature) — Date: Time:

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

SAMPLED BY: (Print & Initial) JT/GA — Date: Time:

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

TETRA TECH CONTACT PERSON: Jeff Kindley

Results by:

RUSH Charges Authorized: Yes No

RECEIVING LABORATORY: Trace
ADDRESS:
CITY: Midland STATE: TX ZIP:
CONTACT: PHONE:
RECEIVED BY: (Signature) Brenda Ward
DATE: 11/1/11 TIME: 8:42

SAMPLE CONDITION WHEN RECEIVED: Intact 3.9°C

REMARKS: Midland-Chloride & Lubbock-BTEX LS ZN003964 3.9°

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

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TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
200 East Sunset Road, Suite E El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
500 North Marienfeld Street, Suite 201 Midland, Texas 79701 432•689•6301 FAX 432•689•6313
6015 Harris Parkway, Suite 110 Fort Worth, Texas 76132 817•201•5260

E-Mail: labs@traceanalysis.com

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

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

Report Date: November 30, 2011

Work Order: 11103125

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.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
281143	MW-2	water	2011-10-28	14:20	2011-10-31
281144	MW-4	water	2011-10-28	14:30	2011-10-31
281145	MW-3	water	2011-10-28	14:10	2011-10-31
281146	MW-1	water	2011-10-28	14:40	2011-10-31

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

Notes:
For inorganic analyses, the term MQL should actually read PQL.

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

Report Contents

Case Narrative

Samples for project Celero/Rock Queen Unit Tract #33 were received by TraceAnalysis, Inc. on 2011-10-31 and assigned to work order 11103125. Samples for work order 11103125 were received intact without headspace and at a temperature of 3.9 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
SO4 (IC)	E 300.0	73346	2011-11-01 at 10:24	86373	2011-11-02 at 10:31
SO4 (IC)	E 300.0	73346	2011-11-01 at 10:24	86374	2011-11-02 at 10:33
TDS	SM 2540C	73460	2011-11-16 at 15:57	86754	2011-11-21 at 15:15

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 11103125 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

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

Analytical Report

Sample: 281143 - MW-2

Laboratory:	Midland				
Analysis:	SO4 (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	86373	Date Analyzed:	2011-11-02	Analyzed By:	AR
Prep Batch:	73346	Sample Preparation:	2011-11-03	Prepared By:	AR

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Sulfate	Qs	1	**163**	**163**	<0.885	mg/L	5	0.885	2.5	0.177

Sample: 281143 - MW-2

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	86754	Date Analyzed:	2011-11-21	Analyzed By:	AR
Prep Batch:	73460	Sample Preparation:	2011-11-17	Prepared By:	AR

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Dissolved Solids		1	**566**	**566**	<9.75	mg/L	1	9.75	10	9.75

Sample: 281144 - MW-4

Laboratory:	Midland				
Analysis:	SO4 (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	86373	Date Analyzed:	2011-11-02	Analyzed By:	AR
Prep Batch:	73346	Sample Preparation:	2011-11-03	Prepared By:	AR

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Sulfate	Qs	1	**324**	**324**	<8.85	mg/L	50	8.85	2.5	0.177

Sample: 281144 - MW-4

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A

QC Batch: 86754 Date Analyzed: 2011-11-21 Analyzed By: AR
Prep Batch: 73460 Sample Preparation: 2011-11-17 Prepared By: AR

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Dissolved Solids		1	**15600**	**15600**	<975	mg/L	100	975	10	9.75

Sample: 281145 - MW-3

Laboratory: Midland
Analysis: SO4 (IC) Analytical Method: E 300.0 Prep Method: N/A
QC Batch: 86374 Date Analyzed: 2011-11-02 Analyzed By: AR
Prep Batch: 73346 Sample Preparation: 2011-11-03 Prepared By: AR

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Sulfate	Qs	1	**143**	**143**	<8.85	mg/L	50	8.85	2.5	0.177

Sample: 281145 - MW-3

Laboratory: Midland
Analysis: TDS Analytical Method: SM 2540C Prep Method: N/A
QC Batch: 86754 Date Analyzed: 2011-11-21 Analyzed By: AR
Prep Batch: 73460 Sample Preparation: 2011-11-17 Prepared By: AR

