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AUG 2 1 2013

QUANTUM RESOURCES

5 Houston Center 1401 McKinney Street, Suite 2400 Houston, TX 77010 Phone 713.452.2200

State E 1288 Battery

Termination Request

Unit Letter F, Section 27, Township 18S, Range 28E

Rice Environmental Consulting & Safety

P.O. Box 2948, Hobbs, NM 88241 Phone 575.393.2967

August 20th, 2013

Mike Bratcher

New Mexico Energy, Minerals, & Natural Resources Oil Conservation Division, Environmental Bureau – District 2 811 S. First St. Artesia, NM 88210

RE: Termination Request Quantum Resources – State E 1288 Battery UL/F sec. 27 T18S R28E

Mr. Bratcher:

Quantum Resources (Quantum) has retained Rice Environmental Consulting and Safety (RECS) to address potential environmental concerns at the above-referenced site.

Background and Previous Work

The site is located approximately 12.5 miles southwest of Loco Hills, New Mexico at UL/F sec. 27 T18S R28E. NM OSE and BLM records indicate that the depth to groundwater at the site is approximately 145 ft bgs. However, soil bore installation at the site found no groundwater in the area.

RECS personnel were on site beginning on October 31st, 2012 to take initial samples of the release. Samples were taken at the surface and at depth and field tested for chlorides and hydrocarbons (Figure 1). The samples were taken to a commercial laboratory for confirmation of field numbers. Laboratory readings showed elevated chlorides results which decreased with depth. GRO readings at all points and at all depth were non-detect. DRO readings were slightly elevated, especially with depth. The exception to this was at Pt. 5 where the DRO readings decreased with depth (Appendix A).

Five verticals were installed at the site to determine the extent of contamination in the vadose zone (Figure 2). Vertical #1 was excavated to a depth of 16 ft bgs where the field chloride reading was 922 mg/kg. Vertical #2 was excavated to a depth of 4 ft bgs. The 3 ft and 4 ft samples were taken to a commercial laboratory for analysis of chlorides and hydrocarbons. The samples returned laboratory chloride readings below 250 mg/kg and GRO readings of non-detect. The 3 ft sample returned a DRO reading of 3,240 mg/kg and the 4 ft sample returned a DRO reading of 3,760 mg/kg. Vertical #3 was excavated to a depth of 5 ft bgs. The 4 ft and 5 ft samples were taken to a commercial laboratory chloride readings below 250 mg/kg and GRO and DRO readings of non-detect. Vertical #4 was excavated to a depth of 3 ft bgs. The 2 ft and 3 ft samples were taken to a commercial laboratory for analysis of chlorides and hydrocarbons. The 2 ft sample returned a laboratory chloride reading of 480 mg/kg and the 3 ft reading returned a laboratory

chloride reading of 48 mg/kg. Both samples returned GRO and DRO readings of nondetect. Vertical #5 was excavated to a depth of 3 ft bgs. The 2 ft and 3 ft samples were taken to a commercial laboratory for analysis of chlorides and hydrocarbons. The samples returned laboratory chloride readings below 250 mg/kg and GRO and DRO readings of non-detect (Appendix B).

On December 18th, 2012, four soil bores were installed at the site (Figure 3). The bores were sampled at regular intervals as they were being installed and the samples were field tested for chlorides and hydrocarbons. Representative samples from each bore were taken to a commercial laboratory for analysis (Appendix C). SB-1 returned laboratory chloride results of 400 mg/kg at 3 ft bgs and 48 mg/kg at 6 ft bgs. SB-2 returned laboratory chloride results of 32 mg/kg at 9 ft and 12 ft bgs. SB-3 returned laboratory chloride results of 8,720 mg/kg at the surface and 2,380 mg/kg at 65 ft bgs. At 66 ft bgs, red bed clay was encountered, which indicates the bottom of the aquifer. The bore was drilled down to approximately 76 ft bgs and left open to allow groundwater to accumulate. On December 22nd, 2012, ARC Environmental checked the bore with a Solinist Water Level Meter for water accumulation. The meter indicated no water within the borehole to a depth of 68.3 feet. SB-4 returned laboratory chloride results of 128 mg/kg at 6 ft bgs and 192 mg/kg at 9 ft bgs. GRO and DRO results in all bores at all depth were non-detect, except for SB-3 where the DRO reading and the surface was 161 mg/kg.

RECS personnel met with NMOCD – District 2 on May 21st, 2013. NMOCD required that the entire release area be scraped down 18 inches. At SB-3, the area was to be scraped down to 1 ft bgs and the soil exported to a NMOCD approved facility. Then the area was to be excavated down another 2 ft bgs and that soil be stockpiled on the site. At 3 ft bgs, a 1 ft thick clay layer was to be installed and then backfilled with the stockpiled soil. In the pasture, to the southwest, the area was to be scraped down 2 ft bgs (Figure 4).

On June 20th, 2013, RECS personnel were on site to begin the scraping and excavation actions (Figure 5). The areas were scraped down as required by NMOCD. A total of 420 yards of excavated soil was taken to NMOCD approved facility for disposal. A total of 440 yards of soil and 12 yards of red clay was imported to the site. The scraped areas were backfilled with the clean, imported soil. At SB-3 at a depth of 3 ft bgs, a 1 ft thick clay layer was installed and properly seated into the excavation. On June 28th, 2013, Pettigrew & Associates was on site to conduct a clay compaction test on the clay layer (Appendix D). The Dry Density Percent Max result was 95.9 and the Percent Moisture result was 11.3. The excavation was then backfilled with the stockpiled soil to bring the excavation back to surface level.

Photo documentation of these activities can be found in Appendix E.

Due to the removal of the impacted soils and the installation of the clay layer as directed by NMOCD District-2 and given the lack of groundwater at the site, RECS, on behalf of Quantum Resources, submits the final C-141 (Appendix F) and respectfully requests the closure of the regulatory file for this site. RECS appreciates the opportunity to work with you on this project. Please call Hack Conder at (575) 631-6432 if you wish to discuss the site.

Sincerely,

JC.W.

Lara Weinheimer Project Scientist RECS (575) 441-0431

Attachments:

Figure 1 – Initial Lab Sampling Data

Figure 2 – Vertical Sampling Data

Figure 3 – Soil Bore Installation Map

Figure 4 – NMOCD Approved Corrective Actions

Figure 5 – Excavation Data

Appendix A – Initial Sampling Laboratory Analyses

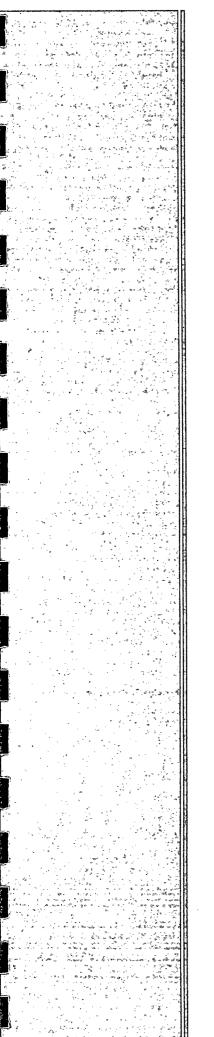
Appendix B – Vertical Sampling Laboratory Analyses

