## 1RP-1594

## Assessment and Workplan Report

## DATE: Oct. 2009



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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 Saltwater Plant #1, Unit Letter D, Section 26, Township 13 South, Range 31 East, Chaves County, New Mexico, Operated by Celero Energy II, LP (NMOCD 1RP#1594)

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 Saltwater Plant #1, located in Unit Letter D, Section 26, Township 13 South, Range 31 East, Chaves County, New Mexico (Site). The pit coordinates are N 33.16667° W 103.79917°. 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 Saltwater Plant #1 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 2,200 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.



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### **Groundwater and Regulatory**

Neither the New Mexico State Engineer's Office database nor the USGS database show any wells in Section 26, Township 13 South, Range 31 East. However, a monitor well installed at this site had a depth to groundwater of approximately 136 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 15, 2007 and March 24, 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 115 feet by 115 feet. One soil boring (SB-1) was installed in the center of the pit. The remaining boreholes (SB-2 through SB-12) 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 maximum 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 Cl-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.



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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 through SB-3, SB-5, SB-6, SB-10 and SB-11, while decreasing with depth in soil borings SB-4 and SB-7. Due to a belling out effect from the source pit area, chloride concentrations increased with depth in soil borings SB-8 and SB-12. Chloride concentrations were below 250 mg/L for perimeter soil boring SB-9.

### 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 north, south, and west 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 north of the pit approximately 50 feet and west approximately 100 feet and encompassing the same area northwest of the original pit.

### **Monitor Well Installation**

On May 24, 2007, Tetra Tech was onsite to oversee the installation of monitor well MW-1 located south of the closed pit. Monitor well MW-1 was drilled to a depth of 145 feet. Fifty 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 136 feet below ground surface (bgs) in both wells. On 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 154,000 mg/L chlorides. The results of the sampling are shown



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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

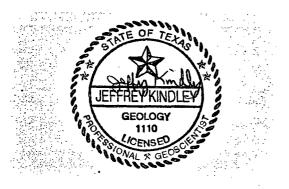
Between November and December 2007, the pit area was excavated to dimensions of 165 feet by 140 feet. Approximately 2,200 cubic yards of soil were excavated and transported offsite for disposal at Gandy-Marley of Lovington, New Mexico. A one foot thick clay liner was placed at 4 feet bgs in the excavation 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 north of the pit approximately 50 feet and west approximately 100 feet and encompassing the same area northwest of the original pit.

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.



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

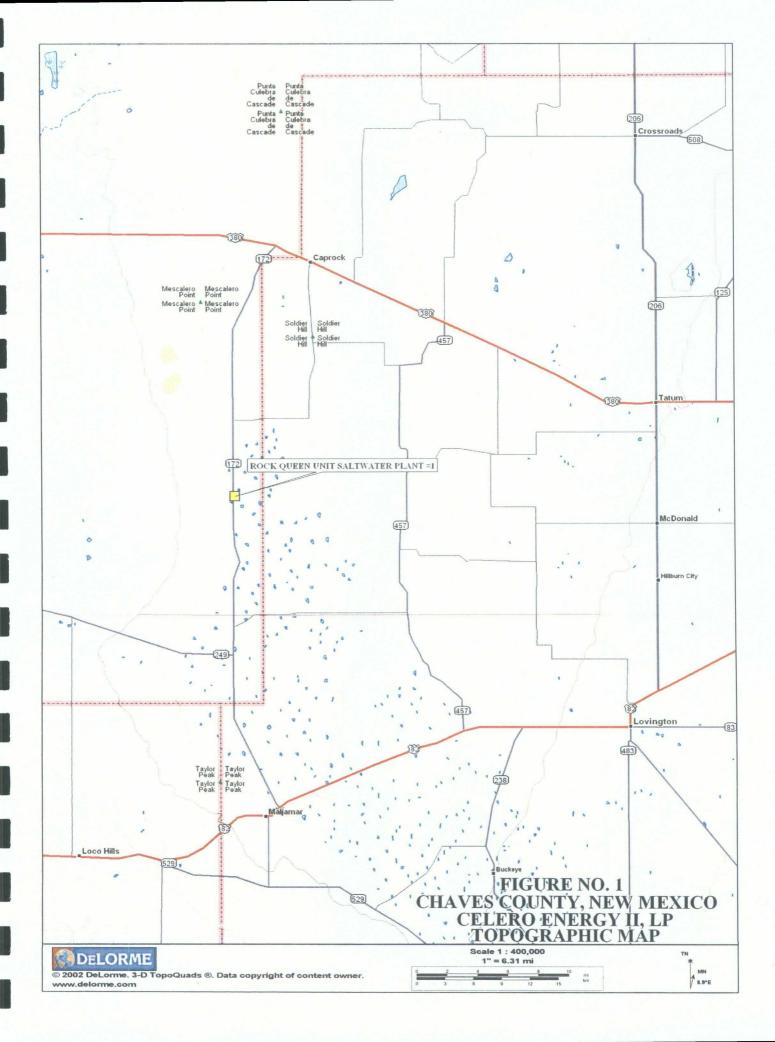
Tetra Tech

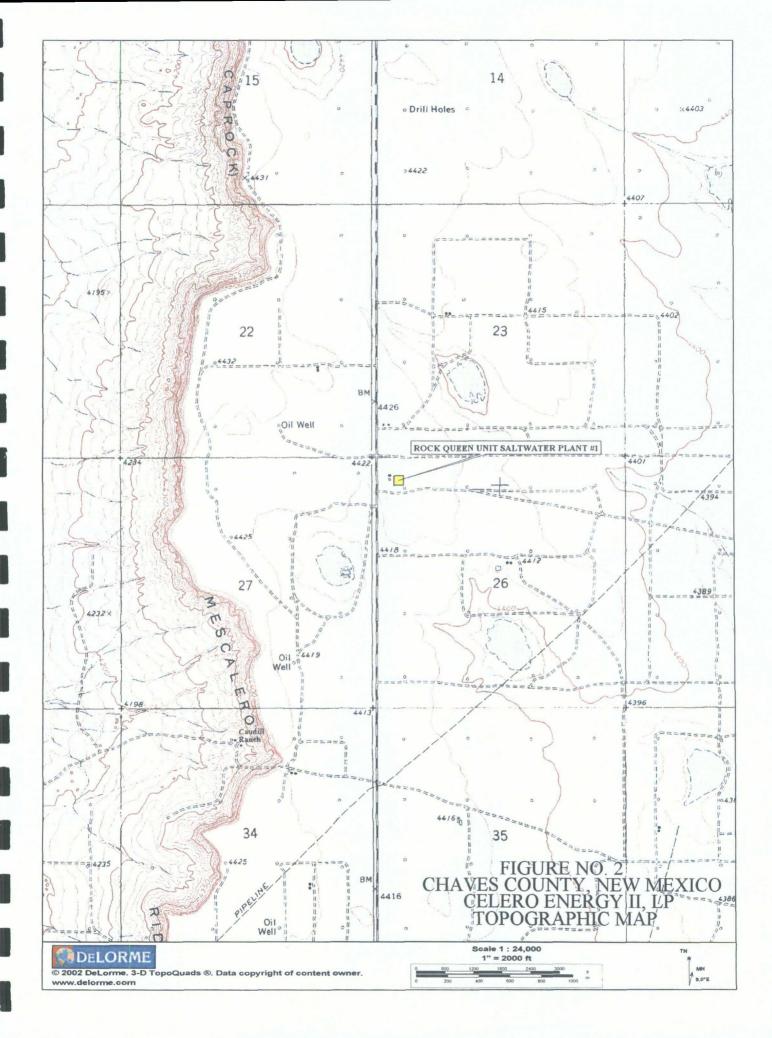
Jeffrey Kindley, P.G.

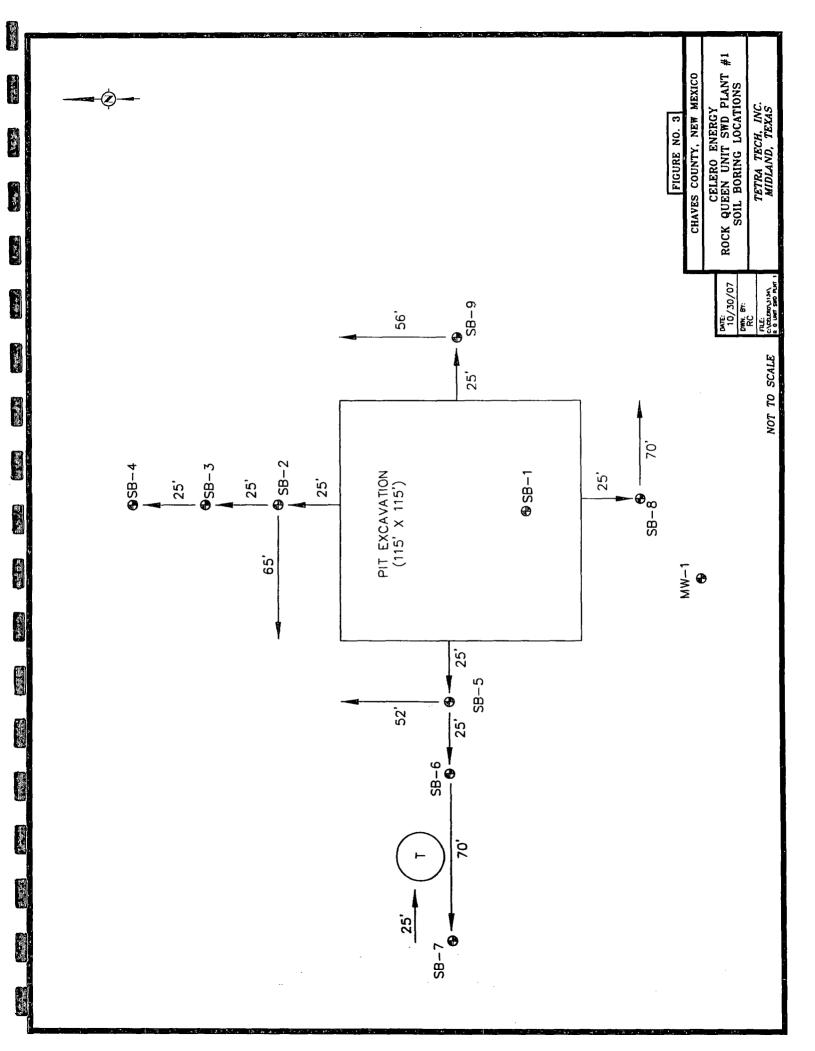
Senior Environmental Geologist

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Table 1 Celero Energy Rock Queen Plant #1 Chaves County, New Mexico Chloride (mg/kg) 12,300 11,000 2,010 7,240 7,640 8,780 8,380 9,980 7,310 8,070 7,510 6,170 5,720 4,570 5,400 4,200 2,610 1,090 1,920 2,170 ,200 ,780 1,700 ,700 ,410 2,340 6.730 7,880 4,320 696 366 170 127 35 mg/kg) Xylene 0.0671 Ethlybenzene (mg/kg) <0.0100 Toluene (mg/kg) <0.0100 Benzene (mg/kg) <0.0100 Total 3.37 TPH (mg/kg) 3.37 DRO <50.0 . Depth (ft) Excavation (38-40') 13-15') (58-60') (68-70') (78-80') (88-90') 98-100') (18-20') (28-30') (38-40') (18-20') (28-30') (38-40') (48-50') (18-20') (28-30') (38-40') (48-50') 18-20') 28-30') (38-40') 48-50') 48-50') 48-50') (28-30') (8-10') (8-10') 18-20') (8-10') (8-10') (8-10') (8-10') (3-5') Sampled 10/15/07 10/15/07 0/15/07 0/15/07 0/15/07 0/15/07 10/15/07 10/15/07 10/15/07 10/15/07 10/15/07 10/15/07 10/15/07 10/15/07 10/15/07 10/15/07 10/15/07 10/15/07 0/15/07 10/15/07 0/15/07 10/15/07 10/15/07 10/15/07 0/15/07 0/15/07 10/15/07 10/15/07 10/15/07 10/15/07 0/15/01 0/15/07 10/15/07 Date Sample SB-2 SB-3 SB-4 SB-5 SB-6 0 SB-1

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Table 1 Celero Energy Rock Queen Plant #1 Chaves County, New Mexico Chloride (mg/kg) 1,110 3,140 4,080 3,890 2,330 4,470 3,280 4,850 4,040 1,270 2,000 <100 <100 <100 <100 <100 <100 146 <100 <100 156 **720** 311 903 244 214 114 066 232 777 Xylene (mg/kg) Ethlybenzene (mg/kg) (mg/kg) Toluene Benzene (mg/kg) Total TPH (mg/kg) GRO DRO Excavation Depth (ft) (28-30') (38-40') (28-30') (38-40') (18-20') (28-30') (38-40') (38-40') (18-20') (28-30') 38-40') 18-20') 48-50') (18-20') (48-50') 18-20') 28-30') (18-20') (28-30') (38-40') 48-50') 48-50') 48-50') 48-50') (8-10') (8-10') (8-10') (8-10') (8-10') (8-10') Sampled 1 10/15/07 10/15/07 10/15/07 10/15/07 10/15/07 10/15/07 10/15/07 03/24/08 03/24/08 03/24/08 03/24/08 03/24/08 03/24/08 03/24/08 03/24/08 03/24/08 03/24/08 03/24/08 03/24/08 03/24/08 03/24/08 03/24/08 10/15/07 10/15/07 10/15/07 10/15/07 10/15/07 0/15/07 10/15/07 10/15/07 Sample SB-12 SB-10 SB-11 SB-8 SB-9 SB-7

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Table 2

## Celero Energy

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# Groundwater Analytical Results

# Rock Queen Unit Saltwater Injection Plant #1

## Chaves County, New Mexico

Sulfate         Chloride         TDS: (mg/L)         Hardness         PH           (mg/L)         (mg/L)         (mg/L)         (mg/L)         PH           1.800         154,000         231,100         26,600         6.45
Chioride TDS:(mgL) (mgL)) 155:(mgL)
Chioride Tr mg/L)
Chloric Chloric 154,00
Suifáte (mg/Ľ) 1,800
Alkalinity Alkalinity (mg/L) 154
Bicarbonate Alkalinity (mg/L)) 154
Carbonate Alkalinity (mg/L)
Hydroxide Alkalinity // (mg/L)
Dissolved Polassium/ (mg/L)
Dissoved Sodium (m9/L)
A. 620
Dissolved A.Calcium (mg/L) 3.040
Date Sampled
Monitor Wells MW-1

NS - Not sampled

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### APPENDIX A LABORATORY ANALYTICAL

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

Lubbock, Texas 79424 El Paso, Texas 79922 Midland, Texas 79703 Ft. Worth, Texas 76132 E-Mail: lab@traceanalysis.com

800+378+1296 888 • 588 • 3443

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

### 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 2, 2007

7102209 Work Order: 

Project Name: Rock Queen Plant #1 Project Number: 3134

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

	she rinary new neport and a		Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
139764	SB-1 (3-5')	soil	2007-10-15	00:00	2007-10-22
139765	SB-1 (8-10')	soil	2007-10-15	00:00	2007-10-22
139766	SB-1 (13-15')	soil	2007-10-15	00:00	2007-10-22
139767	SB-1 (18-20')	soil	2007-10-15	00:00	2007-10-22
139768	SB-1 (28-30')	soil	2007-10-15	00:00	2007-10-22
139769	SB-1 (38-40')	soil	2007-10-15	00:00	2007-10-22
139770	SB-1 (48-50')	soil	2007-10-15	00:00	2007-10-22
139771	SB-1 (58-60')	soil	2007-10-15	00:00	2007 - 10 - 22
139772	SB-1 (68-70')	soil	2007-10-15	00:00	2007-10-22
139773	SB-1 (78-80')	soil	2007-10-15	00:00	2007 - 10 - 22
139774	SB-1 (88-90')	soil	2007-10-15	00:00	2007 - 10 - 22
139775	SB-1 (98-100')	soil	2007-10-15	00:00	2007 - 10 - 22
139776	SB-2 (8-10')	soil	2007-10-15	00:00	2007 - 10 - 22
139777	SB-2 (18-20')	soil	2007-10-15	00:00	2007-10-22
139778	SB-2 (28-30')	soil	2007-10-15	00:00	2007 - 10 - 22
139779	SB-2 (38-40')	soil	2007-10-15	00:00	2007-10-22
139780	SB-2 (48-50')	soil	2007-10-15	00:00	2007-10-22
139781	SB-3 (8-10')	soil	2007-10-15	00:00	2007-10-22
139782	SB-3 (18-20')	soil	2007-10-15	00:00	2007-10-22
139783	SB-3 (28-30')	soil	2007-10-15	00:00	2007-10-22
139784	SB-3 (38-40')	soil	2007-10-15	00:00	2007-10-22
139785	SB-3 (48-50')	soil	2007-10-15	00:00	2007-10-22
139786	SB-4 (8-10')	soil	2007-10-15	00:00	2007-10-22
139787	SB-4 (18-20')	soil	2007-10-15	00:00	2007-10-22

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
139788	SB-4 (28-30')	soil	2007-10-15	00:00	2007-10-22
139789	SB-4 (38-40')	soil	2007-10-15	00:00	2007-10-22
139790	SB-4 (48-50')	soil	2007-10-15	00:00	2007-10-22
139791	SB-5 (8-10')	soil	2007-10-15	00:00	2007-10-22
139792	SB-6 (8-10')	soil	2007-10-15	00:00	2007-10-22
139793	SB-6 (18-20')	soil	2007-10-15	00:00	2007-10-22
139794	SB-6 (28-30')	soil	2007-10-15	00:00	2007-10-22
139795	SB-6 (38-40')	soil	2007-10-15	00:00	2007-10-22
139796	SB-6 (48-50')	soil	2007-10-15	00:00	2007-10-22
139797	SB-7 (8-10')	soil	2007-10-15	00:00	2007-10-22
139798	SB-7 (18-20')	soil	2007-10-15	00:00	2007-10-22
139799	SB-7 (28-30')	soil	2007-10-15	00:00	2007-10-22
139800	SB-7 (38-40')	soil	2007-10-15	00:00	2007-10-22
139801	SB-7 (48-50')	soil	2007-10-15	00:00	2007-10-22
139802	SB-8 (8-10')	soil	2007-10-15	00:00	2007-10-22
139803	SB-8 (18-20')	soil	2007-10-15	00:00	2007-10-22
139804	SB-8 (28-30')	soil	2007-10-15	00:00	2007-10-22
139805	SB-8 (38-40')	soil	2007-10-15	00:00	2007-10-22
139806	SB-8 (48-50')	soil	2007-10-15	00:00	2007-10-22
139807	SB-9 (8-10')	soil	2007-10-15	00:00	2007-10-22
139808	SB-9 (18-20')	soil	2007-10-15	00:00	2007-10-22
139809	SB-9 (28-30')	soil	2007-10-15	00:00	2007-10-22
139810	SB-9 (38-40')	soil	2007-10-15	00:00	2007-10-22
139811	SB-9 (48-50')	soil	2007-10-15	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 26 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Blain Laftu À

Dr. Blair Leftwich, Director

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### **Analytical Report**

### Sample: 139764 - SB-1 (3-5')

Analysis: QC Batch:	BTEX 42329		Analytical M Date Analy:	zed:	S 8021B 2007-10-23		Prep Me Analyze	d By: I	5035 DC
Prep Batch:	36547		Sample Pre	paration:	2007-10-23		Prepareo	d By: I	DC
			RI						
Parameter	Fla	g	Result	t	Units		Dilution		$\mathbf{RL}$
Benzene			< 0.0100	)	mg/Kg		1	(	0.0100
Toluene			< 0.0100	)	mg/Kg		1	(	0.0100
Ethylbenzene			< 0.0100	Ĵ	mg/Kg		1	(	0.0100
Xylene			0.067	<u> </u>	mg/Kg		1	(	0.0100
						Spike	Percent	Reco	overy
Surrogate		Flag	Result	Units	Dilution	Amount	Recovery		nits
Trifluorotolue	ene (TFT)		0.756	mg/Kg	1	1.00	76		- 116
	obenzene (4-BFB)		0.738	mg/Kg	1	1.00	74		144.2
Analysis: QC Batch: Prep Batch:	Chloride (Titrati 42369 36579	)	Date	vtical Meth Analyzed: de Preparat	2007-10		Analy	Method: zed By: red By:	N/A AR AR
•			RL	*					
Parameter	Flag		Result		Units		Dilution		RL
Chloride			7640		mg/Kg		50		2.00
Sample: 139 Analysis: QC Batch: Prep Batch:	9764 - SB-1 (3-5 TPH DRO 42274 36501	;')	Date Ana	al Method: alyzed: Preparation	Mod. 8015 2007-10-23 : 2007-10-23	в	Analy	Method: zed By: ared By:	N/A LD LD
Analysis: QC Batch:	TPH DRO 42274	;')	Date Ana Sample P	lyzed:	2007-10-23	В	Analy	zed By:	ĹĎ
Analysis: QC Batch: Prep Batch:	TPH DRO 42274 36501		Date Ana	lyzed:	2007-10-23 : 2007-10-23	В	Analy	zed By:	
Analysis: QC Batch: Prep Batch: Parameter	TPH DRO 42274		Date Ana Sample P RL	lyzed:	2007-10-23	В	Analy Prepa	zed By:	LD LD RL
Analysis: QC Batch:	TPH DRO 42274 36501		Date Ana Sample P RL Result	lyzed: reparation	2007-10-23 : 2007-10-23 Units mg/Kg	B Spike mount	Analy Prepa Dilution	rzed By: ared By:  Reco	LD LD

### Sample: 139764 - 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

Parameter	Flag		RL Result		Units		Dilution	$\mathbf{RL}$
GRO			3.37		mg/Kg		1	1.00
						Spike	Percent	Recovery
Surrogate		Flag	$\mathbf{Result}$	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TF	T)		0.630	mg/Kg	1	1.00	63	50.2 - 89.3
4-Bromofluorobenzer	ne (4-BFB)		0.808	mg/Kg	1	1.00	81	51.2 - 107.4

### Sample: 139765 - SB-1 (8-10')

Analysis: QC Batch: Prep Batch:	Chloride (Titration) 42369 36579	Analytical Met Date Analyzed Sample Prepar	: 2007-10-24	Prep Method: Analyzed By: Prepared By:	AR
<b>D</b>		RL	<b>.</b>		DI
Parameter	Flag	$\mathbf{Result}$	Units	Dilution	$\mathbf{RL}$
Chloride		8780	mg/Kg	50	2.00

### Sample: 139766 - SB-1 (13-15')

Analysis:	Chloride (Titration)	Analytical Me	thod: SM 4500-Cl B	Prep Method:	N/A
QC Batch:	42369	Date Analyzed	l: 2007-10-24	Analyzed By:	AR
Prep Batch:	36579	Sample Prepar	ation:	Prepared By:	AR
		$\mathbf{RL}$			
Parameter	Flag	$\mathbf{Result}$	Units	Dilution	$\mathbf{RL}$
Chloride		8380	mg/Kg	50	2.00

### Sample: 139767 - SB-1 (18-20')

Analysis: QC Batch: Prep Batch:	Chloride (Titration) 42369 36579	Analytical M Date Analyze Sample Prepa	ed: 2007-10-24	Prep Method: Analyzed By: Prepared By:	ÁR
T Tep Daten.	00019	RL	aration:	riepateu by:	An
Parameter	Flag	Result	Units	Dilution	RL
Chloride		9980	mg/Kg	50	2.00

### Sample: 139768 - SB-1 (28-30')

Analysis: QC Batch: Prep Batch:	Chloride (Titration) 42369 36579	Analytical Meth Date Analyzed: Sample Prepara	2007-10-24	Prep Method: Analyzed By: Prepared By:	AR
		RL			
Parameter	Flag	$\mathbf{Result}$	Units	Dilution	$\mathbf{RL}$
Chloride		7310	mg/Kg	50	2.00

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### Sample: 139769 - SB-1 (38-40')

Analysis: QC Batch: Prep Batch:	Chloride (Titration) 42369 36579	Analytical Met Date Analyzed: Sample Prepar	2007-10-24	Prep Method: Analyzed By: Prepared By:	AR
Parameter	Flag	RL Result	Units	Dilution	$\mathbf{RL}$
Chloride	rag	8070	mg/Kg	50	2.00

### Sample: 139770 - SB-1 (48-50')

Analysis: QC Batch:	Chloride (Titration) 42369	Analytical Me Date Analyze		Prep Method: Analyzed By:	,
Prep Batch:		Sample Prepa		Prepared By:	
		$\mathbf{RL}$			
Parameter	$\mathbf{Flag}$	Result	Units	Dilution	$\mathbf{RL}$
Chloride		7510	mg/Kg	50	2.00

### Sample: 139771 - SB-1 (58-60')

Analysis:	Chloride (Titration)	Analytical Met	hod: SM 4500-Cl B	Prep Method:	N/A
QC Batch:	42369	Date Analyzed	: 2007-10-24	Analyzed By:	AR
Prep Batch:	36579	Sample Prepar	ation:	Prepared By:	$\mathbf{AR}$
		$\mathbf{RL}$			
Parameter	$\mathbf{Flag}$	$\mathbf{Result}$	Units	Dilution	$\mathbf{RL}$
Chloride		6170	mg/Kg	50	2.00

### Sample: 139772 - SB-1 (68-70')

Analysis:	Chloride (Titration)	Analytical Metl		Prep Method:	,
QC Batch:	42411	Date Analyzed:	2007-10-25	Analyzed By:	$\mathbf{AR}$
Prep Batch:	36618	Sample Prepara	Prepared By:	$\mathbf{AR}$	
		$\mathbf{RL}$			
Parameter	$\mathbf{Flag}$	$\mathbf{Result}$	Units	Dilution	$\mathbf{RL}$
Chloride		5720	mg/Kg	50	2.00
					· · · ·

### Sample: 139773 - SB-1 (78-80')

Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	42411	Date Analyzed:	2007-10-25	Analyzed By:	AR
Prep Batch:	36618	Sample Preparation:		Prepared By:	$\mathbf{AR}$

continued ...

sample 139773 continued ...

