1RP-1614

Assessment and workplan Report

DATE: Oct. 2009



October 12, 2009

Mr. Glenn von Gonten Senior Hydrologist/Acting Environmental Bureau Chief Environmental Bureau Oil Conservation Division Energy, Minerals and Natural Resources Department 1220 South St. Francis Drive Santa Fe, New Mexico 87505

RE: Assessment Report and Workplan for a Pit Located at the Rock Queen Unit Track 13 Tank Battery, Unit Letter G, Section 36, Township 13 South, Range 31 East, Chaves County, New Mexico, Operated by Celero Energy II, LP (NMOCD 1RP#1614)

Dear Mr. von Gonten:

Tetra Tech was contacted by Celero Energy (Celero) to assist in the closure of a pit at the Rock Queen Unit Track 13 Tank Battery, located in Unit Letter G, Section 36, Township 13 South, Range 31 East, Chaves County, New Mexico (Site). The pit coordinates are N 33.14639° W 103.77500°. Both the State of New Mexico C-141 and C-144 (Initial) are included in Appendix D. The Site is shown on Figures 1 and 2.

Background

On September 21, 2007, Highlander submitted an Investigation and Characterization work plan (ICP) for an open pit at this site. The ICP was approved by the New Mexico Oil Conservation Division (NMOCD).

The Tract 13 Tank Battery pit was dewatered and the residual sludge, tank bottom materials, and liner were removed in late July and early August 2007. Removed fluids were placed into an existing SWD system or taken to disposal, while the sludge, tank bottom materials, and liner were disposed of at Gandy-Marley, Inc. landfill site of Lovington, New Mexico. Upon completion of the removal of the fluids, sludge and liner, the underlying soils were visually inspected for obvious signs of impact. Approximately 400 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.



Groundwater and Regulatory

Neither the New Mexico State Engineer's Office database nor the USGS database show any wells in Section 36, Township 13 South, Range 31 East. However, a monitor well installed at this site had a depth to groundwater of approximately 127 feet below ground surface (bgs).

A risk-based evaluation was performed for the Site in accordance with the New Mexico Oil Conservation Division (NMOCD) Guidelines for Remediation of Leaks, Spills and Releases, dated August 13, 1993. The guidelines require a risk-based evaluation of the site to determine recommended remedial action levels (RRAL) for benzene, toluene, ethylbenzene and xylene (collectively referred to as BTEX) and total petroleum hydrocarbons (TPH) in soil. The proposed RRAL for benzene was determined to be 10 parts per million (ppm) or milligrams per kilogram (mg/kg) and 50 ppm for total BTEX (sum of benzene, toluene, ethylbenzene, and xylene). Based upon the depth to groundwater, the proposed RRAL for TPH is 5,000 mg/kg.

Assessment and Results

On October 17-18, 2007 and March 25, 2008, Highlander supervised the installation of soil borings at the pit. Prior to the installation of the borings, a visual inspection was performed around the perimeter of the pit. The area of the pit excavation measured approximately 110 feet by 125 feet. One soil boring (SB-1) was installed in the center of the pit. The remaining boreholes (SB-2 through SB-13) were installed outside the edges of the pit. The boring locations and the approximate edge of the pit are shown on Figure 3.

The borings were installed using an air-rotary type drilling rig. Soil samples from soil boring SB-1 were collected at 5 foot intervals to 20 feet and 10 foot intervals thereafter during drilling operations. The samples were field screened for hydrocarbons with a PID, and field screened for chlorides. Soil samples from the remaining soil borings were collected at 10 foot intervals to depths of 50 feet bgs.

The soil samples were field screened for chlorides to determine if impacts showed a distinctive decline with depth. Select soil samples were analyzed for Total Petroleum Hydrocarbons (TPH) by method modified 8015 DRO/GRO, benzene, toluene, ethylbenzene, and xylene (BTEX) by



method 8021B and chloride by method 4500 CI-B. All samples were collected and preserved in laboratory prepared sample containers with standard QA/QC procedures. All samples were shipped under proper chain-of-custody control and analyzed within the standard holding times. The results of the sampling are shown in Table 1. The laboratory reports and chain-of-custody are included in Appendix A.

All down hole equipment was washed between boreholes or sampling events using a potable water and laboratory grade detergent. All down hole equipment (i.e., drill rods, drill bits, etc.) were thoroughly decontaminated between each use with a high-pressure hot water wash and rinse. Soil cuttings from drilling were stockpiled adjacent to the borehole. Following the completion of the drilling activities, all boreholes were grouted to the surface.

Referring to Table 1, the samples selected for TPH and BTEX analysis were all below the reporting limits. Chloride impact was found throughout SB-1, SB-3 through SB-7, and SB-10, while decreasing with depth in soil borings SB-2, SB-8, SB-9 and SB-11. Chloride concentrations were below 250 mg/L for perimeter soil borings SB-12 and SB-13.

Soil Capping

In late November-December 2007, Gandy-Marley Corporation of Lovington, New Mexico was onsite to install a one foot thick clay liner for the pit. The pit area was further extended out approximately 25 feet east, west, north, and south of the original dimensions. See Figure 3 for pit liner dimensions. The soils were excavated to a depth of 4 feet bgs. The soils excavated were placed back into the center of the original excavation in order to bring the original excavation up to a depth of 4 feet bgs. Upon completion of the clay liner, overburden material stripped from the expansion of the pit was utilized as backfill for the site and brought up to grade. A copy of the sieve analysis/permeability data for the clay is included in Appendix B.

In order to complete the capping of the soils at the site, the clay liner will need to be extended towards the onsite equipment approximately 40 feet east of the pit. In accordance with a verbal agreement with the NMOCD, the chloride impacted soils beneath the onsite equipment will not require a liner. The soils may need to be addressed at a future date should the site be decommissioned or the equipment relocated.



Monitor Well Installation

On May 25, 2007, Tetra Tech was onsite to oversee the installation of monitor well MW-1 located south/southwest of the closed pit. Monitor well MW-1 was drilled to a depth of 158 feet. Sixty feet of 0.02" slotted screen was installed at the bottom of the monitor well. The remainder of the well boring was fitted with blank schedule 40 blank PVC to the top of the boring. Groundwater was encountered at 127 feet below ground surface (bgs) in both wells. On May 31 and June 1, 2007, Tetra Tech was onsite to develop and sample monitor well MW-1. Approximately 100 gallons of water were removed from the well and stored in onsite 55-gallon drums. Once the well stabilized, a sample was collected and submitted to Trace Analysis, Inc. of Midland, Texas for analysis of of major anions/cations along with pH and TDS. Monitor well MW-1 had results of 3,278 mg/L chlorides. The results of the sampling are shown in Table 2. A copy of the laboratory reports and chain-of-custody are included in Appendix A, while the boring logs and monitor well installation diagrams are included in Appendix C.

Based on the results of the sampling, additional monitor wells will be required at the site to complete delineation of the groundwater.

Conclusions

Between November and December 2007, the pit area was excavated to dimensions of 160 feet by 175 feet. Approximately 400 cubic yards of soil were excavated and transported offsite for disposal at Gandy-Marley of Lovington, New Mexico. A one foot thick clay liner was placed at 4 feet bgs in the excavation in order to impede the remaining chlorides at the site from migrating to the underlying groundwater. Upon completion of the clay liner, the site was backfilled with overburden material and brought up to surface grade.

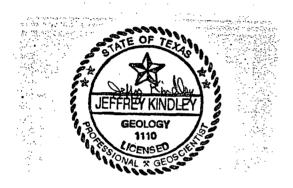
Recommendations

In order to complete the capping of the soils at the site, the clay liner will need to be extended towards the onsite equipment approximately 40 feet east of the pit. In accordance with a verbal agreement with the NMOCD, the chloride impacted soils beneath the onsite equipment will not require a liner. The soils may need to be addressed at a future date should the site be decommissioned or the equipment relocated.



In addition, additional monitor wells will be required at the facility in order to complete delineation of the chloride impacted groundwater at the Site.

If you require any additional information or have any questions or comments concerning the assessment/closure report, please call at (432) 682-4559.



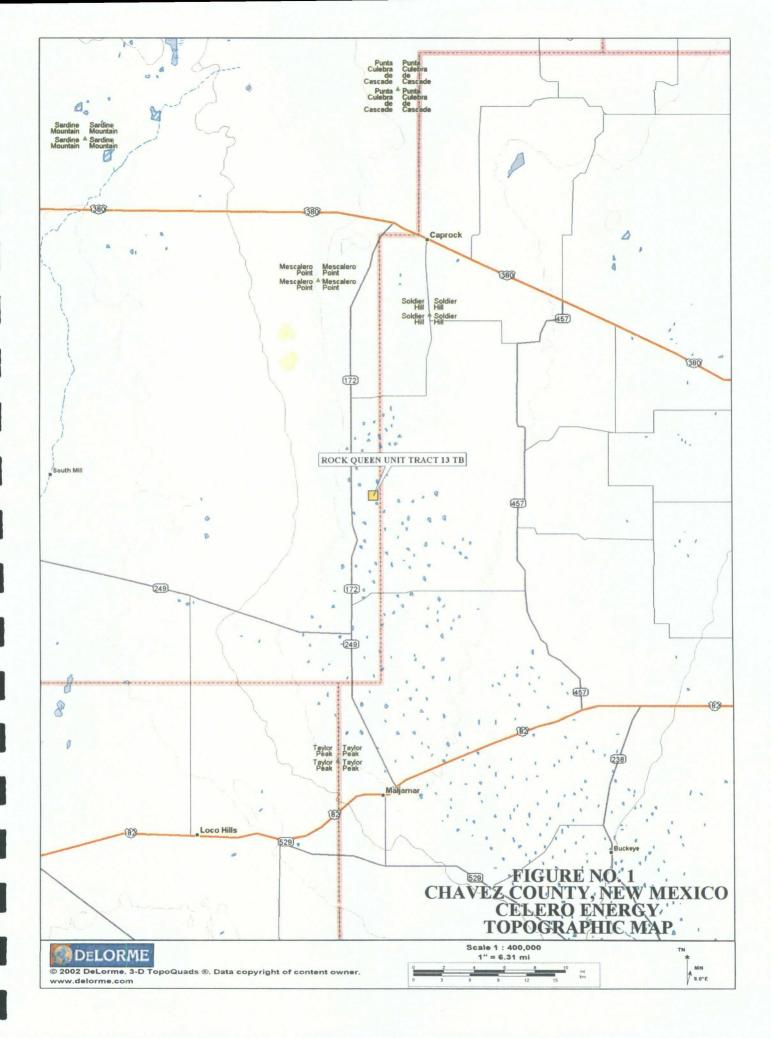
Respectfully submitted, Tetra Tech

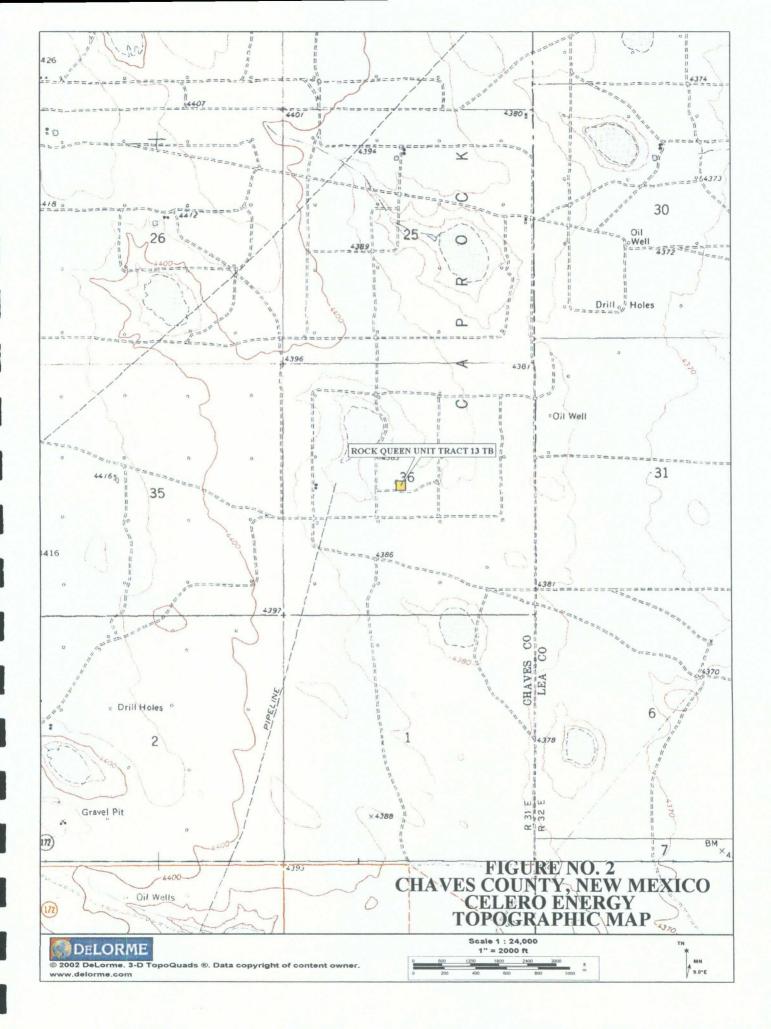
Jeffrey Kindley, P

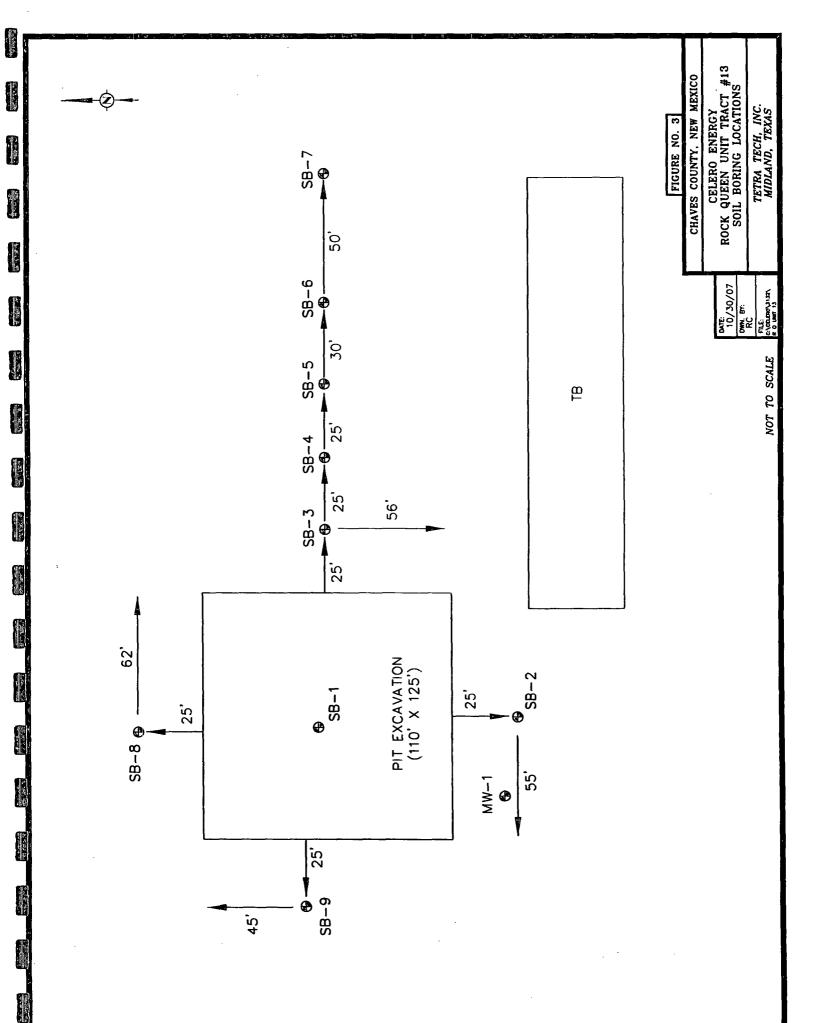
Senior Environmental Geologist

cc: Bruce Woodard – Celero Energy II LP Larry Johnson – NMOCD – Hobbs, NM

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11. 15 B. 19 1.4.24 10 A 4 40 ing an and 5 . & C. Mar TABLES Ref. to . 1 \$ 6 3 B 3 4 5 1 Y6397 - 24 1. A. W. $k_{\rm part}^{\rm T} \mathcal{E}$ の読む and the second the age of the 1.00 No. 10 11.00. 100.00 The second

avi	Excavation Depth (ft)	DRO	I PH (mg/kg)) Total	Benzene (mg/kg)	(mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Cnioride (mg/kg)
(3-51)		<50.0	<1.00	<50.0	<0.0100	<0.0100	<0.0100	<0.0100	6 600
(8-10')		2.2	2		1) - - -			7,330
(13-15')	1	1		-	1	•		-	16,900
(18-20')	()		-		1	-	-	-	15,200
(28-30')		1		1	1	-	-		12,800
(38-40')	[1	1	•	1	-	-	-	12,100
(48-50')		1	•	•	8	-	-	-	8,010
(58-60')		1	1	-	1	-	•	I	7,780
(68-70')		1	1		١	1	•	1	6,600
(78-80')		1	1	•	1	-	•	-	6,520
(88-90)		1		-	1	•	-	-	6,910
98-100	<u> </u>	,	1	1	1	•	•	-	5,670
(8-10')	_	1	•	1	١	•	-	-	3,620
(18-20')		ŀ		1	٦	-	-	-	2,330
(28-30')		-		-	١	•	-	1	2,580
(38-40')		-	-	•	1	,	1	1	696
(48-50')				-	1	1	T	I	727
(8-10')		-	-	1	١	1	1	I	7,290
(18-20')		1	1	-	-	1	1	1	4,630
(28-30')		1		-	1	-	1	1	9,560
(38-40')		-	1	r	1	1	1	1	8,770
(48-50')		1	•	•	1	-		1	7,750
(8-10')		١	-	•	1	1	•	T	6,560
(18-20')	(.	-	-	1	1	'	1	1	9,930
(28-30')	(ı	1	1	1	1	-	7,860
(38-40')	(1	-	-	١	'	-	-	7,340
(48-50')		1	-	•	•	-	1	1	2,670
(8-10')			1	F	1	1	1	1	6,860
(18-20")		1	•	•	١	-		_	6,840
(28-30')	<u> </u>	1	•	1	1	-		1	5,770
(38-40')	0')	1	-	1	1	1	1	1	3,590
(48-50')	0') [1	'			1	1	-	2,760
(8-10')	. (1		1	1	1	-	•	3,950
(18-20')		ı	1	,	ı	1	1	,	6,360

Table 1 Celero Energy Rock Queen Unit Tract 13 Tank Battery

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Sample	Date -	Excavation		TPH (mg/kg		Benzene	1.1	Ethlybenzene	Xylene	· z
	Sampled	Depth (ft)	DRO	GRO	Total	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	🔆 (mg/kg)
	10/18/2007	(28-30')	1	1	•	L	L		-	3,370
-	10/18/2007	(38-40')	-	•	1	-		-	•	1,860
	10/18/2007	(48-50')	1	4	1	1	•		•	1,220
┣	10/18/2007	(8-10')	,	1	1		L			4,300
	10/18/2007	(18-20')		•			•	-	-	5,440
┣	10/18/2007	(28-30')	1	4	•	1	•	-	•	2,090
┣-	10/18/2007	(38-40')		1	1	I			•	1,500
_	10/18/2007	(48-50')	1	1	,				-	1,420
\vdash	10/18/2007	(8-10')	P	1	,	1	ţ			6,240
–	10/18/2007	(18-20')	•	1	1	1	L		1	1,410
	10/18/2007	(28-30')		1	 	1	1		•	223
┞	10/18/2007	(38-40')		1	,		ı	1	ı	123
	10/18/2007	(48-50')		1	,	1	L L	1	ſ	197
┨	10/18/2007	(8-10')	•	1	,					1,110
	10/18/2007	(18-20')	1	ł	,	1	1	-	-	187
	10/18/2007	(28-30')		-		1	-	-	1	138
_	10/18/2007	(38-40')	•	-	1	-	4	-	1	<100
	10/18/2007	(48-50')	•	-	••••	-	•	-	1	<100
	3/25/2008	(8-10')		1		I	1		١	3,410
	3/25/2008	(18-20')	1	-	1	-		-	1	2,100
	3/25/2008	(28-30')	,	I		1	•			5,020
┣	3/25/2008	(38-40')	•	-	-	-	•	-	,	5,310
┣_	3/25/2008	(48-50')		1		1	5	-	•	3,720
	3/25/2008	(8-10')	1	-		ŀ	١	-	1	1,130
┣	3/25/2008	(18-20')	•			-	۲	-	1	1,120
┞	3/25/2008	(28-30')	,	1	1		•	-	1	230
┞—	3/25/2008	(38-40')	•	-	-	-	•	-	1	175
•	3/25/2008	(48-50')		•	а	1	1	-	1	106
┣	3/25/2008	(8-20')	•	-		•		-	1	<100
	3/25/2008	(18-20')	•	-	1	-	1	-	,	<100
┣	3/25/2008	(28-30')	•	-	1	1	٩		, ,	<100
-	3/25/2008	(38-40')	,	-		1	1	-	١	<100
┣—	3/25/2008	(48-50')	1	-	•			-	,	<100
┣	3/25/2008	(8-10')	-	-	-	-	3		1	187
┡	0/06/00/00	1100 01/								

Table 1 Celero Energy Rock Queen Unit Tract 13 Tank Battery

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Table 1	Celero Energy	Rock Queen Unit Tract 13 Tank Battery	Chaves County, New Mexico
		Rock (0

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Date Excavation
Depth (ft) DF
(28-30')
(38-40')
(48-50')

(-) Not Analyzed

Table 2

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 $A_{i} = A_{i} X_{i}^{*}$

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Celero Energy

Groundwater Analytical Results

Rock Queen Unit Tract 13 Tank Battery

Chaves County, New Mexico

Ha	7.02	
Hardness (mg/L)	[∞]	
TDS (mg/L)		
Chioride (mg/L),	3,270	
Sulfate (mg/L)	÷.	
Total Alkalinity (mg/L)	660	
Bicarbonate Alkalinity (mg/L)	652	
Carbonate Alkalinity (mg/L))	8.00	
Hydroxide VAIkalinity (mg/L)	<1.00	
Dissolved Potassium, (mg/L)	20.1	
Dissolved Sodium (mg/L)	2,020	
Dissolved Magnesium (mg(L))	24.4	
Dissolved Calcium (mg/L)	282	
Sampled	. 06/01/07	
Monitor Well	MW-1	

NS - Not sampled

APPENDIX A LABORATORY ANALYTICAL

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6701 Aberdeen Avenue, Suite 9 Lubbock, Texes 73424 800+378+1295 806+794+1296 FAX 806+794+1298

6701 Aberdeen Avenue, Suite 9 200 East Sunser Road, Suite E 5002 Basin Street, Suite A1 6015 Harris Parkway, Suite 110

Lubbock, Texas 79424 800+378+1296 El Paso, Texas 79922 888+588+3443 Midland, Texas 79703 Ft. Worth, Texas 76132 E-Mail: lab@traceanalysis.com

800•378•1296 806•794•1296 888•588•3443 915•585•3443 432•689•6301 817•201•5260

 806+794+1296
 FAX 806+794+1298

 915+585+3443
 FAX 915+585+4944

 432+689+6301
 FAX 432+689+6313

 917+201+5260
 FAX 432+689+6313

Analytical and Quality Control Report

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

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20.0

Project Location:Chaves Co. NMProject Name:Celero Energy-Rock Queen ESAProject Number:2972

Report Date: June 15, 2007

Work Order: 7060508

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

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
126448	RQU Tract 11 MW-1	water	2007-05-31	16:45	2007-06-04
126449	RQU Tract 13 MW-1	water	2007-06-01	14:30	2007-06-04

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 16 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Slan f

Dr. Blair Leftwich, Director

Standard Flags

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

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Analytical Report

Sample: 126448 - RQU Tract 11 MW-1

Analysis: A	lkalinity	Analytical Method:	SM 2320B	Prep Method:	N/A
QC Batch: 3	8159	Date Analyzed:	2007-06-14	Analyzed By:	JŚ
Prep Batch: 3	3038	Sample Preparation:	2007-06-14	Prepared By:	JS
		\mathbf{RL}			
Parameter	\mathbf{Flag}	Result	Units	Dilution	\mathbf{RL}
Hydroxide Alka	linity	<1.00	mg/L as CaCo3	1	1.00
Carbonate Alka	linity	<1.00	mg/L as CaCo3	1	1.00
Bicarbonate All	kalinity	110	mg/L as CaCo3	1	4.00
Total Alkalinity	·	110	mg/L as CaCo3	1	4.00

Sample: 126448 - RQU Tract 11 MW-1

Analysis: QC Batch: Prep Batch:	Ca, Dissolved 38113 32823		Analytical Method: Date Analyzed: Sample Preparation:	S 6010B 2007-06-13 2007-06-06	Prep Method: Analyzed By: Prepared By:	TP
			\mathbf{RL}			
Parameter		\mathbf{Flag}	\mathbf{Result}	Units	Dilution	\mathbf{RL}
Dissolved Ca	lcium		1300	mg/L	20	0.500

Sample: 126448 - RQU Tract 11 MW-1

Analysis: QC Batch: Prep Batch:	Chloride (IC) 38153 33031	Analytical Method: Date Analyzed: Sample Preparation:	E 300.0 2007-06-13 2007-06-13	Prep Method: Analyzed By: Prepared By:	ER
_		RL			
Parameter	Flag	Result	Units	Dilution	\mathbf{RL}
Chloride		37800	mg/L	5000	0.500

Sample: 126448 - RQU Tract 11 MW-1

Analysis: QC Batch: Prep Batch:	Hardness 38113 32823		Analytical Method: Date Analyzed: Sample Preparation:	S 6010B 2007-06-13 2007-06-06	Prep Method: Analyzed By: Prepared By:	Τ́Ρ
			RL			
Parameter		Flag	Result	Units	Dilution	\mathbf{RL}
Hardness (by	ICP)		7570	mg eq CaCO3/L	1	0.00

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Sample: 126448 - RQU Tract 11 MW-1

Analysis: QC Batch: Prep Batch:	K, Dissolved 38113 32823		Analytical Method: Date Analyzed: Sample Preparation:	S 6010B 2007-06-13 2007-06-06	Prep Method: Analyzed By: Prepared By:	ТР
			\mathbf{RL}			
Parameter		\mathbf{Flag}	Result	Units	Dilution	\mathbf{RL}
Dissolved Po	tassium		416	mg/L	20	0.500

Sample: 126448 - RQU Tract 11 MW-1

Analysis: QC Batch: Prep Batch:	Mg, Dissolved 38113 32823		Analytical Method: Date Analyzed: Sample Preparation:	S 6010B 2007-06-13 2007-06-06	Prep Method: Analyzed By: Prepared By:	TP
			RL			
Parameter		Flag	Result	Units	Dilution	\mathbf{RL}
Dissolved Ma	agnesium		1050	mg/L	20	0.500

Sample: 126448 - RQU Tract 11 MW-1

Analysis: QC Batch:	Na, Dissolved 38113		Analytical Method: Date Analyzed:	S 6010B 2007-06-13	Prep Method: Analyzed By:	
Prep Batch:	32823		Sample Preparation:	2007-06-06	Prepared By:	TS
			\mathbf{RL}			
Parameter		Flag	Result	Units	Dilution	\mathbf{RL}
Dissolved So	dium		19400	mg/L	200	0.500

Sample: 126448 - RQU Tract 11 MW-1

Parameter pH		7.06	s.u.		0.00
D	Flag	Result	Units	Dilution	RL
-		RL			
^a samples w	vere ran in the lab				
Prep Batch:	32839	Sample Preparation:	2007-06-05	Prepared By:	JS
QC Batch:	37918 ^a	Date Analyzed:	2007-06-05	Analyzed By:	JŚ
Analysis:	pН	Analytical Method:	SM 4500-H+	Prep Method:	N/A

Sample: 126448 - RQU Tract 11 MW-1

Analysis:	SO4 (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	38153	Date Analyzed:	2007-06-13	Analyzed By:	\mathbf{ER}
Prep Batch:	33031	Sample Preparation:	2007-06-13	Prepared By:	\mathbf{ER}

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		\mathbf{RL}			
Parameter	Flag	Result	Units	Dilution	RL
Sulfate		1080	mg/L	50	0.500

Sample: 126448 - RQU Tract 11 MW-1

Analysis: QC Batch: Prep Batch:	TDS 38061 32957		Analytical Method: Date Analyzed: Sample Preparation:	SM 2540C 2007-06-11 2007-06-06	Prep Method: Analyzed By: Prepared By:	$\dot{\mathbf{ER}}$
			\mathbf{RL}			
Parameter		\mathbf{Flag}	\mathbf{Result}	Units	Dilution	\mathbf{RL}
Total Dissolv	red Solids		59400	mg/L	200	10.00

Sample: 126449 - RQU Tract 13 MW-1

Analysis: Alkalin	ity	Analytical Method:	SM 2320B	Prep Method:	N/A
QC Batch: 38159		Date Analyzed:	2007-06-14	Analyzed By:	JS
Prep Batch: 33038		Sample Preparation:	2007-06-14	Prepared By:	JS
		\mathbf{RL}			
Parameter	\mathbf{Flag}	Result	Units	Dilution	\mathbf{RL}
Hydroxide Alkalinity		<1.00	mg/L as CaCo3	1	1.00
Carbonate Alkalinity		8.00	mg/L as CaCo3	1	1.00
Bicarbonate Alkalinit	у	652	mg/L as CaCo3	1	4.00
Total Alkalinity		660	mg/L as CaCo3	1	4.00

Sample: 126449 - RQU Tract 13 MW-1

Analysis: QC Batch: Prep Batch:	Ca, Dissolved 38113 32823		Analytical Method: Date Analyzed: Sample Preparation:	S 6010B 2007-06-13 2007-06-06	Prep Method: Analyzed By: Prepared By:	ТР
			\mathbf{RL}			
Parameter		Flag	Result	Units	Dilution	\mathbf{RL}
Dissolved Ca	lcium		282	mg/L	5	0.500