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Dissolved Solids		1	**11100**	**11100**	<97.5	mg/L	10	97.5	10	9.75

Sample: 281146 - MW-1

Laboratory: Midland
Analysis: SO4 (IC) Analytical Method: E 300.0 Prep Method: N/A
QC Batch: 86374 Date Analyzed: 2011-11-02 Analyzed By: AR
Prep Batch: 73346 Sample Preparation: 2011-11-03 Prepared By: AR

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Sulfate	J,Qs	1	**1070**	<1250	<88.5	mg/L	500	88.5	2.5	0.177

Sample: 281146 - MW-1

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	86754	Date Analyzed:	2011-11-21	Analyzed By:	AR
Prep Batch:	73460	Sample Preparation:	2011-11-17	Prepared By:	AR

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Dissolved Solids		1	**120000**	**120000**	<975	mg/L	100	975	10	9.75

Method Blanks

Method Blank (1)

QC Batch: 86373 | Date Analyzed: 2011-11-02 | Analyzed By: AR
Prep Batch: 73346 | QC Preparation: 2011-11-01 | Prepared By: AR

Parameter	F	C	Result	Units	Reporting Limits
Sulfate		1	<0.177	mg/L	0.177

Method Blank (1)

QC Batch: 86374 | Date Analyzed: 2011-11-02 | Analyzed By: AR
Prep Batch: 73346 | QC Preparation: 2011-11-01 | Prepared By: AR

Parameter	F	C	Result	Units	Reporting Limits
Sulfate		1	<0.177	mg/L	0.177

Method Blank (1)

QC Batch: 86754 | Date Analyzed: 2011-11-21 | Analyzed By: AR
Prep Batch: 73460 | QC Preparation: 2011-11-16 | Prepared By: AR

Parameter	F	C	Result	Units	Reporting Limits
Total Dissolved Solids		1	<9.75	mg/L	9.75

Duplicate (1) Duplicated Sample: 281151

QC Batch: 86754 | Date Analyzed: 2011-11-21 | Analyzed By: AR
Prep Batch: 73460 | QC Preparation: 2011-11-16 | Prepared By: AR

Param	F	C	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Total Dissolved Solids		1	130000	135000	mg/L	100	4	10

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 86373 Date Analyzed: 2011-11-02 Analyzed By: AR
Prep Batch: 73346 QC Preparation: 2011-11-01 Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Sulfate		1	25.2	mg/L	1	25.0	<0.177	101	90 - 110

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Sulfate		1	25.1	mg/L	1	25.0	<0.177	100	90 - 110	0	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 86374 Date Analyzed: 2011-11-02 Analyzed By: AR
Prep Batch: 73346 QC Preparation: 2011-11-01 Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Sulfate		1	24.7	mg/L	1	25.0	<0.177	99	90 - 110

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Sulfate		1	25.3	mg/L	1	25.0	<0.177	101	90 - 110	2	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 86754 Date Analyzed: 2011-11-21 Analyzed By: AR
Prep Batch: 73460 QC Preparation: 2011-11-16 Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Dissolved Solids		1	1000	mg/L	1	1000	<9.75	100	85.5 - 112.7

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Dissolved Solids		1	1030	mg/L	1	1000	<9.75	103	85.5 - 112.7	3	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: 281141

QC Batch: 86373 Date Analyzed: 2011-11-02 Analyzed By: AR
Prep Batch: 73346 QC Preparation: 2011-11-01 Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Sulfate	Qs	1	3480	mg/L	100	2750	1270	80	90 - 110

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Sulfate		1	3500	mg/L	100	2750	1270	81	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: 281145

QC Batch: 86374 Date Analyzed: 2011-11-02 Analyzed By: AR
Prep Batch: 73346 QC Preparation: 2011-11-01 Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Sulfate	Qs	1	1280	mg/L	50	1380	143	83	90 - 110

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Sulfate	Qs	1	1280	mg/L	50	1380	143	83	90 - 110	0	20

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

Calibration Standards

Standard (ICV-1)