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Parameter	Flag	RL Result	Units	Dilution	RL
Parameter	Flag	RL Result	Units	Dilution	RL
Chloride	Flag	4570	mg/Kg	50	2.00

### Sample: 139774 - SB-1 (88-90')

Analysis: QC Batch: Prep Batch:	Chloride (Titration) 42411 36618	Analytical Me Date Analyzed Sample Prepa	d: 2007-10-25	Prep Method: Analyzed By: Prepared By:	ÁŔ
		$\mathbf{RL}$			
Parameter	Flag	Result	Units	Dilution	$\mathbf{RL}$
Chloride		5400	mg/Kg	50	2.00

### Sample: 139775 - SB-1 (98-100')

Analysis:	Chloride (Titration)	Analytical Meth	iod: SM 4500-Cl B	Prep Method:	N/A
QC Batch:	42411	Date Analyzed:	2007-10-25	Analyzed By:	AR
Prep Batch:	36618	Sample Preparation:		Prepared By:	AR
		DI			
		$\mathbf{RL}$			
Parameter	Flag	$\mathbf{Result}$	Units	Dilution	RL
Chloride		4200	mg/Kg	50	2.00

### Sample: 139776 - SB-2 (8-10')

Analysis: QC Batch:	Chloride (Titration) 42411	Analytical Me Date Analyze		Prep Method: Analyzed By:	•
Prep Batch:		Sample Prepa		Prepared By:	
		RL			
Parameter	$\mathbf{Flag}$	Result	Units	Dilution	$\mathbf{RL}$
Chloride		2610	mg/Kg	50	2.00

### Sample: 139777 - SB-2 (18-20')

Analysis: QC Batch: Prep Batch:	Chloride (Titration) 42411 36618	Analytical M Date Analyze Sample Prepa	ed: 2007-10-25	Prep Method: Analyzed By: Prepared By:	AR
		$\mathbf{RL}$			
Parameter	$\mathbf{Flag}$	Result	Units	Dilution	$\mathbf{RL}$
Chloride		969	mg/Kg	50	2.00

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### Sample: 139778 - SB-2 (28-30')

Analysis: QC Batch: Prep Batch:	Chloride (Titration) 42411 36618	Analytical Me Date Analyze Sample Prepa	1: 2007-10-25	Prep Method: Analyzed By: Prepared By:	N/A AR AR
		$\mathbf{RL}$			
Parameter	$\mathbf{Flag}$	Result	Units	Dilution	$\mathbf{RL}$
Chloride		1090	mg/Kg	50	2.00
Sample: 13	39779 - SB-2 (38-40')				

Chloride		1920	mg/Kg	50	2.00
Parameter	Flag	RL Result	Units	Dilution	RL
Prep Batch:		Sample Preparatio	Prepared By:		
QC Batch:	42411	Date Analyzed:	2007-10-25	Analyzed By:	$\mathbf{AR}$
Analysis:	Chloride (Titration)	Analytical Method	1: SM 4500-Cl B	Prep Method:	N/A

### Sample: 139780 - SB-2 (48-50')

Analysis:	Chloride (Titration)	Analytical M		Prep Method:	,
QC Batch:	42411	Date Analyze	ed: 2007-10-25	Analyzed By:	$\mathbf{AR}$
Prep Batch:	36618	Sample Preparation:		Prepared By:	$\mathbf{AR}$
		$\mathbf{RL}$			
Parameter	Flag	Result	Units	Dilution	$\mathbf{RL}$
Chloride		2170	mg/Kg	50	2.00

### Sample: 139781 - SB-3 (8-10')

Analysis: QC Batch:	Chloride (Titration) 42411	Analytical Me Date Analyze		Prep Method: Analyzed By:	,
Prep Batch:	36618	Sample Preparation:		Prepared By:	AR
		RL			
Parameter	$\mathbf{Flag}$	Result	Units	Dilution	$\mathbf{RL}$
Chloride		1200	mg/Kg	50	2.00

### Sample: 139782 - SB-3 (18-20')

Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	42414	Date Analyzed:	2007-10-25	Analyzed By:	AR
Prep Batch:	36619	Sample Preparation:		Prepared By:	$\mathbf{AR}$

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sample 139782 continued ...

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		RL			
Parameter	Flag	Result	Units	Dilution	RL
		RL			
Parameter	Flag	Result	Units	Dilution	$\mathbf{RL}$
Chloride		1780	mg/Kg	50	2.00

### Sample: 139783 - SB-3 (28-30')

Analysis: QC Batch: Prep Batch:	Chloride (Titration) 42414 36619	Analytical Me Date Analyze Sample Prepa	d: 2007-10-25	Prep Method: Analyzed By: Prepared By:	AR
		RL			
Parameter	Flag	$\mathbf{Result}$	Units	Dilution	$\mathbf{RL}$
Chloride		1700	mg/Kg	50	2.00

### Sample: 139784 - SB-3 (38-40')

Analysis:	Chloride (Titration)	Analytical M	ethod: SM 4500-Cl B	Prep Method:	N/A
QC Batch:	42414	Date Analyze	d: 2007-10-25	Analyzed By:	AR
Prep Batch:	36619	Sample Preparation:		Prepared By:	AR
		$\mathbf{RL}$			
Parameter	Flag	$\mathbf{Result}$	Units	Dilution	$\mathbf{RL}$
Chloride		1700	mg/Kg	50	2.00

### Sample: 139785 - SB-3 (48-50')

Analysis:	Chloride (Titration)	Analytical Met	hod: SM 4500-Cl B	Prep Method:	N/A
QC Batch:	42414	Date Analyzed	: 2007-10-25	Analyzed By:	AR
Prep Batch:	36619	Sample Preparation:		Prepared By:	AR
		$\mathbf{RL}$			
Parameter	Flag	Result	Units	Dilution	$\mathbf{RL}$
Chloride		1410	mg/Kg	50	2.00

### Sample: 139786 - SB-4 (8-10')

Analysis: QC Batch: Prep Batch:	Chloride (Titration) 42414 36619	Analytical M Date Analyze Sample Prepa	ed: 2007-10-25	Prep Method: Analyzed By: Prepared By:	$\mathbf{AR}$
		$\mathbf{RL}$			
Parameter	Flag	$\mathbf{Result}$	Units	Dilution	$\mathbf{RL}$
Chloride		2340	mg/Kg	50	2.00

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### Sample: 139787 - SB-4 (18-20')

Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	42414	Date Analyzed:	2007-10-25	Analyzed By:	$\mathbf{AR}$
Prep Batch:	36619	Sample Preparation:		Prepared By:	AR
		RL			
Parameter	$\mathbf{Flag}$	Result	Units	Dilution	$\mathbf{RL}$
Chloride	······································	2010	mg/Kg	50	2.00
Sample: 13	9788 - SB-4 (28-30')				
-	9788 - SB-4 (28-30') Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	,
Sample: 13 Analysis: QC Batch:		Date Analyzed:	2007-10-25	Analyzed By:	N/A AR
Analysis: QC Batch:	Chloride (Titration) 42414	Ų	2007-10-25	•	,
Analysis:	Chloride (Titration) 42414	Date Analyzed:	2007-10-25	Analyzed By:	ÁR
Analysis: QC Batch:	Chloride (Titration) 42414	Date Analyzed: Sample Preparation:	2007-10-25	Analyzed By:	ÁR

### Sample: 139789 - SB-4 (38-40')

Chloride	<u></u>	170	mg/Kg	50	2.00
Parameter	Flag	$\operatorname{RL}$ Result	Units	Dilution	RL
Prep Batch:	36619	Sample Prepa	ration:	Prepared By:	AR
QC Batch:	42414	Date Analyze	d: 2007-10-25	Analyzed By:	AR
Analysis:	Chloride (Titration)	Analytical Me	ethod: SM 4500-Cl B	Prep Method:	N/A

### Sample: 139790 - SB-4 (48-50')

Analysis: QC Batch:	Chloride (Titration) 42414	Analytical Meth Date Analyzed:		Prep Method: Analyzed By:	,
Prep Batch:		Sample Preparation:		Prepared By:	
		$\mathbf{RL}$			
Parameter	$\mathbf{Flag}$	Result	Units	Dilution	$\mathbf{RL}$
Chloride		127	mg/Kg	50	2.00

### Sample: 139791 - SB-5 (8-10')

Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	42417	Date Analyzed:	2007-10-25	Analyzed By:	AR
Prep Batch:	36620	Sample Preparation:		Prepared By:	AR

continued ...

sample 139791 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Parameter	Flag	RL Result	Units	Dilution	RL
Chloride	8	6730	mg/Kg	50	2.00

### Sample: 139792 - SB-6 (8-10')

Analysis: QC Batch: Prep Batch:	Chloride (Titration) 42417 36620	Analytical Method: SM 4500-Cl B Date Analyzed: 2007-10-25 Sample Preparation:		Prep Method: Analyzed By: Prepared By:	AR
		RL			
Parameter	$\mathbf{Flag}$	$\mathbf{Result}$	Units	Dilution	$\mathbf{RL}$
Chloride		7880	mg/Kg	50	2.00

### Sample: 139793 - SB-6 (18-20')

Analysis:	Chloride (Titration)	Analytical Metho	d: SM 4500-Cl B	Prep Method:	N/A
QC Batch:	42417	Date Analyzed:	2007-10-25	Analyzed By:	AR
Prep Batch:	36620	Sample Preparati	Prepared By:	AR	
		$\mathbf{RL}$			
Parameter	Flag	$\mathbf{Result}$	Units	Dilution	$\mathbf{RL}$
Chloride		12300	mg/Kg	50	2.00

### Sample: 139794 - SB-6 (28-30')

Analysis:	Chloride (Titration)	Analytical Method	l: SM 4500-Cl B	Prep Method:	N/A
QC Batch:	42417	Date Analyzed:	2007-10-25	Analyzed By:	AR
Prep Batch:	36620	Sample Preparatio	Prepared By:	AR	
		$\mathbf{RL}$			
Parameter	$\mathbf{Flag}$	Result	Units	Dilution	$\mathbf{RL}$
Chloride		11000	mg/Kg	50	2.00

### Sample: 139795 - SB-6 (38-40')

Analysis:	Chloride (Titration)	Analytical Me	ethod: SM 4500-Cl B	Prep Method:	N/A
QC Batch:	42417	Date Analyze	d: 2007-10-25	Analyzed By:	AR
Prep Batch:	36620	Sample Prepa	ration:	Prepared By:	AR
		$\mathbf{RL}$			
Parameter	$\mathbf{Flag}$	Result	Units	Dilution	$\mathbf{RL}$
Chloride		7240	mg/Kg	50	2.00

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### Sample: 139796 - SB-6 (48-50')

Analysis: QC Batch: Prep Batch:	Chloride (Titration) 42417 36620	Analytical Method: SM 4500-Cl B Date Analyzed: 2007-10-25 Sample Preparation:		Prep Method: Analyzed By: Prepared By:	AR
		$\mathbf{RL}$			
Parameter	Flag	Result	Units	Dilution	$\mathbf{RL}$
Chloride		4320	mg/Kg	50	2.00

### Sample: 139797 - SB-7 (8-10')

Analysis: QC Batch:	Chloride (Titration) 42417	Analytical Meth Date Analyzed:		Prep Method: Analyzed By:	•
Prep Batch:		Sample Preparation:		Prepared By:	
		$\mathbf{RL}$			
Parameter	Flag	Result	Units	Dilution	$\mathbf{RL}$
Chloride		990	mg/Kg	50	2.00

### Sample: 139798 - SB-7 (18-20')

Chloride		244	mg/Kg	50	2.00
Parameter	Flag	RL Result	Units	Dilution	RL_
Prep Batch:	36620	Sample Prepara	Prepared By:	AR.	
QC Batch:	42417	Date Analyzed:	2007-10-25	Analyzed By:	AR
Analysis:	Chloride (Titration)	Analytical Met	hod: SM 4500-Cl B	Prep Method:	N/A

### Sample: 139799 - SB-7 (28-30')

Chloride (Titration)	U		Prep Method:	,
	•		<i>u u</i>	
36620	Sample Preparatio	Prepared By:	AK	
	RL			
Flag	Result	Units	Dilution	$\mathbf{RL}$
	214	mg/Kg	50	2.00
	42417 36620	42417 Date Analyzed: 36620 Sample Preparatio RL Flag Result	42417 Date Analyzed: 2007-10-25 36620 RL Flag Result Units	42417     Date Analyzed: 2007-10-25     Analyzed By:       36620     Sample Preparation:     Prepared By:       RL     Flag     Result     Units

### Sample: 139800 - SB-7 (38-40')

Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	42417	Date Analyzed:	2007-10-25	Analyzed By:	AR
Prep Batch:	36620	Sample Preparation:		Prepared By:	AR

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sample 139800 continued ...

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Parameter	Flag	RL Result	Units	Dilution	RL
		RL			
Parameter	Flag	$\mathbf{Result}$	Units	Dilution	$\mathbf{RL}$
Chloride		114	mg/Kg	50	2.00

### Sample: 139801 - SB-7 (48-50')

Analysis: QC Batch:	Chloride (Titration) 42424	Analytical M Date Analyza		Prep Method: Analyzed By:	,
Prep Batch:		Sample Prep		Prepared By:	
		$\mathbf{RL}$			
Parameter	Flag	Result	Units	Dilution	$\mathbf{RL}$
Chloride		232	mg/Kg	50	2.00

### Sample: 139802 - SB-8 (8-10')

Analysis:	Chloride (Titration)	Analytical Meth	od: SM 4500-Cl B	Prep Method:	N/A
QC Batch:	42424	Date Analyzed:	2007-10-25	Analyzed By:	AR
Prep Batch:	36623	Sample Preparat	Prepared By:	AR	
		$\mathbf{RL}$			
Parameter	$\mathbf{Flag}$	Result	Units	Dilution	$\mathbf{RL}$
Chloride		146	mg/Kg	50	2.00

### Sample: 139803 - SB-8 (18-20')

Analysis:	Chloride (Titration)	Analytical Metho	d: SM 4500-Cl B	Prep Method:	N/A
QC Batch:	42424	Date Analyzed:	2007-10-25	Analyzed By:	AR
Prep Batch:	36623	Sample Preparati	ion:	Prepared By:	AR
		$\mathbf{RL}$			
Parameter	Flag	$\mathbf{Result}$	Units	Dilution	$\mathbf{RL}$
Chloride		<100	mg/Kg	50	2.00

### Sample: 139804 - SB-8 (28-30')

Analysis: QC Batch: Prep Batch:	Chloride (Titration) 42424 36623	Analytical M Date Analyze Sample Prep	ed: 2007-10-25	Prep Method: Analyzed By: Prepared By:	AR
		$\operatorname{RL}$			
Parameter	Flag	Result	Units	Dilution	$\mathbf{RL}$
Chloride		156	mg/Kg	50	2.00

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Page Number: 13 of 26

### Sample: 139805 - SB-8 (38-40')

Analysis: QC Batch: Prep Batch:	Chloride (Titration) 42424 36623	Analytical Method Date Analyzed: Sample Preparatio	2007-10-25	Prep Method: Analyzed By: Prepared By:	AR
		RL			
Parameter	Flag	Result	Units	Dilution	$\mathbf{RL}$
Chloride		720	mg/Kg	50	2.00

### Sample: 139806 - SB-8 (48-50?)

Analysis: QC Batch: Prep Batch:	Chloride (Titration) 42424 36623	Analytical Meth Date Analyzed: Sample Prepara	2007-10-25	Prep Method: Analyzed By: Prepared By:	AR
		RL			
Parameter	Flag	$\mathbf{Result}$	Units	Dilution	$\mathbf{RL}$
Chloride		1110	mg/Kg	50	2.00

### Sample: 139807 - SB-9 (8-10')

Analysis: QC Batch:	Chloride (Titration) 42424	Analytical M Date Analyze		Prep Method: Analyzed By:	'
Prep Batch:	36623	Sample Prepa	aration:	Prepared By:	
		$\mathbf{RL}$			
Parameter	Flag	Result	Units	Dilution	$\mathbf{RL}$
Chloride		<100	mg/Kg	50	2.00

### Sample: 139808 - SB-9 (18-20')

Analysis: QC Batch: Prep Batch:	Chloride (Titration) 42424 36623	Analytical Me Date Analyze Sample Prepa	d: 2007-10-25	Prep Method: Analyzed By: Prepared By:	AR
Parameter	Flag	RL Result	Units	Dilution	RL
Chloride	<u></u>	<100	mg/Kg	50	2.00

### Sample: 139809 - SB-9 (28-30')

Analysis: Chloride (Titra	on) Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch: 42424	Date Analyzed:	2007-10-25	Analyzed By:	AR
Prep Batch: 36623	Sample Preparation	:	Prepared By:	AR

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sample 139809 continued ...

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Parameter	Flag	RL Result	Units	Dilution	RL
		RL			
Parameter	$\mathbf{Flag}$	Result	Units	Dilution	$\mathbf{RL}$
Chloride		<100	mg/Kg	50	2.00

### Sample: 139810 - SB-9 (38-40')

Analysis: QC Batch: Prep Batch:	Chloride (Titration) 42424 36623	Analytical Met Date Analyzed Sample Prepar	: 2007-10-25	Prep Method: Analyzed By: Prepared By:	ÁR
Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<100	mg/Kg	50	2.00

### Sample: 139811 - SB-9 (48-50')

Analysis:	Chloride (Titration)	Analytical Method	: SM 4500-Cl B	Prep Method:	N/A
QC Batch:	42441	Date Analyzed:	2007-10-26	Analyzed By:	AR
Prep Batch:	36634	Sample Preparation:		Prepared By:	AR
		$\mathbf{RL}$			
Parameter	$\mathbf{Flag}$	Result	Units	Dilution	$\mathbf{RL}$
Chloride	<u> </u>	<100	mg/Kg	50	2.00

### Method Blank (1) QC Batch: 42274

QC Batch: 42274	Date Analyzed: 2007-10-23	Analyzed By: LD
Prep Batch: 36501	QC Preparation: 2007-10-23	Prepared By: LD

				MDL			
Parameter		$\mathbf{Flag}$		Result		Units	$\mathbf{RL}$
DRO		23.6		mg/Kg		50	
					Spike	Percent	Recovery
Surrogate	$\mathbf{Flag}$	Result	Units	Dilution	Amount	Recovery	Limits
n-Triacontane		109	mg/Kg	1	150	73	32.9 - 156.1

Method Blank (1) QC Batch: 42329

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

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				IDL				
Parameter	Flag			sult	Un			RL
Benzene			<0.00		mg/			0.01
Toluene			<0.00		mg/			0.01
Ethylbenzene			< 0.00		mg/			).01
Kylene			< 0.00	410	mg/	/Kg	0	).01
Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recove: Limits	-
Trifluorotoluene (TFT)		0.747	mg/Kg	1	1.00	75	58.2 - 12	21.3
4-Bromofluorobenzene (	(4-BFB)	0.543	mg/Kg	1	1.00	54	53.1 - 11	11.6
Method Blank (1) QC Batch: 42333 Prep Batch: 36547	QC Batch: 42333	Date Ana QC Prep		2007-10-23 2007-10-23			zed By: I red By: I	DC
			MD	L		-	-	
Parameter	$\mathbf{Flag}$		Resu		Uni	its		RI
GRO			<0.73	39	mg/	Kg		1
					Spike	Percent	Recov	ery
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limi	
Trifluorotoluene (TFT)		0.706	mg/Kg		1.00	71	67.8 -	
1-Bromofluorobenzene	(4-BFB)	0.576	mg/Kg	<u> </u>	1.00	58	24.6 -	12
Method Blank (1)	QC Batch: 42369							
QC Batch: 42369		Date Ana	alyzed:	2007-10-24		Analy	zed By: A	AR
Prep Batch: 36579		QC Prep	aration:	2007-10-24		-		AR
Parameter	Flag		MD Resu		Un	ite		R
Chloride	1 lag		<0.50		mg/			2
,	<u></u>							
Method Blank (1)	QC Batch: 42411							
QC Batch: 42411 Prep Batch: 36618		Date Ana QC Prep		2007-10-25 2007-10-25			•	AR AR
1 10p 200000 00010		w⊂ 11cp				1 repe	ncu Dy. J	411
Parameter	Flag		MD Besu		Un	ita		D
Chloride	Flag		Resu <0.50		Un			<u>R</u>
			<0.00		mg/	11g		

Method Blank (1) QC Batch: 42414

QC Batch:	42414	Date Analyzed:	2007-10-25	Analyzed By:	AR
Prep Batch:	36619	QC Preparation:	2007-10-25	Prepared By:	AR

Report	Date:	November	2,	2007
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Work Order: 7102209 Rock Queen Plant #1

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Parameter	Flag	Res			Units			RL
Chloride		<0.8	500		mg/K	g		2
Method Blank (1)	QC Batch: 42417							
QC Batch: 42417		Date Analyzed:	2007-10-2				Analyzed By:	
Prep Batch: 36620		QC Preparation:	2007-10-2	25		I	Prepared By:	AR
		М	DL					
Parameter	Flag	Res			Units			RL
Chloride		<0.	500	<u> </u>	mg/K	g		2
Method Blank (1)	QC Batch: 42424							
QC Batch: 42424		Date Analyzed:	2007-10-2	25		j	Analyzed By	AR
Prep Batch: 36623		QC Preparation:					Prepared By:	
-								
Davanatar	Flor		DL		II	~		וס
Parameter	Flag	Res	sult		Unit			<u>RJ</u>
Chloride		<0.	500		mg/K	íg 🛛		2
Chloride		<0.	500		mg/K	ίg		2
	QC Batch: 42441	<0.	500		mg/K	(g		2
Method Blank (1) QC Batch: 42441		Date Analyzed:	2007-10-2		mg/K		Analyzed By	AR
Method Blank (1) QC Batch: 42441			2007-10-2		mg/K		Analyzed By Prepared By	AR
Method Blank (1) QC Batch: 42441 Prep Batch: 36634	QC Batch: 42441	Date Analyzed: QC Preparation: M	2007-10-3 2007-10-3 IDL					AR
Method Blank (1) QC Batch: 42441 Prep Batch: 36634 Parameter		Date Analyzed: QC Preparation: M Res	2007-10-1 2007-10-1 IDL sult		Unit	S		AR AR RI
Method Blank (1) QC Batch: 42441 Prep Batch: 36634 Parameter Chloride	QC Batch: 42441 Flag	Date Analyzed: QC Preparation: M Res	2007-10-3 2007-10-3 IDL			S		AR AR RI
Method Blank (1) QC Batch: 42441 Prep Batch: 36634 Parameter Chloride Laboratory Control	QC Batch: 42441 Flag	Date Analyzed: QC Preparation: M Re: <0.	2007-10-1 2007-10-1 IDL sult 500	26	Unit	s (g	Prepared By	AR AR RI 2
Method Blank (1) QC Batch: 42441 Prep Batch: 36634 Parameter Chloride Laboratory Control QC Batch: 42274	QC Batch: 42441 Flag	Date Analyzed: QC Preparation: M Re: <0. Date Analyzed:	2007-10-1 2007-10-1 IDL sult 500 2007-10-	26	Unit	s (g	Prepared By	AR AR RI 2 : LD
Method Blank (1) QC Batch: 42441 Prep Batch: 36634 Parameter Chloride Laboratory Control QC Batch: 42274	QC Batch: 42441 Flag	Date Analyzed: QC Preparation: M Re: <0.	2007-10-1 2007-10-1 IDL sult 500 2007-10-	26	Unit	s (g	Prepared By	AR AR RI 2 : LD
Method Blank (1) QC Batch: 42441 Prep Batch: 36634 Parameter Chloride Laboratory Control QC Batch: 42274 Prep Batch: 36501	QC Batch: 42441 Flag Spike (LCS-1)	Date Analyzed: QC Preparation: M Re: <0. <0. Date Analyzed: QC Preparation:	2007-10- 2007-10- sult 500 2007-10- 2007-10-	26  23 23 Spike	Unit mg/F	s (g	Prepared By Analyzed By Prepared By	AR AR RI 2 : LD : LD
Method Blank (1) QC Batch: 42441 Prep Batch: 36634 Parameter Chloride Laboratory Control QC Batch: 42274 Prep Batch: 36501 Param	QC Batch: 42441 Flag Spike (LCS-1) LC Res	Date Analyzed: QC Preparation: M Re: <0. Oate Analyzed: QC Preparation: S ult Units	2007-10-3 2007-10-3 sult 500 2007-10- 2007-10- Dil.	26 23 23 Spike Amount	Unit mg/F Matrix Result	s (g c c R	Prepared By Analyzed By Prepared By Hec. L	AR AR R] 2 : LD : LD : LD : LD
Method Blank (1) QC Batch: 42441 Prep Batch: 36634 Parameter Chloride Laboratory Control QC Batch: 42274 Prep Batch: 36501 Param DRO	QC Batch: 42441 Flag Spike (LCS-1)	Date Analyzed: QC Preparation: M Res <0. Date Analyzed: QC Preparation: S ult Units 3 mg/Kg	2007-10- 2007-10- sult 500 2007-10- 2007-10- Dil. 1	23 23 23 Spike Amount 250	Unit mg/F Matrin Result <13.4	s (g R 1	Prepared By Analyzed By Prepared By Hec. L	AR AR R] 2 : LD : LD : LD : LD
Method Blank (1) QC Batch: 42441 Prep Batch: 36634 Parameter Chloride Laboratory Control QC Batch: 42274 Prep Batch: 36501 Param DRO	QC Batch: 42441 Flag Spike (LCS-1) LC Res 33 sed on the spike result.	Date Analyzed: QC Preparation: M Res <0. Date Analyzed: QC Preparation: S ult Units 3 mg/Kg	2007-10-3 2007-10-3 IDL sult 500 2007-10- 2007-10- Dil. 1 the spike a	23 23 23 Amount 250 and spike o	Unit mg/F Matrin Result <13.4	s (g t R sult.	Prepared By Analyzed By Prepared By Hec. L	AR AR R 2 : LD : LD : LD : LD : LD : LD : LD : LD
Method Blank (1) QC Batch: 42441 Prep Batch: 36634 Parameter Chloride Laboratory Control QC Batch: 42274 Prep Batch: 36501 Param DRO	QC Batch: 42441 Flag Spike (LCS-1) LC Res 33	Date Analyzed: QC Preparation: M Res <0. Date Analyzed: QC Preparation: S ult Units 3 mg/Kg	2007-10- 2007-10- sult 500 2007-10- 2007-10- Dil. 1	23 23 23 Spike Amount 250	Unit mg/F Matrin Result <13.4	s (g R 1	Prepared By Analyzed By Prepared By Hec. L	AR AR R] 2 : LD : LD : LD : LD

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

Report	Date:	November	2,	2007
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Work Order: 7102209 Rock Queen Plant #1

Surrogate	LCS Result	LCSI Resul		Units	Г	Dil.	Spike Amoun		LCS Rec.	LCSD Rec.		Rec. Jimit
n-Triacontane	140	129		mg/Kg		1	150		93	86		- 133.2
Laboratory Control Spil	ke (LC	S-1)										
QC Batch: 42329			Date	e Analyze	ed: 2	007-10-2	23				yzed By	
Prep Batch: 36547			QC I	Preparat	ion: 2	007-10-2	23			Prepa	ared By	DC
		LCS	5				Spike	M	atrix		F	lec.
Param		Resu		Units	Di		mount		esult	Rec.		imit
Benzene		0.87		mg/Kg	1		1.00		00110	88		2 - 119
Toluene		0.89		mg/Kg	1		1.00		00150	89		- 116.5
Ethylbenzene		0.89		mg/Kg	1		1.00		00160	89		5 - 114
Xylene		2.71		ıng/Kg	1		3.00		00410	90	78.8	- 113.9
Percent recovery is based o	n the sp	oike result.	RPD	is based	on the	e spike a	nd spike	duplica	te resul	t.		
		LCSD			$\mathbf{Sp}$	ike	Matrix		2	Rec.		RPD
Param		Result	Unit		Am	ount	Result	Rec	. I	Limit	RPD	Limit
Benzene		0.933	mg/H		1.		< 0.0011			2 - 119	6	20
Toluene		0.980	mg/H				< 0.0015			- 116.5	9	<b>20</b>
Ethylbenzene		1.02	mg/H				< 0.0016			6 - 114	13	20
Xylene		3.10	_mg/H	Kg 1	3.	00	< 0.0041	0 103	78.8	- 113.9	13	20
Percent recovery is based o	n the sp	oike result.	RPD.	is based	l on the	e spike a	nd spike	e duplica	ate resul	t.		
		LCS	S	LCSD			S	bpike	LCS	LCSD	I	lec.
Surrogate		Resu		Result	Unit	s D		nount	Rec.	Rec.	L	imit
Trifluorotoluene (TFT)		0.65	18	0.650	mg/F	(g 1		1.00	66	65	56.1	- 107.8
4-Bromofluorobenzene (4-B	FB)	0.66	60	0.722	mg/H	(g 1	L _	1.00	66	72	56.2	- 118.8
Laboratory Control Spi QC Batch: 42333 Prep Batch: 36547	ke (LC	S-1)		e Analyz Preparat		007-10-5 007-10-5					yzed By ared By	
Param		LC Res		Units	3	Dil.	Spike Amour		Matrix Result	Rec.		Rec. Limit
GRO		7.4		mg/K		$\frac{DR}{1}$	10.0		<0.739	74		- 105.2
Percent recovery is based o	n the sp											
		LCSD				Spike	Matri	x		Rec.		RPD
Param		Result	Un	its D	il. A	mount	Resul		с. І	Limit	RPD	Limit
GRO		7.65	mg/	′Kg	1	10.0	<0.73		56	- 105.2	3	20
Percent recovery is based o	n the sp	oike result.	. RPD	is based	l on the	e spike a	nd spike	e duplica	ate resul	lt.		
		LC	s	LCSD			5	Spike	LCS	LCSD	]	Rec.
Surrogate		Resu		Result	Unit	s D		mount	Rec.	Rec.		imit
Trifluorotoluene (TFT)		0.86		0.890	mg/ł			1.00	86	89		- 148.1
4-Bromofluorobenzene (4-E	FB)	0.73		0.728	mg/ł			1.00	74	73		- 119.2
						<u> </u>						

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### Laboratory Control Spike (LCS-1)

Prep Batch: 36579 QC Preparation: 2007-10-24 Prepared By: AR	QC Batch: Prep Batch:		Date Analyzed: QC Preparation:		Analyzed By: Prepared By:	
--	--------------------------	--	-----------------------------------	--	------------------------------	--

	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	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride	102	mg/Kg	1	100	< 0.500	102	85 - 115	1	20

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

### Laboratory Control Spike (LCS-1)

QC Batch:	42411	Date Analyzed:	2007-10-25	Analyzed By:	AR
Prep Batch:	36618	QC Preparation:	2007-10-25	Prepared By:	AR

	LCS			Spike	Matrix		Rec.
Param	$\mathbf{Result}$	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.