Sample: 126449 - RQU Tract 13 MW-1

Analysis: QC Batch: Prep Batch:	Chloride (IC) 38153 33031	Analytical Method: Date Analyzed: Sample Preparation:	E 300.0 2007-06-13 2007-06-13	Prep Method: Analyzed By: Prepared By:	$\mathbf{E}\mathbf{\hat{R}}$
		\mathbf{RL}			
Parameter	Flag	\mathbf{Result}	Units	Dilution	\mathbf{RL}
Chloride		3270	mg/L	500	0.500

Report Date: June 15, 2007	Work Order: 7060508	ŀ
2972	Celero Energy-Rock Queen ESA	

Sample: 126449 - RQU Tract 13 MW-1

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Analysis: QC Batch: Prep Batch:	Hardness 38113 32823		Analytical Method: Date Analyzed: Sample Preparation:	S 6010B 2007-06-13 2007-06-06	Prep Method: Analyzed By: Prepared By:	т́Р	
Parameter		Flag	RL Besult	Units	Dilution	RĹ	

Parameter	Flag	Result	Units	Dilution	RL
Hardness (by ICP)		804	mg eq CaCO3/L	1	0.00

Sample: 126449 - RQU Tract 13 MW-1

Analysis: QC Batch:	K, Dissolved 38113		Analytical Method: Date Analyzed:	S 6010B 2007-06-13	Prep Method: Analyzed By:	
Prep Batch:			Sample Preparation:		Prepared By:	
			\mathbf{RL}			
Parameter		Flag	Result	Units	Dilution	\mathbf{RL}
Dissolved Po	tassium		20.1	mg/L	5	0.500

Sample: 126449 - RQU Tract 13 MW-1

Analysis:	Mg, Dissolved		Analytical Method:	S 6010B	Prep Method:	S 3005A
QC Batch:	38113		Date Analyzed:	2007-06-13	Analyzed By:	\mathbf{TP}
Prep Batch:	32823		Sample Preparation:	2007-06-06	Prepared By:	TS
			\mathbf{RL}			
Parameter		Flag	\mathbf{Result}	Units	Dilution	\mathbf{RL}
Dissolved Ma	agnesium		24.4	mg/L	5	0.500

Sample: 126449 - RQU Tract 13 MW-1

Analysis: QC Batch: Prep Batch:	Na, Dissolved 38113 32823		Analytical Method: Date Analyzed: Sample Preparation:	S 6010B 2007-06-13 2007-06-06	Prep Method: Analyzed By: Prepared By:	TP
			\mathbf{RL}			
Parameter		\mathbf{Flag}	Result	Units	Dilution	\mathbf{RL}
Dissolved So	dium		2020	mg/L	50	0.500

Sample: 126449 - RQU Tract 13 MW-1

Analysis:	pH	Analytical Method:	SM 4500-H+	Prep Method:	N/A
QC Batch:	37918 ^a	Date Analyzed:	2007-06-05	Analyzed By:	JŚ
Prep Batch:	32839	Sample Preparation:	2007-06-05	Prepared By:	JS

^asamples were ran in the lab

2972	: June 15, 2	2007	Work Orde Celero Energy-R		Page Number: 6 Chaves Co	
			\mathbf{RL}			
Parameter		Flag	Result	Units	Dilution	R
pН			7.02	s.u.	1	0.0
Sample: 12	6449 - R.O	U Tract 13 MV	W-1			
Analysis:	SO4 (IC)		Analytical Method	: E 300.0	Prep Method:	N/
QC Batch:	38204		Date Analyzed:	2007-06-15	Analyzed By:	ER
Prep Batch:	33077		Sample Preparatio	n: 2007-06-14	Prepared By:	ER
			RL			
Parameter		Flag	Result	Units	Dilution	R
Sulfate			91.1	mg/L	5	0.50
Analysis: QC Batch:	TDS 38061 32957		Analytical Method: Date Analyzed: Sample Preparation:	SM 2540C 2007-06-11 2007-06-06	Prep Method: Analyzed By: Prepared By:	N/ EF EF
Prep Batch:			DI			
-		Flag	RL Besult	Units	Dilution	F
Parameter Total Dissolv		Flag QC Batch: 380	Result 7245	Units mg/L	Dilution 5	
Parameter Total Dissolv Method Bl QC Batch:			Result 7245			10. E
Parameter Total Dissolv Method Bl QC Batch:	ank (1) 38061		Result 7245 D61 Date Analyzed:	mg/L 2007-06-11 2007-06-06	5 Analyzed By:	R 10.0 El
Parameter Total Dissolv Method Bl QC Batch: Prep Batch:	ank (1) 38061		Result 7245 061 Date Analyzed: QC Preparation:	mg/L 2007-06-11 2007-06-06 MDL	5 Analyzed By: Prepared By:	10.0 El
Parameter Total Dissolv Method Bl QC Batch:	ank (1) 38061 32957		Result 7245 D61 Date Analyzed:	mg/L 2007-06-11 2007-06-06	5 Analyzed By:	10. E E
Parameter Total Dissolv Method Bl QC Batch: Prep Batch: Parameter Total Dissolv	ank (1) 38061 32957 red Solids		Result 7245 061 Date Analyzed: QC Preparation: Flag	mg/L 2007-06-11 2007-06-06 MDL Result	5 Analyzed By: Prepared By: Units	10.0 E
Parameter Total Dissolv Method Bl QC Batch: Prep Batch: Parameter Total Dissolv Method Bl	ank (1) 38061 32957 red Solids ank (1)	QC Batch: 380	Result 7245 061 Date Analyzed: QC Preparation: Flag	mg/L 2007-06-11 2007-06-06 MDL Result <5.000	5 Analyzed By: Prepared By: Units mg/L	EI EI F
Parameter Total Dissolv Method Bl QC Batch: Prep Batch: Parameter Total Dissolv Method Bl QC Batch:	ank (1) 38061 32957 red Solids	QC Batch: 380	Result 7245 061 Date Analyzed: QC Preparation: Flag	mg/L 2007-06-11 2007-06-06 MDL Result	5 Analyzed By: Prepared By: Units	10.1 E) E T
Parameter Total Dissolv Method Bl QC Batch: Prep Batch: Parameter Total Dissolv Method Bl QC Batch: Prep Batch:	ank (1) 38061 32957 red Solids ank (1) 38113	QC Batch: 380 QC Batch: 381	Result 7245 061 Date Analyzed: QC Preparation: Flag .13 Date Analyzed: QC Preparation:	mg/L 2007-06-11 2007-06-06 MDL Result <5.000 2007-06-13 2007-06-06 MDL	5 Analyzed By: Prepared By: <u>Units</u> mg/L Analyzed By: Prepared By:	E) E) F T T
Parameter Total Dissolv Method Bl QC Batch: Prep Batch: Parameter Total Dissolv Method Bl QC Batch: Prep Batch: Prep Batch: Prep Batch:	ank (1) 38061 32957 red Solids ank (1) 38113 32823	QC Batch: 380 QC Batch: 381	Result 7245 061 Date Analyzed: QC Preparation: Flag .13 Date Analyzed: QC Preparation: ag	mg/L 2007-06-11 2007-06-06 MDL Result <5.000 2007-06-13 2007-06-06 MDL Result	5 Analyzed By: Prepared By: <u>Units</u> <u>mg/L</u> Analyzed By: Prepared By: Units	E) E) F T T
Parameter Total Dissolv Method Bl QC Batch: Prep Batch: Parameter Total Dissolv Method Bl QC Batch: Prep Batch:	ank (1) 38061 32957 red Solids ank (1) 38113 32823	QC Batch: 380 QC Batch: 381	Result 7245 061 Date Analyzed: QC Preparation: Flag .13 Date Analyzed: QC Preparation: ag	mg/L 2007-06-11 2007-06-06 MDL Result <5.000 2007-06-13 2007-06-06 MDL	5 Analyzed By: Prepared By: <u>Units</u> mg/L Analyzed By: Prepared By:	10.0 El El T
Parameter Total Dissolv Method Bl QC Batch: Prep Batch: Parameter Total Dissolv Method Bl QC Batch: Prep Batch: Prep Batch: Prep Batch:	ank (1) 38061 32957 red Solids ank (1) 38113 32823 	QC Batch: 380 QC Batch: 381	Result 7245 061 Date Analyzed: QC Preparation: Flag 113 Date Analyzed: QC Preparation: lag	mg/L 2007-06-11 2007-06-06 MDL Result <5.000 2007-06-13 2007-06-06 MDL Result	5 Analyzed By: Prepared By: <u>Units</u> <u>mg/L</u> Analyzed By: Prepared By: Units	E) E) F T T
Parameter Total Dissolv Method Bl QC Batch: Prep Batch: Parameter Total Dissolv Method Bl QC Batch: Prep Batch: Prep Batch: Prep Batch:	ank (1) 38061 32957 red Solids ank (1) 38113 32823 	QC Batch: 380 QC Batch: 381 Fl	Result 7245 061 Date Analyzed: QC Preparation: Flag 113 Date Analyzed: QC Preparation: lag	mg/L 2007-06-11 2007-06-06 MDL Result <5.000 2007-06-13 2007-06-06 MDL Result	5 Analyzed By: Prepared By: <u>Units</u> <u>mg/L</u> Analyzed By: Prepared By: Units	E E F T T

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Report Date: June 15, 2972	2007		er: 7060508 Rock Queen ESA		Page Number: 7 Chaves Co	
			MDL			
Parameter	Flag		Result	Units		RL
Dissolved Potassium	·······		<0.307	mg/L		0.5
Method Blank (1)	QC Batch: 38113					
QC Batch: 38113 Prep Batch: 32823		Date Analyzed: QC Preparation:	2007-06-13 2007-06-06		Analyzed By: Prepared By:	TP TS
Parameter	Flag	5	MDL Result	Units		\mathbf{RL}
Dissolved Magnesium			<0.0740	mg/L		0.5
Method Blank (1)	QC Batch: 38113					
QC Batch: 38113 Prep Batch: 32823		Date Analyzed: QC Preparation:	2007-06-13 2007-06-06		Analyzed By: Prepared By:	TP TS
Parameter	Flag		MDL Result	Units		RL
Dissolved Sodium			<0.529	mg/L		0.5
Method Blank (1)	QC Batch: 38153					
QĊ Batch: 38153 Prep Batch: 33031		Date Analyzed: QC Preparation:	2007-06-13 2007-06-13		Analyzed By: Prepared By:	ER ER
Parameter	Flag		1DL	I		זמ
Chloride	r lag		.172	Units mg/L		RL 0.5
Method Blank (1)	QC Batch: 38153					
QC Batch: 38153 Prep Batch: 33031		Date Analyzed: QC Preparation:	2007-06-13 2007-06-13		Analyzed By: Prepared By:	ER ER
Deveryetar	Flore		1DL	TT :+-		Dr
Parameter Sulfate	Flag		.777	Units mg/L		RL 0.5
Method Blank (1)	QC Batch: 38159					
OC Batch 38150		Date Analyzod:	9007 06 14		Applured Pu	20

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QC Batch:	38159	Date Analyzed:	2007-06-14	Analyzed By:	\mathbf{JS}
Prep Batch:	33038	QC Preparation:	2007-06-14	Prepared By:	JS

Report Date: June 15, 2972	2007	Work Orde Celero Energy-R	er: 7060508 lock Queen ESA	F	Page Number: 8 Chaves Co	
			IDL	T		DI
Parameter Hydroxide Alkalinity	Flag		sult 1.00	Units mg/L as CaCo3		$\frac{\text{RI}}{1}$
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	l	4
Method Blank (1)	QC Batch: 38204					
QC Batch: 38204		Date Analyzed:	2007-06-15		Analyzed By:	
Prep Batch: 33077		QC Preparation:	2007-06-14		Prepared By:	ER
Parameter	Flag		DL sult	Units		R
Sulfate		<0.		mg/L		0.
Param	Duplicate Result	Sample Result			RPD	RPI Lim
pH Duplicates (1)	7.09	7.06	<u>s.u.</u>	1	0	0.8
QC Batch: 38061		Date Analyzed:	2007-06-11		Analyzed By:	EF
Prep Batch: 32957		QC Preparation:	2007-06-06		Prepared By:	
riep Baten. 02501		v + r				
-	Duplic	cate Sample			222	
Param	Resu	cate Sample lt Result	Units	Dilution	RPD	Lim
Param Total Dissolved Solids	1	cate Sample lt Result		Dilution2	RPD 2	Lim
Param Total Dissolved Solids Duplicates (1)	Resu	cate Sample alt Result 0 582.0	Units mg/L		2	Lim 17.
Param Total Dissolved Solids Duplicates (1) QC Batch: 38159	Resu	cate Sample lt Result	Units			Lim 17.5
Param Total Dissolved Solids Duplicates (1) QC Batch: 38159 Prep Batch: 33038	Resu 596. Duplicat	eate Sample alt Result 0 582.0 Date Analyzed: QC Preparation: e Sample	Units mg/L 2007-06-14 2007-06-14	2	2 Analyzed By Prepared By	Lim 17.: : JS : JS RP
Param Total Dissolved Solids Duplicates (1) QC Batch: 38159 Prep Batch: 33038 Param	Resu 596. Duplicat Result	eate Sample lt Result 0 582.0 Date Analyzed: QC Preparation: e Sample Result	Units mg/L 2007-06-14 2007-06-14 Units	2 Dilution	2 Analyzed By	Lim 17.: : JS : JS RP Lim
Param Total Dissolved Solids Duplicates (1) QC Batch: 38159	Resu 596. Duplicat	eate Sample alt Result 0 582.0 Date Analyzed: QC Preparation: e Sample	Units mg/L 2007-06-14 2007-06-14	2 Dilution 3 1	2 Analyzed By Prepared By RPD	Lim 17.5 : JS : JS RPI Lim 20
Param Total Dissolved Solids Duplicates (1) QC Batch: 38159 Prep Batch: 33038 Param Hydroxide Alkalinity	Resu 596. Duplicat Result <1.00	cate Sample lt Result 0 582.0 Date Analyzed: QC Preparation: e Sample Result <1.00	Units mg/L 2007-06-14 2007-06-14 Units mg/L as CaCo	2 Dilution 3 1 3 1 3 1 3 1	2 Analyzed By Prepared By RPD 0	

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2972	June 15, 2007		Cele		ler: 706050 Rock Quee			F		umber: Chaves C	
Laboratory	Control Spike (LC	S-1)									
QC Batch:	38113		Date A	Analyzed:	2007-06-	13			Anal	yzed By	TP
•	32823			eparation	2007-06-	06				ared By:	
		\mathbf{LC}				Spike	Mat				Rec.
Param		Res		Units		Amount	Res		Rec.		imit
Dissolved Cal		50.		mg/L	1	50.0	<0.0		101	79.	1 - 121
Percent recove	ery is based on the sp	ike result.	RPD is	s based on	the spike a	and spike di	uplicate	result.			
		LCSD			Spike	Matrix		Rec.			RPD
Param		Result	Units	Dil.	Amount	Result	Rec.	Limi	t	RPD	Limit
Dissolved Cal	cium ery is based on the sp	51.0	mg/L	1	50.0	< 0.0290	102	79.1 - 1	121	1	20
	Control Spike (LC 38113	S-1)	Date A	Analyzed:	2007-06	-13			Anal	yzed By	: TP
Prep Batch:	32823			reparation	2007-06	-06			Prep	ared By	: TS
D		LC		FT : 4	12.1	Spike	Mat		n		Rec.
Param Dissolved Pota	occium	Res 51		Units mg/L		Amount 50.0	Res <0.3		Rec. 103		Limit 8 - 114
	ery is based on the sp								105	10.	0 - 114
reicent iecow	ery is based on the sp	ike result.	RFD B	s based on	the spike	and spike d	upiicate	result.			
		LCSD			Spike	Matrix		Rec.			RPD
_						\mathbf{Result}		T i anni i	4	PDD	Limi
Param		Result	Units		Amount		Rec.	Limi		RPD	
Dissolved Pot	assium ery is based on the sp	Result 51.9	mg/L	1	50.0	< 0.307	104	78.8 - 1		1	20
Dissolved Pot Percent recove Laboratory QC Batch:		Result 51.9 vike result.	mg/L RPD is Date A	1	50.0 the spike 2007-06	<0.307 and spike d	104	78.8 - 1	Anal		20 : TP
Dissolved Pot Percent recove Laboratory QC Batch: Prep Batch:	ery is based on the sp Control Spike (LC 38113	Result 51.9 ike result. S-1)	mg/L RPD is Date A QC Pr	s based on Analyzed: reparation	50.0 the spike 2007-06 2007-06	<0.307 and spike d -13 -06 Spike	104 uplicate Mat	78.8 - 1 result.	Anal Prep	1 yzed By ared By	20 : TP : TS Rec.
Dissolved Pot Percent recove Laboratory QC Batch: Prep Batch: Param	ery is based on the sp Control Spike (LC 38113 32823	Result 51.9 ike result. S-1) LC Res	mg/L RPD is Date A QC Pr 2S ult	s based on Analyzed: reparation Units	50.0 the spike 2007-06 : 2007-06 Dil.	<0.307 and spike d -13 -06 Spike Amount	104 uplicate Mat Res	78.8 - 1 result. 	Anal Prep Rec.	1 yzed By ared By	20 : TP : TS Rec. Limit
Dissolved Pot Percent recove Laboratory QC Batch: Prep Batch: Param Dissolved Mag	ery is based on the sp Control Spike (LC 38113 32823 gnesium	Result 51.9 vike result. S-1) LC Res 50	mg/L RPD is Date A QC Pr 2S ult .1	a 1 s based on Analyzed: reparation Units mg/L	50.0 the spike 2007-06 2007-06 2007-06 Dil. 1	<0.307 and spike d -13 -06 Spike Amount 50.0	104 uplicate Mat Res <0.0	78.8 - 1 result. rix ult 740	Anal Prep	1 yzed By ared By	20 : TP : TS Rec. Limit
Dissolved Pot Percent recove Laboratory QC Batch: Prep Batch: Param Dissolved Mag	ery is based on the sp Control Spike (LC 38113 32823	Result 51.9 vike result. S-1) LC Res 50	mg/L RPD is Date A QC Pr 2S ult .1	a 1 s based on Analyzed: reparation Units mg/L	50.0 the spike 2007-06 2007-06 2007-06 Dil. 1	<0.307 and spike d -13 -06 Spike Amount 50.0	104 uplicate Mat Res <0.0	78.8 - 1 result. rix ult 740	Anal Prep Rec.	1 yzed By ared By	20 : TP : TS Rec. Limit
Dissolved Pot Percent recove Laboratory QC Batch: Prep Batch: Param Dissolved Mag	ery is based on the sp Control Spike (LC 38113 32823 gnesium	Result 51.9 ike result. S-1) LC Res 50 vike result. LCSD	mg/L RPD is Date A QC Pr 2S ult .1	Analyzed: reparation Units mg/L s based on	50.0 the spike 2007-06 2007-06 2007-06 Dil. 1	<0.307 and spike d -13 -06 Spike Amount 50.0	104 uplicate Mat Res <0.0	78.8 - 1 result. rix ult 740	Anal Prep Rec. 100	1 yzed By ared By 80.	20 : TP : TS Rec. Limit 2 - 12
Dissolved Pot Percent recove Laboratory QC Batch: Prep Batch: Param Dissolved Mag Percent recove Param	ery is based on the sp Control Spike (LC 38113 32823 gnesium ery is based on the sp	Result 51.9 ike result. S-1) LC Res 50 vike result. LCSD Result	mg/L RPD is Date 4 QC Pr 2S ult .1 RPD is Units	Analyzed: reparation Units mg/L s based on Dil.	50.0 the spike 2007-06 2007-06 Dil. I the spike Spike Amount	<0.307 and spike d -13 -06 Spike Amount 50.0 and spike d Matrix Result	104 uplicate Mat Res <0.0 uplicate Rec.	78.8 - 1 result. rix ult 1740 result. Rec Limi	Anal Prep Rec. 100	1 yzed By ared By 80. RPD	20 : TP : TS Rec. Limit 2 - 120 RPD Limi
Dissolved Pot Percent recove Laboratory QC Batch: Prep Batch: Param Dissolved Mag Percent recove Param Dissolved Mag	ery is based on the sp Control Spike (LC 38113 32823 gnesium ery is based on the sp gnesium	Result 51.9 ike result. S-1) LC Res 50 ike result. LCSD Result 50.6	mg/L RPD is Date A QC Pr 2S ult .1 RPD is mg/L	Analyzed: reparation Units mg/L s based on Dil. 1	50.0 the spike 2007-06 2007-06 Dil. 1 the spike Amount 50.0	<0.307 and spike d -13 -06 Spike Amount 50.0 and spike d Matrix Result <0.0740	104 uplicate Mat Res <0.0 uplicate Rec. 101	78.8 - 1 result. result. 1740 result. Rec Limi 80.2 -	Anal Prep Rec. 100	1 yzed By ared By 80.	20 : TP : TS Rec. Limit 2 - 12 RPI Limi
Dissolved Pot Percent recove Laboratory QC Batch: Prep Batch: Prep Batch: Param Dissolved Mag Percent recove Param Dissolved Mag Percent recove	ery is based on the sp Control Spike (LC 38113 32823 gnesium ery is based on the sp gnesium ery is based on the sp	Result 51.9 ike result. S-1) LC Res 50 ike result. LCSD Result 50.6 ike result.	mg/L RPD is Date A QC Pr 2S ult .1 RPD is mg/L	Analyzed: reparation Units mg/L s based on Dil. 1	50.0 the spike 2007-06 2007-06 Dil. 1 the spike Amount 50.0	<0.307 and spike d -13 -06 Spike Amount 50.0 and spike d Matrix Result <0.0740	104 uplicate Mat Res <0.0 uplicate Rec. 101	78.8 - 1 result. result. 1740 result. Rec Limi 80.2 -	Anal Prep Rec. 100	1 yzed By ared By 80. RPD	20 : TP : TS Rec. Limit 2 - 12 RPI
Dissolved Pot Percent recove Laboratory QC Batch: Prep Batch: Prep Batch: Param Dissolved Mag Percent recove Param Dissolved Mag Percent recove	ery is based on the sp Control Spike (LC 38113 32823 gnesium ery is based on the sp gnesium	Result 51.9 ike result. S-1) LC Res 50 ike result. LCSD Result 50.6 ike result.	mg/L RPD is Date A QC Pr 2S ult .1 RPD is mg/L RPD is	Analyzed: reparation Units mg/L s based on Dil. 1	50.0 the spike 2007-06 2007-06 Dil. 1 the spike Amount 50.0	<0.307 and spike d -13 -06 Spike Amount 50.0 and spike d Matrix Result <0.0740 and spike d	104 uplicate Mat Res <0.0 uplicate Rec. 101	78.8 - 1 result. result. 1740 result. Rec Limi 80.2 -	Anal Prep Rec. 100 t	1 yzed By ared By 80. RPD	20 : TP : TS Rec. Limit 2 - 12 RPI Limi 20

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Units mg/L is based on as Dil. L 1 is based on Analyzed: Preparation:	Spike Amount 50.0 the spike a 2007-06-	Matrix Result <0.529 Ind spike du	Rec. 107	t Rec. 9 100 sult. Rec. Limit 79.4 - 123 sult.		Rec. Limit 4 - 123 RPD Limit 20
mg/L is based on as Dil. L 1 is based on Analyzed:	1 the spike a Amount 50.0 the spike a 2007-06-	50.0 nd spike du Matrix Result <0.529 nd spike du	<0.52 plicate re Rec. 107	9 100 sult. Rec. Limit 79.4 - 123 sult.	5 79 RPD 0	.4 - 123 RPD Limit
is based on <u>S</u> Dil. <u>L</u> 1 is based on Analyzed:	the spike a Spike Amount 50.0 the spike a 2007-06-	Matrix Result <0.529 and spike du	plicate re Rec. 107	sult. Rec. Limit 79.4 - 123 sult.	RPD 0	RPD Limit
Analyzed:	Spike Amount 50.0 the spike a 2007-06-	Matrix Result <0.529 Ind spike du	Rec. 107	Rec. <u>Limit</u> 79.4 - 123 sult.	0	Limit
L 1 is based on Analyzed:	Amount 50.0 the spike a 2007-06-	Result <0.529 and spike du	107	Limit 79.4 - 123 sult.	0	Limit
L 1 is based on Analyzed:	Amount 50.0 the spike a 2007-06-	Result <0.529 and spike du	107	Limit 79.4 - 123 sult.	0	Limit
is based on Analyzed:	50.0 the spike a 2007-06-	<0.529 nd spike du 13	107	sult.	0	
Analyzed:	2007-06-	13	plicate re		alvgod D.	
				An	alveod D.	
				An	alverd D.	
				****		: ER
				Pre	epared By	
					sparoa = j	
		Spike	Mat	rix		Rec.
Units	Dil.	Amount	Res	ult R	ec.	Limit
mg/L	1	12.5	<0.1	172 9	98 9	90 - 11
is based on	the spike a	nd spike du	plicate re	sult.		
	Spike	Matrix		Rec		RPL
ts Dil	-		Rec		RPD	Limi
						20
-					-	
Preparation:	2007-06-	13		Pro	epared By	7: ER
		Spike	Mat	rix		Rec.
Units	Dil.	Amount				Limit
	1	12.5	<0.1	777 9	99	90 - 11
mg/L	· · · · · · · · · · · · · · · · · · ·				·····	50 - 11
mg/L is based on		•				50 - 11
	the spike a	and spike du		esult.		
		•			RPD	RPI Limi
j	is based on its Dil. /L 1 is based on e Analyzed: Preparation: Units	is based on the spike a Spike its Dil. Amount /L 1 12.5 is based on the spike a e Analyzed: 2007-06- Preparation: 2007-06- Units Dil.	is based on the spike and spike du Spike Matrix its Dil. Amount Result /L 1 12.5 <0.172 is based on the spike and spike du e Analyzed: 2007-06-13 Preparation: 2007-06-13 Spike Units Dil. Amount	is based on the spike and spike duplicate re Spike Matrix its Dil. Amount Result Rec. /L 1 12.5 <0.172 97 is based on the spike and spike duplicate re e Analyzed: 2007-06-13 Preparation: 2007-06-13 Spike Mat Units Dil. Amount Res	is based on the spike and spike duplicate result. Spike Matrix Rec. its Dil. Amount Result Rec. Limit /L 1 12.5 <0.172 97 90 - 110 is based on the spike and spike duplicate result. Analyzed: 2007-06-13 An Preparation: 2007-06-13 Preparation: 2007-06-14 Preparation	is based on the spike and spike duplicate result. Spike Matrix Rec. its Dil. Amount Result Rec. Limit RPD /L 1 12.5 <0.172 97 90 - 110 1 is based on the spike and spike duplicate result. Analyzed: 2007-06-13 Analyzed By Preparation: 2007-06-13 Prepared By Spike Matrix Units Dil. Amount Result Rec.