QC Batch: 86373 Date Analyzed: 2011-11-02 Analyzed By: AR

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Sulfate		1	mg/L	25.0	25.2	101	90 - 110	2011-11-02

Standard (CCV-1)

QC Batch: 86373 Date Analyzed: 2011-11-02 Analyzed By: AR

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Sulfate		1	mg/L	25.0	25.3	101	90 - 110	2011-11-02

Standard (ICV-1)

QC Batch: 86374 Date Analyzed: 2011-11-02 Analyzed By: AR

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Sulfate		1	mg/L	25.0	25.3	101	90 - 110	2011-11-02

Standard (CCV-1)

QC Batch: 86374 Date Analyzed: 2011-11-02 Analyzed By: AR

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Sulfate		1	mg/L	25.0	25.2	101	90 - 110	2011-11-02

Limits of Detection (LOD)

Appendix

Report Definitions

Name	Definition
MDL	Method Detection Limit
MQL	Minimum Quantitation Limit
SDL	Sample Detection Limit

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	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.

WO # 11103125

Analysis Request of Chain of Custody Record

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

PAGE: 1 of 1

CLIENT NAME: Celero
SITE MANAGER: Jeff Kindley
PROJECT NO.: 115-G403133
PROJECT NAME: Celero | Rock Queen #33

LAB I.D. NUMBER	DATE 2011	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
28143	10/28	1420	W		X	MW-2	4	N	X		X		X												X				
144		1430				MW-4																							
145		1410				MW-3																							
146		1440				MW-1																							

ANALYSIS REQUEST (Circle or Specify Method No.)

RELINQUISHED BY: (Signature) — Date: 10/31/11 Time: 1140
RECEIVED BY: (Signature) — Date: 10/31/11 Time: 1140
RELINQUISHED BY: (Signature) — Date: 10/31/11 Time: 1600
RECEIVED BY: (Signature) — Date: Time:
RELINQUISHED BY: (Signature) — Date: Time:
RECEIVED BY: (Signature) — Date: Time:

SAMPLED BY: (Print & Initial) JT/GA — Date: Time:
SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS — AIRBILL #: OTHER:
TETRA TECH CONTACT PERSON: Jeff Kindley — Results by:
RUSH Charges Authorized: Yes No

RECEIVING LABORATORY: Trace
ADDRESS:
CITY: Midland STATE: TX ZIP:
CONTACT: PHONE:
RECEIVED BY: (Signature) Brenda Ward
DATE: 11/1/11 TIME: 8:42

SAMPLE CONDITION WHEN RECEIVED: Intact 3.9°c
REMARKS: Midland-Chloride & Lubbock-BTEX LS ZN003964 3.9°

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

Analysis Request of Chain of Custody Record

PAGE: 1 OF: 1

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

CLIENT NAME: Celero
SITE MANAGER: Jeff Kindley

PROJECT NO.: 117-2403.33
PROJECT NAME: Celero Rock Queen #33

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB I.D. NUMBER	DATE 2011	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS	SO4 TDS Filtered 11/4/11
231143	10/28	1420	W		X	MW-2	4	N	X		X		X												X					X
1144		1430				MW-4																								X
1145		1415				MW-3																								X
1146		1440				MW-1																								X

RELINQUISHED BY: (Signature) [signature] Date: 10/31/11 Time: 1140
RECEIVED BY: (Signature) [signature] Date: 10/31/11 Time: 1140

RELINQUISHED BY: (Signature) [signature] Date: [illegible] Time: [illegible]
RECEIVED BY: (Signature) Date: Time:

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

SAMPLED BY: (Print & Initial) [illegible] Date: Time:

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

TETRA TECH CONTACT PERSON: Jeff Kindley

Results by:

RUSH Charges Authorized: Yes No

RECEIVING LABORATORY: Trace
ADDRESS:
CITY: Midland STATE: TX ZIP:
CONTACT: PHONE:

RECEIVED BY: (Signature) Brenda Ward
DATE: 11/1/11 TIME: 2:40

SAMPLE CONDITION WHEN RECEIVED: Intact 3.9°

REMARKS: [illegible] BTEX 2Nov3964 3.9°

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

NOV - 4 2011

11/30 FP 16