		L	CSD			Spike	Matrix		Rec.		RPD
Param		R	esult	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride	 		102	mg/Kg	1	100	< 0.500	102	85 - 115	1	20
-											

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

### Laboratory Control Spike (LCS-1)

QC Batch:	42414	Date Analyzed:	2007-10-25	Analyzed By:	AR
Prep Batch:	36619	QC Preparation:	2007-10-25	Prepared By:	AR

	LCS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Chloride	94.5	mg/Kg	1	100	< 0.500	94	85 - 115

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

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride	95.5	mg/Kg	1	100	<0.500	95	85 - 115	1	20

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

### Laboratory Control Spike (LCS-1)

QC Batch:	42417	Date Analyzed:	2007-10-25	Analyzed By:	AR
Prep Batch:	36620	QC Preparation:	2007-10-25	Prepared By:	AR

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D		LCS		TT *4	יימ	Spike	Matr			Rec.
Param		Resul 99.4		Units	<u>Dil.</u>	Amount 100	Resu <0.50		tec. 99	Limit 85 - 115
Chloride				mg/Kg					99	00 - 110
Percent recove	ery is based on th	e spike result. H	RPD is t	based on t	the spike an	d spike du	olicate res	ult.		
		LCSD			Spike	Matrix		Rec.		RPD
Param		Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limi
Chloride		100	mg/Kg	1	100	< 0.500	100	85 - 115	1	20
Percent recove	ery is based on th	e spike result. F	RPD is I	based on t	the spike an	d spike dup	olicate res	ult.		
Laboratory (	Control Spike (	(LCS-1)								
QC Batch:	42424	ı	Date An	alvzed:	2007-10-2	5		Ar	alyzed B	v: AR
•	36623			paration:	2007-10-2				epared By	
•			•							
		LCS	2			Spike	Matr			Rec.
Param		Resul		Units	Dil.	Amount	Resu		lec.	Limit
Chloride		95.4		mg/Kg	1	100	<0.5			85 - 11
······	ery is based on th									
	ery is based on th	-		based on t	uic spike ai	ia spike au	pilcate res	ant.		
		LCSD			Spike	Matrix		Rec.		RPI
Param		Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limi
Percent recove	ery is based on th Control Spike (	-	mg/Kg RPD is I		100 the spike ar	<0.500 nd spike du	96 plicate res	<u>85 - 115</u> sult.	1	20
Percent recove Laboratory	·	e spike result. I (LCS-1)	RPD is I Date Ar	based on (		ud spike duy 6		sult. Aı	1 nalyzed B epared B	y: AR
Percent recove Laboratory	Control Spike ( 42441	e spike result. I (LCS-1)	RPD is I Date Ar QC Prej	based on the based	the spike ar 2007-10-2	ud spike duj 6 6	plicate res	sult. Ar Pr	nalyzed B	y: AR y: AR
Percent recove Laboratory QC Batch: Prep Batch:	Control Spike ( 42441	te spike result. I (LCS-1)	RPD is I Date Ar QC Prej	based on ( nalyzed: paration:	the spike ar 2007-10-2 2007-10-2	nd spike du 6 6 Spike	plicate res Matr	sult. Ar Pr	nalyzed B epared B	y: AR y: AR Rec.
Percent recove Laboratory QC Batch: Prep Batch: Param	Control Spike ( 42441	le spike result. I (LCS-1) LCS Resu	RPD is I Date Ar QC Prej S It	based on ( nalyzed: paration: Units	the spike ar 2007-10-2 2007-10-2 Dil.	d spike du 6 6 Spike Amount	plicate res Matr Resu	sult. Ar Pr rix ılt F	nalyzed B epared B	y: AR y: AR Rec. Limit
Percent recove Laboratory ( QC Batch: Prep Batch: Param Chloride	Control Spike ( 42441	ie spike result. I (LCS-1) LCS Resu 100	RPD is I Date Ar QC Prej S It	based on the second sec	the spike ar 2007-10-2 2007-10-2 Dil. 1	nd spike du 6 6 Spike Amount 100	plicate res Matr Resu <0.5	sult. Ar Pr six alt H 00	nalyzed B epared B	y: AR y: AR Rec. Limit
Percent recove Laboratory ( QC Batch: Prep Batch: Param Chloride	Control Spike 42441 36634	LCS-1) (LCS-1) LCS Resu 100 te spike result. I	RPD is I Date Ar QC Prej S It	based on the second sec	the spike ar 2007-10-2 2007-10-2 Dil. 1 the spike ar	od spike du 6 6 Amount 100 10 spike du	plicate res Matr Resu <0.5	sult. Ar Pr cix alt <u>F</u> 00 sult.	nalyzed B epared B	y: AR y: AR Rec. Limit 85 - 11
Percent recove Laboratory ( QC Batch: Prep Batch: Param Chloride Percent recove	Control Spike 42441 36634	te spike result. I (LCS-1) LCS Resu 100 te spike result. I LCSD	RPD is I Date Ar QC Prej It RPD is I	based on the second sec	the spike ar 2007-10-2 2007-10-2 Dil. 1 the spike ar Spike	nd spike du 6 6 Amount 100 nd spike du Matrix	Matr Resu <0.5 plicate res	sult. Ar Pr lit H 00 sult. Rec.	nalyzed B epared B lec. 100	y: AR y: AR Rec. Limit 85 - 11 RPI
Percent recove Laboratory ( QC Batch: Prep Batch: Param Chloride	Control Spike 42441 36634	LCS-1) (LCS-1) LCS Resu 100 te spike result. I	RPD is I Date Ar QC Prej It RPD is I Units	based on the second sec	the spike ar 2007-10-2 2007-10-2 Dil. 1 the spike ar Spike Amount	od spike du 6 6 Amount 100 nd spike du Matrix Result	Matr Resu <0.5 plicate res Rec.	sult. Ar Pr lit H 00 sult. Rec. Limit	nalyzed B epared B	y: AR y: AR Limit 85 - 11 RPI Limi
Laboratory QC Batch: Prep Batch: Param Chloride Percent recove Param Chloride	Control Spike ( 42441 36634	te spike result. I (LCS-1) LCS Resu 100 te spike result. I LCSD Result 101	RPD is I Date Ar QC Prej It RPD is I Units mg/Kg	based on the based	the spike ar 2007-10-2 2007-10-2 Dil. 1 the spike ar Spike Amount 100	6 6 6 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	Matr Resu <0.5 plicate res Rec. 101	Sult. Ar Pr dit H 00 Sult. Rec. Limit 85 - 115	nalyzed B epared B lec. 100	y: AR y: AR Rec. Limit 85 - 11 RPI
Percent recove Laboratory ( QC Batch: Prep Batch: Param Chloride Param Chloride	Control Spike ( 42441 36634 ery is based on th	te spike result. I (LCS-1) LCS Resu 100 te spike result. I LCSD Result 101	RPD is I Date Ar QC Prej It RPD is I Units mg/Kg	based on the based	the spike ar 2007-10-2 2007-10-2 Dil. 1 the spike ar Spike Amount 100	6 6 6 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	Matr Resu <0.5 plicate res Rec. 101	Sult. Ar Pr dit H 00 Sult. Rec. Limit 85 - 115	nalyzed B epared B lec. 100	y: AR y: AR Limit 85 - 11 RPI Limi
Percent recove Laboratory QC Batch: Prep Batch: Param Chloride Percent recove Param Chloride Percent recove	Control Spike ( 42441 36634 ery is based on the ery is based on the	te spike result. I (LCS-1) LCS Resu 100 te spike result. I LCSD Result 101	RPD is I Date Ar QC Prej It RPD is I mg/Kg RPD is I	based on the based	the spike ar 2007-10-2 2007-10-2 Dil. 1 the spike ar Spike Amount 100	6 6 6 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	Matr Resu <0.5 plicate res Rec. 101	Sult. Ar Pr dit H 00 Sult. Rec. Limit 85 - 115	nalyzed B epared B lec. 100	y: AR y: AR Limit 85 - 11 RPI Limi
Percent recove Laboratory QC Batch: Prep Batch: Percent recove Param Chloride Percent recove Param Chloride Percent recove Matrix Spike	Control Spike ( 42441 36634 ery is based on the ery is based on the	LCS-1) (LCS-1) (LCS-1) (LCS-1) (LCS Result 100 te spike result. I LCSD Result 101 te spike result. I ked Sample: 136	RPD is I Date Ar QC Prej It RPD is I mg/Kg RPD is I	based on the second sec	the spike ar 2007-10-2 2007-10-2 Dil. 1 the spike ar Spike Amount 100	od spike du 6 6 6 Mount 100 10 spike du Matrix Result <0.500 nd spike du	Matr Resu <0.5 plicate res Rec. 101	sult. Ar Pr sult <u>F</u> <u>00</u> sult. Rec. Limit <u>85 - 115</u> sult.	nalyzed B epared B lec. 100	y: AR y: AR Limit 85 - 11 RPI Limi 20
Percent recove Laboratory QC Batch: Prep Batch: Param Chloride Percent recove Param Chloride Percent recove Matrix Spike QC Batch:	Control Spike ( 42441 36634 ery is based on the ery is based on the ery is based on the e (MS-1) Spi	LCS-1) (LCS-1) (LCS-1) (LCS-1) (LCS Result 100 te spike result. I LCSD Result 101 te spike result. I ked Sample: 138	RPD is I Date Ar QC Prej S It Units MRPD is I Mg/Kg RPD is I 9812 Date Ar	based on the second sec	the spike ar 2007-10-2 2007-10-2 Dil. 1 the spike ar Spike Amount 100 the spike ar	ad spike du 6 6 6 7 8 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	Matr Resu <0.5 plicate res Rec. 101	sult. Ar Pr cix alt <u>F</u> <u>00</u> sult. Rec. Limit <u>85 - 115</u> sult.	halyzed B epared B Rec. 100 RPD 1	y: AR y: AR Limit 85 - 11 RPI Limi 20
Percent recove Laboratory QC Batch: Prep Batch: Param Chloride Percent recove Param Chloride Percent recove Matrix Spike QC Batch:	Control Spike ( 42441 36634 ery is based on the ery is based on the ery is based on the e (MS-1) Spi 42274	te spike result. I (LCS-1) LCS Resu 100 te spike result. I LCSD Result 101 te spike result. I ked Sample: 135	RPD is I Date Ar QC Prej S It Units MRPD is I Mg/Kg RPD is I 9812 Date Ar	based on the second sec	the spike ar 2007-10-2 2007-10-2 Dil. 1 the spike ar Spike Amount 100 the spike ar 2007-10-2	ad spike du 6 6 6 7 8 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	Matr Resu <0.5 plicate res <u>Rec.</u> 101 plicate res	sult. Ar Pr cix alt <u>F</u> <u>00</u> sult. Rec. Limit <u>85 - 115</u> sult.	nalyzed B repared B Rec. 100 RPD 1 1	y: AR y: AR Limit 85 - 11 RPI Limi 20 y: LI y: LI
Percent recove Laboratory QC Batch: Prep Batch: Param Chloride Percent recove Param Chloride Percent recove Matrix Spike QC Batch:	Control Spike ( 42441 36634 ery is based on the ery is based on the ery is based on the e (MS-1) Spi 42274	LCS-1) (LCS-1) (LCS-1) (LCS-1) (LCS Result 100 te spike result. I LCSD Result 101 te spike result. I ked Sample: 138	RPD is I Date Ar QC Prej It Units mg/Kg RPD is I 9812 Date Ar QC Prej	based on the second sec	the spike ar 2007-10-2 2007-10-2 Dil. 1 the spike ar Spike Amount 100 the spike ar 2007-10-2 2007-10-2	ad spike du 6 6 6 7 8 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	Matr Resu <0.5 plicate res Rec. 101	sult. Ar Pr cix alt <u>F</u> <u>00</u> sult. Rec. Limit <u>85 - 115</u> sult.	halyzed B repared B Rec. 100 RPD 1 nalyzed B repared B	y: AR y: AR Limit 85 - 11 RPI Limi 20

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

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D		MSD	<b>TT T</b>	7.1	Spike	Matrix			.ec.	0.00	RPD
Param		Result	Units	Dil.	Amount	Result			mit	RPD	Limit
DRO		249	mg/Kg		250	<13.4			- 201.4	11	20
Percent recovery is based on	the spi	ke result	. RPD is	based o	n the spike	and spik	e duplica	te result			
	MS	MS	D			Spi	ke	MS	MSD	)	Rec.
Surrogate l	Result	Rest	ult	Units	Dil.	Ame	ount	Rec.	Rec.		Limit
n-Triacontane	127	12	0	mg/Kg	1	15	60	85	80	1	0 - 194
Matrix Spike (MS-1)	Spiked S	Sample: 1	139757								
QC Batch: 42329			Date A	nalyzed	: 2007-1	0-23			Anal	yzed By	: DC
Prep Batch: 36547				eparatio						ared By	
		MS	5			Spike	Ma	trix			Rec.
Param		Resu		Units	Dil.	Amount		sult	Rec.		imit
Benzene		0.84		1g/Kg	1	1.00		00110	85		- 119.
Toluene		0.90		1g/Kg	1	1.00		00150	90		- 153.
Ethylbenzene		0.93		ıg/Kg	1	1.00		00160	94		- 126.
Xylene		2.8	7 II	ng/Kg	1	3.00	<0.	00410	96	73.6	- 125.
Percent recovery is based on	the spi	ke result	. RPD is	based o	on the spike	e and spik	e duplica	te resul	t.		
		MSD			Spike	Matrix	c	I	Rec.		RPI
Param		Result	Units	Dil.	Amount	Result	Rec.		imit	RPD	Limi
Benzene		0.910	mg/Kg	1	1.00	< 0.001	10 91	65.7	- 119.1	7	20
Toluene		0.952	mg/Kg	1	1.00	< 0.0013	50 95	47.7	- 153.8	6	20
Ethylbenzene		0.966	mg/Kg	1	1.00	<0.0016	60 97	73.5	- 126.3	3	20
Xylene		2.94	mg/Kg	1	3.00	< 0.004	10 98	73.6	- 125.9	2	20
Percent recovery is based on	the spi	ke result	. RPD is	s based o	on the spike	e and spik	e duplica	te resul	t.		
		M	S N	1SD			Spike	MS	MSD	J	Rec.
Surrogate		Res	ult Re	esult	Units	Dil. A	Amount	Rec.	Rec.	L	imit
Trifluorotoluene (TFT)		0.6		.662	mg/Kg	1	1	65	66		- 109.6
4-Bromofluorobenzene (4-Bl	FB)	0.7		.636	mg/Kg	1	1	71	64		- 124.
Matrix Spike (MS-1) QC Batch: 42333 Prep Batch: 36547	Spiked S	Sample: 1	Date A	Analyzed	: 2007-1 n: 2007-1					yzed By ared By	
		М	ſĊ			Sail		Antoin			Dee
Param			sult	Units	Dil.	Spik Amou		Matrix Result	Rec.		Rec. Limit
GRO				mg/Kg	<u></u>	10.0		<0.739	<u>60</u>		-102.
Percent recovery is based or	the spi			_, +						10	- 102.
citone recovery to based of	r one shi	ne result			a the spike	, and shire	-				
		MOD			~						
<b>D</b>		MSD		<b>D</b>	Spike	Matr			Rec.		
Param GRO		MSD Result 5.56	Units mg/K		-		lt Rec	:. <u>I</u>	Rec. Limit - 102.2	RPD 7	RPI Limi 20

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

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3134	Rock Queen Plant #1											
2	MS	MSI		T *+- F		Spike	MS	MSD		Rec.		
Surrogate	Result					mount	Rec. 51	Rec.		Limit .2 - 84.2		
Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BFB)	$\begin{array}{c} 0.514 \\ 0.823 \end{array}$	0.55		g/Kg g/Kg	1 1	$\frac{1}{1}$	82	$55 \\ 82$		- 162.6		
-DIOMONUOLOBEIIZEIIE (4-DFD)	0.020	0.02	.0 III	<u>8/116</u>		1		02	00	102.0		
, -	l Sample: 139											
QC Batch: 42369		Date Ana	•	2007-10-2					yzed By			
Prep Batch: 36579	(	QC Prepa	aration:	2007-10-2	24			Prep	ared By	/: AR		
	MS				Spike	e	Matrix			Rec.		
Param	Resul		Units	Dil	Amou		Result	Re		Limit		
Chloride	10700	) m	ng/Kg	50	5000		6171.8	90	}	85 - 115		
Percent recovery is based on the s	pike result. F	RPD is ba	ased on	the spike a	nd spike	duplica	te result.					
	MSD			Spike	Matri	x		.ec.		RPD		
Param	Result	Units	Dil.	Amount	Resu			mit	RPD	Limi		
Chloride	10700	mg/Kg	50	5000	6171.	8 9	0 85	- 115	0	20		
Percent recovery is based on the s	pike result. F	RPD is ba	ased on	the spike a	nd spike	duplica	te result.					
Matrix Spike (MS-1) Spike	i Sample: 139	0781										
QC Batch: 42411	1	Date Ana	alvzed:	2007-10-3	25			Ana	lyzed B	y: AR		
Prep Batch: 36618		QC Prepa	-	2007-10-1	25				ared B	-		
•								-				
	MS				Spike	e	Matrix			Rec.		
Param	Resul		Units	Dil.	Amou	nt	Result	Re		Limit		
Param Chloride			Units 1g/Kg	Dil. 50		nt		Re 98		Limit		
	Resul 5940	m	ıg/Kg	50	Amou 5000	nt	Result 1201.55	- 98		Limit		
Chloride Percent recovery is based on the s	Resul 5940 pike result. F MSD	m PD is ba	ng/Kg ased on	50 the spike a Spike	Amou 5000 and spike Matr	nt duplica x	Result 1201.55 ate result. F	91 lec.	5	Limit 85 - 11 RPE		
Chloride Percent recovery is based on the s Param	Resul 5940 pike result. F MSD Result	PD is ba	ig/Kg ased on Dil.	50 the spike a Spike Amount	Amou 5000 and spike Matr Resu	at duplica x It R	Result 1201.55 ate result. F ec. Li	9: lec. imit		Limit 85 - 11 RPE Limi		
Chloride Percent recovery is based on the s	Resul 5940 pike result. F MSD Result	m PD is ba	ng/Kg ased on	50 the spike a Spike	Amou 5000 and spike Matr	at duplica x It R	Result 1201.55 ate result. F ec. Li	91 lec.	5	Limit 85 - 11 RPD		
Chloride Percent recovery is based on the s Param	Resul 5940 pike result. F MSD Result 5990	m PD is b Units mg/Kg	ng/Kg ased on Dil. 50	50 the spike a Spike Amount 5000	Amou 5000 Ind spike Matr Resu 1201.	at duplica x t R 55 §	Result           1201.55           ate result.           F           ec.         Li           16         85	9: lec. imit - 115	5 RPD	Limit 85 - 11 RPE Limi		
Chloride Percent recovery is based on the s Param Chloride Percent recovery is based on the s	Resul 5940 pike result. F MSD Result 5990	m RPD is ba Units mg/Kg RPD is ba	ng/Kg ased on Dil. 50	50 the spike a Spike Amount 5000	Amou 5000 Ind spike Matr Resu 1201.	at duplica x t R 55 §	Result           1201.55           ate result.           F           ec.         Li           16         85	9: lec. imit - 115	5 RPD	Limit 85 - 11 RPI Limi		
Chloride Percent recovery is based on the s Param Chloride Percent recovery is based on the s Matrix Spike (MS-1) Spike	Resul 5940 pike result. F MSD Result 5990 pike result. F d Sample: 139	m PD is b Units mg/Kg PD is b 790	ng/Kg ased on Dil. 50 ased on	50 the spike a Spike Amount 5000 the spike a	Amou 5000 and spike Matr Resu 1201.4 und spike	at duplica x t R 55 §	Result           1201.55           ate result.           F           ec.         Li           16         85	98 tec. imit - 115	RPD 1	Limit 85 - 11 RPI Limi 20		
Chloride Percent recovery is based on the s Param Chloride Percent recovery is based on the s Matrix Spike (MS-1) Spiked QC Batch: 42414	Resul 5940 spike result. F MSD Result 5990 spike result. F d Sample: 139	m RPD is ba Units mg/Kg RPD is ba	ng/Kg ased on Dil. 50 ased on alyzed:	50 the spike a Spike Amount 5000	Amou 5000 and spike Matr Resu 1201.4 and spike	at duplica x t R 55 §	Result           1201.55           ate result.           F           ec.         Li           16         85	9: tec. imit - 115 Ana	5 RPD	Limit 85 - 11 RPI Limi 20 y: AR		
Chloride Percent recovery is based on the s Param Chloride Percent recovery is based on the s Matrix Spike (MS-1) Spiked QC Batch: 42414	Resul 5940 spike result. F MSD Result 5990 spike result. F d Sample: 139	m PD is ba Units mg/Kg PD is ba PD is ba P790 Date Ana	ng/Kg ased on Dil. 50 ased on alyzed:	50 the spike a Spike Amount 5000 the spike a 2007-10-	Amou 5000 and spike Matr Resu 1201.4 and spike	at duplica x t R 55 § duplica	Result 1201.55 ate result. Fec. Li 06 85 ate result.	9: tec. imit - 115 Ana	5 RPD 1	Limit 85 - 11 RPE Limi 20 y: AR y: AR		
Chloride Percent recovery is based on the s Param Chloride Percent recovery is based on the s <b>Matrix Spike (MS-1)</b> Spiked QC Batch: 42414 Prep Batch: 36619	Resul 5940 spike result. F MSD Result 5990 spike result. F d Sample: 139 d MS	Market Ma	ng/Kg ased on Dil. 50 ased on alyzed:	50 the spike a Spike Amount 5000 the spike a 2007-10- 2007-10-	Amou 5000 and spike Matr Resu 1201.4 and spike 25 25 25	at duplica ix it R 55 { duplica	Result 1201.55 ate result. F ec. Li 06 85 ate result. Matrix	9 tec. imit - 115 Ana Prep	5 RPD 1 lyzed B pared B	Limit 85 - 111 RPE Limi 20 y: AR y: AR y: AR Rec.		
Chloride Percent recovery is based on the s Param Chloride Percent recovery is based on the s <b>Matrix Spike (MS-1)</b> Spiked QC Batch: 42414 Prep Batch: 36619 Param	Resul 5940 spike result. F MSD Result 5990 spike result. F d Sample: 139	Market Market Market Market Ma	ng/Kg ased on Dil. 50 ased on alyzed: aration: Units	50 the spike a Spike Amount 5000 the spike a 2007-10-	Amou 5000 and spike Matr Resu 1201.4 and spike	at duplica ix it R 55 { duplica	Result 1201.55 ate result. Free: Li 16 85 ate result. Matrix Result	9: tec. imit - 115 Ana	RPD 1 lyzed B bared B	Limit 85 - 11 RPI Limi 20 y: AR y: AR y: AR Rec. Limit		
Chloride Percent recovery is based on the s Param Chloride Percent recovery is based on the s Matrix Spike (MS-1) Spiked QC Batch: 42414	Resul 5940 spike result. F MSD Result 5990 spike result. F d Sample: 139 d MS Resul 5100	Market Ma	ng/Kg ased on 50 ased on alyzed: aration: Units ng/Kg	50 the spike a Amount 5000 the spike a 2007-10- 2007-10- Dil. 50	Amou 5000 and spike Matr Resu 1201.4 and spike 25 25 25 Spike Amou 5000	at duplica ix It R 55 9 duplica	Result 1201.55 ate result. F ec. Li 06 85 ate result. Matrix Result 126.644	91 tec. imit - 115 Ana Prep Re 91	RPD 1 lyzed B bared B	Limit 85 - 11 RPI Limi 20 y: AR y: AR y: AR Rec. Limit		
Chloride Percent recovery is based on the s Param Chloride Percent recovery is based on the s Matrix Spike (MS-1) Spiked QC Batch: 42414 Prep Batch: 36619 Param Chloride	Resul 5940 spike result. F MSD Result 5990 spike result. F d Sample: 139 d MS Resul 5100	Market Ma	ng/Kg ased on 50 ased on alyzed: aration: Units ng/Kg	50 the spike a Amount 5000 the spike a 2007-10- 2007-10- Dil. 50 the spike a	Amou 5000 and spike Matr Resu 1201.4 and spike 25 25 25 25 25 25 25 25 25 25 25 25 25	at duplica x t R 55 9 duplica	Result 1201.55 ate result. Fec. Li 26 85 ate result. Matrix Result 126.644 ate result.	91 tec. imit - 115 Ana Prep Re 91	RPD 1 lyzed B bared B	Limit 85 - 11 RPE Limi 20 y: AR y: AR y: AR Rec. Limit 85 - 11		
Chloride Percent recovery is based on the s Param Chloride Percent recovery is based on the s Matrix Spike (MS-1) Spiked QC Batch: 42414 Prep Batch: 36619 Param Chloride	Resul 5940 spike result. F MSD Result 5990 spike result. F d Sample: 139 d MS Resul 5100 spike result. F	Market Ma	ng/Kg ased on 50 ased on alyzed: aration: Units ng/Kg	50 the spike a Amount 5000 the spike a 2007-10- 2007-10- Dil. 50	Amou 5000 and spike Matr Resu 1201.4 and spike 25 25 25 Spike Amou 5000	at duplica ix it R 55 § duplica ent duplica	Result 1201.55 ate result. Freec. Li 126 85 ate result. Matrix Result 126.644 ate result. Free 120 Free 1	91 tec. imit - 115 Ana Prep Re 91 Rec.	5 RPD 1 lyzed B bared B sec. 9	Limit 85 - 111 RPD Limi 20 y: AR y: AR y: AR Rec.		
Chloride Percent recovery is based on the s Param Chloride Percent recovery is based on the s Matrix Spike (MS-1) Spiked QC Batch: 42414 Prep Batch: 36619 Param Chloride Percent recovery is based on the s	Resul 5940 spike result. F MSD Result 5990 spike result. F d Sample: 139 d MS Resul 5100 spike result. F MSD Result	Market Ma	ng/Kg ased on Dil. 50 ased on alyzed: aration: Units ng/Kg ased on	50 the spike a Amount 5000 the spike a 2007-10- 2007-10- Dil. 50 the spike a Spike	Amou 5000 and spike Matr Resu 1201.4 and spike 25 25 25 25 25 25 25 25 25 25 25 25 25	at duplica ix it R 55 § duplica ent duplica ix R	Result 1201.55 the result. Freec. Li 16 85 the result. Matrix Result 126.644 the result. Freec. L	91 tec. imit - 115 Ana Prep Re 91	RPD 1 lyzed B bared B	Limit 85 - 11 RPI Limi 20 y: AF y: AF Rec. Limit 85 - 11 RPI		