Appendix C – Soil Bore Installation Documentation

Appendix D – Clay Compaction Test

Appendix E – Photo Documentation

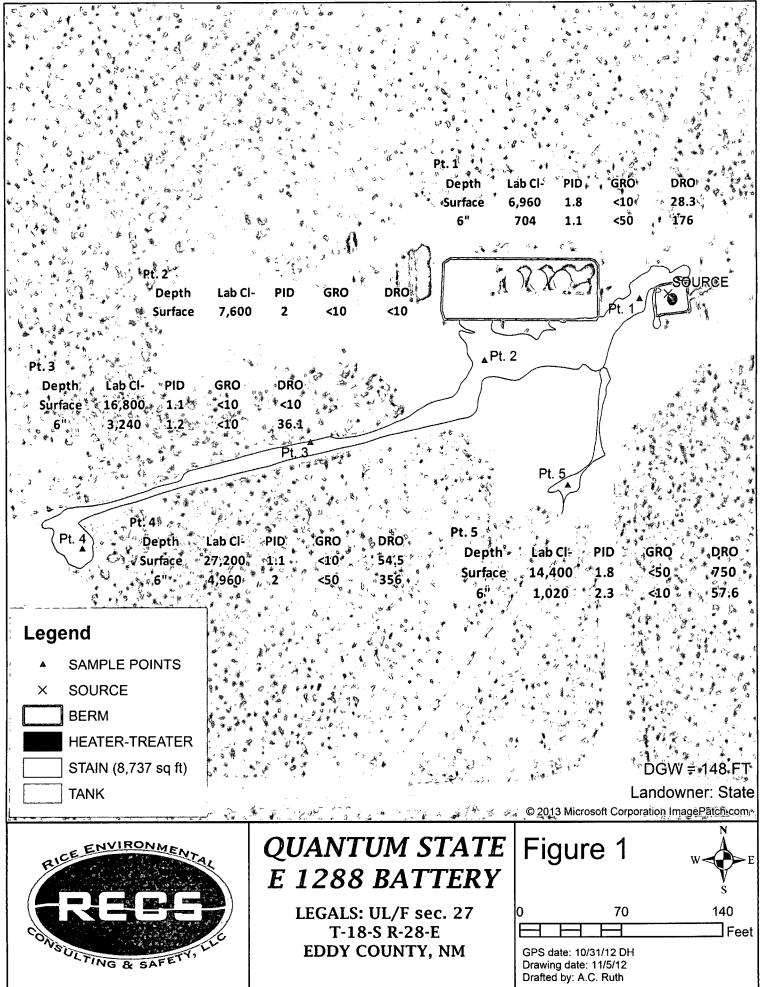
Appendix F – Final C-141



Figures

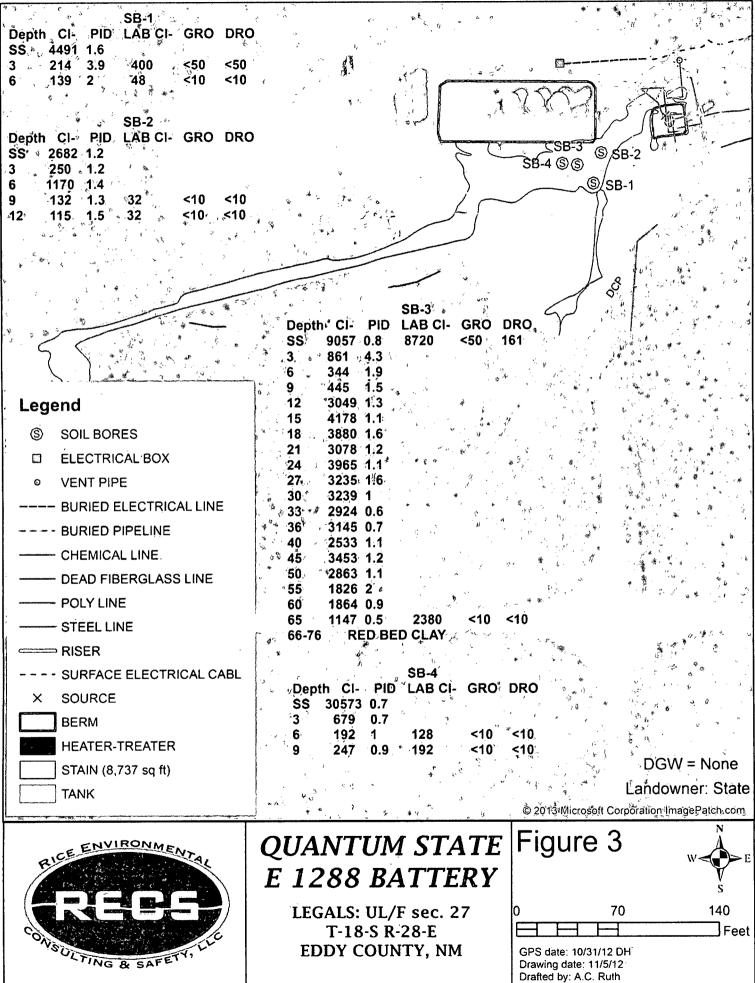
RICE Environmental Consulting and Safety (RECS) P.O. Box 2948, Hobbs, NM 88241 Phone 575.393.2967