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

Report Date: June 15, 20 2972	U7			er: 7060508 lock Queer			Fa	-	umber: Chaves	
	LCSD			Spike	Matrix		Rec.			RPD
Param	Result		Dil.	Amount	Result	Rec.	Limi		RPD	Limit
Sulfate	12.0	mg/L		12.5	<0.777	96	90 - 1		6	20
Percent recovery is based				the spike a						
Matrix Spike (MS-1)	Spiked Sample:	126448								
QC Batch: 38113		Date A	analyzed:	2007-06-	13			Ana	lyzed By	v: TP
Prep Batch: 32823			eparation:	2007-06-0					pared By	
		QUIT	eparation.	2007-00-0	00			rict	area Dy	. 15
-		MS			Spike		trix	-		Rec.
Param		esult	Units	Dil.	Amount		sult	Re		Limit
Dissolved Calcium	1	1290	mg/L	1	50.0	13	300	-20	<u> </u>	69 - 13
Percent recovery is based	on the spike resul	t. RPD is	based on	the spike a	ınd spike du	iplicate i	result.			
	MSD			Spike	Matrix		Rec			RPI
Param	Result	: Units	b Dil.	Amount	Result	Rec.	Limi	it	RPD	Limi
	2 1200	mg/L	1	50.0	1300	-20	69 - 1	30	0	20
Percent recovery is based Matrix Spike (MS-1) QC Batch: 38113		t. RPD is 126448 Date A	based on	the spike a 2007-06-	und spike du 13			Ana	lyzed B	y: TP
Percent recovery is based Matrix Spike (MS-1) QC Batch: 38113 Prep Batch: 32823	on the spike resul	t. RPD is 126448 Date A QC Pr MS	based on Analyzed: eparation:	the spike a 2007-06- 2007-06-	and spike du 13 06 Spike	plicate n	result. rix	Ana Prej	lyzed B pared B	y: TP y: TS Rec.
Percent recovery is based Matrix Spike (MS-1) QC Batch: 38113 Prep Batch: 32823 Param	on the spike resul Spiked Sample: R	t. RPD is 126448 Date A QC Pr MS esult	based on Analyzed: eparation: Units	the spike a 2007-06- 2007-06- Dil.	and spike du 13 06 Spike Amount	nplicate n Mat Res	result. rix ult	Ana Prej Rec.	lyzed B pared B	y: TP y: TS Rec. Limit
Percent recovery is based Matrix Spike (MS-1) QC Batch: 38113 Prep Batch: 32823 Param Dissolved Potassium	on the spike resul Spiked Sample: R 3	t. RPD is 126448 Date A QC Pr MS esult 446	based on Analyzed: eparation: Units mg/L	the spike a 2007-06- 2007-06- Dil. 1	and spike du 13 06 Spike Amount 50.0	Mat Res 41	result. rix ult 6	Ana Prej	lyzed B pared B	y: TP y: TS Rec. Limit
Percent recovery is based Matrix Spike (MS-1) QC Batch: 38113 Prep Batch: 32823 Param Dissolved Potassium	on the spike resul Spiked Sample: R 3	t. RPD is 126448 Date A QC Pr MS esult 446	based on Analyzed: eparation: Units mg/L	the spike a 2007-06- 2007-06- Dil. 1	and spike du 13 06 Spike Amount 50.0	Mat Res 41	result. rix ult 6	Ana Prej Rec.	lyzed B pared B	y: TP y: TS Rec. Limit
Percent recovery is based Matrix Spike (MS-1) QC Batch: 38113 Prep Batch: 32823 Param Dissolved Potassium	on the spike resul Spiked Sample: R 3	t. RPD is 126448 Date A QC Pr MS esult 446 t. RPD is	based on Analyzed: eparation: Units mg/L based on	the spike a 2007-06- 2007-06- Dil. 1 the spike a Spike	and spike du 13 06 Spike Amount 50.0	Mat Res 41	rix ult 6 result. Rec.	Ana Prej Rec. 60	lyzed B pared B	y: TP y: TS Rec. Limit 3.8 - 11
Prep Batch: 32823 Param Dissolved Potassium Percent recovery is based Param	on the spike resul Spiked Sample: R 3 on the spike resul MSD Result	t. RPD is 126448 Date A QC Pr MS esult 446 t. RPD is Units	a based on Analyzed: reparation: Units mg/L based on Dil.	the spike a 2007-06- 2007-06- Dil. 1 the spike a Spike Amount	and spike du 13 06 Spike Amount 50.0 and spike du Matrix Result	Mat Res 41 Iplicate Rec.	rix ult 6 result. Rec. Limi	Ana Prej Rec. 60	lyzed B pared B 76 RPD	y: TP y: TS Limit J.8 - 11 RPI Limi
Percent recovery is based Matrix Spike (MS-1) QC Batch: 38113 Prep Batch: 32823 Param Dissolved Potassium Percent recovery is based Param Dissolved Potassium	on the spike resul Spiked Sample: R on the spike resul MSD Result 468	t. RPD is 126448 Date A QC Pr MS esult 446 t. RPD is Units mg/L	based on Analyzed: eparation: Units mg/L based on Dil. 1	the spike a 2007-06- 2007-06- Dil. 1 the spike a Spike Amount 50.0	and spike du 13 06 Spike Amount 50.0 and spike du Matrix Result 416	Mat Res 41 Iplicate Rec. 104	rix ult 6 result. Rec. Limi 76.8 - 1	Ana Prej Rec. 60	lyzed B pared B	y: TF y: TS Limit <u>J.8 - 11</u> RPI Limi
Percent recovery is based Matrix Spike (MS-1) QC Batch: 38113 Prep Batch: 32823 Param Dissolved Potassium Percent recovery is based Param Dissolved Potassium Percent recovery is based Matrix Spike (MS-1) QC Batch: 38113	on the spike resul Spiked Sample: R on the spike resul MSD Result 468	t. RPD is 126448 Date A QC Pr MS esult 446 t. RPD is Units mg/L t. RPD is 126448 Date A	based on Analyzed: eparation: Units mg/L based on Dil. 1	the spike a 2007-06- 2007-06- Dil. 1 the spike a Spike Amount 50.0	and spike du 13 06 Spike Amount 50.0 and spike du Matrix Result 416 and spike du 13	Mat Res 41 Iplicate Rec. 104	rix ult 6 result. Rec. Limi 76.8 - 1	Ana Prej <u>60</u> <u>t</u> <u>117</u>	lyzed B pared B 76 RPD	y: TF y: TS Limit <u>J.8 - 11</u> RPI Limi 20 y: TF
Percent recovery is based Matrix Spike (MS-1) QC Batch: 38113 Prep Batch: 32823 Param Dissolved Potassium Percent recovery is based Param Dissolved Potassium Percent recovery is based Matrix Spike (MS-1) QC Batch: 38113	on the spike resul Spiked Sample: R 3 on the spike resul MSD Result 468 on the spike resul Spiked Sample:	t. RPD is 126448 Date A QC Pr MS esult 446 t. RPD is Units mg/L t. RPD is 126448 Date A QC Pr	Analyzed: eparation: Units mg/L based on Dil. 1 based on Analyzed:	the spike a 2007-06- 2007-06- Dil. 1 the spike a Spike Amount 50.0 the spike a 2007-06-	and spike du 13 06 Spike Amount 50.0 and spike du Matrix Result 416 and spike du 13 06	Mat Res 41 Iplicate Rec. 104 Iplicate	rix ult 6 result. Rec. Limit 76.8 - 1 result.	Ana Prej <u>60</u> <u>t</u> <u>117</u>	lyzed B pared B 70 <u>RPD</u> 5	y: TP y: TS Limit <u>J.8 - 11</u> RPI Limit 20 y: TF
Percent recovery is based Matrix Spike (MS-1) QC Batch: 38113 Prep Batch: 32823 Param Dissolved Potassium Percent recovery is based Param Dissolved Potassium Percent recovery is based Matrix Spike (MS-1) QC Batch: 38113	on the spike resul Spiked Sample: R 3 on the spike resul MSD Result 468 on the spike resul Spiked Sample:	t. RPD is 126448 Date A QC Pr MS esult 446 t. RPD is Units mg/L t. RPD is 126448 Date A	Analyzed: eparation: Units mg/L based on Dil. 1 based on Analyzed:	the spike a 2007-06- 2007-06- Dil. 1 the spike a Spike Amount 50.0 the spike a 2007-06-	and spike du 13 06 Spike Amount 50.0 and spike du Matrix Result 416 and spike du 13	Mat Res 41 Iplicate Rec. 104	rix ult 6 result. Rec. Limit 76.8 - 1 result.	Ana Prej <u>60</u> <u>t</u> <u>117</u>	lyzed B pared B 70 <u>RPD</u> 5 slyzed B pared B	y: TP y: TS <u>Limit</u> <u>3.8 - 11</u> <u>RPI</u> <u>Limi</u> <u>20</u> y: TP y: TS

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

Report Date: June 15, 200 2972					er: 706050 Rock Quee			۱ 	-	umber: Chaves	
		MSD			Spike	Matrix		Re	c.	•	RPE
Param		Result	Units	Dil.	Amount	Result	Rec.	Lin	nit	RPD	Limi
Dissolved Magnesium	5	1040	mg/L	1	50.0	1050	-20	77.9 -	122	1	20
Percent recovery is based of	on the spi	ke result.	RPD is	based on	the spike a	und spike du	iplicate	result.			
Matrix Spike (MS-1)	Spiked	Sample: 12	26448								
QC Batch: 38113			Date A	nalyzed:	2007-06-	13			Ana	Jyzed By	v: TP
Prep Batch: 32823				eparation:						pared By	,
_		M				Spike	Ma				Rec.
Param		Res		Units	Dil.	Amount	Res		Rec.		Limit
Dissolved Sodium		194		mg/L	1	50.0	194		0		.2 - 12
Percent recovery is based of	on the sp		RPD is	based on	-	-	uplicate				_
D		MSD	** •.	DU	Spike	Matrix	D	Re		0.00	RPI
Param		Result	Units	Dil.	Amount	Result 19400	Rec. 1000	Lin 84.2 -		RPD	Lim
	7	10000				I QZI WI		- ×1 ·).			
Dissolved Sodium Percent recovery is based Matrix Spike (MS-1)		19900 ike result. Sample: 19	26147			and spike d				2 dvzed B	
Dissolved Sodium Percent recovery is based Matrix Spike (MS-1) QC Batch: 38153		ike result.	RPD is 26147 Date A		the spike a 2007-06-	and spike d			Ana	alyzed B	y: Ef
Dissolved Sodium Percent recovery is based Matrix Spike (MS-1) QC Batch: 38153 Prep Batch: 33031		ike result. Sample: 1 M	RPD is 26147 Date A QC Pro	based on analyzed: eparation:	the spike a 2007-06- 2007-06-	and spike d 13 13 Spike	uplicate	result. atrix	Ana Pre	alyzed B pared B	y: EI y: EI Rec.
Dissolved Sodium Percent recovery is based Matrix Spike (MS-1) QC Batch: 38153 Prep Batch: 33031 Param		ike result. Sample: 1 M Res	RPD is 26147 Date A QC Pro S ult	based on analyzed: eparation: Units	the spike a 2007-06- 2007-06- Dil.	and spike d 13 13 Spike Amount	uplicate M R	result. atrix esult	Ana Pre Re	alyzed B pared B ec.	y: EI y: EI Rec. Limit
Dissolved Sodium Percent recovery is based Matrix Spike (MS-1) QC Batch: 38153 Prep Batch: 33031 Param Chloride	Spiked	ike result. Sample: 19 M Res 79	RPD is 26147 Date A QC Pro S ult 8	based on nalyzed: eparation: Units mg/L	the spike a 2007-06- 2007-06- Dil. 50	and spike d 13 13 Spike Amount 625	uplicate M Ri 18	result. atrix esult 5.563	Ana Pre Re	alyzed B pared B ec.	y: EI y: EI Rec. Limit
Dissolved Sodium Percent recovery is based Matrix Spike (MS-1) QC Batch: 38153 Prep Batch: 33031 Param Chloride	Spiked	ike result. Sample: 1 M Res 79 ike result.	RPD is 26147 Date A QC Pro S ult 8	based on nalyzed: eparation: Units mg/L	the spike a 2007-06- 2007-06- Dil. 50 the spike a	and spike d 13 13 Spike Amount 625 and spike d	uplicate M Ri 18	result. atrix esult 5.563 result.	Ana Pre Re 9	alyzed B pared B ec.	y: EI y: EI Rec. Limit 10 - 18
Dissolved Sodium Percent recovery is based Matrix Spike (MS-1) QC Batch: 38153 Prep Batch: 33031 Param Chloride Percent recovery is based	Spiked	ike result. Sample: 1 Sample: 1 Mes 79 ike result. MSD	RPD is 26147 Date A QC Pro S ult 8 RPD is	based on nalyzed: eparation: Units mg/L based on	the spike a 2007-06- 2007-06- Dil. 50 the spike a Spike	and spike d 13 13 Spike Amount 625 and spike d Matrix	uplicate M R 18 uplicate	result. atrix esult 5.563 result. R	Ana Pre <u>Re</u> 9	alyzed B pared B ec. 8	y: EI y: EI Rec. Limit 10 - 18 RP
Dissolved Sodium Percent recovery is based Matrix Spike (MS-1) QC Batch: 38153 Prep Batch: 33031 Param Chloride Percent recovery is based Param	Spiked	ike result. Sample: 1 Sample: 1 MSD Result.	RPD is 26147 Date A QC Pro S ult 8 RPD is Units	based on nalyzed: eparation: Units mg/L based on Dil.	the spike a 2007-06- 2007-06- Dil. 50 the spike a Spike Amount	and spike d 13 13 Spike Amount 625 and spike d Matrix Result	uplicate M Ri uplicate Rec.	result. atrix esult 5.563 result. R Li	Ana Pre Re 9 ec. mit	alyzed B pared B ec. 8 RPD	y: EF y: EF Limit 10 - 18 RP Lim
Dissolved Sodium Percent recovery is based Matrix Spike (MS-1) QC Batch: 38153 Prep Batch: 33031 Param Chloride Percent recovery is based Param Chloride	Spiked on the sp	ike result. Sample: 1 M Res 79 ike result. MSD Result 787	RPD is 26147 Date A QC Pro S ult 8 RPD is MpL is	based on nalyzed: eparation: <u>Units</u> mg/L based on <u>Dil.</u> 50	the spike a 2007-06- 2007-06- Dil. 50 the spike a Spike Amount 625	and spike d 13 13 Spike Amount 625 and spike d Matrix Result 185.563	uplicate M Ra uplicate Rec. 96	result. esult 5.563 result. R Li 10 -	Ana Pre Re 9. ec. mit - 188	alyzed B pared B ec. 8	y: EI y: EI Limit 10 - 18 RP Lim
Dissolved Sodium Percent recovery is based Matrix Spike (MS-1) QC Batch: 38153 Prep Batch: 33031 Param Chloride Percent recovery is based Param Chloride	Spiked on the sp	ike result. Sample: 1 M Res 79 ike result. MSD Result 787	RPD is 26147 Date A QC Pro S ult 8 RPD is MpL is	based on nalyzed: eparation: <u>Units</u> mg/L based on <u>Dil.</u> 50	the spike a 2007-06- 2007-06- Dil. 50 the spike a Spike Amount 625	and spike d 13 13 Spike Amount 625 and spike d Matrix Result 185.563	uplicate M Ra uplicate Rec. 96	result. esult 5.563 result. R Li 10 -	Ana Pre Re 9. ec. mit - 188	alyzed B pared B ec. 8 RPD	y: EI y: EI Limit 10 - 18 RP Lim
Dissolved Sodium Percent recovery is based Matrix Spike (MS-1) QC Batch: 38153 Prep Batch: 33031 Param Chloride Percent recovery is based Param Chloride Percent recovery is based	Spiked on the sp on the sp	ike result. Sample: 1 M Res 79 ike result. MSD Result 787	RPD is 26147 Date A QC Pro S ult 8 RPD is mg/L RPD is	based on nalyzed: eparation: <u>Units</u> mg/L based on <u>Dil.</u> 50	the spike a 2007-06- 2007-06- Dil. 50 the spike a Spike Amount 625	and spike d 13 13 Spike Amount 625 and spike d Matrix Result 185.563	uplicate M Ra uplicate Rec. 96	result. esult 5.563 result. R Li 10 -	Ana Pre Re 9. ec. mit - 188	alyzed B pared B ec. 8 RPD	y: EI y: EI Limit 10 - 18 RP Lim
Dissolved Sodium Percent recovery is based Matrix Spike (MS-1) QC Batch: 38153 Prep Batch: 33031 Param Chloride Percent recovery is based Param Chloride Percent recovery is based Matrix Spike (MS-1)	Spiked on the sp on the sp	ike result. Sample: 1 Sample: 1 MSD Result 787 ike result.	RPD is 26147 Date A QC Pro S ult 8 RPD is Mg/L RPD is 26147 Date A	based on analyzed: eparation: Units mg/L based on Dil. 50 based on	the spike a 2007-06- 2007-06- Dil. 50 the spike a Spike Amount 625 the spike a 2007-06-	13 13 13 Spike Amount 625 and spike d Matrix Result 185.563 and spike d	uplicate M Ra uplicate Rec. 96	result. esult 5.563 result. R Li 10 -	Ana Pre Re 9. ec. mit - 188	alyzed B pared B ec. 8 RPD	y: EI y: EI Limit 10 - 18 RP Lim 20
Dissolved Sodium Percent recovery is based Matrix Spike (MS-1) QC Batch: 38153 Prep Batch: 33031 Param Chloride Percent recovery is based Param Chloride Percent recovery is based Matrix Spike (MS-1) QC Batch: 38153	Spiked on the sp on the sp	ike result. Sample: 1 Sample: 1 MSD Result 787 ike result.	RPD is 26147 Date A QC Pro S ult 8 RPD is Mg/L RPD is 26147 Date A	based on inalyzed: eparation: Units mg/L based on Dil. 50 based on	the spike a 2007-06- 2007-06- Dil. 50 the spike a Spike Amount 625 the spike a 2007-06-	13 13 13 Spike Amount 625 and spike d Matrix Result 185.563 and spike d	uplicate M Ra uplicate Rec. 96	result. esult 5.563 result. R Li 10 -	Ana Pre Re 9. ec. mit - 188	alyzed B pared B ec. 8 RPD 1	y: El y: El Limit 10 - 18 RP Lim 20 y: El
Dissolved Sodium Percent recovery is based Matrix Spike (MS-1) QC Batch: 38153 Prep Batch: 33031 Param Chloride Percent recovery is based Param Chloride Percent recovery is based Matrix Spike (MS-1) QC Batch: 38153 Prep Batch: 33031	Spiked on the sp on the sp	ike result. Sample: 1 Sample: 1 MSD Result 787 ike result.	RPD is 26147 Date A QC Pro S ult 8 RPD is MIN RPD is 26147 Date A QC Pro	based on analyzed: eparation: Units mg/L based on Dil. 50 based on	the spike a 2007-06- 2007-06- Dil. 50 the spike a Spike Amount 625 the spike a 2007-06-	13 13 13 Spike Amount 625 and spike d Matrix Result 185.563 and spike d	M Ru uplicate <u>Rec.</u> 96 uplicate	result. esult 5.563 result. R Li 10 -	Ana Pre Re 9. ec. mit - 188	alyzed B pared B ec. 8 RPD 1 alyzed B	y: EF y: EF Limit 10 - 18 RP Lim 20 y: EF
Dissolved Sodium Percent recovery is based Matrix Spike (MS-1) QC Batch: 38153 Prep Batch: 33031 Param Chloride Percent recovery is based Param Chloride Percent recovery is based Matrix Spike (MS-1) QC Batch: 38153	Spiked on the sp on the sp	ike result. Sample: 1 M Res 79 ike result. MSD Result 787 ike result. Sample: 1	RPD is 26147 Date A QC Pro S ult 8 RPD is MI RPD is 26147 Date A QC Pro S ult	based on analyzed: eparation: Units mg/L based on Dil. 50 based on	the spike a 2007-06- 2007-06- Dil. 50 the spike a Spike Amount 625 the spike a 2007-06-	13 13 13 Spike Amount 625 and spike d Matrix Result 185.563 and spike d -13 -13	M M Ru uplicate Rec. 96 uplicate Ma Re:	atrix esult 5.563 result. R Li 10 - result.	Ana Pre Re 9. ec. mit - 188	alyzed B pared B ec. 8 <u>RPD</u> 1 alyzed B pared B	y: EF Rec. Limit 10 - 18 RP Lim 20 y: EF

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

⁶Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control. ⁷Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

2972		007	Cel	Work Orc ero Energy-	ler: 706050 Rock Quee			Page	Number: Chaves	
Param Sulfate		R	4SD esult Uni 670 mg/		Spike Amount 625	Matrix Result <38.8	Rec.	Rec. Limit 83.1 - 114	RPD 0	RPD Limi 20
	wory is based	on the spike						• • • • • • • • • • • • • • • • • • • •		
	ike (MS-1)	-	aple: 126449		spine (ap			
QC Batch: Prep Batch:	38204 33077			Analyzed: Preparation	2007-06- : 2007-06-				nalyzed B repared B	
Param			MS Result	Units	Dil.	Spike Amount		utrix sult Re		Rec. Límit
Sulfate			159	mg/L	5	62.5		$\frac{3410}{0693}$ 10		3.1 - 11
	overy is based	on the spike						····		
							F			יחם
Param			4SD esult Unit	s Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPE Limi
Sulfate			151 mg/		62.5	91.0693	<u>96</u>	83.1 - 114	<u>5</u>	$\frac{11111}{20}$
			ICVs True	For		ICVs Percent		Percent Recovery		Date
Param pH	Flag	Units s.u.		Fou Co						Date nalyzed 07-06-0
	(CCV-1)		True Conc. 7.00	Fou Co	ınd nc 10	Percent Recovery 101		Recovery Limits 98 - 102		nalyzec 07-06-0
pH Standard	(CCV-1)		True Conc. 7.00 Date CCVs	Fou Co 7. e Analyzed: CO	nd nc. 10 2007-06-0	Percent Recovery 101 05 CCVs		Recovery Limits 98 - 102 A Percent	20	nalyzec 07-06-0 By: JS
pH Standard QC Batch:	(CCV-1) 37918	S.u.	True Conc. 7.00 Date CCVs True	Fou Co 7. • Analyzed: CC Fou	nd nc. 10 2007-06-0 2Vs und	Percent Recovery 101 05 CCVs Percent		Recovery Limits 98 - 102 A Percent Recovery	20 Analyzed I	nalyzed 07-06-0 By: JS Date
pH Standard	(CCV-1)		True Conc. 7.00 Date CCVs	Fou Co 7. 2 4 4 5 5 5 5 6 6 6 6 7 0 7 0 7 0 7 0 7 0 7 0 7 0 7 0	nd nc. 10 2007-06-0	Percent Recovery 101 05 CCVs		Recovery Limits 98 - 102 A Percent	20 Analyzed I A	nalyzec 07-06-0 By: JS Date nalyzec
pH Standard QC Batch: Param pH Standard	(CCV-1) 37918 Flag (ICV-1)	s.u. Units	True Conc. 7.00 Date CCVs True Conc. 7.00	Fou Co 7. e Analyzed: CO Fou Co 7.	110 10 2007-06-0 2Vs und nc. 14	Percent Recovery 101 05 05 CCVs Percent Recovery 102		Recovery Limits 98 - 102 A Percent Recovery Limits 98 - 102	20 Analyzed I A 20	nalyzec 07-06-0 By: JS Date nalyzec 07-06-0
pH Standard QC Batch: Param pH	(CCV-1) 37918 Flag (ICV-1)	s.u. Units	True Conc. 7.00 Date CCVs True Conc. 7.00	Fou Co 7. 2 Analyzed: CO Fou Co 7. 2 Analyzed: ICVs	110 10 2007-06-0 2Vs und nc. 14	Percent Recovery 101 05 05 CCVs Percent Recovery 102		Recovery Limits 98 - 102 A Percent Recovery Limits 98 - 102	20 Analyzed I A	nalyzec 07-06-0 By: JS Date nalyzec 07-06-0
pH Standard QC Batch: Param pH Standard QC Batch:	(CCV-1) 37918 Flag (ICV-1)	s.u. Units s.u.	True Conc. 7.00 Date CCVs True Conc. 7.00	Fou Co 7. Analyzed: CO Fou Co 7. Analyzed: ICVs True	110 2007-06-0 2Vs und nc. 14 2007-06-1 ICVs Found	Percent Recovery 101 05 05 05 05 05 05 05 05 05 05 05 05 05	Vs cent	Recovery Limits 98 - 102 A Percent Recovery Limits 98 - 102 A Percent Recovery	20 Analyzed I A 20 Nalyzed E	nalyzec 07-06-0 By: JS Date nalyzec 07-06-0 By: EF Date
pH Standard QC Batch: Param pH Standard	(CCV-1) 37918 Flag (ICV-1) 38061	s.u. Units	True Conc. 7.00 Date CCVs True Conc. 7.00	Fou Co 7. 2 Analyzed: CO Fou Co 7. 2 Analyzed: ICVs	ind nc. 10 2007-06-0 2Vs und nc. 14 2007-06-1 ICVs	Percent Recovery 101 05 05 05 05 05 05 05 05 05 05 05 05 05	Vs cent very	Recovery Limits 98 - 102 A Percent Recovery Limits 98 - 102 A Percent	20 Analyzed I A Nalyzed E	nalyzec 07-06-0 By: JS Date nalyzec 07-06-0 By: EF Date nalyzec
pH Standard QC Batch: Param pH Standard QC Batch: Param	(CCV-1) 37918 Flag (ICV-1) 38061	s.u. Units s.u.	True Conc. 7.00 Date CCVs True Conc. 7.00 Date	Fou Co 7. Analyzed: CO Fou Co 7. Analyzed: ICVs True Conc.	2007-06-0 2007-06-0 2007-06-1 14 2007-06-1 ICVs Found Conc.	Percent Recovery 101 05 05 05 05 05 05 05 05 05 05 05 05 05	Vs cent very	Recovery Limits 98 - 102 A Percent Recovery Limits 98 - 102 A Percent Recovery Limits	20 Analyzed I A Nalyzed E	nalyzec 07-06-0 By: JS Date nalyzec 07-06-0 By: EF

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Report Date: June 15, 2972	2007		Work Ord Celero Energy-J	er: 7060508 Rock Queen E	SA	0	mber: 14 of 16 haves Co. NM
Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids	0	mg/L	1000	981.0	98	90 - 110	2007-06-11
Standard (ICV-1)							. ·
QC Batch: 38113			Date Analyzed:	2007-06-13		Analy	zed By: TP
Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium	riag	mg/L	50.0	49.5	<u>99</u>	90 - 110	2007-06-13
		H		10.0		00 110	2001 00 10
Standard (ICV-1)							
QC Batch: 38113			Date Analyzed:	2007-06-13		Analy	vzed By: TP
			ICVs	ICVs	ICVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Dissolved Potassium		mg/L	50.0	49.9	100	90 - 110	2007-06-13
Standard (ICV-1)							
QC Batch: 38113			Date Analyzed:	2007-06-13		Analy	zed By: TP
			ICVs	ICVs	ICVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Dissolved Magnesium		mg/L	50.0	49.3	99	90 - 110	2007-06-13
Standard (ICV-1)							
QC Batch: 38113			Date Analyzed:	2007-06-13		Anal	yzed By: TP
			ICVs	ICVs	ICVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Dissolved Sodium		mg/L	50.0	51.5	103	90 - 110	2007-06-1
Standard (CCV-1)							
QC Batch: 38113			Date Analyzed:	2007-06-13		Anal	yzed By: TP
			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Dissolved Calcium		mg/L	50.0	51.6	103	90 - 110	2007-06-1

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Report Date: June 15, 2972	2007		Work Orc Celero Energy-	ler: 7060508 Rock Queen	ESA		mber: 15 of 1 haves Co. NM
Standard (CCV-1)							
QC Batch: 38113			Date Analyzed:	2007-06-13		Analy	zed By: TP
			CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date
Param Dissolved Potassium	Flag	Units mg/L	<u>Conc.</u> 50.0	Conc. 52.8	Recovery 106	Limits 90 - 110	Analyzed 2007-06-13
Standard (CCV-1)							
QC Batch: 38113			Date Analyzed:	2007-06-13		Analy	zed By: TP
			CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date
Param	Flag	Units		Conc.	Recovery	Limits	Analyzed
Dissolved Magnesium		mg/L	50.0	51.7	103	90 - 110	2007-06-1
Param Dissolved Sodium	Flag	Units mg/L	CCVs True Conc. 50.0	CCVs Found Conc. 52.7	CCVs Percent <u>Recovery</u> 105	Percent Recovery Limits 90 - 110	Date Analyzed 2007-06-1
Dissolved Sodium		mg/L	50.0	52.7		90 - 110	2007-06-1
Standard (ICV-1)							
QC Batch: 38153			Date Analyzed:	2007-06-13		Anal	yzed By: ER
				CVs ound	ICVs Percent	Percent Recovery	Date
Param Flag	Units	3		onc.	Recovery	Limits	Analyzed
Chloride	mg/I		12.5 1	2.1	97	90 - 110	2007-06-1
Standard (ICV-1)							
QC Batch: 38153			Date Analyzed:	2007-06-13		Anal	yzed By: ER
	.	,	True Fo	CVs und	ICVs Percent	Percent Recovery	Date
Param Flag Sulfate	Units mg/L			onc. 1.7	Recovery 94	Limits 90 - 110	Analyzeo 2007-06-1
	mg/L		12.0 1	1. <i>1</i>			2001-00-1
Standard (CCV-1) QC Batch: 38153				2007-06-13			

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Report Date: June 15, 2007 2972					Work Order: b Energy-Roc		ESA	Page Number: 16 of 1 Chaves Co. Ni				
Param	Flag	 5	Units	CCVs True Conc.	CCVs Found Conc.		CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed			
Chloride			mg/L	12.5	12.3		98	90 - 110	2007-06-13			
Standard	(CCV-1)											
QC Batch: 38153			Date A	nalyzed: 20	07-06-13		Analyzed By: ER					
				CCVs	CCVs		CCVs	Percent				
ъ			TT. 14	True	Found		Percent	Recovery	Date			
Param Sulfate	Flag		Units mg/L	<u>Conc.</u> 12.5	Conc. 12.6		Recovery 101	Limits 90 - 110	Analyzed 2007-06-13			
									2007 00 10			
Standard QC Batch:	. ,			Date A	Analyzed: 20	07-06-14		Anal	yzed By: JS			
					ICVs	ICVs	ICVs	Percent	-			
					True	Found	Percent	Recovery	Date			
Param		Flag		nits	Conc.	Conc.	Recovery	Limits	Analyzed			
Total Alkal	inity		mg/L a	s CaCo3	250	242	97	90 - 110	2007-06-14			
Standard QC Batch:				Date A	Analyzed: 20	07-06-14		Anal	yzed By: JS			
·												
· ·					CCVs	CCVs	CCVs	Percent	_			
		Dia	T		True	Found	Percent	Recovery	Date			
Param		Flag		nits s CaCo3	True Conc.	Found Conc.	Percent Recovery	Recovery Limits	Analyzed			
Param Total Alkal	inity	Flag		nits s CaCo3	True	Found	Percent	Recovery	Analyzed			
Param Total Alkal Standard	inity (ICV-1)	Flag		s CaCo3	True Conc. 250	Found Conc. 240	Percent Recovery	Recovery Limits 90 - 110	Analyzed 2007-06-14			
Param Total Alkal Standard	inity (ICV-1)	Flag		s CaCo3 Date A	True Conc. 250 Analyzed: 20	Found Conc.	Percent Recovery 96	Recovery Limits 90 - 110 Analy	Analyzed			
Param Total Alkal Standard	inity (ICV-1)	Flag		s CaCo3	True Conc. 250	Found Conc. 240	Percent Recovery	Recovery Limits 90 - 110 Analy Percent	Analyzed 2007-06-14			
Param Total Alkal Standard QC Batch:	inity (ICV-1)	Flag		s CaCo3 Date A ICVs True Conc.	True Conc. 250 Analyzed: 20 ICVs	Found Conc. 240 07-06-15	Percent Recovery 96	Recovery Limits 90 - 110 Analy Percent Recovery Limits	Analyzed 2007-06-14 zed By: ER Date			
Param Total Alkal Standard QC Batch: Param	inity (ICV-1) 38204	Flag	mg/L a	s CaCo3 Date A ICVs True	True Conc. 250 Analyzed: 20 ICVs Found	Found Conc. 240 07-06-15	Percent Recovery 96 ICVs Percent	Recovery Limits 90 - 110 Analy Percent Recovery	Analyzed 2007-06-14 zed By: ER Date Analyzed			
Param Total Alkali Standard QC Batch: Param Sulfate	inity (ICV-1) 38204 Flag		mg/L a Units	s CaCo3 Date A ICVs True Conc.	True Conc. 250 Analyzed: 20 ICVs Found Conc.	Found Conc. 240 07-06-15	Percent Recovery 96 ICVs Percent Recovery	Recovery Limits 90 - 110 Analy Percent Recovery Limits	Analyzed 2007-06-14 zed By: ER Date Analyzed			
Param Total Alkal Standard QC Batch: Param Sulfate Standard	inity (ICV-1) 38204 Flag (CCV-1)		mg/L a Units	s CaCo3 Date A ICVs True Conc. 12.5	True Conc. 250 Analyzed: 20 ICVs Found Conc.	Found Conc. 240 07-06-15	Percent Recovery 96 ICVs Percent Recovery	Recovery Limits 90 - 110 Analy Percent Recovery Limits 90 - 110	Analyzed 2007-06-14 zed By: ER Date Analyzed 2007-06-15			
Param Total Alkal Standard QC Batch: Param Sulfate Standard QC Batch:	inity (ICV-1) 38204 Flag (CCV-1)		mg/L a Units	s CaCo3 Date A ICVs True Conc. 12.5 Date A CCVs	True Conc. 250 Analyzed: 20 ICVs Found Conc. 11.6 Analyzed: 20 CCVs	Found Conc. 240 07-06-15	Percent Recovery 96 ICVs Percent Recovery 93	Recovery Limits 90 - 110 Analy Percent Recovery Limits 90 - 110	Analyzed 2007-06-14 zed By: ER Date Analyzed 2007-06-15			
Param Total Alkal Standard QC Batch: Param Sulfate Standard QC Batch:	inity (ICV-1) 38204 Flag (CCV-1) 38204		mg/L a Units mg/L	s CaCo3 Date A ICVs True Conc. 12.5 Date A CCVs True	True Conc. 250 Analyzed: 20 ICVs Found Conc. 11.6 Analyzed: 20 CCVs Found	Found Conc. 240 07-06-15	Percent Recovery 96 ICVs Percent Recovery 93 CCVs Percent	Recovery Limits 90 - 110 Analy Percent Recovery Limits 90 - 110 Analy Percent Recovery	Analyzed 2007-06-14 rzed By: ER Date Analyzed 2007-06-15 rzed By: ER Date			
Param Total Alkal Standard QC Batch: Param Sulfate Standard	inity (ICV-1) 38204 Flag (CCV-1)		mg/L a Units	s CaCo3 Date A ICVs True Conc. 12.5 Date A CCVs	True Conc. 250 Analyzed: 20 ICVs Found Conc. 11.6 Analyzed: 20 CCVs	Found Conc. 240 07-06-15	Percent Recovery 96 ICVs Percent Recovery 93	Recovery Limits 90 - 110 Analy Percent Recovery Limits 90 - 110 Analy Percent	Analyzed 2007-06-14 zed By: ER Date Analyzed 2007-06-15			

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the second			, uur.		Fax (432) 682-3946	R PRESERVATIVE			NONE ICE HINOJ HCI LILIEKEI NORBEB	×	× /					Date: 6-4-0'7 Three: 13-27		Date: Time:		TDE:	HELVARYS: OL	to Highlander Enviromental Carp F WMA
	Analysis Request and Chain of Custody	TANDER FAILTRANKEN	IIIGTLAIVDEN EIVVIKUIVIKEIVIAL 1910 N Big Spring St	Midland, Texas 79705	(432) 682-4559 F	CLIENT NAME: COLETY MANAGER:	PROJECT NAME:		LAB I.D. DATE THE REP. B. SAMPLE DENTIFICATION NUMBER NUMBER 2015	12604485-31-07 4:4520 A RQ 4 Tract 11 mus-1	2:301 × 0011					REALEMENTERINE BY: (Sumature) Date 6-4-07 REFERENCE BY: (Sumature)	Date: 10-4-07		RY: Theele	AUDIASSI COTT: Didlered STATE: JX. IIP: DATE: COTTACT: Didlered FHONE: JX. IIP: DATE:	HEH RECEIVED: MATRIX.	, Piezes Fill out all copies - Laboratory retains yallow copy - Return original copy to Hig.