Report Date: Nove 3134					der: 710220 een Plant #			1 age	Number:	
Matrix Spike (M	S-1) Spiked	Sample: 13	39800							
QC Batch: 42417 Prep Batch: 36620			Date An QC Pre	nalyzed: paration:	2007-10-2 2007-10-2				alyzed By epared By	•
		MS				Spike	Mat	rix		Rec.
Param		Resi		Units		Amount	Res		tec.	Limit
Chloride		482		mg/Kg	50	5000	. 114.		94	85 - 118
Percent recovery is	based on the sp	ike result.	RPD is	based on	the spike ar	id spike du	olicate re	esult.		
		MSD			Spike	Matrix		Rec.		RPD
Param		Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride		4870	mg/Kg		5000	114.485	95	85 - 115	1	20
Percent recovery is	based on the sp	ike result.	RPD is	based on	the spike ar	ıd spike duş	olicate re	esult.		
Matrix Spike (M	S-1) Spiked	Sample: 13	39810							
QC Batch: 42424	ł		Date A	nalyzed:	2007-10-2	5		An	alyzed B	v: AR
Prep Batch: 36623				paration:	2007-10-2				epared B	-
		M	S			Spike	Mat	trix		Rec.
Param		Res		Units	Dil.	Amount	Res		lec.	Limit
Chloride		522	20	mg/Kg	50	5000	<2	5.0 1	104	85 - 11
Percent recovery is	based on the sp	oike result.	RPD is	based on	the spike ar	ıd spike du	olicate re	esult.		
		MSD			Spike	Matrix		Rec.		RPI
Param		Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limi
Chloride		5270	mg/Kg		5000	<25.0	105	85 - 115	1	20
Percent recovery is	based on the st	oike result.	RPD is	based on	the spike a	nd spike du	olicate re	esult.		
-										
Matrix Spike (M	S-1) Spiked	Sample:								
QC Batch: 42441	-		Date A:	nalyzed:	2007-10-2	6		Ar	alyzed B	y: AR
Prep Batch: 36634	Ł		QC Pre	paration:	2007-10-2	6		Pr	epared B	y: AR
n		M		<b>TT 1</b>	100 C 1	Spike	Ma			Rec.
Param		Res		Units	Dil.	Amount	Res		Rec.	Limit
Chloride Persent recovery is	hood on the	464		mg/Kg	50	5000			93	85 - 11
Percent recovery is	uased on the sp	nke result.	<b>КРД 1</b> \$	Dased on	the spike a	ia spike duj	plicate re	esun.		
		MSD		_	Spike	Matrix		Rec.		RPI
Param		Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limi
Chloride		4690	mg/Kg		5000	<25.0	94	85 - 115	1	20
Percent recovery is	based on the sp	oike result.	RPD is	based on	the spike a	nd spike du	plicate r	esult.		
Standard (ICV-1	)									
QC Batch: 42274			Date 4	nolus - J.	2007-10-23				nalyzed B	

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DRO Standard (CC QC Batch: 422	274 Flag V-1)	Units mg/Kg Units mg/Kg	ICVs True Conc. 250 Date Analy CCVs True Conc.	ICVs Found Conc. 235 /zed: 2007-10- CCVs	ICVs Percent Recovery 94	Percent Recovery Limits 85 - 115 Anal	Date Analyzed 2007-10-23
DRO Standard (CC QC Batch: 422 Param DRO Standard (IC) QC Batch: 423 Param Benzene Toluene Ethylbenzene	CV-1) 274 Flag V-1)	Units	Date Analy CCVs True	/zed: 2007-10-			
QC Batch: 422 Param 1 DRO Standard (IC) QC Batch: 423 Param Benzene Toluene Ethylbenzene	274 Flag V-1)		CCVs True		23	Anal	
Param D DRO Standard (IC) QC Batch: 423 Param Benzene Toluene Ethylbenzene	Flag V-1)		CCVs True		23	Anal	
DRO Standard (IC QC Batch: 423 Param Benzene Toluene Ethylbenzene	V-1)		True	CCVs		•	yzed By: LD
DRO Standard (IC QC Batch: 423 Param Benzene Toluene Ethylbenzene	V-1)		l'one	Found	CCVs Percent	Percent Recovery	Date
Standard (IC) QC Batch: 423 Param Benzene Toluene Ethylbenzene	-	mg/Kg		Conc.	Recovery	Limits	Analyzed
QC Batch: 423 Param Benzene Toluene Ethylbenzene	-		250	230	92	85 - 115	2007-10-2
Param Benzene Toluene Ethylbenzene	329						
Benzene Toluene Ethylbenzene			Date Analy	zed: 2007-10-	23	Analy	yzed By: DC
Benzene Toluene Ethylbenzene			ICVs	ICVs	ICVs	Percent	
Benzene Toluene Ethylbenzene			True	Found	Percent	Recovery	Date
Toluene Ethylbenzene	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Ethylbenzene		mg/Kg	0.100	0.106	106	85 - 115	2007-10-2
•		mg/Kg	0.100	0.107	107	85 - 115	2007-10-2
•		mg/Kg	0.100	0.106	106	85 - 115	2007-10-2
		mg/Kg	0.300	0.322	107	85 - 115	2007-10-2
Standard (CC QC Batch: 423			Date Analy	vzed: 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	1 100	mg/Kg	0.100	0.0855	86	85 - 115	2007-10-2
Toluene		mg/Kg	0.100	0.0855 0.0864	86	85 - 115	2007-10-2
Ethylbenzene		177	0.100	0.0804 0.0862	86	85 - 115	2007-10-2
Xylene		mg/Kg mg/Kg	0.100	0.0802	87	85 - 115	2007-10-2
Standard (IC)							
QC Batch: 423	333		-	yzed: 2007-10-			yzed By: DC
			ICVs	ICVs Found	ICVs Demonst	Percent	
Danam	Elem	TT:+-	True	Found	Percent	Recovery	Date
	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
GRO		mg/Kg	1.00	0.926	93	85 - 115	2007-10-2
Standard (CC	CV-1)						

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Report Dat 3134	e: November	2, 2007		Work Order: 716 lock Queen Pla		Page Nu	umber: 24 of 20
Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	0.957	96	85 - 115	2007-10-23
Standard	(ICV-1)						
QC Batch:	. ,		Date Ana	lyzed: 2007-10	)-24	Anal	yzed By: AR
			ICVa	ICWa	ICVa	Dencent	
			ICVs True	ICVs Found	ICVs Percent	Percent Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride	t 105	mg/Kg	100	97.2	<u>97</u>	<u>85 - 115</u>	2007-10-24
Standard	(CCV 1)						
QC Batch:	````		Date Ana	lyzed: 2007-10	ጉን4	Anal	yzed By: AR
go Batan	1.000						<i>,</i>
			CCVs	CCVs	CCVs	Percent	
<b>D</b>		<b>TT T</b> .	True	Found	Percent	Recovery	Date
Param Chloride	Flag	Units mg/Kg	<u>Conc.</u> 100	<u> </u>	Recovery 103	Limits 85 - 115	Analyzed 2007-10-2
Standard							
QC Batch:	42411		Date Ana	lyzed: 2007-10	)-25	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	97.0	97	85 - 115	2007-10-2
0 1 1	(CCV-1)						
Standard			Data Aus	lyzed: 2007-10	)-25	Anal	yzed By: AR
	42411		Date Ana	ayzea. 2001 it			
	42411		CCVs	CCVs	CCVs	Percent	
QC Batch:						Recovery	Date
QC Batch: Param	42411 Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Recovery Limits	Analyzed
QC Batch: Param Chloride		Units mg/Kg	CCVs True	CCVs Found	CCVs Percent	Recovery	
QC Batch: Param Chloride	Flag		CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Recovery Limits	Analyzed
QC Batch: Param Chloride Standard	Flag (ICV-1)		CCVs True Conc. 100	CCVs Found Conc.	CCVs Percent Recovery 103	Recovery Limits 85 - 115	Analyzed 2007-10-2
QC Batch: Param	Flag (ICV-1)		CCVs True Conc. 100	CCVs Found Conc. 103	CCVs Percent Recovery 103	Recovery Limits 85 - 115	Analyzed
QC Batch: Param Chloride Standard	Flag (ICV-1) 42414		CCVs True Conc. 100 Date Ana	CCVs Found Conc. 103	CCVs Percent Recovery 103	Recovery Limits 85 - 115 Anal	Analyzed 2007-10-2
QC Batch: Param Chloride Standard	Flag (ICV-1)		CCVs True Conc. 100 Date Ana ICVs	CCVs Found Conc. 103 Jyzed: 2007-16 ICVs	CCVs Percent Recovery 103 0-25 ICVs	Recovery Limits 85 - 115 Anal Percent	Analyzed 2007-10-2 yzed By: AR

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Report Date 3134	e: November 2	2, 2007		Vork Order: 710 Lock Queen Pla		Page Nu	1mber: 25 of 26
Standard (	CCV-1)						
QC Batch:	42414		Date Anal	yzed: 2007-10	-25	Anal	yzed By: AR
Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent	Percent Recovery Limits	Date
Chloride	r lag	mg/Kg	100	<u> </u>	Recovery 96	85 - 115	Analyzed 2007-10-25
Standard (	ICV-1)						
QC Batch:	42417		Date Anal	lyzed: 2007-10	-25	Anal	yzed By: AR
Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride	I 14g	mg/Kg	100	98.6	<u></u>	85 - 115	2007-10-25
QC Batch: Param Chloride	42417 Flag	Units mg/Kg	Date Anal CCVs True Conc. 100	lyzed: 2007-10 CCVs Found Conc. 101	-25 CCVs Percent Recovery 101	Anal Percent Recovery Limits 85 - 115	yzed By: AR Date <u>Analyzed</u> 2007-10-2
Standard (	ICV-1)	ing/Kg	100	101	101	89 - 119	2007-10-23
QC Batch:	42424		Date Anal	lyzed: 2007-10	-25	Anal	yzed By: AR
Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	103	103	85 - 115	2007-10-25
Standard (	CCV-1)						
QC Batch:	42424		Date Anal	lyzed: 2007-10	-25	Anal	yzed By: AR
Param	Flag	Units	CCVs True Conc. 100	CCVs Found Conc. 97.4	CCVs Percent Recovery 97	Percent Recovery Limits	Date Analyzed 2007-10-2

QC Batch: 42441

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No. of Lot

Date Analyzed: 2007-10-26

Analyzed By: AR

Report Date: November 2, 2007 3134		Vork Order: 710 Lock Queen Plan		Page Number: 26 of 26
	ICVs	ICVs	ICVs	Percent

			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride		mg/Kg	100	98.0	98	85 - 115	2007-10-26
Standard (	(CCV-1)						
QC Batch:	42441		Date Anal	lyzed: 2007-10	)-26	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	2007-10-26

Param	Flag	Units	Conc.	Conc.	Recovery	Limits	A
Chloride		mg/Kg	100	102	102	85 - 115	2
		0/_0					

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ľ		No.)			~		<b>\</b>		na Spec								L				Date		ATRENL # OTHER: _	2	44 °		1
	E	ъ	<u> </u>		Lop		o]'s		. 808/808 Hq ,227		$\geq$				╡ン	>	$\mid >$	1>	->	$\geq$	-	1	-			00	- Accounting To
*	ANALYSIS REQUEST	Method	⊢						08/808 B												5	ŝ	BUB Setu		入	T T	8 1
	- RO		<u> </u>		g	139/0/	128		Janes 2		 :									1	s		89 <b>9</b> 9	Ň	Jay the ally	1 de	1 -4
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5		(Circle	26	BHP	d -10	POW	8 91		Metals .				<u> </u>								۳. ۲. د	A LY NOR	ERE	со а	3	S .	er retains
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# MULLUM TRACEANALYSIS, INC. MULLUM

 5701 Aberdeen Avenue, Suite 9
 Lubbock, Texas 79424

 200 East Sunset Road, Suite 4
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 5002 Basin Street, Suite A1
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Lubbock, Texas 79424 800•378•1296 El Paso, Jexas 79922 888•588•3443 Midland, Texas 79703 Ft. Worth, Texas 76132 E-Mail; Tab@traceanalysis.com

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1296 FAX 806 • 794 • 1298 3443 FAX 915 • 585 • 4944 6301 FAX 432 • 689 • 6313 5260

## Analytical and Quality Control Report

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

1. 202 P

1910

Report Date: March 31, 2008

Work Order: 8032656

Project Name: Celero/Rock Queen Unit Plant #1 Project Number: 3134

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
154765	SB-10 8-10'	soil	2008-03-24	00:00	2008-03-26
154766	SB-10 18-20'	$\mathbf{soil}$	2008-03-24	00:00	2008-03-26
154767	SB-10 28-30'	soil	2008-03-24	00:00	2008-03-26
154768	SB-10 38-40'	soil	2008-03-24	00:00	2008-03-26
154769	SB-10 48-50'	soil	2008-03-24	00:00	2008-03-26
154770	SB-11 8-10'	soil	2008-03-24	00:00	2008-03-26
154771	SB-11 18-20'	soil	2008-03-24	00:00	2008-03-26
154772	SB-11 28-30'	soil	2008-03-24	00:00	2008-03-26
154773	SB-11 38-40'	soil	2008-03-24	00:00	2008-03-26
154774	SB-11 48-50'	soil	2008-03-24	00:00	2008-03-26
154775	SB-12 8-10'	soil	2008-03-24	00:00	2008-03-26
154776	SB-12 18-20'	soil	2008-03-24	00:00	2008-03-26
154777	SB-12 28-30'	soil	2008-03-24	00:00	2008-03-26
154778	SB-12 38-40'	soil	2008-03-24	00:00	2008-03-26
154779	SB-12 48-50'	soil	2008-03-24	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 9 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Blain Lapourch

Dr. Blair Leftwich, Director

#### **Standard Flags**

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Page 2 of 9

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Report Date: March 31, 2008 3134

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## **Analytical Report**

#### Sample: 154765 - SB-10 8-10'

Analysis: QC Batch: Prep Batch:	Chloride (Titration) 46929 40365	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-Cl B 2008-03-27 2008-03-27	Prep Method: Analyzed By: Prepared By:	AR
		$\mathbf{RL}$			
Parameter	$\mathbf{Flag}$	Result	Units	Dilution	$\mathbf{RL}$
Chloride		2000	mg/Kg	50	2.00

#### Sample: 154766 - SB-10 18-20'

Analysis: QC Batch: Prep Batch:	Chloride (Titration) 46929 40365	Analytical Method Date Analyzed: Sample Preparatio	2008-03-27	Prep Method: Analyzed By: Prepared By:	AR
_	_	RL			
Parameter	Flag	$\mathbf{Result}$	Units	Dilution	$\mathbf{RL}$
Chloride		3140	mg/Kg	50	2.00

#### Sample: 154767 - SB-10 28-30'

Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	46929	Date Analyzed:	2008-03-27	Analyzed By:	AR
Prep Batch:	40365	Sample Preparation	2008-03-27	Prepared By:	$\mathbf{AR}$
		RL			
Parameter	$\mathbf{Flag}$	Result	Units	Dilution	$\mathbf{RL}$
Chloride		4080	mg/Kg	50	2.00

#### Sample: 154768 - SB-10 38-40'

Analysis: QC Batch: Prep Batch:	Chloride (Titration) 46929 40365	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-Cl B 2008-03-27 2008-03-27	Prep Method: Analyzed By: Prepared By:	ÁR
Parameter	Flag	RL Result	Units	Dilution	RL_
Chloride		3890	mg/Kg	50	2.00

#### Sample: 154769 - SB-10 48-50'

Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	46930	Date Analyzed:	2008-03-28	Analyzed By:	AR
Prep Batch:	40366	Sample Preparation:	2008-03-28	Prepared By:	$\mathbf{AR}$

		RL			
Parameter	$\mathbf{Flag}$	Result	Units	Dilution	RL
Chloride		2330	mg/Kg	50	2.00

#### Sample: 154770 - SB-11 8-10'

Analysis: QC Batch: Prep Batch:	Chloride (Titration) 46930 40366	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		4470	mg/Kg	50	2.00

#### Sample: 154771 - SB-11 18-20'

Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	46930	Date Analyzed:	2008-03-28	Analyzed By:	AR
Prep Batch:	40366	Sample Preparation:	2008-03-28	Prepared By:	AR
		RL			
Parameter	$\mathbf{Flag}$	Result	Units	Dilution	RL
Chloride		3280	mg/Kg	50	2.00

#### Sample: 154772 - SB-11 28-30'

Analysis: QC Batch: Prep Batch:	Chloride (Titration) 46930 40366	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-Cl B 2008-03-28 2008-03-28	Prep Method: Analyzed By: Prepared By:	AR
		RL	T		D.
Parameter	Flag	Result	Units	Dilution	RL
Chloride		4850	mg/Kg	50	2.00

#### Sample: 154773 - SB-11 38-40'

Analysis: QC Batch: Prep Batch:	Chloride (Titration) 46930 40366	Analytical Method: Date Analyzed: Sample Preparation	2008-03-28	Prep Method: Analyzed By: Prepared By:	ÁR
		RL			
Parameter	$\mathbf{Flag}$	Result	Units	Dilution	$\mathbf{RL}$
Chloride		4040	mg/Kg	50	2.00

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#### Sample: 154774 - SB-11 48-50'

Analysis: QC Batch: Prep Batch:	Chloride (Titration) 46930 40366	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	$\mathbf{Flag}$	Result	Units	Dilution	$\mathbf{RL}$
Chloride		1270	mg/Kg	50	2.00

#### Sample: 154775 - SB-12 8-10'

Analysis:	Chloride (Titration)	Analytical Method:		Prep Method:	,
QC Batch:	46930	Date Analyzed:	2008-03-28	Analyzed By:	$\mathbf{AR}$
Prep Batch:	40366	Sample Preparation	n: 2008-03-28	Prepared By:	$\mathbf{AR}$
		$\mathbf{RL}$			
Parameter	$\operatorname{Flag}$	$\operatorname{Result}$	Units	Dilution	$\mathbf{RL}$
Chloride		<100	mg/Kg	50	2.00

#### Sample: 154776 - SB-12 18-20'

Analysis: QC Batch:	Chloride (Titration) 46930	Analytical Method: Date Analyzed:	SM 4500-Cl B 2008-03-28	Prep Method: Analyzed By:	,
Prep Batch:	40366	Sample Preparation	: 2008-03-28	Prepared By:	AR
		$\mathbf{RL}$			
Parameter	$\operatorname{Flag}$	Result	Units	Dilution	$\mathbf{RL}$
Chloride		<100	mg/Kg	50	2.00

#### Sample: 154777 - SB-12 28-30'

Analysis: QC Batch:	Chloride (Titration) 46930	Analytical Method Date Analyzed:	: SM 4500-Cl B 2008-03-28	Prep Method: Analyzed By:	,
Prep Batch:	40366	Sample Preparation	n: 2008-03-28	Prepared By:	$\mathbf{AR}$
		RL			
Parameter	Flag	Result	Units	Dilution	$\mathbf{RL}$
Chloride		311	mg/Kg	50	2.00

#### Sample: 154778 - SB-12 38-40'

Analysis: QC Batch: Prep Batch:	Chloride (Titration) 46930 40366	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	$\mathbf{Flag}$	Result	Units	Dilution	$\mathbf{RL}$
Chloride		903	mg/Kg	50	2.00

	, 2008	Work Ore Celero/Rock Qu	der: 8032656 ieen Unit Pla			Page Number:	6 of 9
4779 - SB	-12 48-50'						
Chloride 46932 40367	(Titration)	Date Analyzed	: 2008	-03-28		Prep Method: Analyzed By: Prepared By:	N/A AR AR
	Flag	RL Result 777					RL 2.00
	<u> </u>						
ank (1)	QC Batch: 46929						
46929 40365		Date Analyzed: QC Preparation:	2008-03-27 2008-03-27			Analyzed By: Prepared By:	AR AR
	Flag				Units mg/Kg		RI 2
ank (1)	QC Batch: 46930						
46930 40366		Date Analyzed: QC Preparation:	2008-03-28 2008-03-28			Analyzed By: Prepared By:	AR AR
	Flag				mg/Kg		RI 2
ank (1)	QC Batch: 46932						
46932		Date Analyzed: QC Preparation:	2008-03-28 2008-03-28			Analyzed By: Prepared By:	AR
40367							АҚ
40367	Flag	M	DL		Units		AR RI
	Chloride 46932 40367 ank (1) 46929 40365 ank (1) 46930	40367 Flag mk (1) QC Batch: 46929 46929 40365 Flag mk (1) QC Batch: 46930 46930 40366 Flag Flag	Chloride (Titration) Analytical Met 46932 Date Analyzed Sample Prepar RL Flag Result 777 Ank (1) QC Batch: 46929 46929 Date Analyzed: 40365 QC Preparation: MI Flag Res MI Flag MI Res Analytical Met Date Analyzed: QC Preparation: MI Flag Res MI Flag MI Res Analytical Met Date Analyzed: QC Preparation: MI Flag Res MI Flag Res Analyzed: (0.1)   MI Flag Res MI Flag Res Analyzed: (0.1)	Chloride (Titration)       Analytical Method: SM -         46932       Date Analyzed: 2008         40367       Sample Preparation: 2008         RL       RL         Flag       Result       Unit:         777       mg/Ki         ank (1)       QC Batch: 46929       Date Analyzed: 2008-03-27         40365       QC Preparation: 2008-03-27         QC Batch: 46929       MDL         Flag       Result         VIDL       Flag         Result       <0.500	Chloride (Titration) 46932 40367 Analytical Method: SM 4500-Cl B Date Analyzed: 2008-03-28 Sample Preparation: 2008-03-28 RL Result Units 777 mg/Kg 46929 Date Analyzed: 2008-03-27 40365 QC Preparation: 2008-03-27 MDL Flag Result <0.500 46930 Date Analyzed: 2008-03-28 40366 QC Preparation: 2008-03-28 40366 QC Preparation: 2008-03-28 MDL Flag Result <0.500 MDL Flag Result <0.500	Chloride (Titration) Analytical Method: SM 4500-Cl B Date Analyzed: 2008-03-28 Sample Preparation: 2008-03-28 RL Flag Result Units Dilutio 777 mg/Kg 1 ank (1) QC Batch: 46929 46929 Date Analyzed: 2008-03-27 40365 QC Preparation: 2008-03-27 40365 QC Preparation: 2008-03-27 MDL Flag Result Units <0.500 mg/Kg ank (1) QC Batch: 46930 46930 Date Analyzed: 2008-03-28 40366 QC Preparation: 2008-03-28 MDL Flag Result Units <0.500 mg/Kg	Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: 46932 40367 Sample Preparation: 2008-03-28 Analyzed By: RL Flag Result Units Dilution 777 mg/Kg 50 ank (1) QC Batch: 46929 46929 Date Analyzed: 2008-03-27 Analyzed By: QC Preparation: 2008-03-27 Prepared By: MDL Flag Result Units 

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I.