Initial Lab Sampling Data

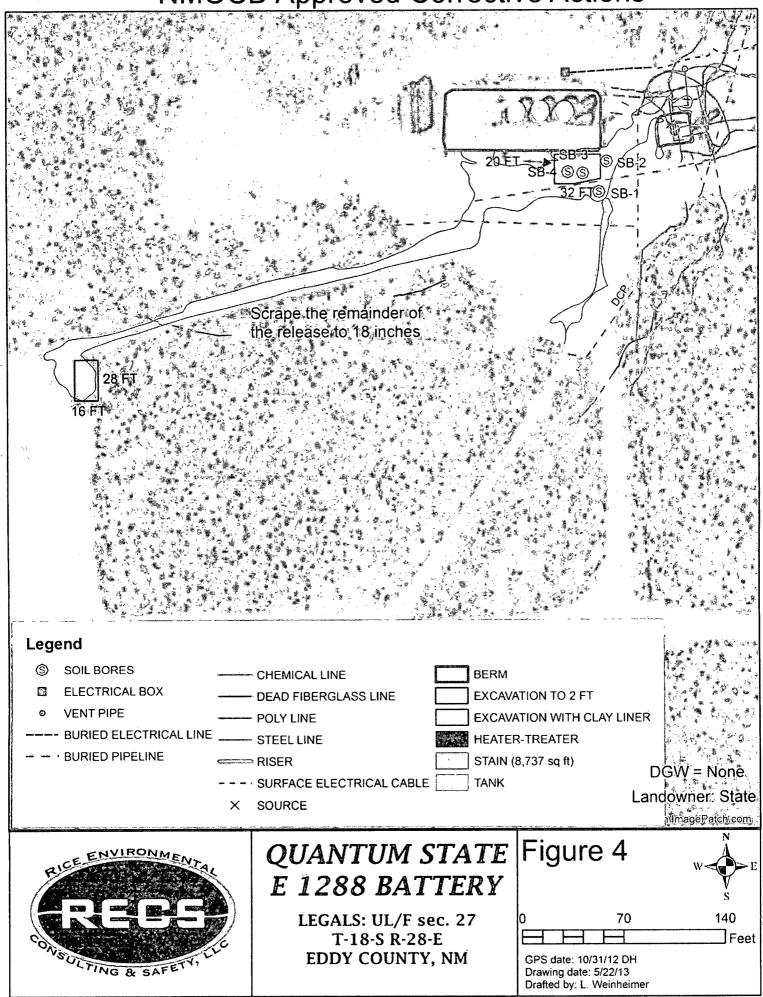


V	ertical Sampling	Data
	Vertical #2 Depth Cl- PID Lab Cl- GRC Surface 4:479 2 7,600 <10	
	1' 300 97.7 2. 247 9:6 3' 189 0.7 112	
Vertical #3 Depth Cl- PID Lab Cl- GRO DRO Surface 11,170 111 16,800 <10 <10 6! 3,480 1.2 3,240 <10 36	· · · · · · · · · · · · · · · · · · ·	Pt. 2 Vertical #1 Vertical.#1 Depth CI- PID #
1' 1125 0.1 2' 173 0 3' 247 0	Vertical #	2 SURFACE 7934 0.7 0.5' 4456 30.3 1' 3523* 18.6 1.5' 370* 20*
4'' 185 0 208 <10 <10 5 ¹ 173 0 208 <10 <10	Pt 3 Vertical #3	2' 428 35 2:5' 511 15.3 460 18:1 35' - 476 10.6
Pt. 4	Vertical #5 -Depth Cl- /PID Lab Cl- G Surface 18,299 1.8, 14,400 < 6" 2,415 2.3 1,020 <	RO DRO Pt. 57 44 602 9.6 RO DRO 45.7 583 5 50 750 665 5.6
▲ Vertical #4 Vertical #4 Depth Cl- PID Lab Cl- GRO DR Surface 21,923 1.1 27,200 <10 55	1 1440 2.1 - 2' 183 1.5 128 < 0 3' 126 1.3 64 <	6 771 7.3 10 10 6.5 1104 4 7 697 3.5 7.5 777 3.3
Surface 21,925 1.1 27,200 <10	6 Pt.1 Depth Cl: PID	8' 340 11.6 8.5' 1344 1.3 Lab Cl- GRO DRO 9' 1195 18'*
3' 140 0.5 48 <10 1	0. Surface 5,220 1.8 6 1,208 1.1	6,960. <10 28.3 9.5 24.7 2 704 <50 176 10 594* 1.8 10,55 542 1.6 11 275 1.2 11,7 275 1.2 11.5 487 1
Legend		12 530 41
		12.5' * 825, 0.9' 13' 302 0.9'
◎ VENT PIPE	SURFACE ELECTRICAL CABL	13.5' 412 0.7 14' 346 07
	SAMPLE POINTS	14.5 1129 1.1 15 1114 2.1
	× SOURCE	15 1114* 2.1 15.5 474 1.2
	BERM	16 922 * 0.7
DEAD FIBERGLASS LINE	HEATER-TREATER	
	STAIN (8,737 sq ft)	DGW = none
	TANK	Landowner: State
		© 2013 Microsoft Corporation ImagePatch.com
RICE ENVIRONMENTAL	QUANTUM STA E 1288 BATTE	
CONSCLTING & SAFETY, LLC	LEGALS: UL/F sec. 2 T-18-S R-28-E EDDY COUNTY, NM	7 0 70 140
STING & SAFE	,,	Drawing date: 11/5/12 Drafted by: A.C. Ruth

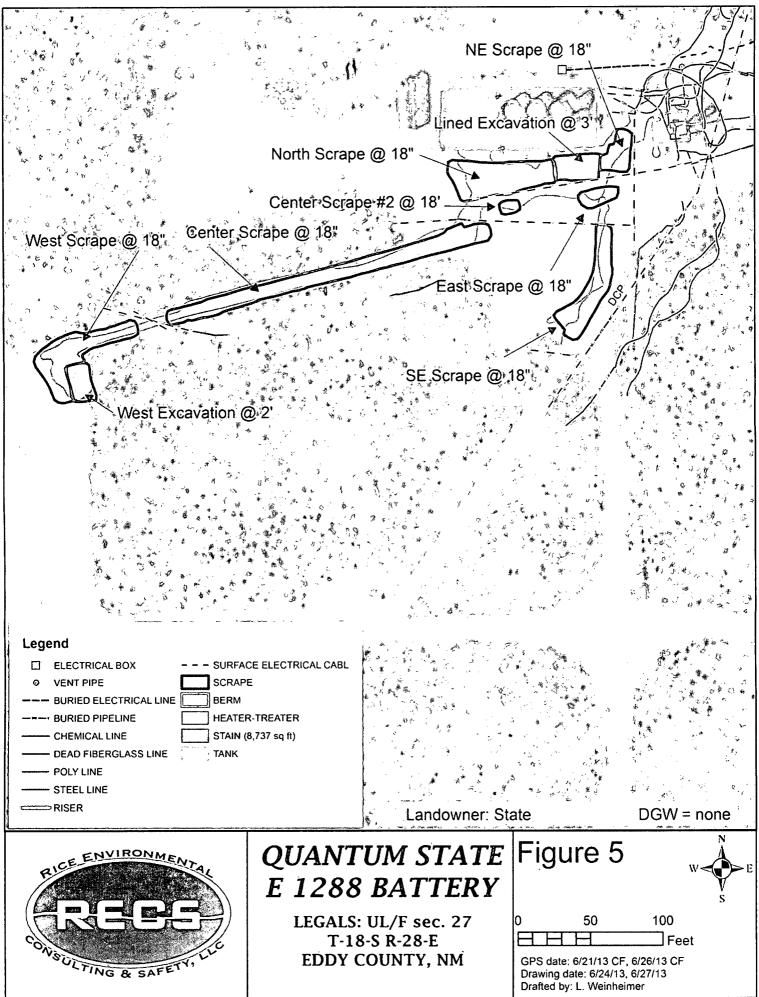
Soil Bore Installation



NMOCD Approved Corrective Actions



Excavation Data



Appendix A Initial Sampling Laboratory Analyses

RICE Environmental Consulting and Safety (RECS) P.O. Box 2948 Hobbs, NM 88241 Phone 575.393.2967



November 05, 2012

BRUCE BAKER RICE ENVIRONMENTAL CONSULTING & SAFETY LLC 112 W. TAYLOR

HOBBS, NM 88240

RE: STATE 1288 BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 11/01/12 11:07.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celez D. Keine

Celey D. Keene Lab Director/Quality Manager



RICE ENVIRONMENTAL CONSULTING & SAFETY BRUCE BAKER 112 W. TAYLOR HOBBS NM, 88240 Fax To: (575) 397-1471

Received:	11/01/2012	Sampling Date:	10/31/2012
Reported:	11/05/2012	Sampling Type:	Soil
Project Name:	STATE 1288 BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN	N	

Sample ID: PT. 1 SURFACE (H202661-01)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6960	16.0	11/05/2012	ND	400	100	400	3.92	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/03/2012	ND	204	102	200	8.19	
DRO >C10-C28	28.3	10.0	11/03/2012	ND	218	109	200	8.81	
Surrogate: 1-Chlorooctane	91.1	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	103	% 63.6-15	4						

Sample ID: PT. 1 @ 6" (H202661-02)

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	704	16.0	11/05/2012	ND	400	100	400	3.92	
TPH 8015M	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<50.0	50.0	11/03/2012	ND	204	102	200	8.19	
DRO >C10-C28	176	50.0	11/03/2012	ND	218	109	200	8.81	
Surrogate: 1-Chlorooctane	88.7	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	103	% 63.6-15	4						

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*=Accredited Analyte

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Celey Di Kune

Celey D. Keene, Lab Director/Quality Manager



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Received:	11/01/2012	Sampling Date:	10/31/2012
Reported:	11/05/2012	Sampling Type:	Soil
Project Name:	STATE 1288 BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: PT. 2 SURFACE (H202661-03)

Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	7600	16.0	11/05/2012	ND	416	104	400	3.77	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/03/2012	ND	204	102	200	8.19	
DRO >C10-C28	<10.0	10.0	11/03/2012	ND	218	109	200	8.81	
Surrogate: 1-Chlorooctane	93.5	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	105	% 63.6-15	4						

Sample ID: PT. 3 SURFACE (H202661-04)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: HM	-				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16800	16.0	11/05/2012	ND	416	104	400	3.77	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/03/2012	ND	204	102	200	8.19	
DRO >C10-C28	<10.0	10.0	11/03/2012	ND	218	109	200	8.81	
Surrogate: 1-Chlorooctane	94.5	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	106	% 63.6-15	4						

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Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager



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Received:	11/01/2012	Sampling Date:	10/31/2012
Reported:	11/05/2012	Sampling Type:	Soil
Project Name:	STATE 1288 BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: PT. 3 @ 6" (H202661-05)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3240	16.0	11/05/2012	ND	416	104	400	3.77	
трн 8015м	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/03/2012	ND	204	102	200	8.19	
DRO >C10-C28	36.1	10.0	11/03/2012	ND	218	109	200	8.81	
Surrogate: 1-Chlorooctane	91.0	% 65.2-14	0						<u></u>
Surrogate: 1-Chlorooctadecane	107	% 63.6-15	4						

Sample ID: PT. 4 SURFACE (H202661-06)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	27200	16.0	11/05/2012	ND	416	104	400	3.77	
TPH 8015M	mg,	/kg	Analyze	d By: MS		<u> </u>			
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/03/2012	ND	204	102	200	8.19	
DRO >C10-C28	54.5	10.0	11/03/2012	ND	218	109	200	8.81	
Surrogate: 1-Chlorooctane	91.4	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	107	% 63.6-15	4						

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Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager



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Received:	11/01/2012	Sampling Date:	10/31/2012
Reported:	11/05/2012	Sampling Type:	Soil
Project Name:	STATE 1288 BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: PT. 4 @ 6" (H202661-07)

Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: HM					•
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4960	16.0	11/05/2012	ND	416	104	400	3.77	
ТРН 8015М	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<50.0	50.0	11/03/2012	ND	204	102	200	8.19	
DRO >C10-C28	356	50.0	11/03/2012	ND	218	109	200	8.81	
Surrogate: 1-Chlorooctane	94.4	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	123	% 63.6-15	4						

.