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FAX 432 • 689 • 6313

Analytical and Quality Control Report

Ike Tavarez Highlander Environmental Services 1910 N. Big Spring Street Midland, TX, 79705

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Report Date: November 1, 2007

Work Order: 7102211

Project Name: Rock Queen Unit 13 Project Number: 3132

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

		5	Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
139864	SB-1 (3-5')	soil	2007-10-17	00:00	2007-10-22
139865	SB-1 (8-10')	soil	2007-10-17	00:00	2007-10-22
139866	SB-1 (13-15')	soil	2007-10-17	00:00	2007-10-22
139867	SB-1 (18-20')	soil	2007-10-17	00:00	2007-10-22
139868	SB-1 (28-30')	soil	2007-10-17	00:00	2007-10-22
139869	SB-1 (38-40')	soil	2007-10-17	00:00	2007-10-22
139870	SB-1 (48-50')	soil	2007-10-17	00:00	2007-10-22
139871	SB-1 (58-60')	soil	2007-10-17	00:00	2007-10-22
139872	SB-1 (68-70')	soil	2007-10-17	00:00	2007-10-22
139873	SB-1 (78-80')	soil	2007-10-17	00:00	2007-10-22
139874	SB-1 (88-90')	soil	2007-10-17	00:00	2007-10-22
139875	SB-1 (98-100')	soil	2007-10-17	00:00	2007-10-22
139876	SB-2 (8-10')	soil	2007-10-18	00:00	2007-10-22
139877	SB-2 (18-20')	soil	2007-10-18	00:00	2007-10-22
139878	SB-2 (28-30')	soil	2007-10-18	00:00	2007 - 10 - 22
139879	SB-2 (38-40')	soil	2007-10-18	00:00	2007 - 10 - 22
139880	SB-2 (48-50')	soil	2007-10-18	00:00	2007-10-22
139881	SB-3 (8-10')	soil	2007-10-18	00:00	2007 - 10 - 22
139882	SB-3 (18-20')	soil	2007-10-18	00:00	2007-10-22
139883	SB-3 (28-30')	soil	2007-10-18	00:00	2007-10-22
139884	SB-3 (38-40')	soil	2007-10-18	00:00	2007-10-22
139885	SB-3 (48-50')	soil	2007-10-18	00:00	2007-10-22
139886	SB-4 (8-10')	soil	2007-10-18	00:00	2007-10-22
139887	SB-4 (18-20')	soil	2007-10-18	00:00	2007-10-22

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
139888	SB-4 (28-30')	soil	2007-10-18	00:00	2007-10-22
139889	SB-4 (38-40')	soil	2007-10-18	00:00	2007-10-22
139890	SB-4 (48-50')	soil	2007-10-18	00:00	2007-10-22
139891	SB-5 (8-10')	soil	2007-10-18	00:00	2007-10-22
139892	SB-5 (18-20')	soil	2007-10-18	00:00	2007-10-22
139893	SB-5 (28-30')	soil	2007-10-18	00:00	2007-10-22
139894	SB-5 (38-40')	soil	2007-10-18	00:00	2007-10-22
139895	SB-5 (48-50')	soil	2007-10-18	00:00	2007-10-22
139896	SB-6 (8-10')	soil	2007-10-18	00:00	2007-10-22
139897	SB-6 (18-20')	soil	2007-10-18	00:00	2007-10-22
139898	SB-6 (28-30')	soil	2007-10-18	00:00	2007-10-22
139899	SB-6 (38-40')	soil	2007-10-18	00:00	2007-10-22
1 399 00	SB-6 (48-50')	soil	2007-10-18	00:00	2007-10-22
139901	SB-7 (8-10')	soil	2007-10-18	00:00	2007-10-22
139902	SB-7 (18-20')	soil	2007-10-18	00:00	2007-10-22
139903	SB-7 (28-30')	soil	2007-10-18	00:00	2007-10-22
139904	SB-7 (38-40')	soil	2007-10-18	00:00	2007-10-22
139905	SB-7 (48-50')	soil	2007-10-18	00:00	2007-10-22
139906	SB-8 (8-10')	soil	2007-10-18	00:00	2007-10-22
139907	SB-8 (18-20')	soil	2007-10-18	00:00	2007-10-22
139908	SB-8 (28-30')	soil	2007-10-18	00:00	2007-10-22
139909	SB-8 (38-40')	soil	2007-10-18	00:00	2007-10-22
139910	SB-8 (40-50')	soil	2007-10-18	00:00	2007-10-22
139911	SB-9 (8-10')	soil	2007-10-18	00:00	2007-10-22
139912	SB-9 (18-20')	soil	2007-10-18	00:00	2007-10-22
139913	SB-9 (28-30')	soil	2007-10-18	00:00	2007-10-22
139914	SB-9 (38-40')	soil	2007-10-18	00:00	2007-10-22
139915	SB-9 (48-50')	soil	2007-10-18	00:00	2007-10-22

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 27 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

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Dr. Blair Leftwich, Director

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

Page 2 of 27

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Analytical Report

Sample: 139864 - SB-1 (3-5')

Analysis:	BTEX	Analytical M		S 8021B		Prep M		5 5035 DC	
QC Batch: Prep Batch:	42329 36547		Date Analyz Sample Prep		2007-10-23 2007-10-23		Analyze Prepare		
T Tep Daten.	30341		Sample 1 lep	aranon.	2007-10-23		Пераге	u Dy. I	
			\mathbf{RL}						
Parameter	Fla	ıg	Result		Units		Dilution		RL
Benzene			< 0.0100		mg/Kg		1		0.0100
Toluene			< 0.0100		mg/Kg		1		0.0100
Ethylbenzene	e		< 0.0100		mg/Kg		1		0.0100
Xylene			< 0.0100		mg/Kg		1		0.0100
						Spike	Percent		overy
Surrogate		Flag	Result	Units	Dilution	Amount	Recovery		nits
Trifluorotolue			0.763	mg/Kg	1	1.00	76		- 116
4-Bromofluor	robenzene (4-BFB)		0.728	mg/Kg	1	1.00	73	47.3 -	144.2
Sample: 139864 - SB-1 (3-5') Analysis: Chloride (Titration) QC Batch: 42558 Prep Batch: 36730			Date	tical Meth Analyzed: e Preparat	Prep Method: Analyzed By: Prepared By:		N/A AR AR		
			RL						
Parameter	Flag	·	Result		Units		Dilution		RL
Chloride			6600		mg/Kg		50		2.00
Sample: 13 Analysis: QC Batch: Prep Batch:	9864 - SB-1 (3-5 TPH DRO 42274 36501	5')	Analytica Date Ana Sample P		Mod. 8015 2007-10-23 2007-10-23	В	Analy	Method: vzed By: ured By:	N/A LD LD
			RL						
	Flag		Result		Units		Dilution		RL
	Flag		Result <50.0		Units mg/Kg		Dilution1		
Parameter DRO Surrogate	Flag	Result		Dili	mg/Kg	Spike .mount			RL 50.0 overy nits

Sample: 139864 - SB-1 (3-5')

Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	42333	Date Analyzed:	2007-10-23	Analyzed By:	DC
Prep Batch:	36547	Sample Preparation:	2007-10-23	Prepared By:	DC

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			\mathbf{RL}					
Parameter	Flag		\mathbf{Result}		Units		Dilution	\mathbf{RL}
GRO			<1.00		mg/Kg		11	1.00
						Spike	Percent	Recovery
Surrogate		Flag	\mathbf{Result}	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)			0.623	mg/Kg	1	1.00	62	50.2 - 89.3
4-Bromofluorobenzene (4-H	3FB)		0.766	mg/Kg	1	1.00	77	51.2 - 107.4

Sample: 139865 - SB-1 (8-10')

Analysis: QC Batch:	Chloride (Titration) 42558	Analytical Me Date Analyzec		Prep Method: Analyzed By:	
Prep Batch:	36730	Sample Prepa	ration:	Prepared By:	\mathbf{AR}
		\mathbf{RL}			
Parameter	Flag	\mathbf{Result}	Units	Dilution	RL
Chloride		7330	mg/Kg	50	2.00

Sample: 139866 - SB-1 (13-15')

Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	42558	Date Analyzed:	2007-10-30	Analyzed By:	AR
Prep Batch:	36730	Sample Preparation	1:	Prepared By:	AR
		\mathbf{RL}			
Parameter	Flag	Result	Units	Dilution	\mathbf{RL}
Chloride		16900	mg/Kg	50	2.00

Sample: 139867 - SB-1 (18-20')

Analysis:	Chloride (Titration)	Analytical Method	l: SM 4500-Cl B	Prep Method:	N/A
QC Batch:	42558	Date Analyzed:	2007-10-30	Analyzed By:	AR
Prep Batch:	36730	Sample Preparation	on:	Prepared By:	AR
		\mathbf{RL}			
Parameter	\mathbf{Flag}	Result	Units	Dilution	\mathbf{RL}
Chloride		15200	mg/Kg	50	2.00

Sample: 139868 - SB-1 (28-30')

Analysis:	Chloride (Titration)	Analytical Meth	iod: SM 4500-Cl B	Prep Method:	N/A
QC Batch:	42558	Date Analyzed:	2007-10-30	Analyzed By:	AR
Prep Batch:	36730	Sample Prepara	tion:	Prepared By:	AR
		RL			
Parameter	Flag	Result	Units	Dilution	\mathbf{RL}
Chloride		12800	mg/Kg	50	2.00

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Sample: 139869 - SB-1 (38-40')

Analysis: QC Batch: Prep Batch:	Chloride (Titration) 42563 36732	Analytical Meth Date Analyzed: Sample Prepara	2007-10-30	Prep Method: Analyzed By: Prepared By:	AR
		RL			
Parameter	Flag	\mathbf{Result}	Units	Dilution	\mathbf{RL}
Chloride		12100	mg/Kg	$5\overline{0}$	2.00

Sample: 139870 - SB-1 (48-50')

Analysis:	Chloride (Titration)	Analytical Me	thod: SM 4500-Cl B	Prep Method:	N/A
QC Batch:	42563	Date Analyzed	1: 2007-10-30	Analyzed By:	AR
Prep Batch:	36732	Sample Prepa	ration:	Prepared By:	\mathbf{AR}
		RL			
Parameter	Flag	Result	Units	Dilution	\mathbf{RL}
Chloride		8010	mg/Kg	50	2.00

Sample: 139871 - SB-1 (58-60')

Analysis:	Chloride (Titration)	Analytical M	ethod: SM 4500-Cl B	Prep Method:	N/A
QC Batch:	42563	Date Analyze	ed: 2007-10-30	Analyzed By:	\mathbf{AR}
Prep Batch:	36732	Sample Prepa	aration:	Prepared By:	\mathbf{AR}
		\mathbf{RL}			
Parameter	\mathbf{Flag}	Result	Units	Dilution	\mathbf{RL}
Chloride		7780	mg/Kg	50	2.00

Sample: 139872 - SB-1 (68-70')

Chloride (Titration) 42563 36732	Date Analyze	ed: 2007-10-30		AR.
	\mathbf{RL}			
\mathbf{Flag}	Result	Units	Dilution	\mathbf{RL}
	6600	mg/Kg	50	2.00
	42563 36732	42563 Date Analyze 36732 Sample Prep RL Flag Result	42563 Date Analyzed: 2007-10-30 36732 RL Flag Result Units	42563 Date Analyzed: 2007-10-30 Analyzed By: 36732 Sample Preparation: Prepared By: RL Flag Result Units

Sample: 139873 - SB-1 (78-80')

Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	42563	Date Analyzed:	2007-10-30	Analyzed By:	AR
Prep Batch:	36732	Sample Preparation:		Prepared By:	AR

continued ...

Page Number: 6 of 27

sample 139873 continued ...

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Parameter	Flag	RL Result	Units	Dilution	RL
		RL			
Parameter	Flag	Result	Units	Dilution	\mathbf{RL}
Chloride		6520	mg/Kg	50	2.00

Sample: 139874 - SB-1 (88-90')

Analysis: QC Batch: Prep Batch:	Chloride (Titration) 42563 36732	Analytical Me Date Analyze Sample Prepa	1: 2007-10-30	Prep Method: Analyzed By: Prepared By:	AR
		RL			
Parameter	Flag	\mathbf{Result}	Units	Dilution	RL
Chloride		6910	mg/Kg	50	2.00

Sample: 139875 - SB-1 (98-100')

Analysis:	Chloride (Titration)	Analytical Meth	nod: SM 4500-Cl B	Prep Method:	N/A
QC Batch:	42563	Date Analyzed:	2007-10-30	Analyzed By:	AR
Prep Batch:	36732	Sample Prepara	Prepared By:	\mathbf{AR}	
		\mathbf{RL}			
Parameter	Flag	\mathbf{Result}	Units	Dilution	\mathbf{RL}
Chloride		5670	mg/Kg	50	2.00

Sample: 139876 - SB-2 (8-10')

Analysis:	Chloride (Titration)	Analytical Meth	od: SM 4500-Cl B	Prep Method:	N/A
QC Batch:	42563	Date Analyzed:	2007-10-30	Analyzed By:	\mathbf{AR}
Prep Batch:	36732	Sample Prepara	tion:	Prepared By:	AR
		\mathbf{RL}			
Parameter	Flag	Result	Units	Dilution	\mathbf{RL}
Chloride		3620	mg/Kg	50	2.00

Sample: 139877 - SB-2 (18-20')

Analysis: QC Batch: Prep Batch:	Chloride (Titration) 42563 36732	Analytical Me Date Analyze Sample Prepa	d: 2007-10-30	Prep Method: Analyzed By: Prepared By:	AR
		\mathbf{RL}			
Parameter	\mathbf{Flag}	\mathbf{Result}	Units	Dilution	\mathbf{RL}
Chloride		2330	mg/Kg	50	2.00

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3132			102211 Init 13	Page Number: 7 of 1	
Sample: 13	9878 - SB-2 (28-30')				
Analysis: QC Batch: Prep Batch:	Chloride (Titration) 42563 36732	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-Cl B 2007-10-30	Prep Method: Analyzed By: Prepared By:	N/A AR AR
				r J	
Parameter	Flag	RL Result	Units	Dilution	\mathbf{RL}
Chloride			mg/Kg	50	2.00
Sample: 13	9879 - SB-2 (38-40')				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	42564	Date Analyzed:	2007-10-30	Analyzed By:	AR
Prep Batch:	36733	Sample Preparation:		Prepared By:	AR
		RL		D	
Parameter	Flag	Result 969	Units mg/Kg	Dilution	RI
			mg/Kg	50	2.00
Chloride Sample: 13 Analysis:	9880 - SB-2 (48-50') Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	
Chloride Sample: 13 Analysis: QC Batch:		Analytical Method: Date Analyzed: Sample Preparation:		Prep Method: Analyzed By: Prepared By:	N/A AR AR
Chloride Sample: 13 Analysis: QC Batch: Prep Batch:	Chloride (Titration) 42564 36733	Analytical Method: Date Analyzed: Sample Preparation: RL	SM 4500-Cl B 2007-10-30	Analyzed By: Prepared By:	AR AR
Chloride	Chloride (Titration) 42564	Analytical Method: Date Analyzed: Sample Preparation: RL Result	SM 4500-Cl B	Analyzed By:	AR AR RI
Chloride Sample: 13 Analysis: QC Batch: Prep Batch: Prep Batch: Parameter Chloride Sample: 13 Analysis: QC Batch:	Chloride (Titration) 42564 36733	Analytical Method: Date Analyzed: Sample Preparation: RL Result	SM 4500-Cl B 2007-10-30 Units	Analyzed By: Prepared By: Dilution	AR AR <u>RI</u> 2.00
Chloride Sample: 13 Analysis: QC Batch: Prep Batch: Prep Batch: Chloride Sample: 13 Analysis: QC Batch: Prep Batch:	Chloride (Titration) 42564 36733 Flag 9881 - SB-3 (8-10') Chloride (Titration) 42564 36733	Analytical Method: Date Analyzed: Sample Preparation: RL Result 727 Analytical Method: Date Analyzed: Sample Preparation: RL	SM 4500-Cl B 2007-10-30 Units mg/Kg SM 4500-Cl B 2007-10-30	Analyzed By: Prepared By: Dilution 50 Prep Method: Analyzed By: Prepared By:	AR AR RI 2.00 N/A AR AR
Chloride Sample: 13 Analysis: QC Batch: Prep Batch: Prep Batch: Chloride Sample: 13 Analysis: QC Batch: Prep Batch: Prep Batch: Parameter	Chloride (Titration) 42564 36733 Flag 9881 - SB-3 (8-10') Chloride (Titration) 42564	Analytical Method: Date Analyzed: Sample Preparation: RL Result 727 Analytical Method: Date Analyzed: Sample Preparation: RL Result	SM 4500-Cl B 2007-10-30 Units mg/Kg SM 4500-Cl B 2007-10-30 Units	Analyzed By: Prepared By: Dilution 50 Prep Method: Analyzed By: Prepared By: Dilution	AR RI 2.00 N/A AR AR AR
Chloride Sample: 13 Analysis: QC Batch: Prep Batch: Prep Batch: Chloride Sample: 13 Analysis: QC Batch: Prep Batch: Prep Batch: Parameter	Chloride (Titration) 42564 36733 Flag 9881 - SB-3 (8-10') Chloride (Titration) 42564 36733	Analytical Method: Date Analyzed: Sample Preparation: RL Result 727 Analytical Method: Date Analyzed: Sample Preparation: RL Result	SM 4500-Cl B 2007-10-30 Units mg/Kg SM 4500-Cl B 2007-10-30	Analyzed By: Prepared By: Dilution 50 Prep Method: Analyzed By: Prepared By:	AR AR RI 2.00 N/A AR AR AR
Chloride Sample: 13 Analysis: QC Batch: Prep Batch: Prep Batch: Chloride Sample: 13 Analysis: QC Batch: Prep Batch: Prep Batch: Prep Batch: Parameter Chloride	Chloride (Titration) 42564 36733 Flag 9881 - SB-3 (8-10') Chloride (Titration) 42564 36733	Analytical Method: Date Analyzed: Sample Preparation: RL Result 727 Analytical Method: Date Analyzed: Sample Preparation: RL Result	SM 4500-Cl B 2007-10-30 Units mg/Kg SM 4500-Cl B 2007-10-30 Units	Analyzed By: Prepared By: Dilution 50 Prep Method: Analyzed By: Prepared By: Dilution	AR AR RI 2.00 N/A AR AR AR
Chloride Sample: 13 Analysis: QC Batch: Prep Batch: Prep Batch: Chloride Sample: 13 Analysis: QC Batch: Prep Batch: Prep Batch: Prep Batch: Parameter Chloride	Chloride (Titration) 42564 36733 Flag 9881 - SB-3 (8-10') Chloride (Titration) 42564 36733 Flag	Analytical Method: Date Analyzed: Sample Preparation: RL Result 727 Analytical Method: Date Analyzed: Sample Preparation: RL Result	SM 4500-Cl B 2007-10-30 Units mg/Kg SM 4500-Cl B 2007-10-30 Units	Analyzed By: Prepared By: Dilution 50 Prep Method: Analyzed By: Prepared By: Dilution	AR AR RI 2.0(N/A AR AR RI 2.0(
Chloride Sample: 13 Analysis: QC Batch: Prep Batch: Prep Batch: Chloride Sample: 13 Analysis: QC Batch: Prep Batch: Prep Batch: Prep Batch: Parameter Chloride Sample: 13	Chloride (Titration) 42564 36733 Flag 9881 - SB-3 (8-10') Chloride (Titration) 42564 36733 Flag 9882 - SB-3 (18-20')	Analytical Method: Date Analyzed: Sample Preparation: RL Result 727 Analytical Method: Date Analyzed: Sample Preparation: RL Result 7290	SM 4500-Cl B 2007-10-30 Units mg/Kg SM 4500-Cl B 2007-10-30 Units mg/Kg SM 4500-Cl B 2007-10-30	Analyzed By: Prepared By: Dilution 50 Prep Method: Analyzed By: Prepared By: Dilution 50	AR AR RI 2.0(N/A AR AR

sample 139882 continued ...

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Parameter	Flag	Result	Units	Dilution	RL
		\mathbf{RL}			
Parameter	Flag	Result	Units	Dilution	\mathbf{RL}
Chloride		4630	mg/Kg	50	2.00

Sample: 139883 - SB-3 (28-30')

Analysis: QC Batch: Prep Batch:	Chloride (Titration) 42564 36733	Analytical Met Date Analyzed Sample Prepar	: 2007-10-30	Prep Method: Analyzed By: Prepared By:	ÁR
Parameter	Flag	RL Result	Units	Dilution	RL
Chloride	Tag	9560	mg/Kg	50	2.00

Sample: 139884 - SB-3 (38-40')

Analysis: QC Batch: Prep Batch:			2007-10-30	Prep Method: Analyzed By: Prepared By:	$\mathbf{A}\mathbf{R}$
		RL		 .	
Parameter	Flag	Result	Units	Dilution	\mathbf{RL}
Chloride		8770	mg/Kg	50	2.00

Sample: 139885 - SB-3 (48-50')

Analysis: QC Batch: Prep Batch:	Chloride (Titration) 42564 36733	Analytical Me Date Analyze Sample Prepa	d: 2007-10-30	Prep Method: Analyzed By: Prepared By:	AR.
Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		7750	mg/Kg	50	2.00

Sample: 139886 - SB-4 (8-10')

Analysis: QC Batch: Prep Batch:	Chloride (Titration) 42564 36733	Analytical Meth Date Analyzed: Sample Prepara	2007-10-30	Prep Method: Analyzed By: Prepared By:	AR
		\mathbf{RL}			
Parameter	\mathbf{Flag}	Result	Units	Dilution	\mathbf{RL}
Chloride		6560	mg/Kg	50	2.00

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Page Number: 9 of 27

Sample: 139887 - SB-4 (18-20')

Analysis: QC Batch: Prep Batch:	Chloride (Titration) 42564 36733	Analytical Me Date Analyze Sample Prepa	d: 2007-10-30	Prep Method: Analyzed By: Prepared By:	ÁR
n		RL	TI-SA-		ıa
Parameter Chloride	Flag	Result 9930	Units mg/Kg	Dilution 50	RL 2.00

Sample: 139888 - SB-4 (28-30')

Analysis: QC Batch:	Chloride (Titration) 42564	Analytical M Date Analyze		Prep Method: Analyzed By:	'
Prep Batch:	36733	Sample Preparation:		Prepared By:	AR
		\mathbf{RL}			
Parameter	Flag	Result	Units	Dilution	RL
Chloride		7860	mg/Kg	50	2.00

Sample: 139889 - SB-4 (38-40')

Analysis: QC Batch: Prep Batch:	Chloride (Titration) 42605 36766	Analytical M Date Analyz Sample Prep	ed: 2007-10-30	Prep Method: Analyzed By: Prepared By:	AR
		\mathbf{RL}			
Parameter	\mathbf{Flag}	Result	Units	Dilution	\mathbf{RL}
Chloride		7340	mg/Kg	50	2.00

Sample: 139890 - SB-4 (48-50')

		od: SM 4500-Cl B	Prep Method:	11/11
05	Date Analyzed:	2007-10-30	Analyzed By:	AR
66	Sample Prepara	tion:	Prepared By:	AR
	\mathbf{RL}			
Flag	Result	Units	Dilution	\mathbf{RL}
	2670	mg/Kg	50	2.00
	66	66 Sample Prepara RL Flag Result	66 Sample Preparation: RL Flag Result Units	66 Sample Preparation: Prepared By: RL Flag Result Units Dilution

Sample: 139891 - SB-5 (8-10')

Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	42605	Date Analyzed:	2007-10-30	Analyzed By:	AR
Prep Batch:	36766	Sample Preparation:		Prepared By:	AR

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sample 139891 continued ...