Report Date: March 31, 2008 3134

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D	LCSD	<b>.</b> .	Dil	Spike	Matrix	D	Re		000	RPD
Param Chloride	<u>Result</u> 96.0	Units mg/Kg	$\frac{\text{Dil.}}{1}$	Amount 100	Result <0.500	Rec. 96	Lin 85 -		RPD 4	Limit 20
			· · ·	· · · · · · · · · · · · · · · · · · ·		····		110		20
Percent recovery is based on	the spike result.	RPD is	based on t	the spike an	a spike au	plicate r	esult.			
Laboratory Control Spike	e (LCS-1)									
QC Batch: 46930		Date A	nalyzed:	2008-03-28	2			Ana	lyzed B	y: AR
Prep Batch: 40366			paration:	2008-03-28					pared B	-
•		•	•							0
	LC	s			Spike	Ma	trix			Rec.
Param	Res		Units	Dil.	Amount		sult	$\mathbf{Re}$	ec.	Limit
Chloride	10	1	mg/Kg	1	100	<0	.500	10	01	85 - 115
Percent recovery is based on	the spike result.	RPD is	based on t	the spike an	d spike du	plicate r	esult.			
	LCSD			Spike	Matrix		Re	ec.		RPD
Param	$\mathbf{Result}$	Units	Dil.	Amount	Result	Rec.	Lin	nit	RPD	Limit
Chloride	97.9	mg/Kg	g 1	100	< 0.500	98	85 -	115	4	20
Laboratory Control Spike QC Batch: 46932		Date A	nalyzed:	2008-03-2	3	plicate r	esult.		lyzed B	-
Laboratory Control Spike QC Batch: 46932	e (LCS-1)	Date A QC Pre			3 8	pncate r	esult.		lyzed B pared B	-
Laboratory Control Spike QC Batch: 46932 Prep Batch: 40367	e (LCS-1) LC	Date A QC Pre	nalyzed: paration:	2008-03-2 2008-03-2	3 3 Spike	Ma	trix	Prej	pared B	y: AR Rec.
Laboratory Control Spike QC Batch: 46932 Prep Batch: 40367 Param	e (LCS-1) LC Res	Date A QC Pre S ult	nalyzed: paration: Units	2008-03-2 2008-03-2 Dil.	3 3 Spike Amount	Ma Re	trix sult	Prej Re	pared B ec.	y: AR Rec. Limit
Laboratory Control Spike QC Batch: 46932 Prep Batch: 40367 Param Chloride	e (LCS-1) LC Res 10	Date A QC Pre CS ult 3	nalyzed: paration: Units mg/Kg	2008-03-2: 2008-03-2: Dil. 1	Spike Amount 100	Ma Re <0	trix sult .500	Prej	pared B ec.	y: AR Rec. Limit
Laboratory Control Spike QC Batch: 46932 Prep Batch: 40367 Param Chloride	e (LCS-1) LC Res 10 the spike result.	Date A QC Pre CS ult 3	nalyzed: paration: Units mg/Kg	2008-03-2: 2008-03-2: Dil. 1	Spike Amount 100	Ma Re <0	trix sult .500	Prej Re	pared B ec.	y: AR Rec. Limit
Laboratory Control Spike QC Batch: 46932 Prep Batch: 40367 Param Chloride Percent recovery is based on	LC E (LCS-1) LC Res 10 the spike result. LCSD	Date A QC Pre S ult 3 RPD is	nalyzed: paration: Units mg/Kg based on	2008-03-2 2008-03-2 Dil. 1 the spike ar Spike	Spike Amount 100 Id spike du Matrix	Ma Re <0 plicate r	trix sult .500 esult. Re	Prep Re 10	pared B ec. )3	y: AR Rec. Limit 85 - 115 RPD
Laboratory Control Spike QC Batch: 46932 Prep Batch: 40367 Param Chloride Percent recovery is based on Param	e (LCS-1) LC Res 10 the spike result. LCSD Result	Date A QC Pre S ult RPD is Units	nalyzed: paration: Units mg/Kg based on Dil.	2008-03-2 2008-03-2 Dil. 1 the spike ar Spike Amount	Spike Amount 100 Id spike du Matrix Result	Ma Re <0 plicate r Rec.	trix sult .500 esult. Re Lir	Prep Re 10 ec. nit	pared B ec. 03 RPD	y: AR Rec. Limit 85 - 115 RPD Limit
Laboratory Control Spike QC Batch: 46932 Prep Batch: 40367 Param Chloride Percent recovery is based on Param Chloride	LC Res 10 the spike result. LCSD Result 96.9	Date A QC Pre S ult 3 RPD is Units mg/Kg	nalyzed: paration: Units mg/Kg based on Dil. g 1	2008-03-2 2008-03-2 Dil. 1 the spike an Spike Amount 100	Spike Amount 100 d spike du Matrix Result <0.500	Ma Re <0 plicate r <u>Rec.</u> 97	trix sult .500 esult. Re Lin 85 -	Prep Re 10 ec. nit	pared B ec. )3	y: AR Rec. Limit 85 - 115 RPD
Laboratory Control Spike QC Batch: 46932 Prep Batch: 40367 Param Chloride Percent recovery is based on Param Chloride	LC Res 10 the spike result. LCSD Result 96.9	Date A QC Pre S ult 3 RPD is Units mg/Kg	nalyzed: paration: Units mg/Kg based on Dil. g 1	2008-03-2 2008-03-2 Dil. 1 the spike an Spike Amount 100	Spike Amount 100 d spike du Matrix Result <0.500	Ma Re <0 plicate r <u>Rec.</u> 97	trix sult .500 esult. Re Lin 85 -	Prep Re 10 ec. nit	pared B ec. 03 RPD	y: AR Rec. Limit 85 - 115 RPD Limit
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Laboratory Control Spike         QC Batch:       46932         Prep Batch:       40367         Param       Chloride         Percent recovery is based on         Param         Chloride         Percent recovery is based on         Param         Chloride         Percent recovery is based on         Matrix Spike (MS-1)	e (LCS-1) LC Res 10 the spike result. LCSD Result 96.9 the spike result.	Date A QC Pre US ult 3 RPD is Units mg/Kg RPD is 54768	nalyzed: paration: <u>Units</u> mg/Kg based on <u>Dil.</u> g 1 based on	2008-03-2 2008-03-2 Dil. 1 the spike an Spike Amount 100 the spike an	S Spike Amount 100 Id spike du Matrix Result <0.500 Id spike du	Ma Re <0 plicate r <u>Rec.</u> 97	trix sult .500 esult. Re Lin 85 -	Prej Re 10 ec. nit 115	ec. 03 RPD 6	y: AR Rec. Limit 85 - 115 RPD Limit 20
Laboratory Control Spike         QC Batch:       46932         Prep Batch:       40367         Param       Chloride         Percent recovery is based on         Param         Chloride         Percent recovery is based on         Param         Chloride         Percent recovery is based on         Matrix Spike (MS-1)       S         QC Batch:       46929	e (LCS-1) LC Res 10 the spike result. LCSD Result 96.9 the spike result.	Date A QC Pre US ult 3 RPD is Units mg/K <sub>f</sub> RPD is 54768 Date A	nalyzed: paration: <u>Units</u> mg/Kg based on <u>Dil.</u> g 1 based on halyzed:	2008-03-2 2008-03-2 Dil. 1 the spike an Spike Amount 100 the spike an 2008-03-2	Spike Amount 100 d spike du Matrix Result <0.500 d spike du	Ma Re <0 plicate r <u>Rec.</u> 97	trix sult .500 esult. Re Lin 85 -	Prep • Re 10 ec. nit 115 Ana	RPD 6	y: AR Rec. Limit 85 - 11: RPD Limit 20 By: AR
Laboratory Control Spike         QC Batch:       46932         Prep Batch:       40367         Param       Chloride         Percent recovery is based on         Param         Chloride         Percent recovery is based on         Param         Chloride         Percent recovery is based on         Matrix Spike (MS-1)       S         QC Batch:       46929	e (LCS-1) LC Res 10 the spike result. LCSD Result 96.9 the spike result.	Date A QC Pre US ult 3 RPD is Units mg/K <sub>f</sub> RPD is 54768 Date A	nalyzed: paration: <u>Units</u> mg/Kg based on <u>Dil.</u> g 1 based on	2008-03-2 2008-03-2 Dil. 1 the spike an Spike Amount 100 the spike an	Spike Amount 100 d spike du Matrix Result <0.500 d spike du	Ma Re <0 plicate r <u>Rec.</u> 97	trix sult .500 esult. Re Lin 85 -	Prep • Re 10 ec. nit 115 Ana	ec. 03 RPD 6	y: AR Rec. Limit 85 - 11: RPD Limit 20 By: AR
Laboratory Control Spike         QC Batch:       46932         Prep Batch:       40367         Param       Chloride         Percent recovery is based on         Param         Chloride         Percent recovery is based on         Param         Chloride         Percent recovery is based on         Matrix Spike (MS-1)         QC Batch:       46929	e (LCS-1) LC Res 10 the spike result. LCSD Result 96.9 the spike result.	Date Al QC Pre 2S ult 3 RPD is Units mg/Kg RPD is 54768 Date A QC Pre	nalyzed: paration: <u>Units</u> mg/Kg based on <u>Dil.</u> g 1 based on halyzed:	2008-03-2 2008-03-2 Dil. 1 the spike an Spike Amount 100 the spike an 2008-03-2	Spike Amount 100 d spike du Matrix Result <0.500 d spike du	Ma Re <0 plicate r <u>Rec.</u> 97 plicate r	ttrix sult .500 esult. Re Lin 85 - esult.	Prep • Re 10 ec. nit 115 Ana	RPD 6	y: AR Rec. Limit 85 - 115 RPD Limit 20 By: AR
Prep Batch: 40367 Param Chloride Percent recovery is based on Param Chloride Percent recovery is based on Matrix Spike (MS-1) S QC Batch: 46929	LC Res 10 the spike result. LCSD Result 96.9 the spike result. Spiked Sample: 15	Date A QC Pre S ult 3 RPD is <u>Units</u> <u>MRPD is</u> 54768 Date A QC Pre S ult	nalyzed: paration: <u>Units</u> mg/Kg based on <u>Dil.</u> g 1 based on halyzed:	2008-03-2 2008-03-2 Dil. 1 the spike an Spike Amount 100 the spike an 2008-03-2	Spike Amount 100 d spike du Matrix Result <0.500 d spike du	Ma Re <0 plicate r <u>Rec.</u> 97 plicate r	trix sult .500 esult. Re Lin 85 -	Prep Re 10 ec. nit 115 Ana Pre	RPD 6	y: AR Rec. Limit 85 - 115 RPD Limit 20 By: AR

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

Report Date: March 31, 2008 3134

matrix spikes continued	MSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
	MSD			Spike	Matrix		Rec.		RPD
Param	$\mathbf{Result}$	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride	8710	mg/Kg	50	5000	3891.63	96	85 - 115	1	20
Percent recovery is based on	the spike result.	RPD is b	ased on	the spike ar	ıd spike duj	plicate re	esult.		
Matrix Spike (MS-1)	Spiked Sample: 1	54778							
QC Batch: 46930		Date Ana	alyzed:	2008-03-2	8		Ana	alyzed By	: AR
Prep Batch: 40366		QC Prep		2008-03-2				pared By	
	M				Spike	Mat			Rec.
Param	Res		Units	Dil.	Amount	Res		ec.	Limit
Chloride	586	50 n	ng/Kg	50	5000	903.	.258 9	99	85 - 115
Percent recovery is based on	-	RPD is b	ased on	-		plicate re			
	MSD	<b>T</b> T •/	DU	Spike	Matrix	D	Rec.	000	RPD
Param Chloride	Result 5720	Units		Amount 5000	Result 903.258	Rec. 96	Limit 85 - 115	RPD 2	Limit 20
Percent recovery is based on				· · · · · ·	~~~~~				
Percent recovery is based on Matrix Spike (MS-1) S QC Batch: 46932	the spike result.	RPD is b 54788 Date An	ased on alyzed:	the spike an 2008-03-2	nd spike du		esult. An	alyzed By	y: AR
Percent recovery is based on Matrix Spike (MS-1) S QC Batch: 46932	the spike result. Spiked Sample: 1	RPD is b 54788 Date An QC Prep	ased on alyzed:	the spike a	nd spike du 8 8	plicate r	esult. An Pre		y: AR y: AR
Percent recovery is based on Matrix Spike (MS-1) S QC Batch: 46932 Prep Batch: 40367	the spike result. Spiked Sample: 1 M	RPD is b 54788 Date An QC Prep S	alyzed: alyzed: aration:	the spike a 2008-03-2 2008-03-2	nd spike du 8 8 Spike	plicate ro Ma	esult. An Pre	alyzed B pared By	y: AR 7: AR Rec.
Percent recovery is based on Matrix Spike (MS-1) S QC Batch: 46932 Prep Batch: 40367 Param	the spike result. Spiked Sample: 1 M Res	RPD is b 54788 Date An QC Prep S ult	alyzed: paration: Units	the spike as 2008-03-2 2008-03-2 Dil.	nd spike du 8 8 Spike Amount	plicate ro Ma Res	esult. An Pre trix sult R	alyzed By epared By ec.	y: AR y: AR Rec. Limit
Percent recovery is based on Matrix Spike (MS-1) S QC Batch: 46932 Prep Batch: 40367 Param Chloride	the spike result. Spiked Sample: 1 M Res 50	RPD is b 54788 Date An QC Prep S ult 70 n	alyzed: oaration: Units 1g/Kg	the spike an 2008-03-2 2008-03-2 Dil. 50	nd spike du 8 8 8 Spike Amount 5000	Ma Res 175	esult. An Pre trix sult R 439 9	alyzed By epared By ec.	y: AR y: AR Rec. Limit
Percent recovery is based on Matrix Spike (MS-1) S QC Batch: 46932 Prep Batch: 40367 Param Chloride	the spike result. Spiked Sample: 1 M Res 50	RPD is b 54788 Date An QC Prep S ult 70 n	alyzed: oaration: Units 1g/Kg	the spike as 2008-03-2 2008-03-2 Dil. 50 the spike as	nd spike du 8 8 8 Spike Amount 5000	Ma Res 175	esult. An Pre trix sult R 439 9	alyzed By epared By ec.	y: AR 7: AR Rec. Limit 85 - 115
Percent recovery is based on Matrix Spike (MS-1) S QC Batch: 46932 Prep Batch: 40367 Param Chloride Percent recovery is based on	the spike result. Spiked Sample: 1 M Res 50 the spike result.	RPD is b 54788 Date An QC Prep S ult 70 n	alyzed: oaration: Units 1g/Kg	the spike an 2008-03-2 2008-03-2 Dil. 50	nd spike du 8 8 8 Amount 5000 nd spike du	Ma Res 175	esult. An Pre trix sult R -439 9 esult.	alyzed By epared By ec.	y: AR 7: AR Rec. Limit 85 - 115 RPD
Percent recovery is based on Matrix Spike (MS-1) S QC Batch: 46932	the spike result. Spiked Sample: 1 M Res 50 the spike result. MSD	RPD is b 54788 Date An QC Prep S ult 70 m RPD is b	alyzed: paration: Units ng/Kg pased on	the spike as 2008-03-2 2008-03-2 Dil. 50 the spike as Spike	nd spike du 8 8 8 Amount 5000 nd spike du Matrix	Ma Res 175. plicate r	esult. An Pre trix sult R .439 S esult. Rec.	alyzed By epared By ec. 98	y: AR 7: AR Rec. Limit 85 - 115
Percent recovery is based on Matrix Spike (MS-1) S QC Batch: 46932 Prep Batch: 40367 Param Chloride Percent recovery is based on Param Chloride Percent recovery is based on	the spike result. Spiked Sample: 1 M Res 50 the spike result. MSD Result 5000	RPD is b 54788 Date An. QC Prep S ult TO n RPD is b Units mg/Kg	alyzed: paration: units ng/Kg pased on Dil. 50	the spike as 2008-03-2 2008-03-2 Dil. 50 the spike as Spike Amount 5000	nd spike du 8 8 8 Amount 5000 nd spike du Matrix Result 175.439	Ma Res 175 plicate r Rec. 96	esult. An. Pre sult R .439 S esult. Rec. Limit 85 - 115	alyzed By epared By ec. 98 RPD	y: AR 7: AR Limit 85 - 115 RPD Limit
Percent recovery is based on Matrix Spike (MS-1) S QC Batch: 46932 Prep Batch: 40367 Param Chloride Percent recovery is based on Param Chloride Percent recovery is based on Standard (ICV-1)	the spike result. Spiked Sample: 1 M Res 50 the spike result. MSD Result 5000	RPD is b 54788 Date An QC Prep S ult 1 70 n RPD is b Units mg/Kg RPD is b	alyzed: paration: Units ng/Kg pased on Dil. 50 pased on	the spike an 2008-03-2 2008-03-2 Dil. 50 the spike an Spike Amount 5000 the spike an	nd spike du 8 8 8 Amount 5000 nd spike du Matrix Result 175.439 nd spike du	Ma Res 175 plicate r Rec. 96	esult. An. Pre sult R 439 9 esult. Rec. Limit 85 - 115 esult.	alyzed By epared By ec. 98 RPD 1	y: AR 7: AR Limit 85 - 115 RPD Limit 20
Percent recovery is based on Matrix Spike (MS-1) S QC Batch: 46932 Prep Batch: 40367 Param Chloride Percent recovery is based on Param Chloride Percent recovery is based on Standard (ICV-1)	the spike result. Spiked Sample: 1 M Res 50 the spike result. MSD Result 5000	RPD is b 54788 Date An QC Prep S ult 1 70 n RPD is b Units mg/Kg RPD is b	alyzed: paration: Units ng/Kg pased on Dil. 50 pased on	the spike as 2008-03-2 2008-03-2 Dil. 50 the spike as Spike Amount 5000	nd spike du 8 8 8 Amount 5000 nd spike du Matrix Result 175.439 nd spike du	Ma Res 175 plicate r Rec. 96	esult. An. Pre sult R 439 9 esult. Rec. Limit 85 - 115 esult.	alyzed By epared By ec. 98 RPD	y: AR /: AR Rec. Limit 85 - 115 RPD Limit 20
Percent recovery is based on Matrix Spike (MS-1) S QC Batch: 46932 Prep Batch: 40367 Param Chloride Percent recovery is based on Param Chloride Percent recovery is based on Standard (ICV-1)	the spike result. Spiked Sample: 1 M Res 50 the spike result. MSD Result 5000	RPD is b 54788 Date An QC Prep S ult 1 70 n RPD is b Units mg/Kg RPD is b Date An ICVs	alyzed: paration: Units ng/Kg pased on Dil. 50 pased on alyzed: IC	the spike as 2008-03-2 2008-03-2 Dil. 50 the spike as Spike Amount 5000 the spike as 2008-03-27	nd spike du 8 8 8 8 Amount 5000 nd spike du Matrix Result 175.439 nd spike du ICVs	Ma Res 175 plicate r Rec. 96 plicate r	esult. An. Pre sult R 439 9 esult. Rec. Limit 85 - 115 esult. An Percent	alyzed B epared By ec. 98 RPD 1 1 alyzed B	y: AR /: AR Rec. Limit 85 - 115 RPD Limit 20 y: AR
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Percent recovery is based on Matrix Spike (MS-1) S QC Batch: 46932 Prep Batch: 40367 Param Chloride Percent recovery is based on Param	the spike result. Spiked Sample: 1 M Res 50 the spike result. MSD Result 5000	RPD is b 54788 Date An QC Prep S ult 1 70 n RPD is b Units mg/Kg RPD is b Date An ICVs	alyzed: paration: Units ng/Kg pased on Dil. 50 pased on alyzed: IC Fo Cc	the spike as 2008-03-2 2008-03-2 Dil. 50 the spike as Spike Amount 5000 the spike as 2008-03-27	nd spike du 8 8 8 8 Amount 5000 nd spike du Matrix Result 175.439 nd spike du ICVs	Ma Res 175 plicate r Rec. 96 plicate r	esult. An. Pre sult R 439 9 esult. Rec. Limit 85 - 115 esult. An Percent	alyzed By epared By ec. 98 RPD 1 alyzed B	y: AR 7: AR Rec. Limit 85 - 115 RPD Limit 20 y: AR

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Report Date 3134	e: March 31, 2	2008		Vork Order: 803 Rock Queen Un		Page Number: 9 of 9				
Standard (	CCV-1)									
QC Batch:	46929		• Date Anal	yzed: 2008-03	-27	Anal	yzed By: AR			
Param Chloride	Flag	Units mg/Kg	CCVs True Conc. 100	CCVs Found Conc. 100	CCVs Percent Recovery 100	Percent Recovery Limits 85 - 115	Date Analyzed 2008-03-27			
		8,0								
Standard () QC Batch:	-		Data Ana	yzed: 2008-03	1.08	Anal	yzed By: AR			
QU Daten.	10550			-		11101	yzeu by. mit			
Desser	Diam	11-:4-	ICVs True	ICVs Found	ICVs Percent	Percent Recovery	Date			
Param Chloride	Flag	Units mg/Kg	Conc. 100	Conc. 100	Recovery 100	Limits 85 - 115	Analyzed 2008-03-28			
Standard (	CCV-1)									
QC Batch:			Date Ana	lyzed: 2008-03	3-28	Anal	yzed By: AR			
Davaar	Elan		CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date			
Param Chloride	Flag	Units mg/Kg	Conc. 100	<u>Conc.</u> 99.5	Recovery 100	Limits 85 - 115	Analyzed 2008-03-28			
Standard (	ICV-1)									
QC Batch:	46932		Date Ana	lyzed: 2008-03	3-28	Anal	yzed By: AR			
			ICVs True	ICVs Found	$\operatorname{ICVs}$	Percent Recovery	Date			
Param Chloride	Flag	Units mg/Kg	Conc. 100	Conc. 101	Recovery 101	Limits 85 - 115	Analyzed 2008-03-28			
Standard (	CCV-1)									
QC Batch:			Date Ana	lyzed: 2008-03	3-28	Anal	yzed By: AR			
			CCVs	CCVs	CCVs	Percent				
2		** •	True	Found	Percent	Recovery	Date			
Param Chloride	Flag	Units mg/Kg	Conc. 100	Conc. 98.9	Recovery 99	Limits 85 - 115	Analyzed 2008-03-28			

2656	PAGE: / OF: 2	ANALYSIS REQUEST (Circle or Specify Method No.)	68 B	н ад	q <u>A</u> L q <u>CL</u>	570/625 60/624 5 Ba C 5 Ba C	MOD. A PA A A PA S A PA A Se Se Se Se Se Se Se Se Se Se	8r508 X3T8											SAMPLED BY (Print's Initial) Date: 031 24/26	All	(GAND DELVERED) UPS OTHER:		Jettry Kindley Autorized: (no)	
NO# 8032656	Analysis Request of Chain of Custody Becord	HIGHLANDER ENVIRONMENTAL CORP.	1910 N. Big Spring St.	Midland, Texas 79705	Fax (432) 682-3946	SITE MANAGER: JE FF KINUNY METHOD	m ()m; ()ent #]		SB-10 (A-10')	5B-10 (18-30')	58-JU (28-30') // //		58-10 (ч8-50 <sup>1</sup> ) /	SB-11 (8-10') [1] [/	\[         \[         \]     \[         \[         \]     \[         \[         \]     \[         \[         \]     \[         \[         \]     \[         \[         \]     \[         \[         \]     \[         \[         \]     \[         \[         \]     \[         \[         \[         \]     \[         \[         \[         \[	SB-N (28-30') 1 1 1	SB-11 (38-40') // // // //		Muula 24, 2005	RECEIVED BY: (Signature)	RECEIVED BY: (Signature)		ZIP DATE 3 210 08 TIME 11:15	
	Analysis Redues	HIGHLANDER	F6 F		(432) 682-4559	CLIENT NAME: Celera Envavo	1 -		154765 coloration S V S	2 V 2		5 1	769 03/24/08 S V SI	> S	779 0324106 S V SF	TT2 oshyios S V SB	773 03 24 S V S	S V		RELINDUGHED BY: (Signature) Date: Time:	RELINQUISHED BY: (Signature) Date:	RECEIVING LABORATORY: To & Araly sty	CONTACT: Midler State T	

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DSA REOS # OM		
Analysis Request of Chain of Custody Record	PAGE:	2 OF: 2
HIGHLANDER ENVIRONMENTAL CORP.	Circle or Specify Method No.)	No.)
(10, 035) (1, 10, 035)		
32-4559 Fax (432) 682-3946 $\begin{bmatrix} a \\ b \end{bmatrix}$		SQ
SITE MANAGER: CANAL BESERVATIVE 00 0 0	279/02	T ,Hq ,a
PROJECT NAME: ROLE (2 veen Unit Plant #1 0) 23 RACE (2 veen Unit Plant #	809	(so) (JIV
BLEX 8051E HUO3 HUO3 HUO3 HUO3 KITHERED ( HO3 KITHERED ( KITHERED ( K)) ( K)	GC.MS Sem Pest. 808/60 Chionde Comma Spe	) sieß siqtA sedsA) MJ9 noinA roisM
154775 astrution S V SB-12 (8-10') 11 V	-	
5 1 58-12		
S V 58-12	<u>&gt;</u>	
778 u3/22/105 5 V 53-12 (38-40) 11 V		
779 (3)24)108 5 V SB-12 (48-56) 11 1 V	<i> </i> ∕	
1.1.4.16.24,2430、 日子 日本	) Juk	Date: 23 24 155
Date:         Date:         Date:         SAMPLE SHIPPED BY. (Signature)           Time:         Time:         Time:         FEDEX	(e)	AIRBILL #:
Date:	UPS PERSON:	Results by:
mecereb Br. (Supreme Level of Mal Nr. 15 July Trey	Kind in	RUSH Charges Authorized: Yes
SAMPLE CONDITION WHEN RECEIVED. REWARKS: all Jacks - multimed		
Please fill out all copies - Laboratory retains Yellow copy - Return Orginal copy to Highlander Environmental Corp Project Manager retains Pink copy		- Accounting receives Gold copy.

## MULLING TRACEANALYSIS, INC. MULLING MULLING

 6701 Aberdeen Avenue, Suite 9
 Lubbock, Texas 79424

 200 East Sunset Road, Suite 1
 El Paso, Texas 79922

 5002 Basin Street, Suite A1
 Midland, Texas 79703

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

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 888 • 588 • 3443 915 • 585 • 3443 432 • 689 • 6301 817 • 201 • 5260

## Analytical and Quality Control Report

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

Report Date: June 14, 2007

7052924

Work Order:

Project Name: Rock Queen ESA Project Number: 2972

Enclosed are the Analytical Report and	Quality Control Report for	the following sample(s)	submitted to	TraceAnalysis, Inc.
		Dite	(P):	D-4-

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
125727	Water Station #1 MW-1	water	2007-05-24	17:25	2007-05-29

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

This report consists of a total of 18 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Michael Alm

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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144 5 144

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10.00

## **Analytical Report**

#### Sample: 125727 - Water Station #1 MW-1

Analysis:	Alkalinity		Analytical Method:	SM 2320B	Prep Method:	N/A
QC Batch:	37938		Date Analyzed:	2007-06-07	Analyzed By:	SM
Prep Batch:	32854		Sample Preparation:	2007-06-06	Prepared By:	SM
			RL			
Parameter		Flag	Result	Units	Dilution	$\mathbf{RL}$
Hydroxide A	Ikalinity		<1.00	mg/L as CaCo3	1	1.00
Carbonate A	lkalinity		< 1.00	mg/L as CaCo3	1	1.00
Bicarbonate	Alkalinity		154	mg/L as CaCo3	1	4.00
Total Alkalin	ity		154	mg/L as CaCo3	1	4.00

#### Sample: 125727 - Water Station #1 MW-1

Analysis: QC Batch: Prep Batch:	BTEX 37812 32729		Π	analytical M ate Analyz ample Prep	ed:	S 8021B 2007-06-03 2007-06-02		Prep Metl Analyzed Prepared	By: AG
				R	L				
Parameter		Flag		Resul	t	Units	]	Dilution	$\mathbf{RL}$
Benzene			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	< 0.0050	0	mg/L		5	0.00100
Toluene				< 0.0050	0	mg/L		5	0.00100
Ethylbenzene	9			< 0.0050	0	mg/L		5	0.00100
Xylene				< 0.0050	0	mg/L		5	0.00100
							Spike	Percent	Recovery
Surrogate			Flag	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotolu	ene (TFT)			0.510	mg/L	5	0.500	102	23.9 - 107.4
4-Bromofluor	obenzene (4-	BFB)		0.449	mg/L	5	0.500	90	22.2 - 104.5

#### Sample: 125727 - Water Station #1 MW-1

Analysis: QC Batch: Prep Batch:	Ca, Total 38029 32755		Analytical Method: Date Analyzed: Sample Preparation:	S 6010B 2007-06-11 2007-06-04	Prep Method: Analyzed By: Prepared By:	TP
			RL			
Parameter		Flag	Result	Units	Dilution	$\mathbf{RL}$
Total Calciur	n		3040	mg/L	100	1.00

#### Sample: 125727 - Water Station #1 MW-1

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

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		$\mathbf{RL}$			
Parameter	Flag	Result	Units	Dilution	RL
Hardness (by ICP)		26600	mg eq CaCO3/L	1	0.00

#### Sample: 125727 - Water Station #1 MW-1

Analysis:Ion ChromatographyQC Batch:37610Prep Batch:32592		Analytical Method: E 300.0 Date Analyzed: 2007-05-29 Sample Preparation:		Prep Method Analyzed By: Prepared By:	AR
		$\mathbf{RL}$			
Parameter	$\mathbf{Flag}$	Result	Units	Dilution	$\mathbf{RL}$
Chloride		154000	mg/L	5000	0.500
Sulfate		1800	mg/L	50	0.500

#### Sample: 125727 - Water Station #1 MW-1

Analysis: QC Batch: Prep Batch:	K, Total 38029 32755		Analytical Method: Date Analyzed: Sample Preparation:	S 6010B 2007-06-11 2007-06-04	Prep Method: Analyzed By: Prepared By:	$\mathbf{TP}$
_			RL			
Parameter		Flag	Result	Units	Dilution	$\mathbf{RL}$
Total Potassi	ium		1950	mg/L	100	1.00

#### Sample: 125727 - Water Station #1 MW-1

Analysis: QC Batch: Prep Batch:	Mg, Total 38029 32755		Analytical Method: Date Analyzed: Sample Preparation:	S 6010B 2007-06-11 2007-06-04	Prep Method: Analyzed By: Prepared By:	ТР
			$\mathbf{RL}$			
Parameter		Flag	Result	Units	Dilution	$\mathbf{RL}$
Total Magne	sium		4620	mg/L	100	1.00

#### Sample: 125727 - Water Station #1 MW-1

Analysis: QC Batch: Prep Batch:	Na, Total 38029 32755		Analytical Method: Date Analyzed: Sample Preparation:	S 6010B 2007-06-11 2007-06-04	Prep Method: Analyzed By: Prepared By:	TP
			$\mathbf{RL}$			
Parameter		Flag	Result	$\mathbf{Units}$	Dilution	$\mathbf{RL}$
Total Sodium	<u>n</u>		79100	mg/L	1000	1.00

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#### Sample: 125727 - Water Station #1 MW-1

Analysis: pH QC Batch: <b>37</b> 604 Prep Batch: <b>32</b> 588		D	nalytical Method: ate Analyzed: ample Preparation:	SM 4500-H+ 2007-05-29	Prep Method: Analyzed By: Prepared By:	AR
Parameter	,	Flag	RL Result	Units	Dilution	RL
pH		<u>~</u>	6.45	s.u.	1	0.00

#### Sample: 125727 - Water Station #1 MW-1

Analysis: Salts, Dissolved QC Batch: 38129 Prep Batch: 32980		Analytical Method: Date Analyzed: Sample Preparation:	S 6010B 2007-06-13 2007-06-12	Prep Method: Analyzed By: Prepared By:	
		$\operatorname{RL}$			
Parameter	$\mathbf{Flag}$	Result	Units	Dilution	$\mathbf{RL}$
Dissolved Calcium		2790	mg/L	100	0.500
Dissolved Magnesium		4530	mg/L	100	0.500
Dissolved Potassium		2210	mg/L	100	0.500
Dissolved Sodium		88400	mg/L	1000	0.500