Sample ID: PT. 5 SURFACE (H202661-08)

Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	14400	16.0	11/05/2012	ND	416	104	400	3.77	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<50.0	50.0	11/03/2012	ND	204	102	200	8.19	
DRO >C10-C28	750	50.0	11/03/2012	ND	218	109	200	8.81	
Surrogate: 1-Chlorooctane	93.2	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	133	% 63.6-15	4						

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Celez D. Kune

Celey D. Keene, Lab Director/Quality Manager



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Received:	11/01/2012	Sampling Date:	10/31/2012
Reported:	11/05/2012	Sampling Type:	Soil
Project Name:	STATE 1288 BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: PT. 5 @ 6" (H202661-09)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1020	16.0	11/05/2012	ND	416	104	400	3.77	
трн 8015м	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/03/2012	ND	204	102	200	8.19	
DRO >C10-C28	57.6	10.0	11/03/2012	ND	218	109	200	8.81	
Surrogate: 1-Chlorooctane		% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	109	% 63.6-15	4						

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*=Accredited Analyte

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Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager



Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below $6^{\circ}C$
	Samples reported on an as received basis (wet) unless otherwise noted on report

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*=Accredited Analyte

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Celey D. Kune

Celey D. Keene, Lab Director/Quality Manager

10f)

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

ARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603 (505) 393-2326 FAX (505) 393-2476 (325) 673-7001, FAX (325)673-7020

Company Name	COMPANY RES	-	• • •	-		••		1.		B	ILL 1	ГО		-	-			ANAL	YSIS	RE	QUE	ST	-		. ·
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PLEASE NOTE: Liability and Damages, Cardinals Enbility and clearly are encody tor any claim arising whether bases in contract or tort, shall be limited to the amount pairling the clear for the Bradyess: Al claims, including these for negoscies and any other saise whicksever shall be deemed walved unless made in writing and received by Cardinal writing and served and any other saise which and the replacation of the replacet service. In no event shall Curdinal be subly for insidential or consequential damages, including without instation, biolings information, loss of one, or loss of profile inclinent by client, its subsituations of the set of the set

Relinquished By	Date: 12 Received By: 11/1/12 Time: 4 100 11 124	Phone Result: D Yes D No Add'I Phone #: Fax Result: D Yes D No Add'I Fax #: REMARKS:
Relinquished By:	Date: Received By:	email results
	Time:	Zconder@rice-ecs.com; Bbaker@rice-ecs.com;
Delivered By: (Circle One)	Sample Condition CHECKED BY: Cool -Intact (Initials)	hconder@rice-ecs.com; Lweinheimer@rice-ecs.com
Sampler - UPS - Bus - Other:	Cool -Intact (Initials) ⊡ Yes ⊡ Yes No No	

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476

Appendix B Vertical Sampling Laboratory Analyses

RICE Environmental Consulting and Safety (RECS) P.O. Box 2948 Hobbs, NM 88241 Phone 575.393.2967



November 16, 2012

BRUCE BAKER RICE ENVIRONMENTAL CONSULTING & SAFETY LLC

112 W. TAYLOR

HOBBS, NM 88240

RE: QUANTUM STATE E 1288 BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 11/14/12 16:26.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celez D. Kuna

Celey D. Keene Lab Director/Quality Manager



RICE ENVIRONMENTAL CONSULTING & SAFETY BRUCE BAKER 112 W. TAYLOR HOBBS NM, 88240 Fax To: (575) 397-1471

Received:	11/14/2012	Sampling Date:	11/14/2012
Reported:	11/16/2012	Sampling Type:	Soil
Project Name:	QUANTUM STATE E 1288 BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: VERT 2 @ 3' (H202765-01)

Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AP			<u></u>		
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	11/16/2012	ND	416	104	400	3.92	
TPH 8015M	mg,	/kg	Analyze	d By: MS					S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<50.0	50.0	11/15/2012	ND	187	93.7	200	1.91	
DR0 >C10-C28	3240	50.0	11/15/2012	ND	205	103	200	2.87	
Surrogate: 1-Chlorooctane		% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	168	% 63.6-15	4						

Sample ID: VERT 2 @ 4' (H202765-02)

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	11/16/2012	ND	432	108	400	3.77	
ТРН 8015М	mg	/kg	Analyze	d By: MS					S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<50.0	50.0	11/15/2012	ND	187	93.7	200	1.91	
DRO >C10-C28	3760	50.0	11/15/2012	ND	205	103	200	2.87	
Surrogate: 1-Chlorooctane		% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	167	% 63.6-15	4						

Cardinal Laboratories

*=Accredited Analyte

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Celez Di Kune

Celey D. Keene, Lab Director/Quality Manager



RICE ENVIRONMENTAL CONSULTING & SAFETY BRUCE BAKER 112 W. TAYLOR HOBBS NM, 88240 Fax To: (575) 397-1471

Received:	11/14/2012	Sampling Date:	11/14/2012
Reported:	11/16/2012	Sampling Type:	Soil
Project Name:	QUANTUM STATE E 1288 BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: VERT 3 @ 4' (H202765-03)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	11/16/2012	ND	432	108	400	3.77	
ТРН 8015М	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/15/2012	ND	187	93.7	200	1.91	
DRO >C10-C28	<10.0	10.0	11/15/2012	ND	205	103	200	2.87	
Surrogate: 1-Chlorooctane	78.9	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	83.4	% 63.6-15	4						

Sample ID: VERT 3 @ 5' (H202765-04)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	11/16/2012	ND	432	108	400	3.77	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/15/2012	ND	187	93.7	200	1.91	
DRO >C10-C28	<10.0	10.0	11/15/2012	ND	205	103	200	2.87	
Surrogate: 1-Chlorooctane	77.0	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	82.4	% 63.6-15	4						

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Celey D. Kune

Celey D. Keene, Lab Director/Quality Manager



RICE ENVIRONMENTAL CONSULTING & SAFETY BRUCE BAKER 112 W. TAYLOR HOBBS NM, 88240 Fax To: (575) 397-1471

Received:	11/14/2012	Sampling Date:	11/14/2012
Reported:	11/16/2012	Sampling Type:	Soil
Project Name:	QUANTUM STATE E 1288 BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: VERT 4 @ 2' (H202765-05)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	480	16.0	11/16/2012	ND	432	108	400	3.77	
TPH 8015M	mg,	/kg	Analyze	d By: MS	•				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/15/2012	ND	187	93.7	200	1.91	
DRO >C10-C28	<10.0	10.0	11/15/2012	ND	205	103	200	2.87	
Surrogate: 1-Chlorooctane	76.2	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	82.8	% 63.6-15	4						

Sample ID: VERT 4 @ 3' (H202765-06)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	11/16/2012	ND	432	108	400	3.77	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/15/2012	ND	187	93.7	200	1.91	
DRO >C10-C28	<10.0	10.0	11/15/2012	ND	205	103	200	2.87	
Surrogate: 1-Chlorooctane	79.5	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	82.5	% 63.6-15	4						