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		\mathbf{RL}			
Parameter	Flag	Result	Units	Dilution	RL
		\mathbf{RL}			
Parameter	Flag	Result	Units	Dilution	\mathbf{RL}
Chloride		6860	mg/Kg	50	2.00

Sample: 139892 - SB-5 (18-20')

Analysis: QC Batch: Prep Batch:	Chloride (Titration) 42605 36766	Analytical M Date Analyz Sample Prep	ed: 2007-10-30	Prep Method: Analyzed By: Prepared By:	ÁR
		\mathbf{RL}			
Parameter	Flag	\mathbf{Result}	Units	Dilution	\mathbf{RL}
Chloride		6840	mg/Kg	50	2.00

Sample: 139893 - SB-5 (28-30')

Analysis:	Chloride (Titration)	Analytical Me	thod: SM 4500-Cl B	Prep Method:	N/A
QC Batch:	42605	Date Analyzed	l: 2007-10-30	Analyzed By:	AR
Prep Batch:	p Batch: 36766 Sample Preparation:			Prepared By:	AR
		\mathbf{RL}			
Parameter	\mathbf{Flag}	\mathbf{Result}	Units	Dilution	\mathbf{RL}
Chloride		5770	mg/Kg	50	2.00

Sample: 139894 - SB-5 (38-40')

Analysis: QC Batch: Prep Batch:	Chloride (Titration) 42605 36766	Analytical Met Date Analyzed: Sample Prepara	2007-10-30	Prep Method: Analyzed By: Prepared By:	A'R
		RL		. ,	
Parameter	Flag	Result	Units	Dilution	\mathbf{RL}
Chloride		3590	mg/Kg	50	2.00

Sample: 139895 - SB-5 (48-50')

Analysis: QC Batch: Prep Batch:	Chloride (Titration) 42605 36766	Analytical M Date Analyze Sample Prep	ed: 2007-10-30	Prep Method: Analyzed By: Prepared By:	AR
		\mathbf{RL}			
Parameter	\mathbf{Flag}	Result	Units	Dilution	\mathbf{RL}
Chloride		2760	mg/Kg	50	2.00

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Page Number: 11 of 27

Sample: 139896 - SB-6 (8-10')

Analysis: QC Batch: Prep Batch:	Chloride (Titration) 42605 36766	Analytical M Date Analyz Sample Prej	zed: 2007-10-30	Prep Method: Analyzed By: Prepared By:	AR
		RL			
Parameter	Flag	Result	Units	Dilution	RL
Chloride		3950	mg/Kg	50	2.00

Sample: 139897 - SB-6 (18-20')

Analysis: QC Batch: Prep Batch:	Chloride (Titration) 42605 36766	Analytical Methe Date Analyzed: Sample Preparat	2007-10-30	Prep Method: Analyzed By: Prepared By:	AR
Parameter	Flag	RL Result	Units	Dilution	RL
Chloride	I iug	6360	mg/Kg	50	2.00

Sample: 139898 - SB-6 (28-30')

Analysis: QC Batch: Prep Batch:	Chloride (Titration) 42605 36766	Analytical Met Date Analyzed Sample Prepar	2007-10-30	Prep Method: Analyzed By: Prepared By:	ÁR
_		RL			
Parameter	Flag	Result	Units	Dilution	\mathbf{RL}
Chloride	_	3370	mg/Kg	50	2.00

Sample: 139899 - SB-6 (38-40')

Analysis: QC Batch:	Chloride (Titration) 42606	Analytical Met Date Analyzed		Prep Method: Analyzed By:	,
Prep Batch:	36769	Sample Prepar	ation:	Prepared By:	AR
i.		\mathbf{RL}			
Parameter	Flag	Result	Units	Dilution	\mathbf{RL}
Chloride		1860	mg/Kg	50	2.00

Sample: 139900 - SB-6 (48-50')

Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	42606	Date Analyzed:	2007-10-31	Analyzed By:	AR
Prep Batch:	36769	Sample Preparation:		Prepared By:	AR

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sample 139900 continued

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		\mathbf{RL}				
Parameter	Flag	Result	Units	Dilution	RL	
		\mathbf{RL}				
Parameter	Flag	Result	Units	Dilution	\mathbf{RL}	
Chloride		1220	mg/Kg	50	2.00	

Sample: 139901 - SB-7 (8-10')

Analysis: QC Batch: Prep Batch:	Chloride (Titration) 42606 36769	Analytical Method: SM 4500-Cl B Date Analyzed: 2007-10-31 Sample Preparation:		Prep Method: Analyzed By: Prepared By:	AR
		\mathbf{RL}			
Parameter	Flag	Result	Units	Dilution	\mathbf{RL}
Chloride		4300	mg/Kg	50	2.00

Sample: 139902 - SB-7 (18-20')

Analysis:	Chloride (Titration)	Analytical Meth	od: SM 4500-Cl B	Prep Method:	N/A
QC Batch:	42606	Date Analyzed:	2007-10-31	Analyzed By:	AR
Prep Batch:	Batch: 36769 Sample Preparation:			Prepared By:	\mathbf{AR}
		\mathbf{RL}			
Parameter	Flag	\mathbf{Result}	Units	Dilution	\mathbf{RL}
Chloride		5440	mg/Kg	50	2.00

Sample: 139903 - SB-7 (28-30')

Analysis:	Chloride (Titration)	Analytical Me	ethod: SM 4500-Cl B	Prep Method:	N/A
QC Batch:	42606	Date Analyze	d: 2007-10-31	Analyzed By:	AR
Prep Batch:	36769	Sample Prepa	ration:	Prepared By:	AR
		\mathbf{RL}			
Parameter	\mathbf{Flag}	Result	Units	Dilution	\mathbf{RL}
Chloride		2090	mg/Kg	50	2.00

Sample: 139904 - SB-7 (38-40')

Analysis: QC Batch: Prep Batch:	Chloride (Titration) 42606 36769	Analytical Me Date Analyze Sample Prepa	d: 2007 -10-31	Prep Method: Analyzed By: Prepared By:	ÁR
		RL			
Parameter	Flag	Result	Units	Dilution	\mathbf{RL}
Chloride		1500	mg/Kg	50	2.00

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Sample: 139905 - SB-7 (48-50')

Analysis: QC Batch: Prep Batch:	Chloride (Titration) 42606 36769	Analytical Method: SM 4500-Cl B Date Analyzed: 2007-10-31 Sample Preparation:		Prep Method: Analyzed By: Prepared By:	AR
Parameter	Flag	RL Result	Units	Dilution	\mathbf{RL}
Chloride		1420	mg/Kg	50	2.00

Sample: 139906 - SB-8 (8-10')

Analysis:	Chloride (Titration)	Analytical Me	thod: SM 4500-Cl B	Prep Method:	N/A
QC Batch:	42606	Date Analyzed	d: 2007-10-31	Analyzed By:	\mathbf{AR}
Prep Batch:	36769	Sample Prepa	ration:	Prepared By:	\mathbf{AR}
		\mathbf{RL}			
Parameter	Flag	Result	Units	Dilution	\mathbf{RL}
Chloride		6240	mg/Kg	50	2.00

Sample: 139907 - SB-8 (18-20')

Analysis:	Chloride (Titration)	Analytical M	ethod: SM 4500-Cl B	Prep Method:	N/A
QC Batch:	42606	Date Analyze	ed: 2007-10-31	Analyzed By:	AR
Prep Batch:	36769	Sample Prepa	aration:	Prepared By:	\mathbf{AR}
		\mathbf{RL}			
Parameter	\mathbf{Flag}	Result	Units	Dilution	\mathbf{RL}
Chloride		1410	mg/Kg	50	2.00

Sample: 139908 - SB-8 (28-30')

Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
42606	Date Analyzed:	2007-10-31	Analyzed By:	\mathbf{AR}
rep Batch: 36769 Sample Preparation:			Prepared By:	AR
	\mathbf{RL}			
Flag	Result	Units	Dilution	\mathbf{RL}
	223	mg/Kg	50	2.00
	42606 36769	42606 Date Analyzed: 36769 Sample Preparation RL Flag Result	42606 Date Analyzed: 2007-10-31 36769 RL Flag Result Units	42606 Date Analyzed: 2007-10-31 Analyzed By: 36769 Sample Preparation: Prepared By: RL Flag Result Units Dilution

Sample: 139909 - SB-8 (38-40')

Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	42607	Date Analyzed:	2007-10-31	Analyzed By:	AR
Prep Batch:	36770	Sample Preparation:		Prepared By:	AR

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sample 139909 continued ...

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		\mathbf{RL}			
Parameter	Flag	Result	Units	Dilution	RL
		\mathbf{RL}			
Parameter	Flag	Result	Units	Dilution	\mathbf{RL}
Chloride		123	mg/Kg	50	2.00

Sample: 139910 - SB-8 (40-50')

Analysis: QC Batch: Prep Batch:	Chloride (Titration) 42607 36770	Analytical Met Date Analyzed Sample Prepar	: 2007-10-31	Prep Method: Analyzed By: Prepared By:	AR
		\mathbf{RL}			
Parameter	Flag	Result	Units	Dilution	\mathbf{RL}
Chloride		197	mg/Kg	50	2.00

Sample: 139911 - SB-9 (8-10')

Analysis:	Chloride (Titration)	Analytical Me	ethod: SM 4500-Cl B	Prep Method:	N/A
QC Batch:	42607	Date Analyze	d: 2007-10-31	Analyzed By:	AR
Prep Batch:	36770	Sample Prepa	aration:	Prepared By:	\mathbf{AR}
		\mathbf{RL}			
Parameter	Flag	\mathbf{Result}	Units	Dilution	\mathbf{RL}
Chloride		1110	mg/Kg	50	2.00

Sample: 139912 - SB-9 (18-20')

Analysis: QC Batch:	Chloride (Titration) 42607	Analytical Me Date Analyze		Prep Method: Analyzed By:	
Prep Batch:		Sample Prepa		Prepared By:	
		RL			
Parameter	Flag	Result	Units	Dilution	RL
Chloride		187	mg/Kg	. 50	2.00

Sample: 139913 - SB-9 (28-30')

Analysis: QC Batch: Prep Batch:	Chloride (Titration) 42607 36770	Analytical M Date Analyz Sample Prep	ed: 2007-10-31	Prep Method: Analyzed By: Prepared By:	AR
		RL			
Parameter	Flag	\mathbf{Result}	Units	Dilution	\mathbf{RL}
Chloride		138	mg/Kg	50	2.00

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Page Number: 15 of 27

Sample: 139914 - SB-9 (38-40')

Analysis: QC Batch: Prep Batch:	Chlorid 42607 36770	le (Titra	tion)	Date	tical Method Analyzed: e Preparatio	2007-	500-Cl B 10-31		Analyz	Aethod: zed By: red By:	N/A AR AR
Parameter		Fle	<i>a</i>	RL Result		Units		Dilu	ion		\mathbf{RL}
Chloride	<u> </u>	Fla	8	<100		mg/Kg		Ditu	<u>50</u>		2.00
						1115/115	<u> </u>				2.00
Sample: 13	9915 - 5	SB-9 (4	8-50')							•	
Analysis:	Chloric	ie (Titra	tion)	Analy	tical Method	: SM 4	500-CI B		Prep M	Aethod:	N/A
QC Batch:	42607			Date .	Analyzed:	2007-	10-31		Analy	zed By:	AR
Prep Batch:	36770				le Preparatio	n:				red By:	AR
_				RL							
Parameter		Fla	. <u>g</u>	Result		Units		Dilu			RL
Chloride				<100		mg/Kg			_50		2.00
Method Bl	ank (1)	QC	Batch: 42274								
QC Batch:	42274			Date Ana		07-10-23				yzed By:	LD
Prep Batch:	36501			QC Prep	aration: 20	07-10-23			Prepa	ared By:	LD
					MDL						
Parameter			Flag		Result			Units			RL
DRO					23.6			mg/Kg			50
							Spike	Per	cent	Reco	overy
Surrogate		Flag	Result	Units	Diluti	on	Amount		overy		nits
n-Triacontan	e		109	mg/Kg	1	· · · · · ·	150	7	/3	32.9 -	156.1
Method Bla	ank (1)	QC	Batch: 42329								
QC Batch: Prep Batch:	42329 36547			Date Ana QC Prep)7-10-23)7-10-23				zed By: ared By:	DC DC
Parameter			Flag		MD Resul			Units			RL
Benzene					< 0.0011			mg/Kg			0.01
Toluene					< 0.0015			mg/Kg			0.01
Ethylbenzene	e				< 0.0016			mg/Kg			0.01
Xylene					< 0.0041	0		mg/Kg			0.01
Surrogate			Flag	Result	Units	Dilution	Spik		Percent		overy
Trifluorotolu	one (TE	T)	r tag	0.747	mg/Kg	1	1.00		ecovery 75		nits 121.3
4-Bromofluor	•	,	3)	0.747 0.543							
	obenzen	ic (4-DF)	<u>ر</u> ب	0.040	mg/Kg	1	1.00	J	54	<u>əə.1</u> -	111.6

Page Number: 16 of 27

3132	,	Rock Qu	ieen Unit 13			
Method Blank (1)	QC Batch: 42333					
QC Batch: 42333		Date Analyzed:	2007-10-23		Analyzed B	y: DC
Prep Batch: 36547		QC Preparation:	2007-10-23		Prepared B	y: DC
		M	DL			
Parameter	Flag	Res	ult	Units		\mathbf{RL}
GRO		<0.7	739	mg/Kg		1
				Spike	Percent F	lecovery
Surrogate	Flag	Result Units		Amount		Limits
Trifluorotoluene (TFT)		0.706 mg/K		1.00		7.8 - 103
4-Bromofluorobenzene	(4-BFB)	0.576 mg/K	(g 1	1.00	58 2	4.6 - 123
Method Blank (1)	QC Batch: 42558					
QC Batch: 42558		Date Analyzed:	2007-10-30		Analyzed B	v: AR
Prep Batch: 36730		QC Preparation:			Prepared B	
•					-	0
Parameter	Flag	M Res	DL sult	Units		RL
Chloride		<0.	500	mg/Kg		2
Method Blank (1) QC Batch: 42563 Prep Batch: 36732	QC Batch: 42563	Date Analyzed: QC Preparation:	2007-10-30 2007-10-30		Analyzed E Prepared B	
		М	DL			
Parameter	Flag	Res		Units		RI
Chloride		<0.	500	mg/Kg		2
Method Blank (1)	QC Batch: 42564					
QC Batch: 42564		Date Analyzed:	2007-10-30		Analyzed E	
Prep Batch: 36733		QC Preparation:	2007-10-30		Prepared B	y: AR
Devezator	Ela		DL	TI		ית
Parameter Chloride	Flag	Res <0.		Units mg/Kg	r	$-\frac{\text{RI}}{2}$
					5	
Method Blank (1)	QC Batch: 42605					
OC Batch: 42605		Data Analyzady	2007 10 20		Analyzed F	A.D.

QC Batch:42605Date Analyzed:2007-10-30Analyzed By:ARPrep Batch:36766QC Preparation:2007-10-30Prepared By:AR

10-10-12

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Report 1	Date:	November	1,	2007
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D	E.		DL			•			D 7
Parameter	Flag	Res				nits			RL
Chloride		<0	500		mg	/Kg			2
Method Blank (1)	QC Batch: 42606								
QC Batch: 42606 Prep Batch: 36769		Date Analyzed: QC Preparation:	2007-10-3 2007-10-3					yzed By: ared By:	
_			DL						
Parameter	Flag		sult			nits			RL
Chloride		<0.	500	<u>_</u>	mg	/Kg			2
Method Blank (1)	QC Batch: 42607								
QC Batch: 42607		Date Analyzed:	2007-10-3	31			Anal	yzed By:	AR
Prep Batch: 36770		QC Preparation:						ared By:	
Parameter	\mathbf{Flag}	M Re:	DL		U	nits			RI
		<0.				s/Kg			2
Laboratory Control QC Batch: 42274			500 2007-10-2					lyzed By bared By	: LD
v	Spike (LCS-1)	<0. Date Analyzed: QC Preparation:	500 2007-10-2	23	mg	s/Kg		ared By	: LD : LD
Laboratory Control QC Batch: 42274 Prep Batch: 36501	Spike (LCS-1) LC	<0. Date Analyzed: QC Preparation: S	500 2007-10-2 2007-10-2			;/Kg		ared By	: LD
Laboratory Control QC Batch: 42274 Prep Batch: 36501 Param	Spike (LCS-1)	<0. Date Analyzed: QC Preparation: 2S ult Units	500 2007-10-2 2007-10-2	23 Spike	mg	5/Kg trix sult	Prep	bared By F	: LD : LD lec. imit
Laboratory Control QC Batch: 42274 Prep Batch: 36501 Param DRO	Spike (LCS-1) LC Res 33	<0. Date Analyzed: QC Preparation: 2S ult Units 3 mg/Kg	500 2007-10-2 2007-10-2 Dil. 1	23 Spike Amount 250	Mai Res <1	trix sult 3.4	Prep Rec. 133	bared By F	: LD : LD lec. imit
Laboratory Control QC Batch: 42274 Prep Batch: 36501 Param DRO	Spike (LCS-1) LC Res 33	<0. Date Analyzed: QC Preparation: 2S ult Units 3 mg/Kg	500 2007-10-2 2007-10-2 Dil. 1	23 Spike Amount 250	Mai Res <1	trix sult 3.4 e resu	Prep Rec. 133 lt. Rec.	bared By F	: LD : LD tec. imit - 142.
Laboratory Control QC Batch: 42274 Prep Batch: 36501 Param DRO Percent recovery is bas Param	Spike (LCS-1) LC Res 33 sed on the spike result LCSD Result	<pre><0. Date Analyzed: QC Preparation: S ult Units 3 mg/Kg . RPD is based on Units Dil.</pre>	500 2007-10-2 2007-10-2 Dil. 1 the spike a Spike Amount	23 Spike Amount 250 nd spike d Matrix Result	Mat Res <1 luplicate Rec.	trix sult 3.4 e resu	Prep <u>Rec.</u> 133 It. Rec. Limit	Pared By F L 49.1 RPD	: LD : LD dec. imit - 142. RPD Limit
Laboratory Control QC Batch: 42274 Prep Batch: 36501 Param DRO Percent recovery is bas Param	Spike (LCS-1) LC Res 33 sed on the spike result LCSD	<0. Date Analyzed: QC Preparation: 2S ult Units 3 mg/Kg . RPD is based on	500 2007-10-2 2007-10-2 Dil. 1 the spike a Spike	23 Spike Amount 250 nd spike d Matrix	Mat Res <1 luplicate	trix sult 3.4 e resu	Prep Rec. 133 lt. Rec.	pared By F L 49.1	: LD : LD tec. imit - 142.
Laboratory Control QC Batch: 42274 Prep Batch: 36501 Param DRO Percent recovery is bas	Spike (LCS-1) LC Res 33 sed on the spike result LCSD Result 317 sed on the spike result	<pre><0. Date Analyzed: QC Preparation: S ult Units 3 mg/Kg . RPD is based on Units Dil. mg/Kg 1 . RPD is based on</pre>	500 2007-10-2 2007-10-2 Dil. 1 the spike a Spike Amount 250	Spike Amount 250 nd spike d Matrix Result <13.4 nd spike d	Mat Res <1 luplicate Rec. 127 luplicate	trix ult 3.4 2 resu 49.1 2 resu	Prep <u>Rec.</u> 133 It. Rec. Limit - 142.3 It.	Pared By F L 49.1 RPD 5	: LD : LD dec. imit - 142.: RPD Limi 20
Laboratory Control QC Batch: 42274 Prep Batch: 36501 Param DRO Percent recovery is bas Param DRO Percent recovery is bas	Spike (LCS-1) LC Res 33 23 24 25 26 27 27 27 27 27 27 27 27 27 27	<pre><0. Date Analyzed: QC Preparation: S ult Units 3 mg/Kg . RPD is based on Units Dil. mg/Kg 1 . RPD is based on D</pre>	500 2007-10-2 2007-10-2 Dil. 1 the spike a Spike Amount 250 the spike a	23 Spike Amount 250 nd spike d Matrix Result <13.4 nd spike d Spike	Mat Res <1 luplicate <u>Rec.</u> 127 luplicate	trix tult 3.4 Presu 49.1 Presu CS	Prep <u>Rec.</u> 133 It. Rec. Limit LCSD	Pared By F L 49.1 RPD 5	: LD : LD dec. imit - 142.: RPD Limit 20 Rec.
Laboratory Control QC Batch: 42274 Prep Batch: 36501 Param DRO Percent recovery is bas Param DRO Percent recovery is bas Surrogate	Spike (LCS-1) LC Res 33 23 24 25 26 27 27 27 27 27 27 27 27 27 27	<pre><0. Date Analyzed: QC Preparation: S ult Units 3 mg/Kg . RPD is based on Units Dil. mg/Kg 1 . RPD is based on D It Units</pre>	500 2007-10-2 2007-10-2 Dil. 1 the spike a Spike Amount 250 the spike a Dil.	23 Spike Amount 250 nd spike d Matrix Result <13.4 nd spike d Spike Amount	Mat Res <1. luplicate <u>Rec.</u> 127 luplicate LC Re	trix trix ult 3.4 2 resu 49.1 2 resu CS ec.	Prep <u>Rec.</u> 133 It. Rec. LCSD Rec.	Pared By F L 49.1 RPD 5	: LD : LD dec. imit - 142.: RPD Limi 20 Rec. Limit
Laboratory Control QC Batch: 42274 Prep Batch: 36501 Param DRO Percent recovery is bas Param DRO	Spike (LCS-1) LC Res 33 23 24 25 26 27 27 26 27 27 27 27 27 27 27 27 27 27	<pre><0. Date Analyzed: QC Preparation: S ult Units 3 mg/Kg . RPD is based on Units Dil. mg/Kg 1 . RPD is based on D It Units</pre>	500 2007-10-2 2007-10-2 Dil. 1 the spike a Spike Amount 250 the spike a	23 Spike Amount 250 nd spike d Matrix Result <13.4 nd spike d Spike	Mat Res <1 luplicate <u>Rec.</u> 127 luplicate	trix trix ult 3.4 2 resu 49.1 2 resu CS ec.	Prep <u>Rec.</u> 133 It. Rec. Limit LCSD	Pared By F L 49.1 RPD 5	: LD : LD dec. imit - 142.: RPD Limi 20 Rec.
Laboratory Control QC Batch: 42274 Prep Batch: 36501 Param DRO Percent recovery is bas Param DRO Percent recovery is bas Surrogate	Spike (LCS-1) LC Res 33 33 33 34 35 35 40 on the spike result LCSD Result 317 317 317 317 317 317 317 317	<pre><0. Date Analyzed: QC Preparation: S ult Units 3 mg/Kg . RPD is based on Units Dil. mg/Kg 1 . RPD is based on D It Units</pre>	500 2007-10-2 2007-10-2 Dil. 1 the spike a Spike Amount 250 the spike a Dil.	23 Spike Amount 250 nd spike d Matrix Result <13.4 nd spike d Spike Amount	Mat Res <1. luplicate <u>Rec.</u> 127 luplicate LC Re	trix trix ult 3.4 2 resu 49.1 2 resu CS ec.	Prep <u>Rec.</u> 133 It. Rec. LCSD Rec.	Pared By F L 49.1 RPD 5	: LD : LD dec. imit - 142. RPI Limi 20 Rec. Limit
Laboratory Control QC Batch: 42274 Prep Batch: 36501 Param DRO Percent recovery is bas Param DRO Percent recovery is bas Surrogate n-Triacontane	Spike (LCS-1) LC Res 33 33 33 34 35 35 40 on the spike result LCSD Result 317 317 317 317 317 317 317 317	<pre><0. Date Analyzed: QC Preparation: S ult Units 3 mg/Kg . RPD is based on Units Dil. mg/Kg 1 . RPD is based on D It Units</pre>	500 2007-10-2 2007-10-2 Dil. 1 the spike a Spike Amount 250 the spike a Dil.	Spike Amount 250 nd spike d Matrix Result <13.4 nd spike d Spike Amount 150	Mat Res <1. luplicate <u>Rec.</u> 127 luplicate LC Re	trix trix ult 3.4 2 resu 49.1 2 resu CS ec.	Prep <u>Rec.</u> 133 It. Rec. Limit 1 - 142.3 It. LCSD <u>Rec.</u> 86	Pared By F L 49.1 RPD 5	: LD : LD imit - 142. RPI Limi 20 Rec. Jimit - 133.

Param Benzene Toluene Ethylbenzene Xylene Percent recovery is based on the sp	LC Res 0.8' 0.89 0.89										
Benzene Toluene Ethylbenzene Xylene	0.8' 0.89 0.89	ult				Spike	M	atrix		I	Rec.
Toluene Ethylbenzene Xylene	0.89 0.89		Unit	s Di	il.	Amount	Re	esult	Rec.	L	imit
Toluene Ethylbenzene Xylene	0.89 0.89	78	mg/k		1	1.00	<0.	00110	88	71.5	2 - 119
Ethylbenzene Xylene	0.8	93	mg/K		1	1.00		00150	89		- 116.5
Xylene			mg/K		1	1.00		00160	89		6 - 114
	2.7		mg/k		1	3.00		00410	90		- 113.9
	LCSD			$\mathbf{S}_{\mathbf{F}}$	oike	Matrix			Rec.		RPD
Param	\mathbf{Result}	Ur	nits D	il. Am	ount	Result	Rec	. I	Limit	RPD	Limit
Benzene	0.933	mg	/Kg	1 1.	.00	<0.0011	0 93	71.	2 - 119	6	20
Toluene	0.980			1 1.	.00	< 0.0015		76.3	8 - 116.5	9	20
Ethylbenzene	1.02				.00	< 0.0016			.6 - 114	13	20
Xylene	3.10				.00	< 0.0041			3 - 113.9	13	20
Percent recovery is based on the s											
	LC	JS	LCSD			2	Spike	LCS	LCSD]	Rec.
Surrogate	Res	\mathbf{ult}	Result	Unit	ts l	Dil. A	nount	Rec.	Rec.	L	<i>.</i> imit
	0.6	58	0.650	mg/H	Kg	1	1.00	66	65	56.1	- 107.8
rmuorotoluene (TFT)		60	0 500		-	1	1.00	66	=0	56.9	- 118.8
4-Bromofluorobenzene (4-BFB) Laboratory Control Spike (LC QC Batch: 42333	<u>0.6</u> CS-1)	Da	0.722 ate Analy C Prepar		<u>kg</u> 2007-10 2007-10	-23	1.00	00		yzed By	/: DC
4-Bromofluorobenzene (4-BFB) Laboratory Control Spike (LC QC Batch: 42333 Prep Batch: 36547	CS-1) L	Da Q(ite Analy C Prepar	yzed: 2 ration: 2	2007-10 2007-10	-23 -23 Spika		Matrix	Ana Prep	yzed By ared By	r: DC r: DC Rec.
4-Bromofluorobenzene (4-BFB) Laboratory Control Spike (LC QC Batch: 42333 Prep Batch: 36547 Param	CS-1) L Re	Da Q(CS esult	te Anal C Prepar Un	yzed: 2 ration: 2	2007-10 2007-10 Dil.	-23 -23 Spike Amou	e . nt	Matrix Result	Ana Prep Rec.	yzed By ared By	7: DC 7: DC Rec. Limit
4-Bromofluorobenzene (4-BFB) Laboratory Control Spike (LC QC Batch: 42333 Prep Batch: 36547 Param GRO	CS-1) L Re 7	Da Q(CS esult .43	te Analy C Prepar Un mg,	yzed: 2 ation: 2 its /Kg	2007-10 2007-10 Dil. 1	-23 -23 Amou 10.0	e nt	Matrix Result <0.739	Ana Prep Rec. 74	yzed By ared By	7: DC 7: DC Rec. Limit
4-Bromofluorobenzene (4-BFB) Laboratory Control Spike (LC QC Batch: 42333 Prep Batch: 36547 Param GRO	CS-1) L Re 7 spike result	Da Q(CS esult .43	te Analy C Prepar Un mg,	yzed: 2 ation: 2 its /Kg sed on the	2007-10 2007-10 Dil. 1 e spike	-23 -23 Amou 10.0 and spik	e nt e duplica	Matrix Result <0.739	Ana Prep Rec. 74 It.	yzed By ared By	7: DC 7: DC Rec. Limit 5 - 105.
4-Bromofluorobenzene (4-BFB) Laboratory Control Spike (LC QC Batch: 42333 Prep Batch: 36547 Param GRO Percent recovery is based on the s	L Re 7 pike result LCSD	Da QC CS esult .43 t. RF	te Analy C Prepar Un mg, PD is bas	yzed: 2 ation: 2 its /Kg sed on the	2007-10 2007-10 Dil. 1 e spike Spike	-23 -23 Amou 10.0 and spik Matr	e nt e duplica x	Matrix Result <0.739 ate resu	Ana Prep Rec. 74 It. Rec.	yzed By ared By 50	7: DC 7: DC Rec. Limit 5 - 105. RPI
4-Bromofluorobenzene (4-BFB) Laboratory Control Spike (LC QC Batch: 42333 Prep Batch: 36547 Param GRO Percent recovery is based on the s Param	L Re 7 pike result LCSD Result	Da QC CS esult .43 t. RF	tte Analy C Prepar Un mg, PD is bas Juits	yzed: 2 ation: 2 its /Kg sed on the Dil. A	2007-10 2007-10 Dil. 1 e spike Spike	-23 -23 Amou 10.0 and spik Matr Resu	e duplica x It Re	Matrix Result <0.739 ate resu	Ana Prep Rec. 74 It. Rec. Limit	yzed By ared By 56 RPD	r: DC r: DC Limit 5 - 105. RPI Limi
4-Bromofluorobenzene (4-BFB) Laboratory Control Spike (LC QC Batch: 42333 Prep Batch: 36547 Param GRO Percent recovery is based on the s Param GRO	L Re 7 pike result LCSD Result 7.65	Da Q(.CS .esult .43 t. RF	te Analy C Prepar Un mg, PD is bas Jnits g/Kg	yzed: 2 ation: 2 its /Kg bil. A 1	2007-10 2007-10 1 e spike Spike Amount 10.0	-23 -23 Amou 10.0 and spik Matr Resu <0.73	e duplica x lt Re 99 76	Matrix Result <0.739 ate resu c. 50 50	Ana Prep Rec. 74 It. Rec. Limit - 105.2	yzed By ared By 50	7: DC 7: DC Rec. Limit 5 - 105. RPI
4-Bromofluorobenzene (4-BFB) Laboratory Control Spike (LC QC Batch: 42333 Prep Batch: 36547 Param GRO Percent recovery is based on the s Param GRO	L Re 7 pike result LCSD Result 7.65 pike result	Da Q(ute Analy C Prepar Un mg, PD is bas Juits g/Kg PD is bas	yzed: 2 ation: 2 its /Kg sed on the Dil. A 1 sed on the	2007-10 2007-10 1 e spike Spike Amount 10.0	-23 -23 Amou 10.0 and spik Matr Resu <0.73 and spik	e duplica x t Re 9 76 e duplica	Matrix Result <0.739 ate resu c. 56 ate resu	Ana Prep Rec. 74 It. Rec. Limit - 105.2 It.	yzed By ared By 56 <u>RPD</u> 3	r: DC r: DC Limit 5 - 105. RPI Limi 20
4-Bromofluorobenzene (4-BFB) Laboratory Control Spike (LC QC Batch: 42333 Prep Batch: 36547 Param GRO Percent recovery is based on the s Param GRO Percent recovery is based on the s	L Re 7 pike result LCSD Result 7.65 pike result LC	Da QC CS esult .43 t. RF U m t. RF	ute Analy C Prepar Un mg, PD is bas Jnits g/Kg PD is bas LCSD	yzed: 2 ation: 2 its /Kg bed on the Dil. A 1 sed on the	2007-10 2007-10 1 e spike Spike Mount 10.0 e spike	-23 -23 Amou 10.0 and spik Matr Resu <0.73 and spik	e duplica x kt Re 9 76 e duplica Spike	Matrix Result <0.739 ate resu c. 56 ate resu LCS	Anal Prep Rec. 74 It. Limit - 105.2 It. LCSD	yzed By ared By 56 RPD 3	r: DC Rec. Limit - 105. RPI Limi 20 Rec.
4-Bromofluorobenzene (4-BFB) Laboratory Control Spike (LC QC Batch: 42333 Prep Batch: 36547 Param GRO Percent recovery is based on the s Param GRO Percent recovery is based on the s Surrogate	L Re 7 pike result LCSD Result 7.65 pike result LC Res	Da QC CS essult .43 t. RF t. RF t. RF CS sult	ute Analy C Prepar Un mg, PD is bas Jnits g/Kg PD is bas LCSD Result	yzed: 2 ation: 2 its /Kg bed on the Dil. A 1 sed on the Unit	2007-10 2007-10 1 e spike Spike Mount 10.0 e spike	-23 -23 Amou 10.0 and spik Matr Resu <0.73 and spik Dil. A	e duplica x lt Re 9 76 e duplica Spike mount	Matrix Result <0.739 ate resu c. 56 ate resu LCS Rec.	Anal Prep Rec. 74 It. Limit - 105.2 It. LCSD Rec.	yzed By ared By 56 RPD 3	r: DC Rec. Limit - 105. RPI Limi 20 Rec. Limit
•	CS-1) L Re	Da Q(CS esult	te Anal C Prepar Un	yzed: 2 ration: 2	2007-10 2007-10 Dil.	-23 -23 Spike Amou	e . nt	Matrix Result	Ana Prep Rec.	yzed By ared By	7: 7: R Li
4-Bromofluorobenzene (4-BFB) Laboratory Control Spike (LC QC Batch: 42333 Prep Batch: 36547 Param	L Re 7 pike result LCSD Result 7.65	Da Q(.CS .esult .43 t. RF	te Analy C Prepar Un mg, PD is bas Jnits g/Kg	yzed: 2 ation: 2 its /Kg bil. A 1	2007-10 2007-10 1 e spike Spike Amount 10.0	-23 -23 Amou 10.0 and spik Matr Resu <0.73	e duplica x lt Re 99 76	Matrix Result <0.739 ate resu c. 50 50	Ana Prep Rec. 74 It. Rec. Limit - 105.2	yzed By ared By 56 RPD	7: D 7: D Rec. Limit - 105 RP Lin
4-Bromofluorobenzene (4-BFB) Laboratory Control Spike (LC QC Batch: 42333 Prep Batch: 36547 Param GRO Percent recovery is based on the s Param GRO Percent recovery is based on the s	L Re 7 pike result LCSD Result 7.65 pike result LC	Da QC CS esult .43 t. RF U m t. RF	ute Analy C Prepar Un mg, PD is bas Jnits g/Kg PD is bas LCSD	yzed: 2 ation: 2 its /Kg bed on the Dil. A 1 sed on the	2007-10 2007-10 1 e spike Spike Mount 10.0 e spike	-23 -23 Amou 10.0 and spik Matr Resu <0.73 and spik	e duplica x kt Re 9 76 e duplica Spike	Matrix Result <0.739 ate resu c. 56 ate resu LCS	Anal Prep Rec. 74 It. Limit - 105.2 It. LCSD	yzed By ared By 56 RPD 3	r: DC Rec. Limit - 105 RP Lim 20 Rec.
4-Bromofluorobenzene (4-BFB) Laboratory Control Spike (LC QC Batch: 42333 Prep Batch: 36547 Param GRO Percent recovery is based on the s Param GRO Percent recovery is based on the s Surrogate	L Re 7 pike result LCSD Result 7.65 pike result LC Res	Da QC CS essult .43 t. RF t. RF t. RF CS sult	ute Analy C Prepar Un mg, PD is bas Jnits g/Kg PD is bas LCSD Result	yzed: 2 ation: 2 its /Kg bed on the Dil. A 1 sed on the Unit	2007-10 2007-10 1 e spike Spike Mount 10.0 e spike	-23 -23 Amou 10.0 and spik Matr Resu <0.73 and spik Dil. A	e duplica x lt Re 9 76 e duplica Spike mount	Matrix Result <0.739 ate resu c. 56 ate resu LCS Rec.	Anal Prep Rec. 74 It. Limit - 105.2 It. LCSD Rec.	yzed By ared By 56 RPD 3	r: DC Rec. Limit - 105 RPI Lim 20 Rec. Limit
4-Bromofluorobenzene (4-BFB) Laboratory Control Spike (LC QC Batch: 42333 Prep Batch: 36547 Param GRO Percent recovery is based on the s Param GRO	L Re 7 pike result LCSD Result 7.65 pike result LC	Da QC CS esult .43 t. RF U m t. RF CS sult 65	ute Analy C Prepar Un mg, PD is bas Jnits g/Kg PD is bas LCSD	yzed: 2 ation: 2 its /Kg bed on the Dil. A 1 sed on the	2007-10 2007-10 1 e spike Spike Mount 10.0 e spike ts	-23 -23 Amou 10.0 and spik Matr Resu <0.73 and spik	e duplica x kt Re 9 76 e duplica Spike	Matrix Result <0.739 ate resu c. 56 ate resu LCS	Anal Prep Rec. 74 It. Limit - 105.2 It. LCSD	yzed By ared By 56 RPD 3	r: DC Rec. Limit - 105 RPI Lim 20 Rec.