#### Sample: 125727 - Water Station #1 MW-1

Analysis: QC Batch: Prep Batch:	TDS 37709 32678		Analytical Method: Date Analyzed: Sample Preparation:	SM 2540C 2007-05-31	Prep Method: Analyzed By: Prepared By:	AR
			$\mathbf{RL}$			
Parameter		$\mathbf{Flag}$	Result	Units	Dilution	$\mathbf{RL}$
Total Dissolv	ved Solids		231100	mg/L	100	10.00

#### Sample: 125727 - Water Station #1 MW-1

Analysis: QC Batch: Prep Batch:	TPH DRO 37730 32692		Analytical M Date Analyze Sample Prep	ed: 2007-0	5-31	Prep M Analyze Prepare	
D i		1.1	RL	<b>7</b>			
Parameter		Flag	Result	Unit	ts	Dilution	$\mathbf{RL}$
DRO			< 5.00	mg/	L	1	5.00
Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontan	e	11.3	mg/L	1	15.0	75	70 - 130

#### Sample: 125727 - Water Station #1 MW-1

Analysis: QC Batch:	TPH GRO 37813		Analytical M Date Analyz		S 8015B 2007-06-03		Prep Method: Analyzed By:	
Prep Batch:	32729		Sample Prep	aration:	2007-06-02		Prepared By:	AG
			$\mathbf{RL}$					
Parameter	Flag		Result		Units	Dil	ution	$\mathbf{RL}$
GRO			< 0.500		mg/L		5	0.100
						Spike	Percent	Recovery
Surrogate		Flag	$\mathbf{Result}$	Units	Dilution	Amount	Recovery	Limits
Trifluorotolu	ene (TFT)		0.435	mg/L	5	0.500	87	70 - 130
4-Bromofluor	robenzene (4-BFB)		0.390	mg/L	5	0.500	78	70 - 130

#### Method Blank (1) QC Batch: 37610

QC Batch:	37610		Date Analyzed:	2007-05-29		Analyzed By:	AR
Prep Batch:	32592		QC Preparation:	2007-05-29		Prepared By:	$\mathbf{AR}$
			Ν	MDL			
Parameter		Flag	Re	esult	Units		$\mathbf{RL}$
Chloride				2.14	mg/L		0.5
Sulfate	*		<0.	0485	mg/L		0.5

#### Method Blank (1) QC Batch: 37709

QC Batch: Prep Batch:		Ŭ	l: 2007-05-31 on: 2007-05-31		Analyzed By: Prepared By:	
			MDL			
Parameter		$\mathbf{Flag}$	Result	Units		$\mathbf{RL}$
Total Dissolv	ved Solids		16.00	mg/L		10

#### Method Blank (1) QC Batch: 37730

QC Batch: Prep Batch:	37730 32692		Date Analyzed: QC Preparation:	2007-05-31 2007-05-31		•	zed By: AG red By: AG
			Ν	ADL			
Parameter		Flag	Re	esult		Units	$\mathbf{RL}$
DRO				1.13		mg/L	5
					Spike	Percent	Recovery
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits
n-Triacontan	e	13.0	mg/L	1	15.0	87	70 - 130

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Method Blank	(1)	QC Batch: 37812
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QC Batch: 37812 Prep Batch: 32729		Date Analyzed: 2007-06-03 QC Preparation: 2007-06-02		Analyzed By: AG Prepared By: AG
		MDL		
Parameter	$\mathbf{Flag}$	Result	Units	$\mathbf{RL}$
Benzene		< 0.000200	mg/L	0.001
Toluene		< 0.000200	mg/L	0.001
Ethylbenzene		< 0.000200	mg/L	0.001
Xylene		< 0.000300	mg/L	0.001

					Spike	Percent	Recovery
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)		0.101	mg/L	1	0.100	101	60.1 - 116.8
4-Bromofluorobenzene (4-BFB)		0.0887	mg/L	1	0.100	89	54.4 - 112.5

#### Method Blank (1) QC Batch: 37813

QC Batch: 37813 Prep Batch: 32729		Date Anal QC Prepa	0	07-06-03 07-06-02		•	d By: AG d By: AG
			MDL				
Parameter	Flag		Result		Units	5	$\mathbf{RL}$
GRO			0.0689		mg/l		0.1
					Spike	Percent	Recovery
Surrogate	$\mathbf{Flag}$	$\mathbf{Result}$	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)		0.0875	mg/L	1	0.100	88	70 - 130
4-Bromofluorobenzene (4-BFB)		0.0776	mg/L	1	0.100	78	70 - 130

#### Method Blank (1) QC Batch: 37938

QC Batch: 37938 Prep Batch: 32854		nalyzed: 2007-06-07 eparation: 2007-06-06		Analyzed By: Prepared By:	
		MDL			
Parameter	$\mathbf{Flag}$	Result	Units		$\mathbf{RL}$
Hydroxide Alkalinity		<1.00	mg/L as CaCo3		1
Carbonate Alkalinity		<1.00	mg/L as CaCo3		1
Bicarbonate Alkalinity		<4.00	mg/L as CaCo3		4
Total Alkalinity		<4.00	mg/L as CaCo3		4

#### Method Blank (1) QC Batch: 38029

QC Batch:	38029	Date Analyzed:	2007-06-11	Analyzed By:	$\mathbf{TP}$
Prep Batch:	32755	QC Preparation:	2007-06-04	Prepared By:	$\mathbf{TS}$

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		MDL		
Parameter	Flag	Result	Units	$\mathbf{RL}$
Total Calcium		<0.517	mg/L	1

### Method Blank (1) QC Batch: 38029

QC Batch: 38029 Prep Batch: 32755		te Analyzed: 2007-06-11 C Preparation: 2007-06-04		Analyzed By: TP Prepared By: TS	
		MDL			
Parameter	Flag	Result	Units	RI	L
Total Potassium		<0.866	mg/L	1	L

#### Method Blank (1) QC Batch: 38029

QC Batch: 38029 Prep Batch: 32755		ate Analyzed: 2007-06-11 C Preparation: 2007-06-04		Analyzed By: Prepared By:	
		MDL			
Parameter	Flag	Result	Units		$\mathbf{RL}$
Total Magnesium		<0.203	mg/L		1

#### Method Blank (1) QC Batch: 38029

QC Batch: Prep Batch:	38029 32755		Date Analyzed: QC Preparation:			Analyzed By: Prepared By:	
				MDL			
Parameter		Flag	F	Result	Units		$\mathbf{RL}$
Total Sodium	1		<	0.668	mg/L		1

#### Method Blank (1) QC Batch: 38129

QC Batch: 38129 Prep Batch: 32980	Date Analyzed: QC Preparation:	2007-06-13 2007-06-12		nalyzed By: TP epared By: TS
		MDL		
Parameter	$\mathbf{Flag}$	Result	Units	$\mathbf{RL}$
Dissolved Calcium		< 0.0290	mg/L	0.5
Dissolved Magnesium		< 0.0740	mg/L	0.5
Dissolved Potassium		0.451	mg/L	0.5
Dissolved Sodium		< 0.529	mg/L	0.5

### Duplicates (1)

QC Batch:	37604	Date Analyzed:	2007-05-29	Analyzed By:	AR
Prep Batch:	32588	QC Preparation:	2007-05-29	Prepared By:	AR

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Param	Duplicate Result	San Res	•	Units	Dil	ution	RPD		RPD Limit
pH	6.46	6.4		s.u.		1	0		1.5
Duplicates (1)									
QC Batch: 37709		Date .	Analyzed:	2007-05-3	81		Anal	lyzed By	: AR
Prep Batch: 32678		QC P	reparation:	2007-05-3	81		Prep	ared By	r: AR
	-	olicate	Sample						RPD
Param		esult	Result		nits	Dilution	RP		Limit
Total Dissolved Solids	23	0000	231100	m	ıg/L	100	0		20
Duplicates (1)									
QC Batch: 37938		Date	Analyzed:	2007-06-0	)7		Ana	lyzed By	y: SM
Prep Batch: 32854			reparation:	2007-06-0				pared By	
	Duplic		Sample		•.	<b>D</b> 11 //	n	DD	RPD
Param	Resu	-	Result		nits	Dilutio		PD	Limit
Hydroxide Alkalinity	<1.(		<1.00	01	as CaCo3	1		0	20
Carbonate Alkalinity	<1.0	10	< 1.00	mg/L ຄ	as CaCo3	1		0	<b>20</b>
					~ ~ ~				
Bicarbonate Alkalinity	206		208	0,	as CaCo3	1		1	20
Bicarbonate Alkalinity Total Alkalinity			208 208	0,	as CaCo3 as CaCo3	1		1	20 20
Bicarbonate Alkalinity	206 206			0,					
Bicarbonate Alkalinity Total Alkalinity Laboratory Control S	206 206	3	208	0,	as CaCo3		Ana	1	20
Bicarbonate Alkalinity Total Alkalinity Laboratory Control S QC Batch: 37610	206 206	5 Date		mg/L a	as CaCo3				20 y: AR
Bicarbonate Alkalinity Total Alkalinity Laboratory Control S QC Batch: 37610	206 206 Spike (LCS-1)	Date QC P	208 Analyzed:	mg/L a	as CaCo3 29 29	1	Preț	1 lyzed By	20 y: AR y: AR
Bicarbonate Alkalinity Total Alkalinity Laboratory Control S QC Batch: 37610 Prep Batch: 32592	206 206 Spike (LCS-1)	Date QC P LCS	208 Analyzed: reparation:	mg/L a 2007-05-2 2007-05-2	as CaCo3 29 29 Spike	1 Matri	Preț x	1lyzed By	20 y: AR 7: AR Rec.
Bicarbonate Alkalinity Total Alkalinity Laboratory Control S QC Batch: 37610 Prep Batch: 32592 Param	206 206 Spike (LCS-1)	Date QC P LCS tesult	208 Analyzed: reparation: Units	mg/L a 2007-05-2 2007-05-2 Dil.	as CaCo3 29 29 Spike Amount	1 Matri Resul	Prer x t <u>R</u> e	1lyzed By pared By	20 y: AR y: AR Rec. Limit
Bicarbonate Alkalinity Total Alkalinity Laboratory Control S QC Batch: 37610 Prep Batch: 32592 Param Chloride	206 206 Spike (LCS-1) F	Date QC P LCS	208 Analyzed: reparation:	mg/L a 2007-05-2 2007-05-2	as CaCo3 29 29 Spike	1 Matri	Prer x t <u>Re</u> 31 10	1 lyzed By bared By c. 2	20 y: AR 7: AR Rec.
Bicarbonate Alkalinity Total Alkalinity Laboratory Control S QC Batch: 37610 Prep Batch: 32592 Param Chloride Sulfate	206 206 Spike (LCS-1) H	Date QC P LCS tesult 12.8 13.0	208 Analyzed: reparation: Units mg/L mg/L	mg/L a 2007-05-2 2007-05-2 Dil. 1 1	29 29 29 Amount 12.5 12.5	1 Matri Resul <0.018 <0.048	Preg x t Re 31 10 35 10	1 lyzed By bared By c. 2	20 y: AR r: AR Rec. Limit 90 - 110
Bicarbonate Alkalinity Total Alkalinity Laboratory Control S QC Batch: 37610 Prep Batch: 32592 Param Chloride Sulfate Percent recovery is based	206 206 Spike (LCS-1) H	Date QC P LCS tesult 12.8 13.0 It. RPD i	208 Analyzed: reparation: Units mg/L mg/L is based on t	mg/L a 2007-05-2 2007-05-2 Dil. 1 1 he spike a	29 29 29 Amount 12.5 12.5	1 Matri Resul <0.018 <0.048	Preg x <u>t Re</u> B1 10 35 10 ult. Rec.	1 lyzed By bared By c. 2 4	20 y: AR r: AR Rec. Limit 90 - 110
Bicarbonate Alkalinity Total Alkalinity Laboratory Control S QC Batch: 37610 Prep Batch: 32592 Param Chloride Sulfate Percent recovery is based Param	206 206 Spike (LCS-1) F d on the spike resu LCSE Resul	Date QC P LCS tesult 12.8 13.0 lt. RPD i o t Unit	208 Analyzed: reparation: Units mg/L mg/L is based on t s Dil.	mg/L a 2007-05-5 2007-05-5 Dil. 1 1 he spike a Spike Amount	29 29 29 Amount 12.5 12.5 and spike du Matrix Result	1 Matri Resul <0.018 <0.048 uplicate res Rec.	Preg x <u>t Re</u> 31 10 35 10 ult. Rec. Limit	1 lyzed By pared By c. 2 4 RPD	20 y: AR r: AR Rec. Limit 90 - 110 90 - 110
Bicarbonate Alkalinity <u>Total Alkalinity</u> Laboratory Control S QC Batch: 37610 Prep Batch: 32592 Param Chloride Sulfate Percent recovery is based Param	206 206 Spike (LCS-1) F d on the spike resu LCSE	Date QC P LCS Lesult 12.8 13.0 It. RPD i	208 Analyzed: reparation: Units mg/L mg/L is based on t s Dil.	mg/L a 2007-05-5 2007-05-5 Dil. 1 1 he spike a Spike	as CaCo3 29 29 Amount 12.5 12.5 and spike du Matrix	1 Matri Resul <0.018 <0.048 uplicate res Rec.	Preg x <u>t Re</u> B1 10 35 10 ult. Rec.	1 lyzed By bared By c. 2 4	20 y: AR /: AR Rec. Limit 90 - 110 90 - 110 RPD
Bicarbonate Alkalinity Total Alkalinity Laboratory Control S QC Batch: 37610 Prep Batch: 32592 Param Chloride Sulfate Percent recovery is based Param Chloride Sulfate Sulfate	206 206 Spike (LCS-1) F d on the spike resu LCSE Resul 12.6 13.0	Date QC P LCS tesult 12.8 13.0 lt. RPD i t Unit mg/ mg/	208 Analyzed: reparation: mg/L mg/L is based on t s Dil. L 1 L 1 L 1	mg/L a 2007-05-2 2007-05-2 Dil. 1 1 he spike a Spike Amount 12.5 12.5	29 29 29 29 29 29 29 29 29 29 29 29 29 2	1 Matri Resul <0.018 <0.048 aplicate res Rec. 101 104	Prep x t Re 31 10 35 10 ult. Rec. Limit 90 - 110 90 - 110	1 lyzed By pared By c. 2 4 RPD	20 y: AR /: AR Rec. Limit 90 - 110 90 - 110 RPD
Bicarbonate Alkalinity Total Alkalinity Laboratory Control S QC Batch: 37610 Prep Batch: 32592 Param Chloride Sulfate	206 206 Spike (LCS-1) F d on the spike resu LCSE Resul 12.6 13.0	Date QC P LCS tesult 12.8 13.0 lt. RPD i t Unit mg/ mg/	208 Analyzed: reparation: mg/L mg/L is based on t s Dil. L 1 L 1 L 1	mg/L a 2007-05-2 2007-05-2 Dil. 1 1 he spike a Spike Amount 12.5 12.5	29 29 29 29 29 29 29 29 29 29 29 29 29 2	1 Matri Resul <0.018 <0.048 aplicate res Rec. 101 104	Prep x t Re 31 10 35 10 ult. Rec. Limit 90 - 110 90 - 110	1 lyzed By bared By c. 2 4 RPD 2	20 y: AR /: AR Rec. Limit 90 - 110 90 - 110 RPD
Bicarbonate Alkalinity Total Alkalinity Laboratory Control S QC Batch: 37610 Prep Batch: 32592 Param Chloride Sulfate Percent recovery is based Param Chloride Sulfate Percent recovery is based	206 206 Spike (LCS-1) F d on the spike resu LCSE Resul 12.6 13.0 d on the spike resu	Date QC P LCS tesult 12.8 13.0 lt. RPD i t Unit mg/ mg/	208 Analyzed: reparation: mg/L mg/L is based on t s Dil. L 1 L 1 L 1	mg/L a 2007-05-2 2007-05-2 Dil. 1 1 he spike a Spike Amount 12.5 12.5	29 29 29 29 29 29 29 29 29 29 29 29 29 2	1 Matri Resul <0.018 <0.048 aplicate res Rec. 101 104	Prep x t Re 31 10 35 10 ult. Rec. Limit 90 - 110 90 - 110	1 lyzed By bared By c. 2 4 RPD 2	20 y: AR /: AR Rec. Limit 90 - 110 90 - 110 RPD
Bicarbonate Alkalinity Total Alkalinity Laboratory Control S QC Batch: 37610 Prep Batch: 32592 Param Chloride Sulfate Percent recovery is based Param Chloride Sulfate	206 206 Spike (LCS-1) F d on the spike resu LCSE Resul 12.6 13.0 d on the spike resu	Date QC P LCS tesult 12.8 13.0 t Unit mg/ lt. RPD i	208 Analyzed: reparation: mg/L mg/L is based on t s Dil. L 1 L 1 L 1	mg/L a 2007-05-2 2007-05-2 Dil. 1 1 he spike a Spike Amount 12.5 12.5	As CaCo3 29 29 29 Amount 12.5 12.5 Ind spike du Matrix Result <0.0181 <0.0485 Ind spike du	1 Matri Resul <0.018 <0.048 aplicate res Rec. 101 104	Prep x t Re 31 10 35 10 ult. Rec. Limit 90 - 110 90 - 110 ult.	1 lyzed By bared By c. 2 4 RPD 2	20 y: AR 7: AR Rec. Limit 90 - 110 90 - 110 RPD Limit

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Param DRO Percent recovery is based o												
DRO			CS	T7 •.	<b>D</b> "		Spike		Aatrix	n		Rec.
			sult	Units	Dil.		mount		lesult	Rec		Limit
Percent recovery is based of			6.6	mg/L			25.0		(0.711	106	)	70 - 130
	on the sp	ike result.	RPD	is based	on the spil	ke and s	spike du	plicat	e resul	t.		
		LCSD			Spik	e N	<i>A</i> atrix			Rec.		RPD
Param		Result	Uni	ts Dil	. Amou	ınt F	Result	Rec	. I	Limit	RPD	Limit
DRO		27.2	mg/	'L 1	25.0	) <	(0.711	109	70	- 130	2	20
Percent recovery is based of	on the sp	ike result.	RPD	is based	on the spi	ke and s	spike d	plicat	e resul	t.		
	LCS	LCS	SD			ç	Spike	Ι	LCS	LCSD	)	Rec.
Surrogate	Result	Res		Units	Dil.		mount		lec.	Rec.		Limit
n-Triacontane	13.0	13.		mg/L	1		15.0		86	87		70 - 130
QC Batch: 37812 Prep Batch: 32729				Analyzec Preparatic		-06-03 -06-02					yzed B ared B	•
		LC	s			Spik	е	Mat	rix			Rec.
Param		Resi	ılt	Units	Dil.	Amou	nt	Resi	ılt	Rec.		Limit
Benzene		0.10		mg/L	1	0.10		< 0.00		103		4 - 120.5
Toluene		0.10		mg/L	1	0.10		< 0.00		103		2 - 117.8
Ethylbenzene		0.09		mg/L	1	0.10		< 0.00		100		3 - 117.9
Xylene	+1	0.29		mg/L	1	0.30		< 0.00		100	80	- 120.1
Percent recovery is based of	on the sp		. rrd	is based			-	upncat				
<b>n</b>		LCSD			Spike		trix	-		Rec.		RPD
Param		Result	Units	Dil.	Amount		sult	Rec.		Jimit	RPD	Limit
Benzene		0.103	mg/L		0.100		00200	103		- 120.5	0	20
Toluene Ethylbenzene		$\begin{array}{c} 0.104 \\ 0.100 \end{array}$	mg/L mg/L		$\begin{array}{c} 0.100 \\ 0.100 \end{array}$		00200 00200	$\frac{104}{100}$		- 117.8 - 117.9	1	20 20
Xylene		0.100 0.301	mg/L	1	0.100		00200	100		- 120.1	0 1	20
ryiene	on the sp										<b>.</b>	20
Percent recovery is based (		$\mathbf{LC}$			-		-	-				D
Percent recovery is based of							SDIL	ro o	LCS	LCSD		
				LCSD Result	Units	Dil.	Spil Amor		LCS Rec.	LCSD Rec.		Rec. Limit
Percent recovery is based of Surrogate Trifluorotoluene (TFT)		Resi 0.09	ult	Result	Units mg/L	Dil.	Amou 0.10	int	LCS Rec. 94	LCSD Rec. 92		Rec. Limit 5 - 117.8

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

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_	LCSD			Spike	Matrix	-	Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limi		Limit
GRO	0.793	mg/L	1	1.00	< 0.0590	79	70 - 1	30 6	20
Percent recovery is based on the s	spike result.	RPD is	based on	the spike	and spike d	uplicate	result.		
	$\mathbf{LC}$	S L	CSD		S	pike	LCS	LCSD	Rec.
Surrogate	Resu			Units		nount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	0.10			mg/L		.100	105	114	70 - 130
4-Bromofluorobenzene (4-BFB)	0.09	49 0	.0887	mg/L	1 0	.100	95	89	70 - 130
Laboratory Control Spike (L	CS-1)								
QC Batch: 38029		Date A	nalyzed:	2007-06	-11			Analyzed	By: TP
Prep Batch: 32755			eparation:	2007-06	-04			Prepared 1	•
	LC	rs			Spike	M	atrix		Rec.
Param	Res		Units	Dil.	Amount		esult	Rec.	Limit
Total Calcium	51		mg/L	1	50.0		0.517	103	85 - 115
Percent recovery is based on the	spike result.	RPD is		the spike	and spike d	uplicate	result.		
	LCSD			Spike	Matrix		Rec		RPD
Param	Result	Units	Dil.	Amount		Rec.	Limi		Limit
Total Calcium	52.1	mg/L	1	50.0	< 0.517	104	85 - 1		20
QC Batch: 38029 Prep Batch: 32755			nalyzed: eparation:	2007-06 2007-06				Analyzed Prepared	-
	Ŧ	20			<b>a</b> 1				5
Donom	L( Res		Units	Dil.	Spike Amount		atrix esult	Rec.	Rec. Limit
Param Total Potassium			mg/L	<u> </u>	50.0		0.866	103	85 - 115
Percent recovery is based on the								105	00 - 110
v	LCSD			Spike	Matrix	•	Rec		RPD
Param	Result	Units	Dil.	Amount		Rec.	Limi		
Total Potassium	52.0	mg/L	1	50.0	< 0.866	104	85 - 1		20
Percent recovery is based on the	spike result.			the spike	and spike o	luplicate	result.		
Laboratory Control Spike (L	CS-1)								
QC Batch: 38029		Date A	analyzed:	2007-06	-11			Analyzed	By: TP
Prep Batch: 32755			eparation					Prepared	
	τı	28			Sniko	M	atriv		Pop
Param		CS	Units	Dil	Spike Amoun		latrix esult	Rec	Rec. Limit
Param Total Magnesium	Rea	CS sult	Units mg/L	Dil1	Spike Amoun 50.0	t R	latrix esult 0.203	Rec	Rec. Limit 85 - 11

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

1.0 m esult. RPI Dat QC LCS Result 51.3	te An Prep	Dil. 1 based on nalyzed: paration: Units	2007-06-		Rec. 102 plicate	Rec. Limi 85 - 1 result.	t 15 Anal:	RPD 1 yzed By	RPI Limi 20
1.0 m esult. RPI Dat QC LCS Result 51.3	g/L D is b te An Prep	1 based on nalyzed: paration:	50.0 the spike a 2007-06-	<0.203 and spike du	102	85 - 1	15 Anal	1	
esult. RPI Dat QC LCS Result 51.3	D is b te An Prep	based on nalyzed: paration	the spike a 2007-06-	and spike du 11			Anal		20
Dat QC LCS Result 51.3	te An Prep	nalyzed: paration:	2007-06-	-11	iplicate i	esult.		vzed Bv	
QC LCS Result 51.3	Prep	paration						vzed Bv	
QC LCS Result 51.3	Prep	paration						vzed Bv	
LCS Result 51.3	· [	-	2007-06-	04			Prep		: TF
Result 51.3		Units					•	ared By	: TS
51.3		Units		Spike	Mat	rix			Rec.
	n		Dil.	Amount	Res		Rec.		Limit
esult. RPI		mg/L	1	50.0	<0.6		103	87	.3 - 12
	D is b	based on	the spike a	and spike du	plicate	result.			
CSD			Spike	Matrix		Rec.			RP
	nits	Dil.	Amount	Result	Rec.	Limit	-	RPD	Lim
2.0 mg	g/L	1	50.0	<0.668	104	87.3 - 1	24		20
				~					
LCS				Spike					D
	T	Inite	Dil		Mat Res		Rec		Rec.
Result		Units ng/L	Dil.	Amount	Res	ılt	Rec.		Limit
	n	Units ng/L ng/L	Dil. 1 1			ılt 290	Rec. 103 103	79	Limit .1 - 12
Result 51.4	n n	ng/L	1	Amount 50.0	Res <0.0	ılt 290 740	103	79 80	Limit .1 - 12 .2 - 12
Result 51.4 51.4	n n n	ng/L ng/L	1	Amount 50.0 50.0	Res <0.0 <0.0	ılt 290 740 807	103 103	79 80 78	
Result 51.4 51.4 51.2 52.1	n n n n	ng/L ng/L ng/L ng/L	1 1 1 1	Amount 50.0 50.0 50.0	Res <0.0 <0.0 <0.3 <0.3	ılt 290 740 807 529	103 103 102	79 80 78	Limit .1 - 12 .2 - 12 .8 - 12
Result 51.4 51.2 52.1 esult. RP	n n n D is b	ng/L ng/L ng/L ng/L based on	1 1 1 the spike Spike	Amount 50.0 50.0 50.0 50.0 and spike do Matrix	Rest <0.0 <0.0 <0.2 <0.2 iplicate	1lt 290 740 607 529 result. Rec.	103 103 102 104	79 80 78 79	Limit .1 - 12 .2 - 12 .8 - 12 .4 - 12
Result           51.4           51.2           52.1           esult. RPI           SD           sult. Un	n n m D is b	ng/L ng/L ng/L ng/L based on Dil.	1 1 1 the spike Spike Amount	Amount 50.0 50.0 50.0 50.0 and spike do Matrix Result	Res. <0.0 <0.0 <0.2 <0.2 1plicate Rec.	1lt 290 740 607 629 result. Rec. Limi	103 103 102 104	79 80 78 79 RPD	Limit .1 - 12 .2 - 12 .8 - 11 .4 - 12 RP Lim
Result           51.4           51.4           51.2           52.1           esult. RPI           CSD           sult         Ur           1.6         mg	n n D is b nits g/L	ng/L ng/L ng/L ng/L based on Dil. 1	1 1 1 the spike Amount 50.0	Amount 50.0 50.0 50.0 50.0 and spike do Matrix Result <0.0290	Res           <0.0	1lt 290 740 607 629 result. Rec. Limi 79.1 -	103 103 102 104 t t	79 80 78 79 RPD 0	Limit .1 - 12 .2 - 12 .8 - 12 .4 - 12 RP Lim 20
Result           51.4           51.4           51.2           52.1           esult. RPI           CSD           sult         Ur           1.6         mg	m m D is b its g/L g/L	ng/L ng/L ng/L ng/L based on Dil.	1 1 1 the spike Spike Amount	Amount 50.0 50.0 50.0 50.0 and spike do Matrix Result	Res. <0.0 <0.0 <0.2 <0.2 1plicate Rec.	1lt 290 740 607 629 result. Rec. Limi	103 103 102 104 t 121 120	79 80 78 79 RPD	Limit .1 - 12 .2 - 12 .8 - 11 .4 - 12 RP
	esult. RP	esult. RPD is Date Ar	esult. RPD is based on Date Analyzed:	esult. RPD is based on the spike a	Date Analyzed: 2007-06-13	Date Analyzed: 2007-06-13	Date Analyzed: 2007-06-13	esult. RPD is based on the spike and spike duplicate result. Date Analyzed: 2007-06-13 Anal	Date Analyzed: 2007-06-13 Analyzed By