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Celez Di Kune

Celey D. Keene, Lab Director/Quality Manager



RICE ENVIRONMENTAL CONSULTING & SAFETY BRUCE BAKER 112 W. TAYLOR HOBBS NM, 88240 Fax To: (575) 397-1471

Received:	11/14/2012	Sampling Date:	11/14/2012
Reported:	11/16/2012	Sampling Type:	Soil
Project Name:	QUANTUM STATE E 1288 BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: VERT 5 @ 2' (H202765-07)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	11/16/2012	ND	432	108	400	3.77	
ТРН 8015М	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	⊤rue Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/15/2012	ND	195	97.7	200	1.85	
DRO >C10-C28	<10.0	10.0	11/15/2012	ND	211	105	200	3.20	
Surrogate: 1-Chlorooctane	82.7	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	90.0	% 63.6-15	4						

Sample ID: VERT 5 @ 3' (H202765-08)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	11/16/2012	ND	432	108	400	3.77	
ТРН 8015М	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/15/2012	ND	195	97.7	200	1.85	
DRO >C10-C28	<10.0	10.0	11/15/2012	ND	211	105	200	3.20	
Surrogate: 1-Chlorooctane	83.7	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	93.3	% 63.6-15	4						

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Celey D. Kune

Celey D. Keene, Lab Director/Quality Manager



Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500CI-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Kune

Celey D. Keene, Lab Director/Quality Manager

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST.

ARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240	2111 Beechwood, Abilene, TX: 79603	
(505) 393-2326 FAX (505) 393-2476	(325) 673-7001, FAX (325)673-7020	

Company Name	RECS.						1		BI	LL TO	a a da anta a	· · ·				ÀNA	LYSI	SRE	EQÚE	ST			
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Delivered By: (Circle One).	Sample Condition CHECKED BY: Cool Intact	hconder@rice-ecs.com; Lweinheimer@rice-ecs.com;
Sampler - UPS = Bus - Otter:	Cool Intact ((bitals)) Yes Yes (1) No No	jkamplain@rice-ecs.comP

† Cardinal cannot accopt verbal changes. Please fax written changes to 503-393-2476:

Appendix C Soil Bore Installation Documentation

RICE Environmental Consulting and Safety (RECS) P.O. Box 2948 Hobbs, NM 88241 Phone 575.393.2967

Logger: Driller:				INN S		R)
Drilling N	/lethod:	Air Rotar	у	SB-4 (S) (SB-2)	Pro	Vell ID:		
Start Date	e:	12/18/201	12	SB-4 € SB-1				SB-1
End Date		12/18/201			Quantum St. E #1288 AD			
Comme	ents: All sam	iples we	re from	cuttings.	Location: UL/F sec. 27 T-18-S R-28-E			
	TD = 6		FTED BY	r: L. Weinheimer GW = NONE		t: 32°43'15.823 ng: 104°9'53.3		County: Eddy State: NM
Depth (feet)	Chloride field tests	LAB	PID	Description		Lithology	Well (Construction
SS	4494		1.6	Red Sand with Caliche		12		
3 ft	214	CI- 400 GRO <50	3.9					bentonite ≻ seal
6 ft	139	DRO <50 CI- 48	2.0	Tan Sand with Some Caliche				
		GRO <10 DRO <10						J

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Logger: Driller:	н	larrisoi	yle Norma n & Coop	per, Inc.	SB-3 COD				
Drilling N			Air Rotary		SB-4 © SB-2	Pro	oject Name:		Well ID:
Start Date			2/18/201 2/18/201		SB-1	Qu	iantum St. E #	1288 AD	SB-2
	ents: All s				i cuttings.	Lo	cation: UL/F s	ec. 27 T-	18-S R-28-E
1			DRAF	TED BY	': L. Weinheimer	La	t: 32°43'16.03'	'N	County: Eddy
	TD =	: 12 F		· · · · · · · · · · · · · · · · · · ·	GW = NONE		ng: 104°9'53.		State: NM
Depth (feet)	Chlorid	1	LAB	PID	Description	Lithology Well		Construction	
						\square	12.97		Ν
					Brown Sand				
SS	2682	2		1.2					
		-				1			
3 ft	250			1.2					
·					Tan Sand with Some Caliche				bentonite
6 ft	1170	,		1.4					seal
	<u> </u>								
[
	100		CI-						
9 ft	132		32 GRO	1.3					
<u> </u> '	<u> </u>	$ \rightarrow $	<10						
Ĺ'			DRO <10						
12 ft	115		CI- 32	1.5	Tan/Red Sand with Caliche				
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Ľ'			<10						/

Logger:			(yle Norm		STR.		E		
Driller: Drilling I			on & Coop Air Rotar		SSB-3 SB-2	Project Name	e:	Thug & SATE	Well ID:
Start Dat	te:		12/18/201	12	SB-4 \$ \$ SB-1	Quantum St. I			SB-3
End Date			12/18/201						
Comme	ents: All s	samp	ples we	re from	n cuttings.	Location: UL	./F se	ec. 27 1-1	8-S R-28-≿
F	TD =			•TED BY	Y: L. Weinheimer GW = NONE	Lat: 32°43'15 Long: 104°9			County: Eddy State: NM
Depth (feet)	Chlorie field te:		LAB	PID	Description	Lithology	/	Well (Construction
				1 !					h
					Tan Sand with Caliche				
SS	9057	7	CI- 8720	0.8					
			GRO <50				1000		
			DRO 161		Tan/Brown Sand				
3 ft	861			4.3					
		_							
		\neg					an the second		
6 ft	344			1.9			A Constraint, All of States		
	<u> </u>			 					
	<u></u>			ļ	Red/Tan Sand with Some Caliche				
9 ft	445	;]		1.5					
12 ft	3049	9		1.3					
							1000		
			[]						
15 ft	4178			1.1					
15 1	4170	<u>, </u>	i — 1	1.1					
		_		<u>├</u> ───┦	Red Sand				
	<u> </u>			┝───┦					
18 ft	3880)	┌──┤	1.6					
	<u> </u>		⊢]						
	ļ			ļ!	•				
21 ft	3965	5		1.1					

Depth (feet)	Chloride field tests	LAB	PID	Description	Lithology	Well Construction
				Red Sandy Clay		
24 ft	3235		1.6			
27 ft	3239		1.0			bentonite
						seal
30 ft	2924		1.0			
33 ft	3145		0.6			
36 ft	2533		0.7			
			0.7		8 . 64.	
				Red Sand		
40 ft	3453		1.1		2.* * *	
45 ft	2863		1.2			
50 ft	1826		1.1			
55 ft	1826		2.0			
60 ft	1864		0.9	· · · ·		
			0.3	· ·		
		Cl-				
<u>65 ft</u>	1147	2380 GRO	0.5	Red Sandy Clay		
		<10 DRO <10				
66 FT				RED BED CLAY		
76 FT						

Logger: Driller: Drilling M Start Dat	Method:	arrison A	le Norm n & Coop sir Rotary 2/18/201	per, Inc. y	SB-3 SB-4 S S SB-2 SB-4 S S SB-2 SB-1		ject Name: antum St. E #1	Well ID: SB-4	
End Date	ents: All s		2/18/201 les wei		cuttings.	Loc	ation: UL/F s	ec. 27 T-1	8-S R-28-E
DRAFTED TD = 9 FT					/: L. Weinheimer GW = NONE		: 32°43'15.96" 1 g: 104°9'53.5		County: Eddy State: NM
Depth (feet)	Chloric field tes		LAB	PID	Description		Lithology	Well	Construction
SS	30573			0.7	Tan Sand with Some Caliche				
3 ft	697		-	0.7	Tan/Brown Sand				
									bentonite seal
6 ft	192		CI- 128 GRO <10	1.0	Tan Sand				
			DRO <10 Cl-						
9 ft	247	·	192 GRO <10 DRO	0.9					
			210 <10						/