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

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Report Date: November 1, 2007 3132				der: 710221 1een Unit 13			Pa	age N	umber:	19 of 27
	LCSD			Spike	Matrix		Ree	с.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Lim		RPD	Limit
Chloride	98.0	mg/Kg	1	100	< 0.500	98	85 - 1	115	1	20
Percent recovery is based on the s	spike result.	RPD is	based on t	the spike and	d spike dug	plicate r	esult.			
Laboratory Control Spike (L0	CS-1)									
QC Batch: 42563		Date Ar	alyzed:	2007-10-30)			Ana	lyzed B	: AR
Prep Batch: 36732			paration:	2007-10-30)				pared By	
	LC				Spike	Ма	trix			Rec.
Param	Res		Units	Dil.	Amount		sult	Re		Limit
Chloride	10	2	mg/Kg	1	100	<0.	.500	10	2	85 - 115
Percent recovery is based on the s	spike result.	RPD is	based on t	the spike and	d spike du	plicate r	esult.			
	LCSD			Spike	Matrix		\mathbf{Re}	c.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Lin		RPD	Limit
	103	(W -	: 1	100	< 0.500	103	85 -	115	1	20
Percent recovery is based on the s	spike result.	mg/Kg RPD is						110		
Percent recovery is based on the s Laboratory Control Spike (Lo QC Batch: 42564	spike result.	RPD is Date Ar	based on (d spike duj)			Ana	lyzed B	y: AR
Laboratory Control Spike (Lo QC Batch: 42564	spike result.	RPD is Date An QC Pre	based on t	the spike an 2007-10-30	d spike duj)	plicate r		Ana	lyzed B	y: AR
Percent recovery is based on the s Laboratory Control Spike (Lo QC Batch: 42564 Prep Batch: 36733	spike result. C S-1)	RPD is Date An QC Pre	based on t	the spike an 2007-10-30	d spike du))	plicate r Ma	esult.	Ana	lyzed B pared B	y: AR y: AR
Percent recovery is based on the s Laboratory Control Spike (Lo QC Batch: 42564 Prep Batch: 36733 Param	spike result. C S-1) L(RPD is Date An QC Pre CS ult	based on (nalyzed: paration:	the spike an 2007-10-30 2007-10-30	d spike duj)) Spike	plicate r Ma Re	esult. trix	Ana Prej	dyzed B pared B ec.	y: AR y: AR Rec.
Percent recovery is based on the s Laboratory Control Spike (Lo QC Batch: 42564 Prep Batch: 36733 Param Chloride	spike result. C S-1) LC Res 94	RPD is Date An QC Pre CS ult .7	based on the second sec	the spike an 2007-10-30 2007-10-30 Dil. 1	d spike du)) Spike <u>Amount</u> 100	plicate r Ma Re <0	esult. trix sult .500	Ana Prej Re	dyzed B pared B ec.	y: AR y: AR Rec. Limit
Percent recovery is based on the s Laboratory Control Spike (Lo QC Batch: 42564 Prep Batch: 36733 Param Chloride	spike result. C S-1) LC Res 94	RPD is Date An QC Pre CS ult .7	based on the second sec	the spike an 2007-10-30 2007-10-30 Dil. 1	d spike du)) Spike <u>Amount</u> 100	plicate r Ma Re <0	esult. trix sult .500	Ana Prej Re 9	dyzed B pared B ec.	y: AR y: AR Rec. Limit
Percent recovery is based on the s Laboratory Control Spike (Lo QC Batch: 42564 Prep Batch: 36733 Param Chloride Percent recovery is based on the s	spike result. CS-1) LC Res 94 spike result.	RPD is Date An QC Pre CS ult .7	based on the second sec	the spike an 2007-10-30 2007-10-30 Dil. 1 the spike an	d spike du)) Amount 100 d spike du	plicate r Ma Re <0	esult. sult. sult. 500 esult.	Ana Prej Re 9	dyzed B pared B ec.	y: AR y: AR Rec. Limit 85 - 115
Percent recovery is based on the s Laboratory Control Spike (Lo QC Batch: 42564 Prep Batch: 36733 Param Chloride	spike result. CS-1) LC Res 94 spike result. LCSD	RPD is Date An QC Pre CS ult .7 RPD is	based on the second sec	the spike and 2007-10-30 2007-10-30 Dil. 1 the spike an Spike	d spike du) Spike Amount 100 d spike du Matrix	Ma Re <0 plicate r	esult. sult .500 esult. Re	Ana Prej Re 9 c.	lyzed B pared B sc5	y: AR y: AR Rec. Limit 85 - 115 RPD
Percent recovery is based on the s Laboratory Control Spike (Le QC Batch: 42564 Prep Batch: 36733 Param Chloride Percent recovery is based on the s Param	Spike result. CS-1) LC Res 94 Spike result. LCSD Result 95.7	RPD is Date An QC Pre CS ult .7 RPD is Units mg/Kg	based on the based	the spike and 2007-10-30 2007-10-30 Dil. 1 the spike an Spike Amount 100	d spike du Spike Amount 100 d spike du Matrix Result <0.500	Ma Re <0 plicate r Rec. 96	esult. sult .500 esult. Re Lim 85 -	Ana Prej Re 9 c.	lyzed B pared B ec	y: AR y: AR Rec. Limit 85 - 115 RPD Limit
Percent recovery is based on the s Laboratory Control Spike (Le QC Batch: 42564 Prep Batch: 36733 Param Chloride Percent recovery is based on the s Param Chloride Percent recovery is based on the s	Spike result. CS-1) LC Res 94 Spike result. LCSD Result 95.7 Spike result.	RPD is Date An QC Pre CS ult .7 RPD is Units mg/Kg	based on the based	the spike and 2007-10-30 2007-10-30 Dil. 1 the spike an Spike Amount 100	d spike du Spike Amount 100 d spike du Matrix Result <0.500	Ma Re <0 plicate r Rec. 96	esult. sult .500 esult. Re Lim 85 -	Ana Prej Re 9 c.	lyzed B pared B ec	y: AR y: AR Rec. Limit 85 - 115 RPD Limit
Percent recovery is based on the s Laboratory Control Spike (Le QC Batch: 42564 Prep Batch: 36733 Param Chloride Percent recovery is based on the s Param Chloride Percent recovery is based on the s Laboratory Control Spike (Le	Spike result. CS-1) LC Res 94 Spike result. LCSD Result 95.7 Spike result.	RPD is Date An QC Pre CS ult .7 RPD is <u>mg/Kg</u> RPD is	based on the based	the spike and 2007-10-30 2007-10-30 Dil. 1 the spike an Spike Amount 100 the spike an	d spike du Spike Amount 100 d spike du Matrix Result <0.500 d spike du	Ma Re <0 plicate r Rec. 96	esult. sult .500 esult. Re Lim 85 -	Ana Prej Re 9 c. nit 115	lyzed B pared B sc. 5 RPD 1	y: AR y: AR Limit 85 - 115 RPD Limit 20
Percent recovery is based on the s Laboratory Control Spike (Le QC Batch: 42564 Prep Batch: 36733 Param Chloride Percent recovery is based on the s Param Chloride Percent recovery is based on the s Laboratory Control Spike (Le QC Batch: 42605	Spike result. CS-1) LC Res 94 Spike result. LCSD Result 95.7 Spike result.	RPD is Date An QC Pre CS ult .7 RPD is <u>mg/Kg</u> RPD is Date An	based on the based	the spike and 2007-10-30 2007-10-30 Dil. 1 the spike an Spike Amount 100	d spike du Spike Amount 100 d spike du Matrix Result <0.500 d spike du	Ma Re <0 plicate r Rec. 96	esult. sult .500 esult. Re Lim 85 -	Ana Prej Re 9 c. nit 115	lyzed B pared B ec	y: AR y: AR Limit 85 - 115 RPD Limit 20 y: AR
Percent recovery is based on the s Laboratory Control Spike (Le QC Batch: 42564 Prep Batch: 36733 Param Chloride Percent recovery is based on the s Param Chloride Percent recovery is based on the s Laboratory Control Spike (Le QC Batch: 42605	spike result. CS-1) LC Res 94 spike result. LCSD Result 95.7 spike result. CS-1)	RPD is Date An QC Pre CS ult .7 RPD is Units mg/Kg RPD is Date An QC Pre	based on the second sec	the spike and 2007-10-30 2007-10-30 Dil. 1 the spike an Spike Amount 100 the spike an 2007-10-30	d spike du Spike Amount 100 d spike du Matrix Result <0.500 d spike du	Ma Re <0 plicate r <u>Rec.</u> 96 plicate r	esult. sult .500 esult. Re Lim <u>85 -</u> esult.	Ana Prej Re 9 c. nit 115	lyzed B pared B ec. 5 RPD 1	y: AR y: AR Rec. Limit 85 - 115 RPD Limit 20 y: AR y: AR
Percent recovery is based on the s Laboratory Control Spike (Le QC Batch: 42564 Prep Batch: 36733 Param Chloride Percent recovery is based on the s Param Chloride Percent recovery is based on the s Laboratory Control Spike (Le QC Batch: 42605	Spike result. CS-1) LC Res 94 Spike result. LCSD Result 95.7 Spike result.	RPD is Date An QC Pre S ult .7 RPD is <u>mg/Kg</u> RPD is Date An QC Pre	based on the second sec	the spike and 2007-10-30 2007-10-30 Dil. 1 the spike an Spike Amount 100 the spike an 2007-10-30	d spike du Spike Amount 100 d spike du Matrix Result <0.500 d spike du	Ma Re <0 plicate r <u>Rec.</u> 96 plicate r	esult. sult .500 esult. Re Lim 85 -	Ana Prej Re 9 c. nit 115	lyzed B pared B ec. 5 8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	y: AR y: AR Limit 85 - 115 RPD Limit 20 y: AR

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

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride	101	mg/Kg	1	100	< 0.500	101	85 - 115	1	20

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

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Laboratory Control Spike (LCS-1)

QC Batch: Prep Batch:	Date Analyzed: QC Preparation:	Analyzed By: Prepared By:	

	LCS			Spike	Mati			Rec.
Param	Result	Units	Dil.	Amount	Resu			Limit
Chloride	96.2	mg/Kg	1	100	<0.5	00 9	6	85 - 115
Percent recovery is based or	n the spike result. RPI) is based on t	he spike an	ld spike dur	olicate res	sult.		
	LCSD		Spike	Matrix		Rec.		RPD
Param		nits Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride	97.2 mg	/Kg 1	100	< 0.500	97	85 - 115	1	20
Percent recovery is based of	n the spike result. RPI) is based on t	he spike an	ıd spike duş	olicate res	sult.		
Laboratory Control Spi	ke (LCS-1)							
QC Batch: 42607	Dat	e Analyzed:	2007-10-3	1		Ana	lyzed B	y: AR
Prep Batch: 36770	QC	Preparation:	2007-10-3	1		Pre	pared B	y: AR
	LCS			Spike	Mati	rix		Rec.
			75.11	-				
Param	Result	Units	Dil.	Amount	Rest	ш к	ec.	Limit
Param Chloride	Result 98.1	Units mg/Kg	$\frac{Dil.}{1}$	Amount 100	<0.5		ec8	
	98.1	mg/Kg	1	100	< 0.5	00 9		
Chloride	98.1	mg/Kg	1 the spike ar	100	< 0.5	00 9		
Chloride	98.1 n the spike result. RPI LCSD	mg/Kg	1	100 id spike duj	< 0.5	00 9 sult.		85 - 115
Chloride Percent recovery is based o	98.1 n the spike result. RPI LCSD Result U:	mg/Kg D is based on t	1 the spike ar Spike	100 nd spike duj Matrix	<0.5 olicate res	00 9 sult. Rec.	8	85 - 115 RPD
Chloride Percent recovery is based o Param	98.1 n the spike result. RPI LCSD Result U 99.1 mg	mg/Kg D is based on t nits Dil. ;/Kg 1	1 the spike ar Spike Amount 100	100 nd spike duy Matrix Result <0.500	<0.5 olicate res <u>Rec.</u> 99	00 9 sult. Rec. Limit 85 - 115	8 RPD	85 - 115 RPD Limit
Chloride Percent recovery is based o Param Chloride Percent recovery is based o	98.1 n the spike result. RPI LCSD Result U 99.1 mg n the spike result. RPI	mg/Kg D is based on t nits Dil. 5/Kg 1 D is based on t	1 the spike ar Spike Amount 100	100 nd spike duy Matrix Result <0.500	<0.5 olicate res <u>Rec.</u> 99	00 9 sult. Rec. Limit 85 - 115	8 RPD	85 - 115 RPD Limit
Chloride Percent recovery is based o Param Chloride Percent recovery is based o Matrix Spike (MS-1)	98.1 n the spike result. RPI LCSD Result U 99.1 mg n the spike result. RPI Spiked Sample: 139812	mg/Kg D is based on t nits Dil. g/Kg 1 D is based on t 2	1 Spike an Amount 100 the spike an	100 nd spike duy Matrix Result <0.500 nd spike duy	<0.5 olicate res <u>Rec.</u> 99	00 9 sult. Rec. Limit 85 - 115	8 RPD	85 - 115 RPD Limit
Chloride Percent recovery is based o Param Chloride Percent recovery is based o Matrix Spike (MS-1) QC Batch: 42274	98.1 n the spike result. RPI LCSD Result U 99.1 mg n the spike result. RPI Spiked Sample: 139812 Dat	mg/Kg D is based on t nits Dil. 5/Kg 1 D is based on t 2 2 de Analyzed:	1 Spike an Amount 100 the spike an 2007-10-2	100 nd spike duy Matrix Result <0.500 nd spike duy 3	<0.5 olicate res <u>Rec.</u> 99	00 9 sult. Rec. Limit 85 - 115 sult. An	8 RPD 1	85 - 115 RPD Limit 20 By: LD
Chloride Percent recovery is based o Param Chloride Percent recovery is based o Matrix Spike (MS-1)	98.1 n the spike result. RPI LCSD Result U 99.1 mg n the spike result. RPI Spiked Sample: 139812 Dat	mg/Kg D is based on t nits Dil. g/Kg 1 D is based on t 2	1 Spike an Amount 100 the spike an	100 nd spike duy Matrix Result <0.500 nd spike duy 3	<0.5 olicate res <u>Rec.</u> 99	00 9 sult. Rec. Limit 85 - 115 sult. An	8 RPD 1	85 - 115 RPD Limit 20 By: LD
Chloride Percent recovery is based o Param Chloride Percent recovery is based o Matrix Spike (MS-1) QC Batch: 42274	98.1 n the spike result. RPI LCSD Result U 99.1 mg n the spike result. RPI Spiked Sample: 139812 Dat	mg/Kg D is based on t nits Dil. 5/Kg 1 D is based on t 2 2 be Analyzed:	1 Spike an Amount 100 the spike an 2007-10-2	100 nd spike duy Matrix Result <0.500 nd spike duy 3	<0.5 olicate res <u>Rec.</u> 99	00 9 sult. Rec. Limit 85 - 115 sult. An Pre	8 RPD 1	85 - 115 RPD Limit 20 By: LD
Chloride Percent recovery is based o Param Chloride Percent recovery is based o Matrix Spike (MS-1) QC Batch: 42274	98.1 n the spike result. RPI LCSD Result U 99.1 mg n the spike result. RPI Spiked Sample: 139814 Dat QC	mg/Kg D is based on t nits Dil. 5/Kg 1 D is based on t 2 2 be Analyzed:	1 Spike an Amount 100 the spike an 2007-10-2 2007-10-2	100 nd spike duy Matrix Result <0.500 nd spike duy 3 3	<0.5 olicate res <u>Rec.</u> 99 olicate res	00 9 sult. Rec. Limit 85 - 115 sult. An Pre	8 RPD 1 alyzed E pared E	85 - 115 RPD Limit 20 By: LD by: LD

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
DRO		249	mg/Kg	1	250	<13.4	100	30.2 - 201.4	11	20
Percent recovery is b	ased on the spik	e result.	RPD is	based or	n the spike a	and spike o	luplicat	e result.		
	MS	MSI)			Spike		MS M	SD	Rec.
Surrogate	Result	Resu	lt	Units	Dil.	Amour	nt	Rec. R	ec.	\mathbf{Limit}
n-Triacontane	127	120) n	ng/Kg	1	150		85 8	0	10 - 194

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Matrix Spike (MS-1) Spiked Sample: 139757

QC Batch:	42329	Date Analyzed:	2007-10-23	Analyzed By:	\mathbf{DC}
Prep Batch:	36547	QC Preparation:	2007-10-23	Prepared By:	DC

	MS			Spike	Matrix		Rec.
Param	Result	\mathbf{Units}	Dil.	\mathbf{Amount}	Result	Rec.	Limit
Benzene	0.847	mg/Kg	1	1.00	<0.00110	85	65.7 - 119.1
Toluene	0.900	mg/Kg	1	1.00	< 0.00150	90	47.7 - 153.8
Ethylbenzene	0.939	mg/Kg	1	1.00	< 0.00160	94	73.5 - 126.3
Xylene	2.87	mg/Kg	1	3.00	<0.00410	96	73.6 - 125.9

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

	MSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Benzene	0.910	mg/Kg	1	1.00	< 0.00110	91	65.7 - 119.1	7	20
Toluene	0.952	mg/Kg	1	1.00	< 0.00150	95	47.7 - 153.8	6	20
Ethylbenzene	0.966	mg/Kg	1	1.00	< 0.00160	97	73.5 - 126.3	3	20
Xylene	2.94	mg/Kg	1	3.00	< 0.00410	98	73.6 - 125.9	2	20

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

	MS	MSD			Spike	MS	MSD	Rec.
Surrogate	\mathbf{Result}	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	0.651	0.662	mg/Kg	1	1	65	66	51 - 109.6
4-Bromofluorobenzene (4-BFB)	0.707	0.636	mg/Kg	1	1	71	64	60.3 - 124.3

Matrix Spike (MS-1) Spiked Sample: 139812

QC Batch:	42333	Date Analyzed:	2007-10-23	Analyzed By:	DC
Prep Batch:	36547	QC Preparation:	2007-10-23	Prepared By:	DC

	MS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
GRO	5.99	mg/Kg	1	10.0	<0.739	60	10 - 102.2

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

	MSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
GRO	5.56	mg/Kg	1	10.0	<0.739	56	10 - 102.2	7	20

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

	MS	MSD			Spike	MS	MSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	0.514	0.553	mg/Kg	1	1	51	55	47.2 - 84.2
4-Bromofluorobenzene (4-BFB)	0.823	0.825	Mg_	1	1	82	82	58 - 162.6

Matrix Spike (MS-1) Spiked Sample: 139868

QC Batch:	42558	Date Analyzed:	2007-10-30	Analyzed By:	AR
Prep Batch:	36730	QC Preparation:	2007-10-30	Prepared By:	AR

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	MS			Spike	Mat			Rec.
Param	Result	Units	Dil.	Amount	Res		.ec.	Limit
Chloride	17500	mg/Kg	50	5000	1285	5.7 9	93	85 - 115
Percent recovery is based	on the spike result. RP	D is based on	the spike a	nd spike du	olicate re	sult.		
	MSD		Spike	Matrix		Rec.		RPD
Param		nits Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride	17500 m	g/Kg 50	5000	12855.7	93	85 - 115	0	20
Percent recovery is based	on the spike result. RP	D is based on	the spike a	nd spike du	olicate re	sult.		
Matrix Spike (MS-1)	Spiked Sample: 13987	'8						
QC Batch: 42563	Da	te Analyzed:	2007-10-3	30		An	alyzed E	Sv: AR
Prep Batch: 36732		Preparation:	2007-10-3				epared B	-
			8				1	5
	MS			Spike	Mat	rix		Rec.
Param	Result	Units	Dil.	Amount	Res	ult R	lec.	Limit
Chloride	7610	mg/Kg	50	5000	2580	1.18	.00	85 - 11
Percent recovery is based	on the spike result. RP	D is based on	the spike a	nd spike du	plicate re	sult.		
	MSD		Spike	Matrix		Rec.		RPL
Param	Result U	nits Dil.	Amount	\mathbf{Result}	Rec.	Limit	RPD	Limi
Chloride	7660 m	g/Kg 50	5000	2580.18	102	85 - 115	1	20
QC Batch: 42564 Prep Batch: 36733		te Analyzed: C Preparation:	2007-10- 2007-10-				alyzed I epared E	•
				a				n
Param	MS Result	Units	Dil	Spike A mount	Mat			Rec. Limit
Chloride	12600	mg/Kg	Dil 50	Amount 5000	Res 7862		lec 95	85 - 11
Percent recovery is based				·····		·	90	00 - 110
	MSD		Spike	Matrix	F	Rec.		RPD
Param		Jnits Dil.	Amount	Result	Rec.	Limit	RPD	Limi
Chloride		g/Kg 50	5000	7862.34	95	85 - 115	$\frac{10}{0}$	20
Percent recovery is based								
Matrix Spike (MS-1)	Spiked Sample: 1398	98						
QC Batch: 42605	Da	te Analyzed:	2007-10-3	30		An	alyzed l	By: AR
Prep Batch: 36766		C Preparation:					epared I	
	NAC			C. !! -	1.5			р
Param	MS Besult	Units	ы	Spike	Mat		200	Rec.
Param Chloride	Result 8140			Amount	Res		lec.	Limit
Unioride	8140	mg/Kg	50	5000	3369	1.30	95	85 - 11

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

Work Order: 7102211 Rock Queen Unit 13

Page Number: 23 of 27

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	8190	mg/Kg	50	5000	3369.35	96	85 - 115	1	20
Percent recovery is b	ased on the spike result.	RPD is b	ased on t	the spike a	nd spike du	olicate r	esult.		
Matrix Spike (MS	-1) Spiked Sample: 1	39908							
QC Batch: 42606 Prep Batch: 36769		Date Ana QC Prep	•	2007-10-3 2007-10-3				alyzed E pared B	
	М	s			Spike	Ма	trix		Rec.
Param	Res		Units	Dil.	Amount	Res		ec.	Limit
Chloride	51:		ig/Kg	50	5000			18	85 - 115
Percent recovery is b	ased on the spike result.			the spike a	nd spike du				
	MSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride	5180	mg/Kg	50	5000	222.652	99	85 - 115	1	20
Matrix Spike (MS	-1) Spiked Sample: 1								
QC Batch: 42607		Date Ana	•	2007-10-3	31		Ana	alyzed E	By: AR
Prep Batch: 36770		QC Prep	aration:	2007-10-3	81		Pre	pared B	y: AR
	М	c			Spike	Ма	trix		Rec.
Param	Res		Units	Dil.	Amount			ec.	Limit
Chloride	569		g/Kg	50	5000			06	85 - 115
Percent recovery is b	ased on the spike result.	RPD is b	ased on t	the spike a	nd spike du	plicate r	esult.		
	MSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride	5740	mg/Kg	50	5000	906.404	97	85 - 115	1	20
Percent recovery is b	ased on the spike result.	RPD is b	ased on t	the spike a	nd spike du	plicate r	esult.		
Standard (ICV-1)									
QC Batch: 42274		Date Ana	alyzed:	2007-10-23	3		An	alyzed F	By: LD
		ICVs	ICV		ICVs		Percent		
	T T •/	True	Fou		Percent	1	Recovery		Date
Param Flag DRO	Units	Conc. 250	Con 23		Recovery 94		Limits		nalyzed
	mg/Kg	200	23	J			85 - 115	2(007-10-23
Standard (CCV-1)									
QC Batch: 42274		Date Ana	alyzed:	2007-10-23	}		An	alyzed I	By: LD

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D		T T •/-	CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date
Param DRO	Flag	Units	<u>Conc.</u> 250	<u>Conc.</u> 230	Recovery 92	Limits 85 - 115	Analyzed 2007-10-23
360		mg/Kg		230		00 - 110	2007-10-23
Standard	(ICV-1)						
QC Batch:	42329		Date Anal	yzed: 2007-10-	23	Anal	yzed By: DC
			ICVs	ICVs	ICVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Benzene		mg/Kg	0.100	0.106	106	85 - 115	2007-10-23
Toluene		mg/Kg	0.100	0.107	107	85 - 115	2007-10-23
Ethylbenze	ne	mg/Kg	0.100	0.106	106	85 - 115	2007-10-23
Xylene		mg/Kg	0.300	0.322	107	85 - 115	2007-10-23
Standard	(CCV-1)						
QC Batch:	42329		Date Anal	yzed: 2007-10-	-23	Anal	yzed By: DC
			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Benzene		mg/Kg	0.100	0.0855	86	85 - 115	2007-10-23
Toluene		mg/Kg	0.100	0.0864	86	85 - 115	2007-10-23
Ethylbenze	ne	mg/Kg	0.100	0.0862	86	85 - 115	2007-10-23
Xylene		mg/Kg	0.300	0.262	87	85 - 115	2007-10-23
Standard	(ICV-1)						
QC Batch:	. ,		Date Anal	yzed: 2007-10	-23	Anal	yzed By: DC
			ICVs	ICVs	ICVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
GRO		mg/Kg	1.00	0.926	93	85 - 115	2007-10-23
Standard	(CCV-1)						
QC Batch:	42333		Date Anal	yzed: 2007-10	-23	Anal	yzed By: DC
			CCVs	CCVs	\mathbf{CCVs}	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
GRO		mg/Kg	1.00	0.957	96	85 - 115	2007-10-23

Standard (ICV-1)

QC Batch: 42558

Date Analyzed: 2007-10-30

Analyzed By: AR

Report Date 3132	e: November 1	1, 2007		Vork Order: 710 Rock Queen Un		Page Nu	umber: 25 of 27
Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride	· · · · · · · · · · · · · · · · · · ·	mg/Kg	100	101	101	85 - 115	2007-10-30
Standard (CCV-1)						
QC Batch:	-		Date Anal	yzed: 2007-10	-30	Anal	yzed By: AR
			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride		mg/Kg	100	99.0	99	85 - 115	2007-10-30
Standard (ICV-1)						
QC Batch:	42563		Date Anal	yzed: 2007-10	-30	Anal	yzed By: AR
			ICVs	ICVs	ICVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride		mg/Kg	100	96.4	96	85 - 115	2007-10-30
Standard (CCV-1)						
QC Batch:	42563		Date Anal	lyzed: 2007-10)-30	Anal	yzed By: AR
			CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride		mg/Kg	100	104	104	85 - 115	2007-10-30
Standard (ICV-1)						
QC Batch:	42564		Date Anal	lyzed: 2007-10)-30	Anal	yzed By: AR
			ICVs	ICVs	ICVs	Percent	_
Danam	El ····	TI- "+-	True	Found	Percent	Recovery	Date
Param Chloride	Flag	Units mg/Kg	<u>Conc.</u> 100	<u> </u>	Recovery 103	Limits 85 - 115	Analyzed 2007-10-30
		mg/Kg	100		103	<u> 85 - 115</u>	2007-10-3
Standard (,		Det - A				
QC Batch:	42004		Date Anal	-			yzed By: AR
			CCVs	CCVs	CCVs	Percent	-
Param	Flor	Units	True	Found	Percent	Recovery	Date Analumad
Chloride	Flag	mg/Kg	<u>Conc.</u> 100	<u>Conc.</u> 96.6	Recovery 97	Limits 85 - 115	Analyzed 2007-10-30
omoride			100	50.0	31	00 - 110	2001-10-3