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Report Date: June 14, 2007 2972

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-	MS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
	MS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Chloride	1 177000	mg/L	$\overline{50}$	625	179679	-427	90 - 110
Sulfate	2390	mg/L	50	625	1796.67	95	90 - 110

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

		MSD			Spike	Matrix		Rec.		RPD
Param		Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride	2	178000	mg/L	50	625	179679	-267	90 - 110	1	
Sulfate		2420	mg/L	50	625	1796.67	100	90 - 110	1	

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

#### Matrix Spike (MS-1) Spiked Sample: 126001

QC Batch:	38029	Date Analyzed:	2007-06-11	Analyzed By:	$\mathbf{TP}$
Prep Batch:	32755	QC Preparation:	2007-06-04	Prepared By:	TS

	MS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Total Calcium	65.9	mg/L	1	50.0	14.2	103	75 - 125

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

	MSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Total Calcium	65.1	mg/L	1	50.0	14.2	102	75 - 125	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: 126001

QC Batch:	38029	Date Analyzed:	2007-06-11	Analyzed By:	TP
Prep Batch:	32755	QC Preparation:	2007-06-04	Prepared By:	TS

	MS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Total Potassium	55.9	mg/L	1	50.0	3.6	105	75 - 125

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

	MSD			Spike	Matrix		Rec.	•	RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Total Potassium	54.9	mg/L	1	50.0	3.6	103	75 - 125	2	20

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

 $^{1}$ Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.  $^{2}$ Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

Report Date: June 1 2972	.4, 2007			Work Orde Rock Qu	er: 7052924 leen ESA			Pag	e Number:	13 of 18
Matrix Spike (MS	-1) Spiked S	Sample: 12	26001							
QC Batch: 38029 Prep Batch: 32755				nalyzed: eparation:	<b>2007-06-1</b> 2007-06-0				Analyzed E Prepared E	
		М	S			Spike	Ma	ıtrix		Rec.
Param		Res	-	Units	Dil.	Amount	_	sult	Rec.	Limit
Total Magnesium		55	_	mg/L	1	50.0		.55	103	75 - 125
Percent recovery is b	ased on the spi	ke result.	RPD is	based on t	the spike a	nd spike du	plicate 1	result.		
D		MSD	** •.	D'I	Spike	Matrix	5	Rec.	DDD	RPL
Param		Result	Units		Amount	Result	Rec.	Limit	RPD	Limi
Total Magnesium		54.0	mg/L	1	50.0	3.55	101	75 - 128	5	20
Percent recovery is b	ased on the spi	ke result.	RPD is	based on t	the spike a	nd spike du	plicate	result.		
Matrix Spike (MS	-1) Spiked S	Sample: 1:	26001							
QC Batch: 38029			Date A	nalyzed:	2007-06-1	11		ļ	Analyzed I	By: TF
Prep Batch: 32755				eparation:	2007-06-0				Prepared B	-
1			•	ı					1	0
		М	IS			Spike	Ma	atrix		Rec.
Param			sult	Units	Dil.	Amount	$\mathbf{R}\epsilon$	sult	Rec.	Limit
Total Sodium	3	7(	69	mg/L	1	50.0	7	05	128	75 - 12
Percent recovery is b	ased on the spi	ke result.	RPD is	based on <sup>4</sup>	the spike a	nd spike du	plicate	result.		
		MSD			Spike	Matrix		Rec.		RPI
Param		Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Lim
Total Sodium		766	mg/L	1	50.0	705	122	75 - 12	5 0	20
Percent recovery is b	abed on one opi			based on	the spike a	na spike at	ipiicauc			
Matrix Spike (MS QC Batch: 38129	-	Sample: 1	27171 Date A	nalyzed: eparation:	2007-06- 2007-06-	13	predoc		Analyzed J Prepared I	•
•	-	Sample: 11	27171 Date A QC Pre	nalyzed:	2007-06-1	13 12	-	]	-	By: TS
Matrix Spike (MS QC Batch: 38129 Prep Batch: 32980	-	Sample: 1: M	27171 Date A QC Pro	nalyzed:	2007-06- 2007-06-	13 12 Spike	Mat	l	Prepared I	By: TS Rec.
Matrix Spike (MS QC Batch: 38129	-	Sample: 11	27171 Date A QC Pro S Sult	nalyzed: eparation:	2007-06-1	13 12	-	rix ult I	-	By: TS Rec. Limit
Matrix Spike (MS QC Batch: 38129 Prep Batch: 32980 Param Dissolved Calcium Dissolved Magnesium	5-1) Spiked S	Sample: 15 M Res 14 98	27171 Date A QC Pro S Sult 12 .1	nalyzed: eparation: Units mg/L mg/L	2007-06- 2007-06- Dil.	13 12 Spike <u>Amount</u> 50.0 50.0	Mat Res 92 41	rix ult <u>H</u> 9	Prepared I Rec. 99 98	By: TS Rec. Limit 69 - 130 77.9 - 12
Matrix Spike (MS QC Batch: 38129 Prep Batch: 32980 Param Dissolved Calcium Dissolved Magnesium Dissolved Potassium	5-1) Spiked S	Sample: 15 M Res 14 98 61	27171 Date A QC Pro S sult 12 .1	units mg/L mg/L mg/L	2007-06- 2007-06- Dil. 1 1 1	13 12 Spike <u>Amount</u> 50.0 50.0 50.0	Mat <u>Res</u> 92 4!	1 srix <u>ult F</u> .3 9 .7	Prepared I Rec. 99 98 102	By: TS Rec. Limit 69 - 130 77.9 - 12 76.8 - 11
Matrix Spike (MS QC Batch: 38129 Prep Batch: 32980 Param Dissolved Calcium Dissolved Magnesium Dissolved Potassium Dissolved Sodium	5-1) Spiked S	Sample: 15 M Res 14 98 61 24	27171 Date A QC Pro S sult 12 .1 .9	nalyzed: eparation: mg/L mg/L mg/L mg/L mg/L	2007-06- 2007-06- Dil. 1 1 1 1	13 12 Amount 50.0 50.0 50.0 50.0 50.0	Mat Res 92 49 10 18	l arix ult I 3 9 .7 .7 0	Prepared I Rec. 99 98 102	By: TS Rec. Limit 69 - 130 77.9 - 12 76.8 - 11
Matrix Spike (MS QC Batch: 38129 Prep Batch: 32980 Param Dissolved Calcium Dissolved Magnesium Dissolved Potassium Dissolved Sodium	5-1) Spiked S	Sample: 15 M Res 14 98 61 24	27171 Date A QC Pro S sult 12 .1 .9	nalyzed: eparation: mg/L mg/L mg/L mg/L mg/L	2007-06- 2007-06- Dil. 1 1 1 1	13 12 Amount 50.0 50.0 50.0 50.0 50.0	Mat Res 92 49 10 18	l arix ult I 3 9 .7 .7 0	Prepared I Rec. 99 98 102	By: TS Rec. Limit 69 - 136 77.9 - 12 76.8 - 11
Matrix Spike (MS QC Batch: 38129 Prep Batch: 32980 Param Dissolved Calcium Dissolved Magnesium Dissolved Potassium Dissolved Sodium Percent recovery is b	5-1) Spiked S	Sample: 1 M Res 14 98 61 24 ike result. MSD	27171 Date A QC Pro Sult 12 .1 .9 14 RPD is	units mg/L mg/L mg/L mg/L based on	2007-06- 2007-06- Dil. 1 1 1 1 the spike a Spike	13 12 Amount 50.0 50.0 50.0 50.0 and spike du Matrix	Mat Res 92 49 10 18 rplicate	rix ult F .3 9 .7 10 result. Rec.	Prepared H Rec. 99 98 102 128 8	Rec. Limit 69 - 130 77.9 - 12 76.8 - 11 34.2 - 12 RP1
Matrix Spike (MS QC Batch: 38129 Prep Batch: 32980 Param Dissolved Calcium Dissolved Magnesium Dissolved Potassium Dissolved Sodium Percent recovery is b Param	5-1) Spiked S	Sample: 1 M Res 14 98 61 24 ike result. MSD Result	27171 Date A QC Pro Soult 12 .1 .9 14 RPD is Units	nalyzed: eparation: mg/L mg/L mg/L mg/L based on Dil.	2007-06- 2007-06- Dil. 1 1 1 1 the spike a Spike Amount	13 12 Amount 50.0 50.0 50.0 50.0 and spike du Matrix Result	Mat Res 92 49 10 18 uplicate Rec.	rix ult F .3 9 .7 result. Rec. Limit	Prepared H Rec. 99 98 102 128 8 RPD	Rec. Limit 69 - 130 77.9 - 12 76.8 - 11 34.2 - 12 RP Lim
Matrix Spike (MS QC Batch: 38129 Prep Batch: 32980 Param Dissolved Calcium Dissolved Magnesium Dissolved Potassium Dissolved Sodium	n pased on the spi	Sample: 1 M Res 14 98 61 24 ike result. MSD	27171 Date A QC Pro Sult 12 .1 .9 14 RPD is	units mg/L mg/L mg/L mg/L based on	2007-06- 2007-06- Dil. 1 1 1 1 the spike a Spike	13 12 Amount 50.0 50.0 50.0 50.0 and spike du Matrix	Mat Res 92 49 10 18 rplicate	rix ult F .3 9 .7 10 result. Rec.	Prepared H Rec. 99 98 102 128 8 RPD 0 1	Rec. Limit 69 - 130 77.9 - 12 76.8 - 11 34.2 - 12 RP1

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<sup>3</sup>Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control. <sup>4</sup>Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control. Report Date: June 14, 2007 2972

matrix spikes continued ....

	MSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Dissolved Potassium	62.7	mg/L	1	50.0	10.7	104	76.8 - 117	1	20
Dissolved Sodium	239	mg/L	1	50.0	180	118	84.2 - 120	2	20

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

#### Standard (ICV-1)

QC Batch	QC Batch: 37604			alyzed: 2007-0	Analyzed By: AR		
			ICVs	ICVs	ICVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
pH		s.u.	7.00	7.06	101	98 - 102	2007-05-29

#### Standard (CCV-1)

QC Batch:	QC Batch: 37604			alyzed: 2007-0	Analyzed By: AR		
			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
pH		s.u.	7.00	7.18	102	98 - 102	2007-05-29

#### Standard (ICV-1)

QC Batch: 37610			Date Ana	dyzed: 2007-0	Analyzed By: AR		
Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	12.6	101	90 - 110	2007-05-29
Sulfate		mg/L	12.5	12.7	102	90 - 110	2007-05-29

#### Standard (CCV-1)

QC Batch:	37610		Date Ana	dyzed: 2007-0	5-29	Anal	yzed By: AR
Descar	Flor	U	CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride		mg/L	12.5	12.6	101	90 - 110	2007-05-29
Sulfate		$\mathrm{mg/L}$	12.5	12.7	102	<b>90 - 110</b>	2007-05-29

Standard (ICV-1)

QC Batch: 37709

Date Analyzed: 2007-05-31

Analyzed By: AR

Units mg/L Date ICVs True Conc. 250	IC Fo Co	ICVs. Found Conc. 1047 2007-05-3 CVs Found Conc. 960.0 2007-05-3 CVs pund onc. 277	CCVs Percent Recovery 96	Percent Recovery Limits 90 - 110 Analy Percent	Date Analyzed 2007-05-31 rzed By: AR Date Analyzed 2007-05-31
Date Units mg/L Date ICVs True Conc. 250	Analyzed: CCVs True Conc. 1000 Analyzed: Fo Co	2007-05-3 CCVs Found Conc. 960.0 2007-05-3 CVs bund onc.	1 CCVs Percent Recovery 96 11 ICVs Percent	Analy Percent Recovery Limits 90 - 110 Analy Percent	zed By: AR Date Analyzed 2007-05-31
Units mg/L Date ICVs True Conc. 250	CCVs True Conc. 1000 Analyzed: Fo Co	CCVs Found Conc. 960.0 2007-05-3 CVs bund onc.	CCVs Percent Recovery 96	Percent Recovery Limits 90 - 110 Analy Percent	Date Analyzed 2007-05-31
Units mg/L Date ICVs True Conc. 250	CCVs True Conc. 1000 Analyzed: Fo Co	CCVs Found Conc. 960.0 2007-05-3 CVs bund onc.	CCVs Percent Recovery 96	Percent Recovery Limits 90 - 110 Analy Percent	Date Analyzed 2007-05-31
mg/L Date ICVs True Conc. 250	True Conc. 1000 Analyzed: Fo Co	Found Conc. 960.0 2007-05-3 CVs bund onc.	Percent Recovery 96	Recovery Limits 90 - 110 Analy Percent	Analyzed 2007-05-31
Date ICVs True Conc. 250	Analyzed: IC Fo Co	2007-05-3 CVs bund onc.	11 ICVs Percent	Analy Percent	
ICVs True Conc. 250	IC Fo Co	CVs ound onc.	ICVs Percent	Percent	zed By: AG
True Conc. 250	Fo Co	ound onc.	Percent	Percent	
Conc. 250	Co	onc.			Dete
250			Recovery	Recovery Limits	Date Analyzed
_			111	85 - 115	2007-05-31
CCVs	-	: 2007-05-3 CVs	CCVs	Percent	zed By: AG
True			Percent	Recovery	Date
			Recovery		Analyzed 2007-05-31
Date Analyzed: 2007-06-03				Analyzed By: AG	
$\operatorname{Tr}$	ue	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
~		0.104	104	85 - 115	2007-06-03
		0.103	103 102	85 - 115	2007-06-03
	00	0.102	1/14	85 - 115	2007-06-03
5	True Conc. 250 Date IC Tr Con	True Fo Conc. C 250 2 Date Analyzed: ICVs True Conc. 0.100	TrueFound Conc.250278Date Analyzed:2007-06-0ICVsICVsTrueFound Conc.0.1000.104	TrueFoundPercentConc.Conc.Recovery250278111Date Analyzed: 2007-06-03ICVsICVsICVsTrueFoundPercentConc.Conc.Recovery0.1000.104104	TrueFoundPercentRecoveryConc.Conc.RecoveryLimits25027811185 - 115Date Analyzed: 2007-06-03ICVsICVsPercentTrueFoundPercentRecoveryConc.Conc.RecoveryLimits0.1000.10410485 - 115

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Report Date 2972	e: June 14,	2007		ork Order: 70 Rock Queen E		Page Nu	mber: 16 of 18
			CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date
Param	F	ag Unit	s Conc.	Conc.	Recovery	Limits	Analyzed
Benzene		mg/l	L 0.100	0.102	102	85 - 115	2007-06-03
Toluene		mg/l		0.102	102	85 - 115	2007-06-03
Ethylbenzen	e	mg/l	L 0.100	0.0996	100	85 - 115	2007-06-03
Xylene		mg/	L 0.300	0.299	100	85 - 115	2007-06-03
Standard (	(ICV-1)						
QC Batch:	37813		Date An	alyzed: 2007-	06-03	Analy	zed By: AG
			ICVs	ICVs	ICVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
GRO		mg/L	1.00	0.872	87	85 - 115	2007-06-03
			Date An CCVs	CCVs	CCVs	Percent	vzed By: AG
Standard ( QC Batch: Param GRO		Units mg/L		-		-	zed By: AG Date Analyzed 2007-06-03
QC Batch: Param GRO Standard (	37813 Flag (ICV-1)		CCVs True Conc. 1.00	CCVs Found Conc. 0.981	CCVs Percent Recovery 98	Percent Recovery Limits 85 - 115	Date Analyzed 2007-06-03
QC Batch: Param GRO Standard (	37813 Flag (ICV-1)		CCVs True Conc.	CCVs Found Conc. 0.981 alyzed: 2007-	CCVs Percent Recovery 98 -06-07	Percent Recovery Limits 85 - 115 Analy	Date Analyzed
QC Batch: Param GRO Standard (	37813 Flag (ICV-1)		CCVs True Conc. 1.00	CCVs Found Conc. 0.981 alyzed: 2007- ICVs 1	CCVs Percent Recovery 98 -06-07 CVs ICVs	Percent Recovery Limits 85 - 115 Analy Percent	Date Analyzed 2007-06-03 vzed By: SM
QC Batch: Param GRO Standard ( QC Batch:	37813 Flag (ICV-1) 37938	mg/L	CCVs True Conc. 1.00 Date An	CCVs Found Conc. 0.981 alyzed: 2007- ICVs I True F	CCVs Percent Recovery 98 -06-07 CVs ICVs ound Percent	Percent Recovery Limits 85 - 115 Analy Percent Recovery	Date Analyzed 2007-06-03 yzed By: SM Date
QC Batch: Param GRO Standard ( QC Batch: Param	37813 Flag (ICV-1) 37938	mg/L	CCVs True Conc. 1.00 Date An Units	CCVs Found Conc. 0.981 alyzed: 2007- ICVs I True F Conc. C	CCVs Percent Recovery 98 -06-07 CVs ICVs ound Percent Conc. Recovery	Percent Recovery Limits 85 - 115 Analy Percent Recovery Limits	Date Analyzed 2007-06-03 yzed By: SM Date Analyzed
QC Batch: Param GRO	37813 Flag (ICV-1) 37938 F nity	mg/L	CCVs True Conc. 1.00 Date An	CCVs Found Conc. 0.981 alyzed: 2007- ICVs I True F Conc. C	CCVs Percent Recovery 98 -06-07 CVs ICVs ound Percent	Percent Recovery Limits 85 - 115 Analy Percent Recovery	Date Analyzed 2007-06-03 yzed By: SM Date
QC Batch: Param GRO Standard ( QC Batch: Param Total Alkali	37813 Flag (ICV-1) 37938 F nity (CCV-1)	mg/L	CCVs True Conc. 1.00 Date An Date An Units as CaCo3	CCVs Found Conc. 0.981 alyzed: 2007- ICVs I True F Conc. C	CCVs Percent Recovery 98 -06-07 CVs ICVs ound Percent Conc. Recovery 244 98	Percent Recovery Limits 85 - 115 Analy Percent Recovery Limits 90 - 110	Date Analyzed 2007-06-03 yzed By: SM Date Analyzed
QC Batch: Param GRO Standard ( QC Batch: Param Total Alkali Standard (	37813 Flag (ICV-1) 37938 F nity (CCV-1)	mg/L	CCVs True Conc. 1.00 Date An Date An Units as CaCo3	CCVs Found Conc. 0.981 alyzed: 2007 ICVs I True F Conc. C 250	CCVs Percent Recovery 98 -06-07 CVs ICVs ound Percent Conc. Recovery 244 98	Percent Recovery Limits 85 - 115 Analy Percent Recovery Limits 90 - 110	Date Analyzed 2007-06-03 yzed By: SM Date Analyzed 2007-06-03
QC Batch: Param GRO Standard ( QC Batch: Param Total Alkali Standard (	37813 Flag (ICV-1) 37938 F nity (CCV-1)	mg/L	CCVs True Conc. 1.00 Date An Date An Units as CaCo3	CCVs Found Conc. 0.981 alyzed: 2007 ICVs I True F Conc. ( 250 alyzed: 2007 CCVs (	CCVs Percent Recovery 98 -06-07 CVs ICVs ound Percent Conc. Recovery 244 98 -06-07	Percent Recovery Limits 85 - 115 Analy Percent Recovery Limits 90 - 110 Analy	Date Analyzed 2007-06-03 yzed By: SM Date Analyzed 2007-06-03
QC Batch: Param GRO Standard ( QC Batch: Param Total Alkali Standard (	37813 Flag (ICV-1) 37938 F nity (CCV-1) 37938	mg/L lagmg/L	CCVs True Conc. 1.00 Date An Date An Units as CaCo3	CCVs Found Conc. 0.981 alyzed: 2007 ICVs I True F Conc. C 250 alyzed: 2007 CCVs C True F	CCVs Percent Recovery 98 -06-07 CVs ICVs ound Percent Conc. Recovery 244 98 -06-07 CCVs CCVs	Percent Recovery Limits 85 - 115 Analy Percent Recovery Limits 90 - 110 Analy Percent Recovery	Date Analyzed 2007-06-03 yzed By: SM Date Analyzed 2007-06-03

Standard (ICV-1)

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QC Batch: 38029

Date Analyzed: 2007-06-11

Analyzed By: TP

Report Date: June 2972	e 14, 2007			Order: 705292 k Queen ESA	Page Number: 17 of 18			
Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed	
Total Calcium		mg/L	50.0	51.7	103	90 - 110	2007-06-11	
Standard (ICV-1	1)							
QC Batch: 38029			Date Analyze	ed: 2007-06-1	.1	Analy	yzed By: TP	
Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed	
Total Potassium	<b>F</b> lag	mg/L	50.0	<u>51.6</u>	103	<u>90 - 110</u>	2007-06-11	
Total Potassium		mg/L	50.0	51.0	105	90 - 110	2007-00-11	
Standard (ICV-1	1)							
QC Batch: 38029			Date Analyze	ed: 2007-06-1	1	Anal	yzed By: TP	
			ICVs	ICVs	ICVs	Percent		
_			True	Found	Percent	Recovery	Date	
Param Total Magnesium	Flag	Units mg/L	<u> </u>	<u> </u>	Recovery 103	Limits 90 - 110	Analyzed 2007-06-1	
Standard (ICV-1								
QC Batch: 38029			Date Analyze	ed: 2007-06-1	1	Anal	yzed By: TP	
			ICVs	ICVs	ICVs	Percent		
			<u>m</u> .	Found	Percent	Recovery	Date	
D	<b>D</b> I	<b>T</b> T <b>T</b>	True					
Param	Flag	Units	Conc.	Conc.	Recovery	Limits		
Total Sodium		Units mg/L				Limits 90 - 110	Analyzed 2007-06-1	
Total Sodium Standard (CCV-	-1)		Conc. 50.0	Conc. 50.6	Recovery 101	90 - 110	2007-06-1	
Total Sodium Standard (CCV-	-1)		Conc. 50.0 Date Analyze	Conc. 50.6 ed: 2007-06-1	Recovery 101	90 - 110 Anal	2007-06-1	
Total Sodium Standard (CCV-	-1)		Conc. 50.0 Date Analyze CCVs	Conc. 50.6 ed: 2007-06-1 CCVs	Recovery 101	90 - 110 Anal Percent	2007-06-1 yzed By: TP	
Total Sodium Standard (CCV- QC Batch: 38029	.1)	mg/L	Conc. 50.0 Date Analyze CCVs True	Conc. 50.6 ed: 2007-06-1 CCVs Found	Recovery 101	90 - 110 Anal Percent Recovery	2007-06-1 yzed By: TP Date	
Total Sodium Standard (CCV- QC Batch: 38029	.1)	mg/L	Conc. 50.0 Date Analyze CCVs True	Conc. 50.6 ed: 2007-06-1 CCVs Found	Recovery 101	90 - 110 Anal Percent Recovery	2007-06-1 yzed By: TI Date	
Total Sodium Standard (CCV- QC Batch: 38029 Param Total Calcium	1) Flag		Conc. 50.0 Date Analyze CCVs	Conc. 50.6 ed: 2007-06-1 CCVs	Recovery 101	90 - 110 Anal Percent	2007-06-1 yzed By: TP Date Analyzeo	
Total Sodium Standard (CCV- QC Batch: 38029 Param Total Calcium Standard (CCV-	1) Flag -1)	mg/L Units	Conc. 50.0 Date Analyze CCVs True Conc.	Conc. 50.6 ed: 2007-06-1 CCVs Found Conc. 50.8	Recovery 101 11 CCVs Percent Recovery 102	90 - 110 Anal Percent Recovery Limits 90 - 110	2007-06-1 yzed By: TP Date Analyzed 2007-06-1	
Total Sodium Standard (CCV-	1) Flag -1)	mg/L Units	Conc. 50.0 Date Analyze CCVs True Conc. 50.0 Date Analyze	Conc. 50.6 ed: 2007-06-1 CCVs Found Conc. 50.8 ed: 2007-06-1	Recovery 101 11 CCVs Percent Recovery 102	90 - 110 Anal Percent Recovery Limits 90 - 110	2007-06-1 yzed By: TP Date Analyzed 2007-06-1	
Total Sodium Standard (CCV- QC Batch: 38029 Param Total Calcium Standard (CCV-	1) Flag -1)	mg/L Units	Conc. 50.0 Date Analyze CCVs True Conc. 50.0	Conc. 50.6 ed: 2007-06-1 CCVs Found Conc. 50.8	Recovery 101 11 CCVs Percent Recovery 102	90 - 110 Anal Percent Recovery Limits 90 - 110 Anal	2007-06-1 yzed By: TP Date Analyzed 2007-06-1	
Total Sodium Standard (CCV- QC Batch: 38029 Param Total Calcium Standard (CCV-	1) Flag -1)	mg/L Units	Conc. 50.0 Date Analyze CCVs True Conc. 50.0 Date Analyze CCVs	Conc. 50.6 ed: 2007-06-1 CCVs Found Conc. 50.8 ed: 2007-06-1 CCVs	Recovery 101 11 CCVs Percent Recovery 102 11 CCVs	90 - 110 Anal Percent Recovery Limits 90 - 110 Anal Percent	2007-06-1 yzed By: TP Date Analyzed 2007-06-1 yzed By: TP	