December 26, 2012

BRUCE BAKER

RICE ENVIRONMENTAL CONSULTING & SAFETY LLC

112 W. TAYLOR

HOBBS, NM 88240

RE: STATE E #1288

Enclosed are the results of analyses for samples received by the laboratory on 12/19/12 13:40.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Lope S. Moreno

Hope Moreno Inorganic Technical Director



RICE ENVIRONMENTAL CONSULTING & SAFETY BRUCE BAKER 112 W. TAYLOR HOBBS NM, 88240 Fax To: (575) 397-1471

Received:	12/19/2012	Sampling Date:	12/18/2012
Reported:	12/26/2012	Sampling Type:	Soil
Project Name:	STATE E #1288	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SB 1 @ 3' (H203057-01)

Chloride, SM4500Cl-B	mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	400	4.00	12/26/2012	ND	416	104	400	7.41	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<50.0	50.0	12/22/2012	ND	198	98.8	200	1.02	
DRO >C10-C28	<50.0	50.0	12/22/2012	ND	223	111	200	1.72	
Surrogate: 1-Chlorooctane	80.7	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	88.8	% 63.6-15	4						

Sample ID: SB 1 @ 6' (H203057-02)

Chloride, SM4500Cl-B	mg/L		Analyzed By: AP		•			-,	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	48.0	4.00	12/26/2012	ND	416	104	400	7.41	
TPH 8015M	mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/22/2012	ND	198	98.8	200	1.02	
DRO >C10-C28	<10.0	10.0	12/22/2012	ND	223	111	200	1.72	
Surrogate: 1-Chlorooctane	84.6	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	95.0	% 63.6-15	4						

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*=Accredited Analyte

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Lope S. Moreno

Hope Moreno, Inorganic Technical Director



RICE ENVIRONMENTAL CONSULTING & SAFETY BRUCE BAKER 112 W. TAYLOR HOBBS NM, 88240 Fax To: (575) 397-1471

Received:	12/19/2012	Sampling Date:	12/18/2012
Reported:	12/26/2012	Sampling Type:	Soil
Project Name:	STATE E #1288	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SB 2 @ 9' (H203057-03)

Chloride, SM4500CI-B	mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	32.0	4.00	12/26/2012	ND	416	104	400	7.41	
TPH 8015M	mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/22/2012	ND	198	98.8	200	1.02	
DRO >C10-C28	<10.0	10.0	12/22/2012	ND	223	111	200	1.72	
Surrogate: 1-Chlorooctane	77.9	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	87.6	% 63.6-15	4						

Sample ID: SB 2 @ 12' (H203057-04)

Chloride, SM4500CI-B	mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	32.0	4.00	12/26/2012	ND	416	104	400	7.41	
ТРН 8015М	mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/22/2012	ND	198	98.8	200	1.02	
DRO >C10-C28	<10.0	10.0	12/22/2012	ND	223	111	200	1.72	
Surrogate: 1-Chlorooctane	77.4	% 65.2-14	0						
Surrogate: I-Chlorooctadecane	85.6	% 63.6-15	4						

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Lope S. Moreno-

Hope Moreno, Inorganic Technical Director



Analytical Results For:

RICE ENVIRONMENTAL CONSULTING & SAFETY BRUCE BAKER 112 W. TAYLOR HOBBS NM, 88240 Fax To: (575) 397-1471

Received:	12/19/2012	Sampling Date:	12/18/2012	
Reported:	12/26/2012	Sampling Type:	Soil	
Project Name:	STATE E #1288	Sampling Condition:	Cool & Intact	
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson	
Project Location:	NOT GIVEN			

Sample ID: SB 3 @ SURFACE (H203057-05)

Chloride, SM4500CI-B	mg,	/L	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	8720	4.00	12/26/2012	ND	416	104	400	7.41	
ТРН 8015М	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<50.0	50.0	12/22/2012	ND	198	98.8	200	1.02	
DRO >C10-C28	161	50.0	12/22/2012	ND	223	111	200	1.72	
Surrogate: 1-Chlorooctane	80.9	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	100	% 63.6-15	4						

Sample ID: SB 3 @ 65' (H203057-06)

Chloride, SM4500Cl-B	mg	/L	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	2380	4.00	12/26/2012	ND	416	104	400	7.41	
ТРН 8015М	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/22/2012	ND	198	98.8	200	1.02	
DRO >C10-C28	<10.0	10.0	12/22/2012	ND	223	111	200	1.72	
Surrogate: 1-Chlorooctane	80.4	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	89.2	% 63.6-15	4						

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Hope S. Moreno

Hope Moreno, Inorganic Technical Director



Analytical Results For:

RICE ENVIRONMENTAL CONSULTING & SAFETY BRUCE BAKER 112 W. TAYLOR HOBBS NM, 88240 Fax To: (575) 397-1471

Received:	12/19/2012	Sampling Date:	12/18/2012
Reported:	12/26/2012	Sampling Type:	Soil
Project Name:	STATE E #1288	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SB 4 @ 6' (H203057-07)

Chloride, SM4500CI-B	mg,	/L	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	128	4.00	12/26/2012	ND	416	104	400	7.41	
ТРН 8015М	mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/22/2012	ND	198	98.8	200	1.02	
DRO >C10-C28	<10.0	10.0	12/22/2012	ND	223	111	200	1.72	
Surrogate: 1-Chlorooctane	84.4	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	91.1	% 63.6-15	4						

Sample ID: SB 4 @ 9' (H203057-08)

Chloride, SM4500Cl-B	mg,	/L	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	192	4.00	12/26/2012	ND	416	104	400	7.41	
ТРН 8015М	mg,	/kg	Analyze	d By: MS		. <u></u>			
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/22/2012	ND	198	98.8	200	1.02	
DRO >C10-C28	<10.0	10.0	12/22/2012	ND	223	111	200	1.72	
Surrogate: 1-Chlorooctane	81.7	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	91.8	% 63.6-15	4						

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Lope S. Moreno

Hope Moreno, Inorganic Technical Director



Notes and Definitions

- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- ** Samples not received at proper temperature of 6°C or below.
- *** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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Hope S. Moreno

Hope Moreno, Inorganic Technical Director

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST.

ARDINAL LABORATORIES

with a standinger

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(505).393-2320; FAX (505) 393-2476 (325) 673-7001, FAX (325) 673-7020

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Project, Name:					<u>isi</u>	ato:	Zip:		1-8	5	×		0	M						
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FOR LAB USE ONLY			-	MATRIX	<u>`</u> F	PRESERV.	SAMPL	ang. T	ĮQ.			1-	ete	,					r.	ľ
Lab I.D.	Sample I.D.) (G)RAB OR (C)OMP. THE CONTAINEDS	r conjourations	WASTEWATER Soil	SLUDGE OTHER:	ACID/548E ICE/COOL QTHER:	.DATE	TIME	an an an the state of the state			•	Complete Cations/Anions				1			
1	SBT @ 3"	G			- 4		12-15-12	10:50	VI	14										
2	SBIC 6'	62	1.		1		11	11:00_	1/	11	<u> </u>					.:	<u> </u>			
3	58709	67.	<u> </u>		!			11:10		10				<u>. </u>					•	<u> </u>
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5	SB3C Sulface	107	4	/j		1-1/1-		1.15	-4	4					<u> </u>	, ,	<u></u>	·····	·	
6	<u>SR3@ (5'</u> 5248 6'	- <u>G7</u> -	<u> </u>	/	4		_//	1:25	-/-				·						·	
	5 <u>948 6'</u> SAUC 9'	6	LĮ-		1	17		13/00	<u></u>	4					<u>_</u>	<u>.</u>				
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inalyses. At claims, includin service. In no event shall Ca	II) Damages. Cardolala fability and clent's cicture remedy for in those (o) negligence and viry other cause what beyes shall be ratigal be fable for incidential or consequential damages, including to out of or tellistic to the performance of services herearder for out of or tellistic to the performance of services herearder for any other of tellistic to the performance of services herearder for any other of tellistic to the performance of services herearder for any other of tellistic to the performance of services herearder for any other of tellistic to the performance of the services herearder for any other of tellistic to the performance of the services herearder for any other services of tellistic to the performance of the services herearder of the services herearder for the services herearder for the services herearder for any other services of the services herearder for the services herearder for the services herearder of the services herearder for the services herearder for the services herearder for any other services of tellistic to the services herearder for any other services herearder for tellistic to the services herearder for any other services herearder for tellistic to the service herearder for any other services herearder for tellistic tellistic tellistic to the services herearder for any other services herearder for the services herearder for the services herearder for any other services herearder for the service herearder for the services herearder for any other services herearder for the services herearder for the services herearder for any other services herearder for the service herearder for the services herearder for therearder for therearde	deemad wi g vithaut i r	uh ed U mintap	niess made in voldi 5. business interrupti	rand,reck	fived by Catelrial in tube, of best of 5	dinin 10 days at a file incurred by	er completion at t clant, is a complete	ha application	ie ie	L-M-Y-Y-Winyuf		أحدادني محمدهم		Lan and the Annual I					