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Page Number: 26 of 27

Stanuaru (ICV-I)	CV-1)	Standard
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QC Batch:	42605		Date Anal	yzed: 2007-10	-30	Anal	yzed By: AR
			ICVs	ICVs	ICVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride		mg/Kg	100	97.9	98	85 - 115	2007-10-30
Standard (CCV-1)						
QC Batch:	42605		Date Anal	yzed: 2007-10	-30	Anal	yzed By: AR
			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride		mg/Kg	100	102	102	85 - 115	2007-10-3
Standard (ICV-1)						
QC Batch:	42606		Date Ana	yzed: 2007-10	-31	Anal	yzed By: AR
			ICVs	ICVs	ICVs	Percent	
_			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzec
Chloride		mg/Kg	100	102	102	85 - 115	2007-10-3
Standard (CCV-1)						
QC Batch:	42606		Date Ana	lyzed: 2007-10)-31	Anal	yzed By: AR
			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride		mg/Kg	100	98.2	98	85 - 115	2007-10-3
Standard (ICV-1)						
QC Batch:	42607		Date Ana	lyzed: 2007-10)-31	Ana	yzed By: AR
			ICVs	ICVs	ICVs	Percent	
_			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzeo
Chloride		mg/Kg	100	99.9	100	85 - 115	2007-10-3

QC Batch: 42607

Date Analyzed: 2007-10-31

Analyzed By: AR

Report Date 3132	e: November 1	, 2007		Vork Order: 71 Rock Queen Un		Page N	umber: 27 of 27
			CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride		mg/Kg	100	100	100	85 - 115	2007-10-31

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No. of Street

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Analvais	A VALA	nur		(432) 682-4559	CLIENT NAME:		CCIS	LAB I.D. DATE NUMBER	134984 jointer	885 Ninio7	ସିଥିତ ଯାନ୍ତାଟୀ	Reg licitation	BEB IIOINGIO	Ben allela	ମ୍ବର ଜ୍ୟାନାମ	891 Nolifica	Bran willeler	BT DIBLET	RELIFICIUMIED BY: (Sumature)	Reginequisitien Hr. (Sugnature)	RELIVQUISHED BY: (Sumeture)	HECKLANC TABORATORY:	CUTT: DUCIEROS STATE	EALPHE CONDITION RHEA	Please Fill out all co

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Lubbock, Texas 79424 El Paso, Texas 79922 Midland, Texas 79703 E-Mail: lab@traceanalysis.com

800 • 378 • 1296 888 • 588 • 3443

FAX 806 • 794 • 1298 FAX 915•585•4944 915•585•3443 432 • 689 • 6301 FAX 432+689+6313 817 • 201 • 5260

Analytical and Quality Control Report

Jeff Kindley **Highlander Environmental Services** 1910 N. Big Spring Street Midland, TX, 79705

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Report Date: March 31, 2008

Work Order: 8032657

Project Name: Celero/Rock Queen Unit 13 **Project Number:** 3132

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

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
154780	SB-10 8-10'	soil	2008-03-25	00:00	2008-03-26
154781	SB-10 18-20'	soil	2008-03-25	00:00	2008-03-26
154782	SB-10 28-30'	soil	2008-03-25	00:00	2008-03-26
154783	SB-10 38-40'	soil	2008-03-25	00:00	2008-03-26
154784	SB-10 48-50'	soil	2008-03-25	00:00	2008-03-26
154785	SB-11 8-10'	soil	2008-03-25	00:00	2008-03-26
154786	SB-11 18-20'	soil	2008-03-25	00:00	2008-03-26
154787	SB-11 28-30'	soil	2008-03-25	00:00	2008-03-26
154788	SB-11 38-40'	soil	2008-03-25	00:00	2008-03-26
154789	SB-11 48-50'	soil	2008-03-25	00:00	2008-03-26
154790	SB-12 8-10'	soil	2008-03-25	00:00	2008-03-26
154791	SB-12 18-20'	soil	2008-03-25	00:00	2008-03-26
154792	SB-12 28-30'	soil	2008-03-25	00:00	2008-03-26
154793	SB-12 38-40'	soil	2008-03-25	00:00	2008-03-26
154794	SB-12 48-50'	soil	2008-0 3- 25	00:00	2008-03-26
154795	SB-13 8-10'	soil	2008-03-25	00:00	2008-03-26
154796	SB-13 18-20'	soil	2008-03-25	00:00	2008-03-26
154797	SB-13 28-30'	soil	2008-03-25	00:00	2008-03-26
154798	SB-13 38-40'	soil	2008-03-25	00:00	2008-03-26
154799	SB-13 48-50'	soil	2008-03-25	00:00	2008-03-26

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

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

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Dr. Blair Leftwich, Director

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

Page 2 of 10

Report Date: March 31, 2008 3132

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Analytical Report

Sample: 154780 - SB-10 8-10'

Analysis: QC Batch: Prep Batch:	Chloride (Titration) 46932 40367	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-Cl B 2008-03-28 2008-03-28	Prep Method: Analyzed By: Prepared By:	AR
Parameter	Flag	RL Result	Units	Dilution	\mathbf{RL}
Chloride		3410	mg/Kg	50	2.00

Sample: 154781 - SB-10 18-20'

Analysis: QC Batch: Prep Batch:	Chloride (Titration) 46932 40367	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-Cl B 2008-03-28 2008-03-28	Prep Method: Analyzed By: Prepared By:	AR
Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		2100	mg/Kg	50	$\bar{2.00}$

Sample: 154782 - SB-10 28-30'

Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	46932	Date Analyzed:	2008-03-28	Analyzed By:	\mathbf{AR}
Prep Batch:	40367	Sample Preparation	: 2008-03-28	Prepared By:	AR
		\mathbf{RL}			
Parameter	Flag	\mathbf{Result}	Units	Dilution	\mathbf{RL}
Chloride		5020	mg/Kg	50	2.00

Sample: 154783 - SB-10 38-40'

Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	46932	Date Analyzed:	2008-03-28	Analyzed By:	\mathbf{AR}
Prep Batch:	40367	Sample Preparation	: 2008-03-28	Prepared By:	AR
		\mathbf{RL}			
Parameter	\mathbf{Flag}	Result	Units	Dilution	\mathbf{RL}
Chloride		5310	mg/Kg	50	2.00

Sample: 154784 - SB-10 48-50'

Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	46932	Date Analyzed:	2008-03-28	Analyzed By:	AR
Prep Batch:	40367	Sample Preparation:	2008-03-28	Prepared By:	AR

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		\mathbf{RL}			
Parameter	Flag	Result	Units	Dilution	RL
Chloride		3720	mg/Kg	50	2.00

Sample: 154785 - SB-11 8-10'

Analysis: QC Batch: Prep Batch:	Chloride (Titration) 46932 40367	Analytical Method: Date Analyzed: Sample Preparation	2008-03-28	Prep Method: Analyzed By: Prepared By:	AR
~		RL			DI
Parameter	Flag	Result	Units	Dilution	RL
Chloride		1130	mg/Kg	50	2.00

Sample: 154786 - SB-11 18-20'

Analysis: QC Batch: Prep Batch:	Chloride (Titration) 46932 40367	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-Cl B 2008-03-28 2008-03-28	Prep Method: Analyzed By: Prepared By:	AR
_		RL			
Parameter	Flag	Result	Units	Dilution	\mathbf{RL}
Chloride		1120	mg/Kg	50	2.00

Sample: 154787 - SB-11 28-30'

Analysis: QC Batch:	Chloride (Titration) 46932	Analytical Method: Date Analyzed:	SM 4500-Cl B 2008-03-28	Prep Method: Analyzed By:	,
Prep Batch:		Sample Preparation:		Prepared By:	
		RL			
Parameter	Flag	\mathbf{Result}	Units	Dilution	\mathbf{RL}
Chloride		230	mg/Kg	50	2.00

Sample: 154788 - SB-11 38-40'

Analysis: QC Batch: Prep Batch:	Chloride (Titration) 46932 40367	Analytical Method: Date Analyzed: Sample Preparation	2008-03-28	Prep Method: Analyzed By: Prepared By:	AR
		\mathbf{RL}			
Parameter	Flag	Result	Units	Dilution	\mathbf{RL}
Chloride		175	mg/Kg	50	2.00

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Page Number: 5 of 10

Sample: 154789 - SB-11 48-50'

Analysis: QC Batch: Prep Batch:	Chloride (Titration) 46933 40368	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-Cl B 2008-03-28 2008-03-28	Prep Method: Analyzed By: Prépared By:	\mathbf{AR}
		RL		· .	
Parameter	Flag	Result	Units	Dilution	\mathbf{RL}
Chloride		106	mg/Kg	50	2.00

Sample: 154790 - SB-12 8-10'

Analysis: QC Batch: Prep Batch:	Chloride (Titration) 46933 40368	Analytical Method Date Analyzed: Sample Preparation	2008-03-28	Prep Method: Analyzed By: Prepared By:	AR
		RL			
Parameter	\mathbf{Flag}	Result	Units	Dilution	\mathbf{RL}
Chloride		<100	mg/Kg	50	2.00

Sample: 154791 - SB-12 18-20'

Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	46933	Date Analyzed:	2008-03-28	Analyzed By:	AR
Prep Batch:	40368	Sample Preparation:	2008-03-28	Prepared By:	AR
		RL			
Parameter	\mathbf{Flag}	Result	Units	Dilution	\mathbf{RL}
Chloride		<100	mg/Kg	50	2.00

Sample: 154792 - SB-12 28-30'

Analysis: QC Batch: Prep Batch:	Chloride (Titration) 46933 40368	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-Cl B 2008-03-28 2008-03-28	Prep Method: Analyzed By: Prepared By:	AR
		\mathbf{RL}			
Parameter	\mathbf{Flag}	Result	Units	Dilution	\mathbf{RL}
Chloride		<100	mg/Kg	50	2.00

Sample: 154793 - SB-12 38-40'

Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	'
QC Batch:	46933	Date Analyzed:	2008-03-28	Analyzed By:	\mathbf{AR}
Prep Batch:	40368	Sample Preparation:	2008-03-28	Prepared By:	AR
		RL			
Parameter	Flag	Result	Units	Dilution	\mathbf{RL}
Chloride		<100	mg/Kg	50	2.00

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Sample: 154794 - SB-12 48-50'

Analysis: QC Batch: Prep Batch:	Chloride (Titration) 46933 40368	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-Cl B 2008-03-28 2008-03-28	Prep Method: Analyzed By: Prepared By:	AR
D	171	RL	TT •.		DI
Parameter	Flag	Result	Units	Dilution	RL
Chloride		<100	mg/Kg	50	2.00

Sample: 154795 - SB-13 8-10'

Analysis: QC Batch: Prep Batch:	Chloride (Titration) 46933 40368	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-Cl B 2008-03-28 2008-03-28	Prep Method: Analyzed By: Prepared By:	AR
Parameter	Flag	RL Result	Units	Dilution	RL
Chloride			mg/Kg	50	2.00

Sample: 154796 - SB-13 18-20'

Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	46933	Date Analyzed:	2008-03-28	Analyzed By:	AR
Prep Batch:	40368	Sample Preparation:	2008-03-28	Prepared By:	AR
		\mathbf{RL}			
Parameter	\mathbf{Flag}	Result	Units	Dilution	\mathbf{RL}
Chloride		374	ng/Kg	50	2.00

Sample: 154797 - SB-13 28-30'

Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	46933	Date Analyzed:	2008-03-28	Analyzed By:	AR
Prep Batch:	40368	Sample Preparation:	2008-03-28	Prepared By:	AR
		RL			
Parameter	\mathbf{Flag}	Result	Units	Dilution	\mathbf{RL}
Chloride		132	mg/Kg	50	2.00

Sample: 154798 - SB-13 38-40'

Analysis: QC Batch: Prep Batch:	Chloride (Titration) 46933 40368	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-Cl B 2008-03-28 2008-03-28	Prep Method: Analyzed By: Prepared By:	ÁR
		\mathbf{RL}			
Parameter	\mathbf{Flag}	Result	Units	Dilution	RL
Chloride		136 1	mg/Kg	50	2.00

Report Date: 3132	March 3	1, 2008		Work Ord Celero/Rock				Page Number:	7 of 10
Sample: 154	4799 - SE	3-13 48-50'							
Analysis: QC Batch: Prep Batch:	Chloride 46934 40369	(Titration)	D	nalytical Met ate Analyzed ample Prepar	:	SM 4500-Cl B 2008-03-28 2008-03-28		Prep Method: Analyzed By: Prepared By:	N/A AR AR
				RL					DI
Parameter Chloride		Flag	Res 1	34		Units g/Kg	Dilut	50	RL 2.00
Method Bla	unk (1)	QC Batch: 46932							
QC Batch: Prep Batch:	46932 40367			Analyzed: Preparation:	2008-0 2008-0			Analyzed By: Prepared By:	AR AR
Description		DL -			DL		T]:4		זמ
Parameter Chloride		Flag		Res <0.8			Units mg/Kg		RL 2
Method Bla	ank (1)	QC Batch: 46933							
QC Batch: Prep Batch:	469 3 3 40368			e Analyzed: Preparation:	2008-0 2008-0			Analyzed By: Prepared By:	AR AR
Parameter		Flag		M	DL		Units		RL
Chloride				<0.5			mg/Kg	······	2
Method Bla	unk (1)	QC Batch: 46934	ł						
QC Batch: Prep Batch:	46934 40369			e Analyzed: Preparation:	2008-0 2008-0			Analyzed By: Prepared By:	AR AR
Parameter		Flag		M	DL		Units		RL
Chloride				<0.8		······	mg/Kg		2
Laboratory	Control	Spike (LCS-1)							
QC Batch: Prep Batch:	46932 40367			e Analyzed: Preparation:	2008-0 2008-0			Analyzed By: Prepared By:	
Param			LCS .esult	Units	Dil.	Spike Amount	Matrix Result		Rec. Limit
Chloride			103	mg/Kg	<u></u> 1	100	<0.500		$\frac{11111}{5 - 115}$

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

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride	96.9	mg/Kg	1	100	< 0.500	97	85 - 115	6	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:	46933	Date Analyzed:	2008-03-28	Analyzed By:	AR
Prep Batch:	40368	QC Preparation:	2008-03-28	Prepared By:	AR

	LCS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Chloride	101	mg/Kg	1	100	< 0.500	101	85 - 115

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

	LCSD			Spike	Matrix		Rec.		RPD
Param	\mathbf{Result}	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride	102	mg/Kg	1	100	< 0.500	102	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:	46934	Date Analyzed:	2008-03-28	Analyzed By:	\mathbf{AR}
Prep Batch:	40369	QC Preparation:	2008-03-28	Prepared By:	AR

	LCS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Chloride	97.3	mg/Kg	1	100	< 0.500	97	85 - 115

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

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride	98.4	mg/Kg	1	100	< 0.500	98	85 - 115	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: 154788

QC Batch: Prep Batch:	46932 40367		e Analyzed: Preparation:	2008-03 2008-03				l By: AR l By: AR
		MS			Spike	Matrix		Rec.
Param		Result	Units	Dil.	Amount	Result	Rec.	Limit
Chloride		5070	mg/Kg	50	5000	175.439	98	85 - 115

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Report Date: March 31, 2008 3132

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matrix spike	es continued										
		MSD			Spike	Matrix		Rec.			RPD
Param		Result	Units	Dil.	Amount	Result	Rec.	Limit	: R	PD	Limi
		MSD			Spile	Motrix		Pag			חסס
Param		Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	- D	PD	RPD
Chloride		5000	mg/Kg	50	5000	175.439	<u>96</u>	85 - 11		1	Limi 20
					· · · · ·				10	1	
Percent reco	overy is based	on the spike result.	RPD is t	based on	the spike ar	id spike duj	plicate re	esult.			
Matrix Sp	ike (MS-1)	Spiked Sample: 1	54798								
QC Batch:	46933		Date An	alvzed:	2008-03-2	8			Analyz	ed By	: AR
Prep Batch:	40368		QC Prep	v	2008-03-2				Prepare	-	
-									-	Ū	
		М	IS			Spike	Mat	trix			Rec.
Param		Res	sult	Units	Dil.	Amount	Res	ult	Rec.		Limit
Chloride		50	40 n	ng/Kg	50	5000	136.	571	98	8	85 - 115
Percent reco	overy is based	on the spike result.	RPD is t	oased on	the spike a	nd spike du	plicate re	esult.			
		MSD			Spike	Matrix		Rec.			RPD
Param						D	n	T 1 4.		DD	T inn it
aram		\mathbf{Result}	\mathbf{Units}	Dil.	Amount	\mathbf{Result}	Rec.	Limit	t R	PD	LIIIII
Chloride Percent reco	overy is based ike (MS-1)	Result 5100 on the spike result. Spiked Sample: 1	mg/Kg . RPD is t	50	5000	136.571	99	85 - 11		1	Limit 20
Chloride Percent reco Matrix Sp QC Batch:	ike (MS-1) 46934	5100 on the spike result.	mg/Kg RPD is b 54800 Date An	50 pased on alyzed:	5000 the spike ar 2008-03-2	136.571 1d spike du	99	85 - 11 esult.	15 Analyz	1 ed By	20 7: AR
Chloride Percent reco Matrix Sp QC Batch:	ike (MS-1) 46934	5100 on the spike result.	mg/Kg . RPD is b .54800	50 pased on alyzed:	5000 the spike ar 2008-03-2	136.571 1d spike du	99	85 - 11 esult.	15	1 ed By	20 7: AR
Chloride Percent reco Matrix Sp QC Batch:	ike (MS-1) 46934	5100 on the spike result.	mg/Kg RPD is t 54800 Date An QC Prep	50 pased on alyzed:	5000 the spike ar 2008-03-2	136.571 1d spike du	99	85 - 11 esult.	15 Analyz	1 ed By	20 7: AR
Chloride Percent reco Matrix Sp QC Batch: Prep Batch: Param	ike (MS-1) 46934	5100 on the spike result. Spiked Sample: 1	mg/Kg RPD is t 54800 Date An QC Prep	50 pased on alyzed:	5000 the spike ar 2008-03-2	136.571 1d spike du 8 8	99 plicate re	85 - 11 esult. trix	15 Analyz	1 ed By ed By	20 7: AR 7: AR Rec. Limit
Chloride Percent reco Matrix Sp QC Batch: Prep Batch: Param	ike (MS-1) 46934	5100 on the spike result. Spiked Sample: 1 M	mg/Kg RPD is t 54800 Date An QC Prep IS sult	50 pased on alyzed: paration:	5000 the spike ar 2008-03-2 2008-03-2	136.571 nd spike du 8 8 8 Spike	99 plicate re Ma	85 - 11 esult. trix sult	15 Analyz Prepar	1 ed By ed By	20 7: AR 7: AR Rec. Limit
Chloride Percent reco Matrix Sp QC Batch: Prep Batch: Param Chloride	ike (MS-1) 46934 40369	5100 on the spike result. Spiked Sample: 1 M Res	mg/Kg RPD is b 54800 Date An QC Prep IS sult 90 n	50 pased on alyzed: paration: Units ng/Kg	5000 the spike ar 2008-03-2 2008-03-2 Dil. 50	136.571 id spike du 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	99 plicate re Ma Res 292	85 - 11 esult. trix sult 949	15 Analyz Prepar Rec.	1 ed By ed By	20 7: AR 7: AR Rec. Limit
Chloride Percent reco Matrix Sp QC Batch: Prep Batch: Param Chloride	ike (MS-1) 46934 40369	5100 on the spike result. Spiked Sample: 1 M Res 51	mg/Kg RPD is b 54800 Date An QC Prep IS sult 90 n	50 pased on alyzed: paration: Units ng/Kg	5000 the spike ar 2008-03-2 2008-03-2 Dil. 50	136.571 id spike du 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	99 plicate re Ma Res 292	85 - 11 esult. trix sult 949	15 Analyz Prepar Rec. 98	1 ed By ed By	20 7: AR 7: AR Rec. Limit 85 - 115
Chloride Percent reco Matrix Sp QC Batch: Prep Batch: Param Chloride Percent reco Param	ike (MS-1) 46934 40369	5100 on the spike result. Spiked Sample: 1 M Res 51 on the spike result. MSD Result	mg/Kg RPD is b 54800 Date An QC Prep Sult 90 n . RPD is b Units	50 pased on alyzed: paration: Units ng/Kg pased on Dil.	5000 the spike ar 2008-03-2 2008-03-2 Dil. 50 the spike ar	136.571 ad spike du 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	99 plicate re Ma Res 292	85 - 11 esult. trix sult 949 esult. Rec. Limit	15 Analyz Prepar <u>Rec.</u> 98 t R	1 ed By ed By	20 7: AR 7: AR Rec. Limit 85 - 115 RPD
Chloride Percent reco Matrix Sp QC Batch: Prep Batch: Param Chloride	ike (MS-1) 46934 40369	5100 on the spike result. Spiked Sample: 1 MRes 51 on the spike result. MSD	mg/Kg RPD is b 54800 Date An QC Prep IS sult 90 n . RPD is b	50 pased on alyzed: paration: Units ng/Kg pased on	5000 the spike ar 2008-03-2 2008-03-2 Dil. 50 the spike ar Spike	136.571 id spike du 8 8 8 Amount 5000 id spike du Matrix	99 plicate re Ma Res 292 plicate re	85 - 11 esult. trix sult .949 esult. Rec.	15 Analyz Prepar <u>Rec.</u> 98 t R	1 ed By	20 7: AR 7: AR Rec.
Chloride Percent reco Matrix Sp QC Batch: Prep Batch: Param Chloride Percent reco Param Chloride	ike (MS-1) 46934 40369 overy is based	5100 on the spike result. Spiked Sample: 1 M Res 51 on the spike result. MSD Result	mg/Kg RPD is b 54800 Date An QC Prep Sult 90 n RPD is b Units mg/Kg	50 pased on alyzed: paration: Units ng/Kg pased on Dil. 50	5000 the spike an 2008-03-2 2008-03-2 Dil. 50 the spike an Spike Amount 5000	136.571 id spike du 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	99 plicate re Ma Res 292 plicate re Rec. 99	85 - 11 esult. sult 949 esult. Rec. Limit 85 - 1	15 Analyz Prepar <u>Rec.</u> 98 t R	1 ed By ed By	20 7: AR 7: AR Rec. Limit 85 - 115 RPD Limi
Chloride Percent reco Matrix Sp QC Batch: Prep Batch: Param Chloride Percent reco Param Chloride	ike (MS-1) 46934 40369 overy is based	5100 on the spike result. Spiked Sample: 1 MRes 51 on the spike result. MSD Result 5250	mg/Kg RPD is b 54800 Date An QC Prep Sult 90 n RPD is b Units mg/Kg	50 pased on alyzed: paration: Units ng/Kg pased on Dil. 50	5000 the spike an 2008-03-2 2008-03-2 Dil. 50 the spike an Spike Amount 5000	136.571 id spike du 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	99 plicate re Ma Res 292 plicate re Rec. 99	85 - 11 esult. sult 949 esult. Rec. Limit 85 - 1	15 Analyz Prepar <u>Rec.</u> 98 t R	1 ed By ed By	20 7: AR 7: AR Rec. Limit 85 - 115 RPD Limi
Chloride Percent reco Matrix Sp QC Batch: Prep Batch: Param Chloride Percent reco Param Chloride Percent reco	ike (MS-1) 46934 40369 overy is based	5100 on the spike result. Spiked Sample: 1 MRes 51 on the spike result. MSD Result 5250	mg/Kg RPD is b 54800 Date An QC Prep Sult 90 n RPD is b Units mg/Kg	50 pased on alyzed: paration: Units ng/Kg pased on Dil. 50	5000 the spike an 2008-03-2 2008-03-2 Dil. 50 the spike an Spike Amount 5000	136.571 id spike du 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	99 plicate re Ma Res 292 plicate re Rec. 99	85 - 11 esult. sult 949 esult. Rec. Limit 85 - 1	15 Analyz Prepar <u>Rec.</u> 98 t R	1 ed By ed By	20 7: AR 7: AR Rec. Limit 85 - 115 RPD Limit
Chloride Percent reco Matrix Sp QC Batch: Prep Batch: Prep Batch: Param Chloride Percent reco Param Chloride Percent reco Standard (ike (MS-1) 46934 40369 overy is based overy is based (ICV-1)	5100 on the spike result. Spiked Sample: 1 MRes 51 on the spike result. MSD Result 5250	mg/Kg RPD is b 54800 Date An QC Prep Sult 90 n RPD is b Units mg/Kg	50 pased on alyzed: paration: Units ng/Kg pased on Dil. 50 pased on	5000 the spike an 2008-03-2 2008-03-2 Dil. 50 the spike an Spike Amount 5000	136.571 nd spike du 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	99 plicate re Ma Res 292 plicate re Rec. 99	85 - 11 esult. trix sult 949 esult. Rec. Limit 85 - 11 esult.	15 Analyz Prepare <u>Rec.</u> 98 t R	1 ed By ed By	20 7: AR 7: AR Rec. Limit 85 - 115 RPD Limit 20
Chloride Percent reco Matrix Sp QC Batch: Prep Batch: Param Chloride Param Chloride	ike (MS-1) 46934 40369 overy is based overy is based (ICV-1)	5100 on the spike result. Spiked Sample: 1 MRes 51 on the spike result. MSD Result 5250	mg/Kg RPD is t 54800 Date An QC Prep (S sult 90 n RPD is t Units mg/Kg . RPD is t	50 pased on alyzed: paration: Units ng/Kg pased on Dil. 50 pased on alyzed:	5000 the spike ar 2008-03-2 2008-03-2 Dil. 50 the spike ar Spike Amount 5000 the spike ar 2008-03-28	136.571 nd spike du 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	99 plicate re Ma Res 292 plicate re Rec. 99 plicate r	85 - 11 esult. trix sult 949 esult. Rec. Limit 85 - 11 esult.	15 Analyz Prepare <u>Rec.</u> 98 t R	1 ed By ed By	20 7: AR 7: AR Rec. Limit 85 - 115 RPD Limit
Chloride Percent reco Matrix Sp QC Batch: Prep Batch: Prep Batch: Param Chloride Percent reco Param Chloride Percent reco Standard (ike (MS-1) 46934 40369 overy is based overy is based (ICV-1)	5100 on the spike result. Spiked Sample: 1 MRes 51 on the spike result. MSD Result 5250	mg/Kg RPD is t 54800 Date An QC Prep Sult 90 n RPD is t Units mg/Kg RPD is t CNs	50 pased on alyzed: paration: Units ng/Kg pased on Dil. 50 pased on alyzed: IC	5000 the spike ar 2008-03-2 2008-03-2 Dil. 50 the spike ar Spike Amount 5000 the spike ar 2008-03-28	136.571 nd spike du 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	99 plicate re Ma Res 292 plicate re Rec. 99 plicate r	85 - 11 esult. trix sult 949 esult. Rec. Limit 85 - 11 esult.	Analyz Prepare Rec. 98 t R 15	1 ed By ed By 2PD 1 ed By	20 7: AR 7: AR Rec. Limit 85 - 115 RPD Limit 20 y: AR
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Report Data 3132	e: March 31, 2	2008		ork Order: 8032 o/Rock Queen		Page N	umber: 10 of 10
Standard ((CCV-1)						
QC Batch:	46932		Date Anal	yzed: 2008-03	-28	Anal	yzed By: AR
			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride		mg/Kg	100	98.9	99	85 - 115	2008-03-28
Standard ((ICV-1)						
QC Batch:	46933		Date Anal	lyzed: 2008-03	-28	Anal	yzed By: AR
			ICVs	ICVs	ICVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride		mg/Kg	100	99.8	100	85 - 115	2008-03-28
Standard ((CCV-1)						
QC Batch:	46933		Date Ana	lyzed: 2008-03	-28	Anal	yzed By: AR
			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride		mg/Kg	100	100	100	85 - 115	2008-03-28
Standard ((ICV-1)						
QC Batch:	46934		Date Ana	lyzed: 2008-03	3-28	Anal	yzed By: AR
			ICVs	ICVs	ICVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride		mg/Kg	100	99.4	99	85 - 115	2008-03-2
Standard ((CCV-1)						
QC Batch:	46934		Date Ana	lyzed: 2008-03	3-28	Ana	lyzed By: AR
			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits 85 - 115	Analyzed
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APPENDIX B PERMEABILITY/SIEVE ANALYSIS

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Hinas, Joleen

From: Hines, Jolean

Sent: Monday, September 28, 2005 3:46 PM

To: John P Pellicer'

Subject: Cover Bucket Density & Clay K-Sat

John,

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I have attached the results for the density of the cover material 'as is' in the 5-gal bucket, and the saturated hydraulic conductivity for the clay (remoled at 90%). Please let me know how to proceed.

Thank you,

Joleen

Joleon Hines Daniel B. Stephens & Associates Laboratory 5840 Osuna Rd., NE Albuquerque, NM 87109

505.889.7752 505.889.0258(fax) hines@dbstephens.com www.dbstephens.com

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11/02/2007 07:42 5053470435 Sec. 26. 2005 3:55PM



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Daniel B. Stephens & Associates, Inc.