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Report Date: June 14 2972	4, 2007			ler: 7052924 Jueen ESA	Page Number: 18 of 18			
Standard (CCV-1)								
QC Batch: 38029			Date Analyzed:	2007-06-11		Analy	zed By: TP	
			CCVs	CCVs	CCVs	Percent		
			True	Found	Percent	Recovery	Date	
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed	
Total Magnesium		mg/L	50.0	50.1	100	90 - 110	2007-06-11	
Standard (CCV-1)								
QC Batch: 38029			Date Analyzed:	2007-06-11		Analy	vzed By: TP	
			CCVs	CCVs	CCVs	Percent		
				Found	Percent	Recovery	Date	
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed	
Total Sodium		mg/L	50.0	47.4	95	90 - 110	2007-06-1	
			Date Analyzed:	2007-06-13		Anal	yzed By: TP	
Standard (ICV-1) QC Batch: 38129			_		ICMa		yzed By: TP	
· · ·			ICVs	ICVs	ICVs Percent	Percent		
QC Batch: 38129	Flag	Units	ICVs True	ICVs Found	Percent	Percent Recovery	Date	
QC Batch: 38129 Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	Percent Recovery	Percent Recovery Limits	Date Analyzed	
QC Batch: 38129 Param Dissolved Calcium		mg/L	ICVs True Conc. 50.0	ICVs Found Conc. 51.7	Percent Recovery 103	Percent Recovery Limits 90 - 110	Date Analyzed 2007-06-1	
QC Batch: 38129 Param Dissolved Calcium Dissolved Magnesium		mg/L mg/L	ICVs True Conc. 50.0 50.0	ICVs Found Conc. 51.7 52.0	Percent Recovery 103 104	Percent Recovery Limits 90 - 110 90 - 110	Date Analyzed 2007-06-1 2007-06-1	
QC Batch: 38129 Param Dissolved Calcium		mg/L	ICVs True Conc. 50.0 50.0 50.0 50.0	ICVs Found Conc. 51.7	Percent Recovery 103	Percent Recovery Limits 90 - 110	Date Analyzed 2007-06-1 2007-06-1 2007-06-1	
QC Batch: 38129 Param Dissolved Calcium Dissolved Magnesium Dissolved Potassium	1	mg/L mg/L mg/L	ICVs True Conc. 50.0 50.0 50.0 50.0	ICVs Found Conc. 51.7 52.0 51.5	Percent Recovery 103 104 103	Percent Recovery Limits 90 - 110 90 - 110 90 - 110	Date Analyzed 2007-06-1 2007-06-1 2007-06-1	
QC Batch: 38129 Param Dissolved Calcium Dissolved Magnesium Dissolved Potassium Dissolved Sodium	1	mg/L mg/L mg/L	ICVs True Conc. 50.0 50.0 50.0 50.0	ICVs Found Conc. 51.7 52.0 51.5 50.4	Percent Recovery 103 104 103	Percent Recovery Limits 90 - 110 90 - 110 90 - 110 90 - 110		
QC Batch: 38129 Param Dissolved Calcium Dissolved Magnesium Dissolved Potassium Dissolved Sodium Standard (CCV-1)	1	mg/L mg/L mg/L	ICVs True Conc. 50.0 50.0 50.0 50.0 50.0 Date Analyzed: CCVs	ICVs Found Conc. 51.7 52.0 51.5 50.4 2007-06-13 CCVs	Percent Recovery 103 104 103 101 CCVs	Percent Recovery Limits 90 - 110 90 - 110 90 - 110 90 - 110 90 - 110 Anal Percent	Date Analyzed 2007-06-1 2007-06-1 2007-06-1 2007-06-1 yzed By: TP	
QC Batch: 38129 Param Dissolved Calcium Dissolved Magnesium Dissolved Potassium Dissolved Sodium Standard (CCV-1) QC Batch: 38129	1	mg/L mg/L mg/L	ICVs True Conc. 50.0 50.0 50.0 50.0 50.0 Date Analyzed: CCVs True	ICVs Found Conc. 51.7 52.0 51.5 50.4 2007-06-13 CCVs Found	Percent Recovery 103 104 103 101 CCVs Percent	Percent Recovery Limits 90 - 110 90 - 110 90 - 110 90 - 110 90 - 110 Anal Percent Recovery	Date Analyzed 2007-06-1 2007-06-1 2007-06-1 2007-06-1 yzed By: TP Date	
QC Batch: 38129 Param Dissolved Calcium Dissolved Magnesium Dissolved Potassium Dissolved Sodium Standard (CCV-1) QC Batch: 38129 Param	1	mg/L mg/L mg/L Units	ICVs True Conc. 50.0 50.0 50.0 50.0 50.0 Date Analyzed: CCVs True Conc.	ICVs Found Conc. 51.7 52.0 51.5 50.4 2007-06-13 CCVs Found Conc.	Percent Recovery 103 104 103 101 CCVs Percent Recovery	Percent Recovery Limits 90 - 110 90 - 110 90 - 110 90 - 110 90 - 110 Anal Percent Recovery Limits	Date Analyzed 2007-06-1 2007-06-1 2007-06-1 2007-06-1 yzed By: TP Date Analyzed	
QC Batch: 38129 Param Dissolved Calcium Dissolved Magnesium Dissolved Potassium Dissolved Sodium Standard (CCV-1) QC Batch: 38129 Param Dissolved Calcium	Flag	mg/L mg/L mg/L mg/L	ICVs True Conc. 50.0 50.0 50.0 50.0 Date Analyzed: CCVs True Conc. 50.0	ICVs Found Conc. 51.7 52.0 51.5 50.4 2007-06-13 CCVs Found Conc. 49.0	Percent Recovery 103 104 103 101 CCVs Percent Recovery 98	Percent Recovery Limits 90 - 110 90 - 110 90 - 110 90 - 110 Anal Percent Recovery Limits 90 - 110	Date Analyzed 2007-06-1 2007-06-1 2007-06-1 yzed By: TP Date Analyzed 2007-06-1	
QC Batch: 38129 Param Dissolved Calcium Dissolved Magnesium Dissolved Potassium Dissolved Sodium Standard (CCV-1) QC Batch: 38129 Param Dissolved Calcium Dissolved Magnesium	Flag	mg/L mg/L mg/L mg/L Units mg/L mg/L	ICVs True Conc. 50.0 50.0 50.0 50.0 Date Analyzed: CCVs True Conc. 50.0 50.0 50.0	ICVs Found Conc. 51.7 52.0 51.5 50.4 2007-06-13 CCVs Found Conc. 49.0 50.2	Percent Recovery 103 104 103 101 CCVs Percent Recovery 98 100	Percent Recovery Limits 90 - 110 90 - 110 90 - 110 90 - 110 Anal Percent Recovery Limits 90 - 110 90 - 110	Date Analyzed 2007-06-1 2007-06-1 2007-06-1 2007-06-1 yzed By: TP Date Analyzed 2007-06-1 2007-06-1	
QC Batch: 38129 Param Dissolved Calcium Dissolved Magnesium Dissolved Potassium Dissolved Sodium Standard (CCV-1) QC Batch: 38129 Param Dissolved Calcium	Flag	mg/L mg/L mg/L mg/L	ICVs True Conc. 50.0 50.0 50.0 50.0 50.0 CCVs True Conc. 50.0	ICVs Found Conc. 51.7 52.0 51.5 50.4 2007-06-13 CCVs Found Conc. 49.0	Percent Recovery 103 104 103 101 CCVs Percent Recovery 98	Percent Recovery Limits 90 - 110 90 - 110 90 - 110 90 - 110 Anal Percent Recovery Limits 90 - 110	Date Analyzed 2007-06-1 2007-06-1 2007-06-1 2007-06-1 yzed By: TF Date Analyzed 2007-06-1	

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PAGE:	ANALYSIS REQUEST (Circle or Specify Method	əg Br	i Pd -5 ( 4.1 -5)	י פיי בייו כ	200 100 100 200 100	CCTRS ZOUT CCTRS AOT BCI LCTS ZOUT LCTS AOTORN LCTS ROTORN	X					SAMPLED BY: (Print & Sign) UNIN, UNINS	SAMPLE SHIPPED BY: (Circle) FEDEX BUS	HAND DALIVERED UPS	TUGGIAMANAS CUMIALI FAROUN		
ain of fustody Renord		pring St.	<b>ns 79705</b> Fax (432) 682-3946	11/2	ENCE H CONTAIN	BLEX 8030/ NONE ICE HIO3 LITLEHED () MOTHEE OL	$X = X - M \cup I$ 3 X X					ANTED THE (Stonature)	RECEIVED BY (Supply lo) 40 Date: 5-20:07	RECEIVED BT: (Signature) () Date:	RECEIVED BY: (Signature)		A-Alr SD-Solid
Analveis Remest and Chain	diving agains invit	IIIUILAIVIDER EIVVINUIVIMEIVIAL CURF. 1910 N. Big Spring St.	Midland, Texas (432) 682-4559	CLIENT, NAME: CLIENT, NAME: C. 20 LANDIN	PROJECT NAME: COL	LAB I.D. DATE TIME IN NUMBER DATE TIME TAKEN	125727 52400 Are Water Station					RELINQUINED BY: (Standburg) Date: 5 - 2 9- 07		RELINQUISHED BY: (Signature) Date:	RECEIVING LABORATORY:	ADDRESS:	ONDITION WHEN RECEIVED: MATRIX:

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# APPENDIX B PERMEABILITY/SIEVE ANALYSIS

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#### Hittes, Joleen

From: +	lines, Jolean
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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 (remoted at 90%). Please let me know how to proceed.

Thank you,

Joieen

Jolean Hines Danlel B. Stephens & Associates Laboratory 5840 Osuna Rd., NE Albuquerque, NM 87109

505.889.7752 505.889.0258(fax) jhines@dbstephens.com 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, cap/plate/apoxy (g): 0.00

> Dry weight of semple (g): 20511.00 Sample volume (c:n<sup>3</sup>): 14884.53 Assumed particle density: 2.65

initial Volumetric Moisture Content (% vol): 6.9 Initial Grevimetric Moisture Content (% g/g): 5.0 Dry bulk density (g/cm<sup>3</sup>): 1.38 Wet bulk density (g/cm<sup>3</sup>): 1.45 Celculated Porcelly (% vol): 48.0 Percent Seturation: 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

		Kaul	Method of	Analysis
Samp	le Number	(cm/səc)	Consunt Head Flexible Wall	Falling Head Flexible Wall
	Clay	1,5E-0B		X

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SAMPLE RECEIPT FORM	
CLIENT: Gandy Marley, Inc. DATE RECE PROJECT #:	IVED: <u>9/16/05</u>
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	
Three samples arrived, each in full 5-gallon buckets, in good con clay sample is being prepared today and testing will begin soon. further instuction on the Cover and Caliche samples. Also awai	Will await
clay core sample.	nes at (505)
ciay core sample. If you have any questions or concerns please contact Joleen Hil 889-7752,	
If you have any questions or concerns please contact Joleen Hil 889-7752,	sting, After
If you have any questions or concerns please contact Joleen Hil	
If you have any questions or concerns please contact Joleen Hit 889-7752, NOTE: Samples will be held for a period of 30 days after the completion of tes	

follows methods that are standard for the industry. The results do not constitute a professional or expert opinion by DBS&A, nor can the results affect any professional or expert opinions rendered with respect thereto by DBS&A. All testing undertaken by 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 ilmited scope of the Lab's undertaking, you hereby waive 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 disclaims any and all other warranties of any kind whatsoever.

# APPENDIX C BORING LOGS/MONITOR WELL CONSTRUCTION DIAGRAM

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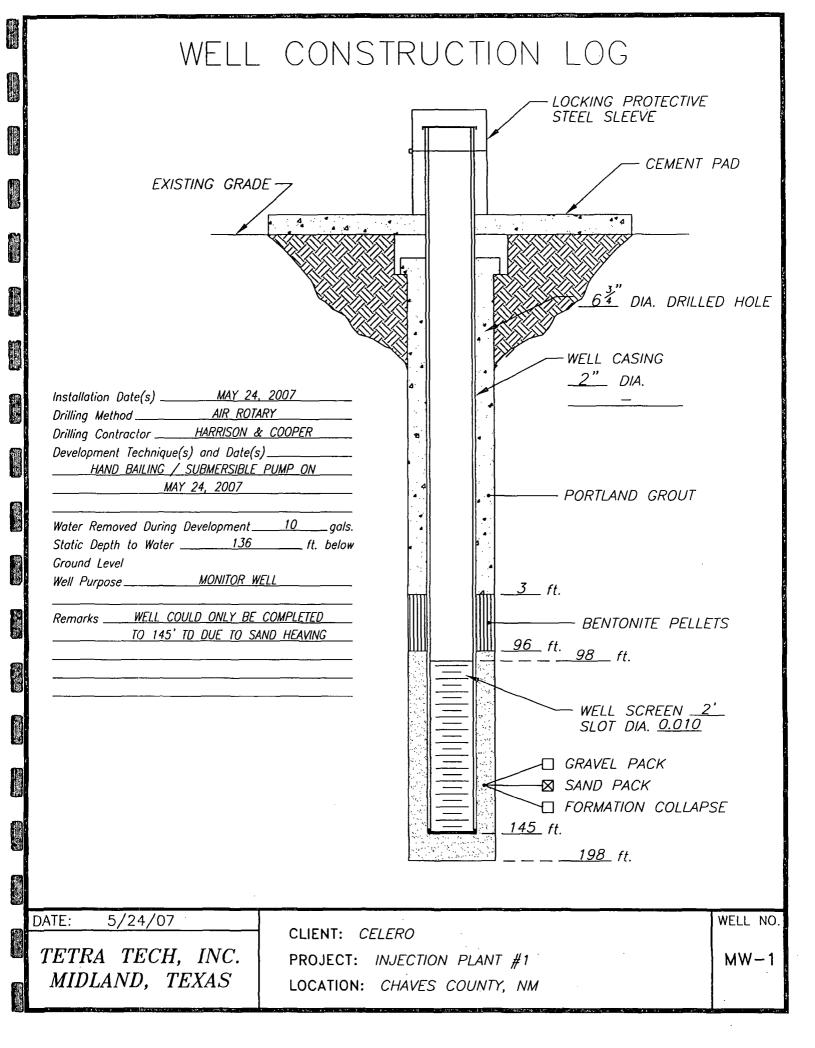
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Boring/Well:	MW-1
<b>Project Number:</b>	3134
Client:	Celero Energy
Site Location:	Rock Queen SWD Plant #1
Location:	Chavez County, New Mexico
Total Depth	198
Date Installed:	05/24/07

DEPTH (Ft)	OVM	SAMPLE DESCRIPTION
0-5		Buff limestone with chert intermixed with tan sand
5-10		Buff limestone with chert intermixed with tan sand
10-15		Buff to tan sandy limestone with chert
15-20		Tan calcareous fine grain sand
23-25		Tan calcareous fine grain sand
28-30		Tan well sorted calcareous sand
33-35		Tan well sorted calcareous sand
38-40		Tan well sorted calcareous sand
43-45		Tan well sorted calcareous sand
48-50		Tan well sorted calcareous sand
53-55		Tan fine grain sand
58-60		Tan fine grain sand
63-65		Tan fine grain sand
68-70		Tan fine grain sand
73-75		Tan fine grain sand
78-80		Tan fine grain sand
83-85		Tan fine grain sand
88-90		Tan fine grain sand
98-100		Tan fine grain sand
108-110		Tan fine grain sand
118-120		Tan fine grain sand
128-130		Tan fine grain sand
138-140		Tan fine grain sand
148-150		Red fine grain sand
158-160		Tan fine grain sand

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168-170	 Dark brown clayey sand	
178-180	 Light red sandy clay	
188-190	 Red clayey sand	
198	 Red sandy clay	

Total Depth is 198 feet Groundwater at 133 feet piping installed to 145 feet

Boring/Well:	SB-1
Project Number:	3134
Client:	Celero Energy
Site Location:	Rock Queen SWD Plant #1
Location:	Chavez County, New Mexico
Total Depth	100
Date Installed:	10/15/07

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DEPTH (Ft)	OVM	SAMPLE DESCRIPTION
0-5	38.0	Buff/tan calcareous sand with strong hydrocarbon odor
5-10	2.7	Tan/yellow calcareous sand with slight hydrocarbon odor
10-15	3.0	Tan fine grain calcareous sand with no hydrocarbon odor
15-20	3.2	Tan fine grain calcareous sand
25-30	2.9	Tan fine grain calcareous sand
35-40	4.8	Tan fine grain well sorted sand
45-50	2.7	Tan fine grain well sorted sand
55-60	2.1	Tan fine grain well sorted sand
65-70	2.9	Tan fine grain well sorted sand
75-80	2.7	Tan fine grain well sorted sand
85-90	0.0	Tan fine grain well sorted sand
95-100	3.1	Tan fine grain well sorted sand

Total Depth is 100 feet

Boring/Well:	SB-2
<b>Project Number:</b>	3134
Client:	Celero Energy
Site Location:	Rock Queen SWD Plant #1
Location:	Chavez County, New Mexico
Total Depth	50
Date Installed:	10/15/07

DEPTH (Ft)	OVM	SAMPLE DESCRIPTION
5-10	8.6	Buff/tan fine grain sandy limestone
15-20	2.9	Tan fine grain calcareous sand
25-30	2.5	Tan fine grain calcareous sand
35-40	2.6	Tan fine grain calcareous sand
45-50	2.9	Tan fine grain calcareous sand

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Total Depth is 50 feet No Groundwater encountered during drilling

Boring/Well:SB-3Project Number:3134Client:Celero EnergySite Location:Rock Queen SWD Plant #1Location:Chavez County, New MexicoTotal Depth50Date Installed:10/15/07

DEPTH (Ft)	OVM	SAMPLE DESCRIPTION
5-10	8.6	Buff/tan fine grain calcareous sand
15-20	2.5	Tan fine grain calcareous sand
25-30	3.4	Tan fine grain calcareous sand
35-40	3.2	Tan fine grain calcareous sand
45-50	2.7	Tan fine grain calcareous sand

Total Depth is 50 feet

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Boring/Well:SB-4Project Number:3134Client:Celero EnergySite Location:Rock Queen SWD Plant #1Location:Chavez County, New MexicoTotal Depth50Date Installed:10/15/07

DEPTH (Ft)	OVM	SAMPLE DESCRIPTION	
5-10	5.0	Rocky gravel with tan fine grain calcareous sand	
15-20	2.5	Tan/buff fine grain calcareous sand	
25-30	2.4	Tan/buff fine grain calcareous sand	
	3.2	Tan/buff fine grain calcareous sand	
45-50	2.8	Tan/buff fine grain calcareous sand	

Total Depth is 50 feet

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Boring/Well:	SB-5
<b>Project Number:</b>	3134
Client:	Celero Energy
Site Location:	Rock Queen SWD Plant #1
Location:	Chavez County, New Mexico
Total Depth	10
Date Installed:	10/15/07

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DEPTH (Ft)	OVM	SAMPLE DESCRIPTION
5-10	3.6	Rocky gravel with tan medium grain calcareous sand
15-20	0.0	Not able to collect sample

Total Depth is 10 feet

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Boring/Well:SB-6Project Number:3134Client:Celero EnergySite Location:Rock Queen SWD Plant #1Location:Chavez County, New MexicoTotal Depth50Date Installed:10/15/07

DEPTH (Ft)	оум	SAMPLE DESCRIPTION	
5-10	28.5	Dark brown hydrocarbon stainded sand	
15-20	13.5	Tan fine grain calcareous sand with hydrocarbon odor	
25-30	6.7	Tan fine grain calcareous sand	
35-40	6.1	Tan fine grain calcareous sand	
45-50	3.8	Tan fine grain calcareous sand	

Total Depth is 50 feet

Boring/Well:	SB-6
<b>Project Number:</b>	3134
Client:	Celero Energy
Site Location:	Rock Queen SWD Plant #1
Location:	Chavez County, New Mexico
Total Depth	50
Date Installed:	10/15/07

DEPTH (Ft)	OVM	SAMPLE DESCRIPTION
5-10	28.5	Dark brown hydrocarbon stained sand
15-20	13.5	Tan fine grain calcareous sand with hydrocarbon odor
25-30	6.7	Tan fine grain calcareous sand
35-40	6.1	Tan fine grain calcareous sand
45-50	3.8	Tan fine grain calcareous sand

Total Depth is 50 feet

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Boring/Well:SB-7Project Number:3134Client:Celero EnergySite Location:Rock Queen SWD Plant #1Location:Chavez County, New MexicoTotal Depth50Date Installed:10/16/07

DEPTH (Ft)	OVM	SAMPLE DESCRIPTION	
5-10	2.4	Rocky gravel with sand and limestone intermixed	
15-20	2.5	Buff/tan calcareous sand	
25-30	2.3	Buff/tan calcareous sand	
35-40	2.4	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-8Project Number:3134Client:Celero EnergySite Location:Rock Queen SWD Plant #1Location:Chavez County, New MexicoTotal Depth50Date Installed:10/16/07

DEPTH (Ft)	OVM	SAMPLE DESCRIPTION
5-10	2.2	Rocky gravel with sand and limestone intermixed
15-20	2.2	Buff/tan calcareous sand
25-30	2.4	Buff/tan calcareous sand
35-40	2.2	Tan fine grain well sorted sand
45-50	2.2	Tan fine grain well sorted sand

Total Depth is 50 feet

Boring/Well:SB-9Project Number:3134Client:Celero EnergySite Location:Rock Queen SWD Plant #1Location:Chavez County, New MexicoTotal Depth50Date Installed:10/16/07

DEPTH (Ft)	OVM	SAMPLE DESCRIPTION
5-10	2.3	Rocky gravel with sand and limestone and chert intermixed
15-20	2.7	Buff/tan calcareous sand
25-30	2.3	Buff/tan calcareous sand
35-40	2.3	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-10Project Number:3134Client:Celero EnergySite Location:Rock Queen SWD Plant #1Location:Chavez County, New MexicoTotal Depth50Date Installed:03/24/08

DEPTH (Ft)	OVM	SAMPLE DESCRIPTION
5-10	2.1	Tan/brown limestone (salty)
15-20	1.9	Tan fine grain sand intermixed with limestone (salty)
25-30	1.8	Tan fine grain sand intermixed with limestone (salty)
35-40	2.2	Tan fine grain sand intermixed with limestone (salty)
45-50	1.5	Tan fine grain sand intermixed with limestone (salty)

Total Depth is 50 feet

Boring/Well:SB-11Project Number:3134Client:Celero EnergySite Location:Rock Queen SWD Plant #1Location:Chavez County, New MexicoTotal Depth50Date Installed:03/24/08

DEPTH (Ft)	OVM	SAMPLE DESCRIPTION				
5-10	1.6	Tan to brown limestone (salty)				
15-20	1.5	Buff limestone with some sand intermixed (salty)				
25-30	1.6	Tan fine grain sand (salty)				
35-40	1.8	Tan fine grain sand (salty)				
45-50	1.6	Tan fine grain sand (salty)				

Total Depth is 50 feet

No Groundwater encountered during drilling

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<b>Boring/Well:</b>	SB-12
<b>Project Number:</b>	3134
Client:	Celero Energy
Site Location:	Rock Queen SWD Plant #1
Location:	Chavez County, New Mexico
Total Depth	50
Date Installed:	03/24/08

DEPTH (Ft)	OVM	SAMPLE DESCRIPTION
5-10	1.4	Hard tan to brown limestone (no salt)
15-20	1.3	Hard cherty limestone (no salt)
25-30	1.7	Tan fine grain sand (no salt)
35-40	1.6	Tan fine grain sand (slight salt)
45-50	1.5	Tan fine grain sand (slight salt)

Total Depth is 50 feet No Groundwater encountered during drilling

# APPENDIX D INITIAL C-141 & C-144

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S. F. Barry

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District 1 1625 N. French Dr., Hobbs, NM 88240 District II 1301 W. Grand Avenue, Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410 District IV

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1220 S. St. Francis Dr., Santa Fe, NM 87505

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

> Oil Conservation Division 1220 South St. Francis Dr. Santa Fe. NM 87505

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

Form C-144

June 1, 2004

	c covered by a "general plan"? Yes 🗌 N	
Type of action: Registration of a pit or	r below-grade tank 🖾 Closure of a pit or below-g	rade tank
Operator Celero Energy H, LP Telephone: Address: 400 West Illinois, Suite 1601, Midland, Texas 79701	(432) 686-1883 e-mai	Laddress: bwoodard@celeroenergy.com
iacility or well name: Rock Queen Unit Saltwater Plant #1 = API #; County: Chaves ====================================	U/L or Qtr/Qtr D e 33.16667 N Longitude 103.79917 W	Sec 26 T-13-S R-31-E NAD: 1927 🛛 1983 🗍
à	Below-grade tank	
ype: Drilling 🔲 Production 🗋 Disposal 🗍	Volume:bbl Type of fluid:	
Workover 🔂 Emergency 🛛	Construction material:	
ined 🛛 Unlined 🗋	Double-walled, with leak detection? Yes [] If	not, explain why not.
Jiner type: Unknown/Fiberglass X. Thickness U <b>nknow</b> n mit Clay □ ?it Volume 25.000 b <del>b</del> l		
	Less than 50 feet	(20 points)
Depth to ground water (vertical distance from bottom of pit to seasonal	50 feet or more, but less than 100 feet	(10 points)
igh water elevation of ground water.)	100 feet or more	( 0 points) 0
	Yes	(20 points)
Wellhead protection area: (Less than 200 feet from a private domestic	No	( 0 points) 0
vater source, or less than 1000 feet from all other water sources.)		
Distance to surface water: (horizontal distance to all wetlands, playas,	Less than 200 feet 200 feet or more, but less than 1000 feet	(20 points) (10 points)
rrigation canals, ditches, and perennial and ephemeral watercourses.)	1000 feet or more	( 0 points) 0
		0
	Ranking Score (Total Points)	
	s relationship to other equipment and tanks. (2) In	· ·
aur are burying in place) onsite 🗌 offsite 🗍 If offsite, name of facility	s relationship to other equipment and tanks. (2) In (3) Attach a generation	ral description of remedial action taken inclu
our are burying in place) onsite  offsite  If offsite, name of facility mediation start date and end date. (4) Groundwater encountered: No	's relationship to other equipment and tanks. (2) In (3) Attach a gener Yes 🔲 If yes, show depth below ground surface	ral description of remedial action taken inclu
our are burying in place) onsite  offsite  If offsite, name of facility mediation start date and end date. (4) Groundwater encountered: No  No  Attach soil sample results and a diagram of sample locations and excavations.	s relationship to other equipment and tanks. (2) In (3) Attach a gener Yes ] If yes, show depth below ground surface_ tions.	ral description of remedial action taken inclu
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I hereby certify that the information above is true and complete to the best last been/will be constructed or closed according to NMOCD guidelin Date: 6-15-2007 Printed Name/Title Bruce Woodard, Engineer Your certification and NMOCD approval of this application/closure does otherwise endanger public health or the environment. Nor does it relieve	s relationship to other equipment and tanks. (2) In (3) Attach a generations. (3) Attach a generations. (3) Attach a generation of the second surface_tions. This pit was constructed in the 1960's and were it of other pits in this Unit which are fiberglass. (4) of other pits in this Unit which are fiberglass. (5) of other pits in this Unit which are fiberglass. (5) of other pits in this Unit which are fiberglass. (5) of other pits in this Unit which are fiberglass. (6) of other pits in this Unit which are fiberglass. (7) of my knowledge and belief. I further certify the second sec	ral description of remedial action taken includ ft. and attach sample results. ft. and attach sample results. 

District 1 1625 N. French Dr., Hobbs, NM 88240 District II 1301 W. Grand Avenue, Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505

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State of New Mexico Energy Minerals and Natural Resources

Form C-141 Revised June 10, 2003

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

ŗ	<b>Release Notification and Corrective Action</b>												
				(AMENDED)									
							OPERAT	FOR	(	🗙 Initia	al Report		Final Report
	Name of Company: Celero Energy II, LP				Contact: Br	uce Woodard							
	Address: 400 W. Illinois, Suite 1601, Midland, TX 79701						No. 432-686-18						
Facility Name: Rock Queen Unit Saltwater Plant #1						Facility Typ	e: Pit at Tank B	attery					
Surface Owner State Mineral Owner					State Lease No.								
LOCATIO						ATIO	DN OF RELEASE						
	Unit Letter Section Township Range Feet from the North D 26 13S 31E				h/South Line Feet from the East/We			West Line County Chaves					
_م ا		20	155										
			Lat	itude	<u>33.16667°</u>		Longitu	de <u>103.799</u>	017°				
-	NATURE OF RELEASE												
Ŋ	Type of Rele		Produced Wat	er						ecovered None			
	Source of Re	lease					Date and F Unknown	Hour of Discovery					
	Was Immedia	ate Notice (	Given?				If YES, To	Whom?		N/A			
				Yes 📋	No 🔲 Not Re	equired							
By Whom? Bruce Woodard						Date and Hour							
	Was a Water		ched?				If YES, Vo	olume Impacting	the Wate	rcourse.			
$\square$ Yes $\square$ No													
	If a Watercourse was Impacted, Describe Fully.*												
												_	
Ø	Describe Cau				n Taken.* from Palisades a	nd in in i	the process of	alaging					
m		-		-			me process of	ciosing.					
	Describe Are				ken.* acterization Plan	has heer	submitted fo	r approval					
	I hereby certi	fy that the	information g	iven abov	e is true and com	plete to	the best of my	knowledge and u	inderstar	d that pur	suant to NM	OCD	rules and
								nd perform corre					
								harked as "Final F ion that pose a th					
								ve the operator of					
	federal, state	or local la	ws and/or reg	ulations7	А	- <u>-</u>							
				OIL CONSERVATION DIVISION									
Signature:													
E TRUTHE	Printed Name: Bruce Woodard					Approved by District Supervisor:							
لتربيه	Title: Engine	er					Approval Date: Expiration Date:						
Comments	F	······································											
	E-mail Address: bwoodard@celeroenergy.com				Conditions of Approval:				Attached				
Date: Phone: (432) 686-1883						,							

Attach Additional Sheets If Necesary