Relinquished By:	Date: 19-12 Received By:	Phone Result: D Yes D Ho Add'I Phone #: Fax Result: D Yes D No Add'I Fax #:
human	TIMP: 40 CLOEL MEMON	REMARKS
Rolinguished By:	Date: - Reegived By:	email results: zconder@rice-ecs.com
j, 7	Time:	Knorman@rice-ecs.com; Ipena@riceswd.com
Delivered By: (Circle One)	Sample Condition ! CHECKED BY:	Kjones@riceswd.com; Bbaker@rice-ecs.com;
1. · · · · · · · · · · · · · · · · · · ·	Cool Alutaci	hconder@rice-ecs.com; Lweinheimer@rice-ecs.com
Sampler-UPS - Bus - Other:	1.5 C Pres Art	

y Cardinal camot accept verbal changes. Please fax written changes to 505-393-2476

Arc Envíronmental

P. O. Box 1772 Lovington, New Mexico 88260 (575) 631-9310 Rozanne Johnson ~ rozanne@valornet.com

December 24, 2012

Mr. Hack Conder RICE Environmental Consulting and Safety 112 West Taylor Hobbs, New Mexico 88240

Re: Quantum State E 1288 Battery

Mr. Conder,

On Saturday December 22, 2012 soil bore #1 at the Quantum State E 1288 Battery, Eddy County T18S, R28E, Sec 27 UL/F was checked with a Solinist Water Level Meter for water accumulation within the borehole. The meter indicated no water within the borehole at the total depth of 68.30 feet.

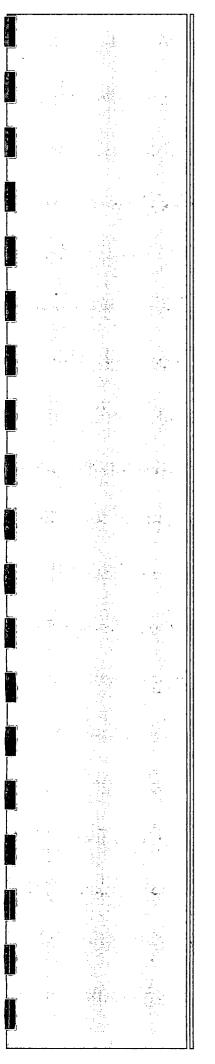
Sincerely, Arc Environmental

Rozanne Johnson

Rozanne Johnson

Electronic Copy:

Hack Conder Bruce Baker Katie Jones



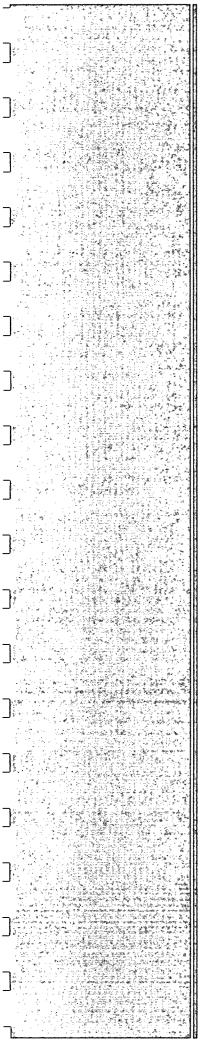
Appendix D Clay Compaction Test

RICE Environmental Consulting and Safety (RECS) P.O. Box 2948 Hobbs, NM 88241 Phone 575.393.2967

Enclosed and a second and a sec	LABORATORY T PETTIGREW & AS 100 E. Navajo Hobbs, NM (575) 393	SOCIATES, P.A. b, Suite 100 1 88240	DEBR	AASHTO RIB AASHTO RIB A P. HICKS, P.E./L.S.I. M.M. HICKS, UI, P.E./P.S.
To:	Rice Environmental Consulting & Safety, LLC 419 W. Cain Hobbs, NM 88240	Materiai: Re	d Clay	Ŷ
Project:	Quantum State E-1288 Battery Project No. 2013.1182	Test Method:	ASTM: D 6938	
Date of Test:	June 28, 2013	Depth:	See Below	
		Depth of Probe:	12"	
Test No.	Location	Dry Density % Max	% Molsture	Depth
SG 1	Battery Pad 3' N. & 5' E. of SW Corner	95.5	11.3	FSG

Control Density: 100.6 **Optimum** Moisture; 19.6% ASTM: D 698 STD/STAT 3570/468 Required Compaction: 90-95% Densometer ID: 5572 PETTIGREW & ASSOCIATES B 13 4196 4198 Lab No.: Copies To: Jacob Kamplain BY P.<u>E.</u>

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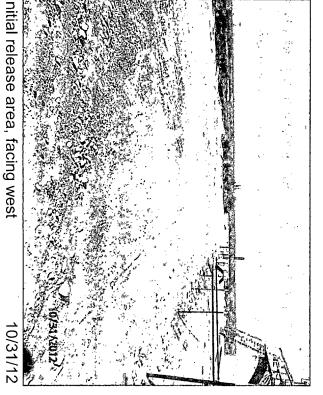


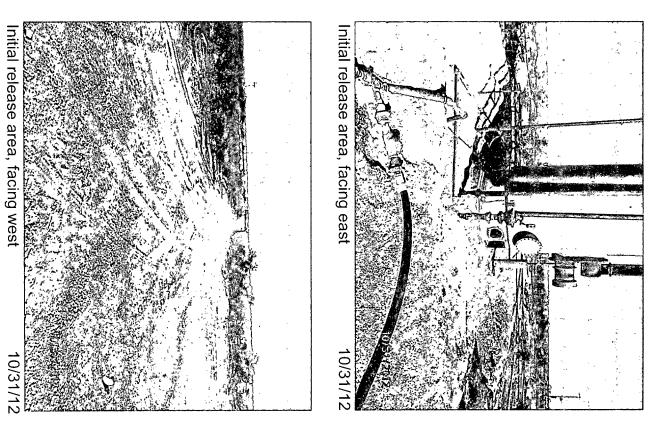
Appendix E Photo Documentation

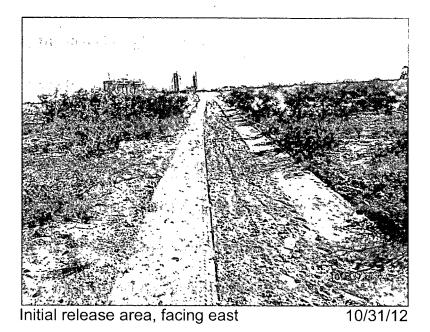
RICE Environmental Consulting and Safety (RECS) P.O. Box 2948 Hobbs, NM 88241 Phone 575.393.2967