Data for Initial Moisture Content, Bulk Density, Porosity, and Percent Saturation

Job Name: Gandy Marley Job Number: LB05.0208.00 Sample Number: Cover (Bucket) Ring Number: N/A Depth: N/A

Test Date: 23-Sep-05

Field weight' of sample (g): 21536.00 Tare weight, ring (g): 0.00 Tare weight, cep/plate/epoxy (g): 0.00

> Dry weight of semple (g): 20511.00 Sample volume (c:n³): 14884,53 Assumed particle density: 2.85

initial Volumetric Moisture Content (% vol): 6.9 Initial Grevimetric Moisture Content (% g/g): 5.0 Dry bulk density (g/cm³): 1.38 Wet bulk density (g/cm³): 1.45 Calculated Porcelly (% vol): 48.0

Percent Saturation: 14.3

Comments:

" Weight including tares NA = Not analyzed

> Laboratory analysis by: D. O'Dowd Data entered by: D. O'Dowd Checked by: J. Hines



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Daniel B. Stephens & Associates, Inc.

Summary of Saturated Hydraulic Conductivity Tests

		Kaal		Method a	of Analysis	
Semple Nu	lmber	(cm/sə	c)	Constant Head Flexible Wall	Falling Head Flexible Wall	
Clay		1, 5E-0	B		×	
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Daniel B. Stephens & Associates, Inc.	·
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SAMPLE RECEIPT FORM	
	CEIVED: 9/16/05
PROJECT #:	· .
DBS&A	
PROJECT #:	
1) Are the custody seals on the cooler intact?	NA
2) Are the custody seals on the sample containers intact?	Yes
3) Are there Chain of Custody(COC), or other directive shipping papers?	Yes
4) Is the COC complete?	See Note
5) Is the COC in agreement with the samples received?	See Note
6) Did all the samples arrive intact?	Yes
7) Comments	
7) Comments Three samples arrived, each in full 5-gallon buckets, in good c clay sample is being prepared today and testing will begin soo further instuction on the Cover and Caliche samples. Also awa clay core sample.	n. Will await
Three samples arrived, each in full 5-gallon buckets, in good c clay sample is being prepared today and testing will begin soo further instuction on the Cover and Caliche samples. Also awa	n. Will await aiting in-situ
Three samples arrived, each in full 5-gallon buckets, in good c clay sample is being prepared today and testing will begin soo further instuction on the Cover and Caliche samples. Also awa clay core sample. If you have any questions or concerns please contact Joleen H 889-7752,	n. Will await aiting in-situ lines at (505)
Three samples arrived, each in full 5-gallon buckets, in good c clay sample is being prepared today and testing will begin soo further instuction on the Cover and Caliche samples. Also awa clay core sample. If you have any questions or concerns please contact Joleen H 889-7752. NOTE: Samples will be held for a period of 30 days after the completion of te	n. Will await aiting in-situ lines at (505) esting. After
Three samples arrived, each in full 5-gallon buckets, in good c clay sample is being prepared today and testing will begin soo further instuction on the Cover and Caliche samples. Also awa clay core sample. If you have any questions or concerns please contact Joleen H 889-7752,	n. Will await aiting in-situ lines at (505) esting. After
Three samples arrived, each in full 5-gallon buckets, in good c clay sample is being prepared today and testing will begin soo further instuction on the Cover and Caliche samples. Also awa clay core sample. If you have any questions or concerns please contact Joleen H 889-7752. NOTE: Samples will be held for a period of 30 days after the completion of te	n. Will await aiting in-situ lines at (505) esting. After
Three samples arrived, each in full 5-gallon buckets, in good c clay sample is being prepared today and testing will begin soo further instuction on the Cover and Caliche samples. Also awa clay core sample. If you have any questions or concerns please contact Joleen H 889-7752. NOTE: Samples will be held for a period of 30 days after the completion of te	n. Will await aiting in-situ lines at (505) esting. After
Three samples arrived, each in full 5-gallon buckets, in good of clay sample is being prepared today and testing will begin soo further instuction on the Cover and Caliche samples. Also awa clay core sample. If you have any questions or concerns please contact Joleen H 889-7752. NOTE: Samples will be held for a period of 30 days after the completion of te 30 days samples will be disposed of locally unless DBS&A receives other inst	n. Will await aiting in-situ lines at (505) esting. After
Three samples arrived, each in full 5-gallon buckets, in good c clay sample is being prepared today and testing will begin soo further instuction on the Cover and Caliche samples. Also awa clay core sample. If you have any questions or concerns please contact Joleen H 889-7752. NOTE: Samples will be held for a period of 30 days after the completion of te 30 days samples will be disposed of locally unless DBS&A receives other inst Signature:	n. Will await aiting in-situ lines at (505) esting. After

provided from said testing, constitute mere test results using standardized methods, and cannot be used to disqualify DBS&A, and any and all reports provided from said testing, constitute mere test results using standardized methods, and cannot be used to disqualify DBS&A from rendering any professional or expert opinion. Because of the nature of the results of our testing, and the limited scope of the Lab's undertaking, you hereby walve any claim of conflict of interest by DBS&A in the event professional or expert opinion is requested of qualified professionals or experts within DBS&A, for or against any party. Other than the express warranty that the testing utilized under this Contract uses standard methods, DBS&A

APPENDIX C BORING LOG/MONITOR WELL CONSTRUCTION DIAGRAM

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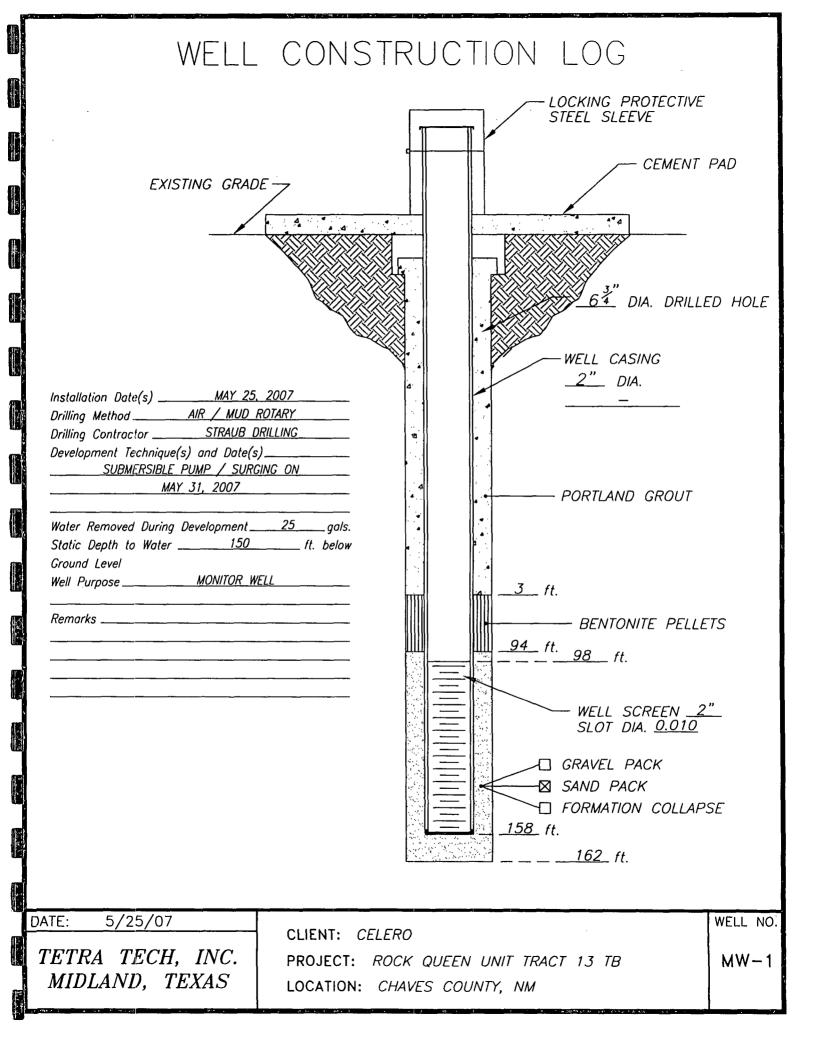
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Boring/Well:	MW-1
Project Number:	2972
Client:	Celero Energy
Site Location:	Rock Queen Tract 13 Tank Battery
Location:	Chaves County, New Mexico
Total Depth	160
Date Installed:	05/25/07

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DEPTH (Ft)	OVM	SAMPLE DESCRIPTION
0~5		Buff to tan sandy limestone
5-10		Buff to tan sandy limestone
10-15	·	Buff to tan sandy limestone with chert
15-20	·	Buff sandy limestone with chert
20-25		Buff to tan calcareous sand
25-30		Buff to tan calcareous sand
30-35		Buff to tan calcareous sand
35-40		Buff to tan calcareous sand
40-45		Buff to tan calcareous sand
45-50		Tan fine sand - v.f. sand
50-55		Tan fine sand - v.f. sand
55-60		Tan fine sand - v.f. sand
63-65		Tan fine sand - v.f. sand
68-70		Tan fine sand - v.f. sand
73-75		Tan fine sand - v.f. sand
78-80		Tan fine sand - v.f. sand
83-85		Tan fine sand - v.f. sand
88-90		Tan fine sand - v.f. sand
93-95	`	Tan fine sand - v.f. sand
98-100		Tan fine sand - v.f. sand
103-105		Tan fine sand - v.f. sand
108-110		Tan fine sand - v.f. sand
113-115		Tan fine sand - v.f. sand
118-120		Tan fine sand - v.f. sand
123-125		Tan fine sand - v.f. sand
128-130		Tan fine sand - v.f. sand

Boring/Well:MW-1Project Number:2972Client:Celero EnergySite Location:Rock Queen Tract 13 Tank BatteryLocation:Chaves County, New MexicoTotal Depth160Date Installed:05/25/07

DEPTH (Ft)	OVM	SAMPLE DESCRIPTION
133-135		Tan fine sand - v.f. sand
138-140		Tan fine sand - v.f. sand
143-145		Tan fine sand - v.f. sand
148-150		Chert layer intermixed with red sand
153-155		Chert layer intermixed with red sand
158-160		Red sand

Total Depth is 160 feet

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Groundwater encountered at 117 feet

Boring/Well:	SB-1
Project Number:	3132
Client:	Celero Energy
Site Location:	Rock Queen Unit Tract # 13
Location:	Chavez County, New Mexico
Total Depth	100
Date Installed:	10/17/07

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DEPTH (Ft)	OVM	SAMPLE DESCRIPTION
0-5	10.5	Buff hard limestone with chert intermixed
5-10	9.8	buff hard fine grain sandy limestone
10-15	7.6	Buff/tan calcareous fine grain sand
15-20	2.6	Tan fine grain sand
25-30	2.5	Tan fine grain sand
35-40	2.4	Tan fine grain well sorted sand
45-50	2.2	Tan fine grain well sorted sand
55-60	2.1	Tan fine grain well sorted sand
65-70	2.6	Tan fine grain well sorted sand
75-80	2.5	Tan fine grain well sorted sand
85-90	2.4	Tan fine grain well sorted sand
95-100	2.2	Tan fine grain well sorted sand

Total Depth is 100 feet No Groundwater encountered during drilling

Boring/Well:SB-2Project Number:3132Client:Celero EnergySite Location:Rock Queen Unit Tract # 13Location:Chavez County, New MexicoTotal Depth50Date Installed:10/18/07

DEPTH (Ft)	OVM	SAMPLE DESCRIPTION
5-10	2.8	Buff hard limestone with chert and sand intermixed
15-20	2.7	Buff/tan fine grain sandy limestone
25-30	2.7	Tan fine grain sand
35-40	2.6	Tan fine grain sand
45-50	2.6	Tan fine grain sand

Total Depth is 50 feet

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Boring/Well:	SB-3
Project Number:	3132
Client:	Celero Energy
Site Location:	Rock Queen Unit Tract # 13
Location:	Chavez County, New Mexico
Total Depth	50
Date Installed:	10/18/07

DEPTH (Ft)	оум	SAMPLE DESCRIPTION
5-10	2.5	Tan/buff limestone with chert and sand intermixed
15-20	2.5	Buff/tan fine grain sandy limestone
25-30	2.6	Tan fine grain sand
35-40	2.7	Tan fine grain sand
45-50	2.8	Tan fine grain sand

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Total Depth is 50 feet No Groundwater encountered during drilling

Boring/Well:SB-4Project Number:3132Client:Celero EnergySite Location:Rock Queen Unit Tract # 13Location:Chavez County, New MexicoTotal Depth50Date Installed:10/18/07

DEPTH (Ft)	OVM	SAMPLE DESCRIPTION
5-10	2.2	Tan/buff limestone with chert intermixed with sand
15-20	1.9	Buff/tan fine grain calcareous sand
25-30	2.1	Tan fine grain well sorted sand
35-40	2.7	Tan fine grain well sorted sand
45-50	2.6	Tan fine grain well sorted sand

Total Depth is 50 feet

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Boring/Well:SB-5Project Number:3132Client:Celero EnergySite Location:Rock Queen Unit Tract # 13Location:Chavez County, New MexicoTotal Depth50Date Installed:10/18/07

DEPTH (Ft)	OVM	SAMPLE DESCRIPTION
5-10	2.7	Tan/buff limestone with chert and sand intermixed
15-20	2.8	Buff/tan fine grain sandy limestone
25-30	2.4	Tan fine grain well sorted sand
35-40	2.4	Tan fine grain well sorted sand
45-50	2.6	Tan fine grain well sorted sand

Total Depth is 50 feet

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Boring/Well:	SB-6
Project Number:	3132
Client:	Celero Energy
Site Location:	Rock Queen Unit Tract # 13
Location:	Chavez County, New Mexico
Total Depth	50
Date Installed:	10/18/07

DEPTH (Ft)	OVM	SAMPLE DESCRIPTION	
5-10	2.7	Tan/buff limestone with chert and sand intermixed	<u></u>
15-20	2.8	Buff/tan fine grain sandy limestone	
25-30	2.7	Tan fine grain well sorted sand	
35-40	2.6	Tan fine grain well sorted sand	
45-50	2.6	Tan fine grain well sorted sand	

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Total Depth is 50 feet No Groundwater encountered during drilling

Boring/Well:	SB-7
Project Number:	3132
Client:	Celero Energy
Site Location:	Rock Queen Unit Tract # 13
Location:	Chavez County, New Mexico
Total Depth	50
Date Installed:	10/18/07

DEPTH (Ft)	OVM	SAMPLE DESCRIPTION
5-10	2.4	Tan/buff limestone with chert and sand intermixed
15-20	2.6	Tan/buff limestone with chert and sand intermixed
25-30	2.5	Tan fine grain well sorted sand
35-40	2.4	Tan fine grain well sorted sand
45-50	2.3	Tan fine grain well sorted sand

Total Depth is 50 feet

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Boring/Well:	SB-8
Project Number:	3132
Client:	Celero Energy
Site Location:	Rock Queen Unit Tract # 13
Location:	Chavez County, New Mexico
Total Depth	50
Date Installed:	10/18/07

DEPTH (Ft)	OVM	SAMPLE DESCRIPTION
5-10	2.6	Tan/buff limestone with chert and sand intermixed
15-20	2.7	Tan/buff fine grain calcareous sand
25-30	2.7	Tan fine grain well sorted sand
35-40	2.6	Tan fine grain well sorted sand
45-50	2.5	Tan fine grain well sorted sand

Total Depth is 50 feet

Boring/Well:	SB-9
Project Number:	3132
Client:	Celero Energy
Site Location:	Rock Queen Unit Tract # 13
Location:	Chavez County, New Mexico
Total Depth	50
Date Installed:	10/18/07

DEPTH (Ft)	ΟVΜ	SAMPLE DESCRIPTION
5-10	2.6	Tan/buff limestone with chert and sand intermixed
15-20	2.7	Tan/buff fine grain sandy limestone
25-30	2.6	Tan fine grain well sorted sand
35-40	2.5	Tan fine grain well sorted sand
45-50	2.3	Tan fine grain well sorted sand

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Total Depth is 50 feet No Groundwater encountered during drilling

Boring/Well:	SB-10
Project Number:	3132
Client:	Celero Energy
Site Location:	Rock Queen Unit Tract # 13
Location:	Chavez County, New Mexico
Total Depth	50
Date Installed:	03/25/08

DEPTH (Ft)	OVM	SAMPLE DESCRIPTION	
5-10	1.3	Tan/buff fine grain sandy limestone (salty)	
. 15-20	1.4	Tan/buff calcareous sand	
25-30	1.2	Tan fine grain well sorted sand	
35-40	1.5	Tan fine grain well sorted sand	
45-50	1.7	Tan fine grain well sorted sand	

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Total Depth is 50 feet No Groundwater encountered during drilling

Boring/Well:SB-11Project Number:3132Client:Celero EnergySite Location:Rock Queen Unit Tract # 13Location:Chavez County, New MexicoTotal Depth50Date Installed:03/25/08

DEPTH (Ft)	OVM	SAMPLE DESCRIPTION
5-10	1.6	Tan/buff fine grain sandy limestone
15-20	1.5	Tan/buff calcareous sand
25-30	1.4	Tan fine grain well sorted sand
35-40	1.8	Tan fine grain well sorted sand
45-50	2.1	Tan fine grain well sorted sand

Total Depth is 50 feet

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Boring/Well:	SB-12
Project Number:	3132
Client:	Celero Energy
Site Location:	Rock Queen Unit Tract # 13
Location:	Chavez County, New Mexico
Total Depth	50
Date Installed:	03/25/08

DEPTH (Ft)	OVM	SAMPLE DESCRIPTION
5-10	1.8	Tan/buff fine grain sandy limestone
15-20	1.6	Tan/buff calcareous sand
25-30	1.7	Tan fine grain well sorted sand
35-40	1.9	Tan fine grain well sorted sand
45-50	2.0	Tan fine grain well sorted sand

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Total Depth is 50 feet No Groundwater encountered during drilling

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Boring/Well:	SB-13
Project Number:	3132
Client:	Celero Energy
Site Location:	Rock Queen Unit Tract # 13
Location:	Chavez County, New Mexico
Total Depth	50
Date Installed:	03/25/08

DEPTH (Ft)	OVM	SAMPLE DESCRIPTION
5-10	1.5	Tan/buff fine grain sandy limestone
15-20	1.7	Tan/buff calcareous sand
25-30	1.4	Tan fine grain well sorted sand
35-40	1.6	Tan fine grain well sorted sand
45-50	1.7	Tan fine grain well sorted sand

Total Depth is 50 feet No Groundwater encountered during drilling

APPENDIX D INITIAL C-141 & C-144

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Sec. 32

	1625 N. French Dr., Hobbs, NM 88240 Ei District II Ei 1301 W. Grand Avenue, Artesia, NM 88210 District III District III 1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505 Release Name of Company Celero Energy	nergy Mineral Oil Cons 1220 Sou Santa Notificatio	ls er uth Fo	rvation Div h St. Franc e, NM 875 n and Co OPERAT Contact Do	l Resources vision is Dr. 05 orrective A OR n Hale	,		ubmit 2 Copies District Office	Form C-141 ctober 10, 2003 to appropriate in accordance e 116 on back side of form Final Report
	Address 400 W. Illinois Midland, Texas 79705 Facility Name Rock Queen Bat. #13)	_	Facility Typ	No. 432-556-92 De oil	23			
1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1		Mineral Owne					Lease No.	302917.007	-51
							In In	Receiver Hobbs	
	Unit Letter Section Township Range Feet	from the Nor		South Line	Fect from the	East/V	Vest Lines (<u> א</u> א
	J 36 13S 31E 2400				2200	E	Vest Line (Chaves	<u></u>
_	Latitude	<u></u>		Longitud	le			122324253	
14 J. 20		NATUR	E	OF REL	EASE			10	
430	Type of Release salt water				Release 30 bbl			covered 18 bbl	
1	Source of Release water pump	•	_	7 am 10-3	lour of Occurrenc -07	c	8 am	our of Discovery	/
10.2 m	Was Immediate Notice Given? x Yes No [A Nat Dequired		If YES, To	Whom? Gary W	ink			
	D. W/L			Date and L	lour 10-3-07 3pr	<u> </u>		·····	
時に	Was a Watercourse Reached?	·			olume Impacting t		ercourse.		
		`						41 · ·	
State State	If a Watercourse was Impacted, Describe Fully.		: : : : : : : : : : : : : : : : : : : :		•••• • • • •			••••••	
	tin provident i transmissione			• •	· ••				
6 30 P48	Describe Cause of Problem and Remedial Action Take Had a nipple leak on the salt water pump. Nipple was i		wa	is picked up b	y a vacuum truck.	40 yrds	s. of soil was	picked up for di	sposal.
(1) (1) (1)		. •							
Parts.	Describe Area Affected and Cleanup Action Taken *								
Constant of the	30' x 200' area was affected. water was picked up with								
	or the environment. In addition, NMOCD acceptance	ile certain release C-141 report by ligate and remedi	en th iat	otifications ar e NMOCD m e contaminati	nd perform correc arked as "Final Re on that pose a thre	tive acti eport" d eat to gr	ions for releas oes not reliev ound water, s	ses which may e the operator o surface water, he	ndanger f liability uman health
1. Jan 4. E	1.11				OIL CON	SERV	ATION D	IVISION	
	Signature: Alon They				C	Ľ	ohuse	5 B	
Carling and	Printed Name: Don Hale			Approved by	District Entry Pa	DNME	NTAL EN	GINEER	0
	Title: Production Superintendent			Approval Dat	e: 10.9.07		Expiration Da	Ite: 12.10.	87
1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	E-mail Address.	<u>.</u>		Conditions of	Approval		7	7	. ,
	Date: 10-4-07 Phone:432	554 0225					1	Attached	
Particular of	Attach Additional Sheets If Necessary	-330-9223	_ L	SUDINI	PLAN OF F	INAC	רע א	······	
								Rf	#7/6/4

21 24 22	District I 1625 N. French Dr., Hobbs, N	IM 88240				New Mex						Form C-141
33	District II 1301 W. Grand Avenue, Artes	sia, NM 88210		Energy Mi	nerais	and Natura	Resources					1 June 10, 2003
Carlo Carlo	District III 1000 Rio Brazos Road, Aztec	, NM 87410				rvation Div				Submit 2 C District (opies t Office	to appropriate in accordance
	District IV 1220 S. St. Francis Dr., Santa					h St. Franc				wi	th Rule	e 116 on back side of form
		1C , 1414 87505				e, NM 875						
			Rele	ase Notific	catio	n and Co	orrective A	ction	(AME)	NDED)		
						OPERA	LOB		<u>`</u>	al Report	Ē	Final Report
1. S. W.	Name of Company: C	elero Energ	y II. LP				uce Woodard					
	Address: 400 W. Illing	Ų		nd, TX 79701		Telephone I	No. 432-686-18	83				
	Facility Name: Rock (Queen Unit	Tract #13	TB		Facility Typ	e: Pit at Tank B	Battery				
	Surface Owner State	<u>_</u>		Mineral C	Owner.	State	· <u>-</u> .		Lease N	lo.		
6 23	^a			LOC		N OF REI	FASE		<u></u>			
115 C	Unit Letter Section	Township	Range	Feet from the		South Line	Feet from the	East/W	est Line	County		
ALC:	G 36	135	31E							Chaves		
a A			<u>_</u>					L				
(Nether		Lat	itude _	33.14639°		~	de <u>103.775</u>	5 <u>00°</u>	<u> </u>			
				NAT	URE	OF REL						
14 15 V	Type of Release Oil & P Source of Release	roduced Wat	er				Release Unknow			Recovered N Hour of Dis		,
<u>1</u>						Unknown			N/A			
	Was Immediate Notice C		Yes 🗌	No 🗌 Not Re	awirad	If YES, To	Whom? won, NMOCD					
10 m 20	By Whom?				equireu	Date and H						
с¥?,	Bruce Woodard					Date and I	ioui					
	Was a Watercourse Reac		Yes 🖾 N			If YES, Vo	olume Impacting	the Wate	rcourse.			
				NO			······					
	If a Watercourse was Imp	pacted, Descr	ibe Fully.*									
Turket												
	Describe Cause of Proble This is an historic pit loc				nd is in	the process of	closing					
lis.												
1. a. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	Describe Area Affected a Pit has been dewatered.				has hee	n submitted fo	r approval					
	I hereby certify that the i	nformation g	iven above	is true and comp	plete to	the best of my	knowledge and u					
	regulations all operators public health or the envir											
5. 2. 3 5	should their operations h	ave failed to	adequately	investigate and	remedia	ate contaminat	ion that pose a thi	reat to gr	ound wate	r, surface wa	ater, hi	uman health
	or the environment. In a			tance of a C-141 7	report	does not reliev	e the operator of	responsi	bility for c	ompliance v	vith an	y other
1. S.	federal, state, or local la	ws and/or reg			[OIL CON	SFRV	ATION	DIVISIO)N	
	Signature: 10m	4/2	K K					<u>ODICI</u>		DIVISIC	<u>///</u>	
-	Signature:	pc	f_{-}			Anneared by	Approved by District Supervisor:					
2.85.71	Printed Name: Bruce Wo	oodard	•	<u></u>								
	Title: Engineer					Approval Da	te:		Expiration	Date:		
22.687.54	E-mail Address: bwooda	rd@celeroor	eray com			Conditions o	fApproval					
100 C	L-man Address. 0w000d	numerer of the	orgy.com				i Appiovai.			Attached	I 🗌	
630		ne: (432) 686-]							
	* Attach Additional Shee	ets If Neces	ary									

District.1 1625 N. French Dr., Hobbs, NM 88240 District.41 T30T W. Grand Avenue, Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec. NM 87410 District IV

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State of New Mexico **Energy Minerals and Natural Resources**

Oil Conservation Division 1220 South St. Francis Dr.

For drilling and production facilities, submit to appropriate NMOCD District Office. For downstream facilities, submit to Santa Fe

Form C-144 June 1, 2004

1220 S. St. Francis Dr., Santa Fc. NM 87505			or downstream facilities, submit to Santa Fe ffice
Is pit or b	Below-Gra elow-grade tan	the Tank Registration or C k covered by a "general plan"? Yes [or below-grade tank [] Closure of a pit or belo	
Operator Celero Energy H, LP Address: 400 West Minois, Suite 1601, Midland, 7		. (432) 686-1883	e-mail address: bwoodard@ceteroenergy.com
Facility or well name: Rock Queen Unit Tract 13 Tank 1 County: Chaves Surface Owner: Federal 🗀 State 🔀 Private 🎦 Indian J	Latitud	U/L. or Qtr/Qtr e 33.14639 N Longitude 103.7750f	
<u> Prôt</u>		Below-grade tank	
Type: Dritting Production Disposal		Volume:bbl Type of fluid:	
Workover 🔚 Emergency 🔀 Lined 🔯 – Unlined 🔲		Construction material:	
Linea 🕰 – Onlinea 🛄 Liner type: Fiberglas X. – Thickness Utakanowa – mil –	Clav 🗖	Double-wated, with leak detection? Tes	a not, explain why lot.
Pit Volume 14,000 bbt	/1		
	n 24.	Less than 50 feet	(20 points)
Depth to ground water (vertical distance from bottom of high water elevation of ground water.)	pit to seasonal	50 feet or more, but less than 100 feet	(10 points)
fingh water elevation of ground water.)		100 feet or more	(0 points) 0
Wellhead protection area: (Less than 200 feet from a p	ivera domestic	Yes	(20 points)
water source, or less than 1000 feet from all other water		No	(Opoints) 0
		Less than 200 feet	(20 points)
Distance to surface water: (horizontal distance to all w	etlands, playas,	200 feet or more, but less than 1000 feet	(10 points)
irrigation canals, ditches, and perennial and ephemeral	watercourses.)	1000 feet or more	(Ú points) 0
		Ranking Score (Total Points)	
Uthis is a mit closure: (1) Attach a diagram of the facili your are burying in place) onsite offsite If offsite			
emediation start date and end date. (4) Groundwater end			
5) Attach soil sample results and a diagram of sample lo			
			are inventorial, but never registered in 1997
Additional Comments: This registration is for information	tion nurnoses only	. THIS DIE WAS CONSIDUCIED IN THE 1900 S AND WE	
Additional Comments: This registration is for informat		. This pit was constructed in the 1900 S and we	the inventories, but never registered in 1997.
Additional Comments: This registration is for informa This pit is out of service and a work plan for closure is		This pit was constructed in the 1960's and we	
This pit is out of service and a work plan for closure is	being prepared.		
This pit is out of service and a work plan for closure is	being prepared.	This pit was constructed in the 1900's and we	
This pit is out of service and a work plan for closure is	being prepared.		
This pit is out of service and a work plan for closure is	being prepared.		
This pit is out of service and a work plan for closure is	being prepared.	t of my knowledge and belief. I further certil	ly that the above-described pit or below-grade to
This pit is out of service and a work plan for closure is 1 hereby certify that the information above is trac and o bas been/will be constructed or closed according to	being prepared.	t of my knowledge and belief. I further certil	ly that the above-described pit or below-grade to
This pit is out of service and a work plan for closure is This pit is out of service and a work plan for closure is Thereby certify that the information above is true and c bas been/will be constructed or closed according to Date: 6-15-2007	being prepared.	st of my knowledge and belief. I further certil tes [], a general permit [], or an (attached)	ly that the above-described pit or below-grade ta
This pit is out of service and a work plan for closure is Thereby certify that the information above is trac and o bass been/will be constructed or closed according to Date: 6-15-2007 Printed Name/Title Bruce Woodard, Engineer	being prepared.	st of my knowledge and belief. I further certil tes [], a general permit [], or an (attached) Signature	ly that the above-described pit or below-grade ta alternative OCD-approved plan []. See above [
This pit is out of service and a work plan for closure is This pit is out of service and a work plan for closure is Thereby certify that the information above is true and c bas been/will be constructed or closed according to Date: 6-15-2007	being prepared.	st of my knowledge and belief. I further certil tof my knowledge and be	y that the above-described pit or below-grade ta alternative OCD-approved plan □. See above [contents of the pit or tank contaminate ground wate
This pit is out of service and a work plan for closure is Thereby certify that the information above is trac and o bass been/will be constructed or closed according to Date: 6-15-2007 Printed Name/Title Bruce Woodard, Engineer Your certification and NMOCD approval of this applie otherwise endanger public health or the environment.	being prepared. complete to the bes NMOCD guidelin cation/closure does Nor does it relieve	st of my knowledge and belief. I further certil tes], a general permit [], or an (attached) Signature stort relieve the operator of liability should the the operator of its responsibility for compliance	ly that the above-described pit or below-grade ta alternative OCD-approved plan []. See above [] contents of the pit or tank contaminate ground wate with any other federal, state, or local laws and/or