Source of release, facing east 10/31/12

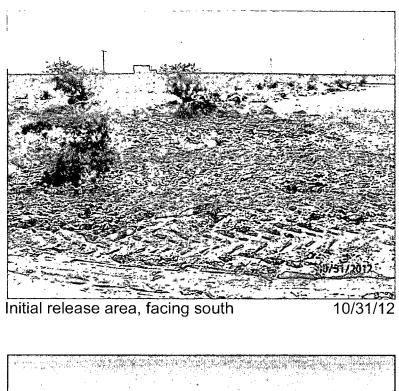


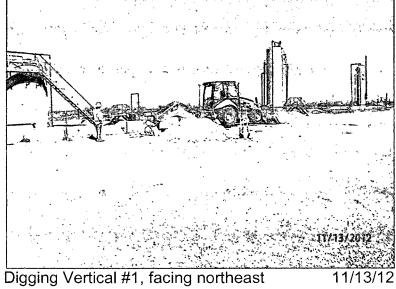


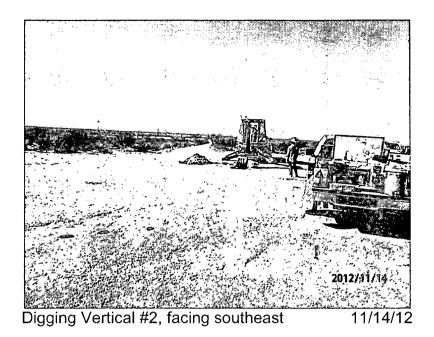


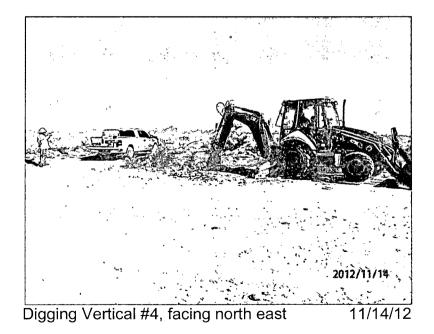
Initial release area, facing east

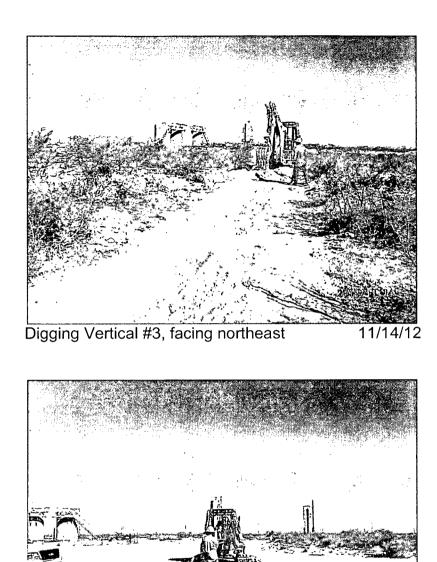
10/31/12





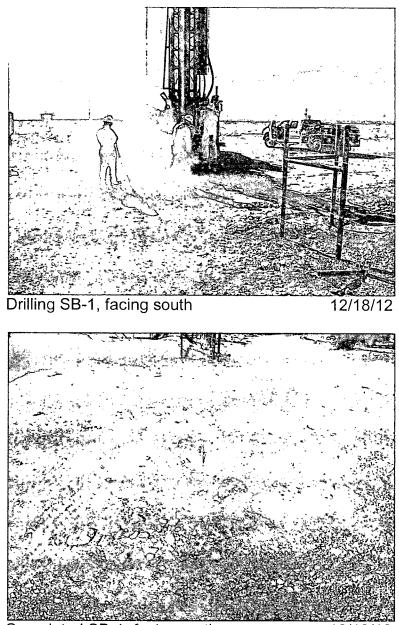






Digging Vertical #5, facing northeast

11/14/12



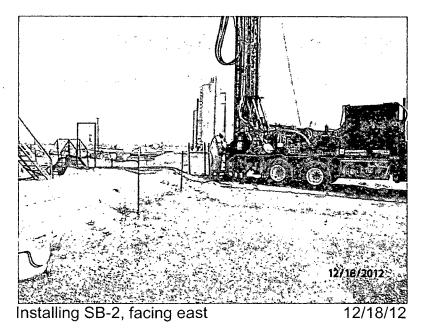
Completed SB-1, facing north

12/18/12



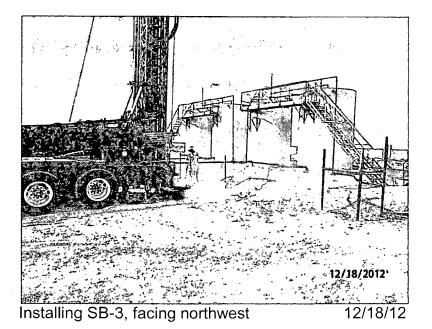
Plugging SB-1 in total with bentonite

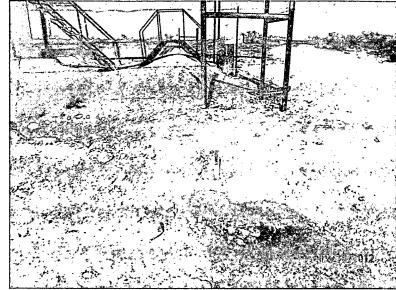
12/18/12





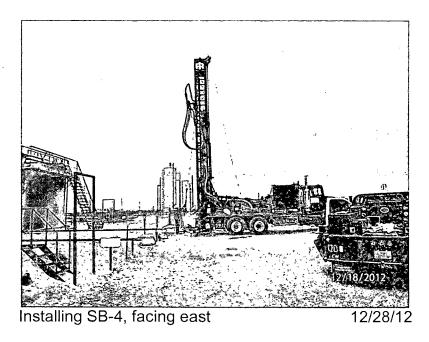
Plugging SB-2 in total with bentonite

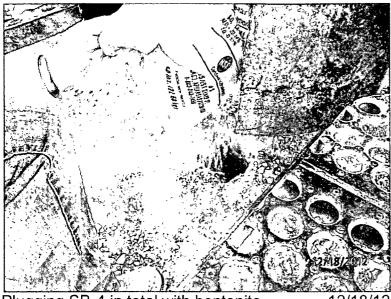




Completed SB-2, facing north

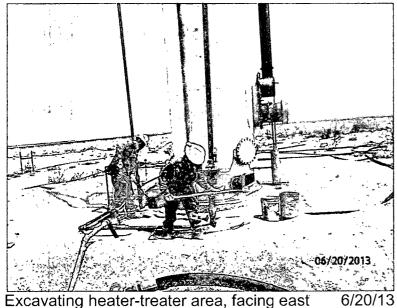
12/18/12



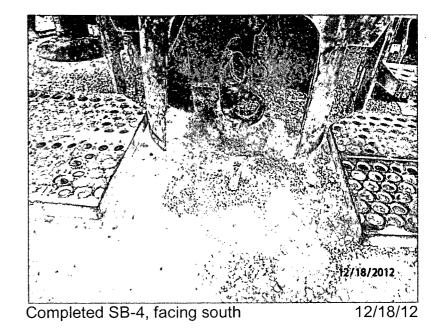


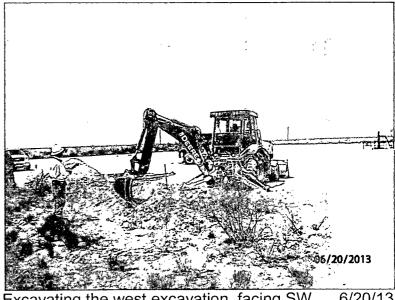
Plugging SB-4 in total with bentonite

12/18/12

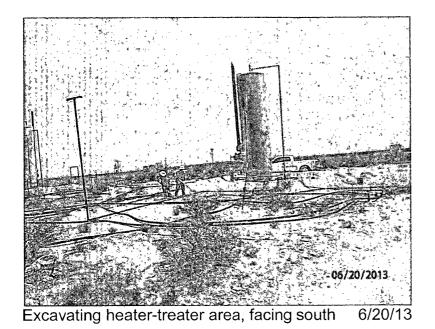


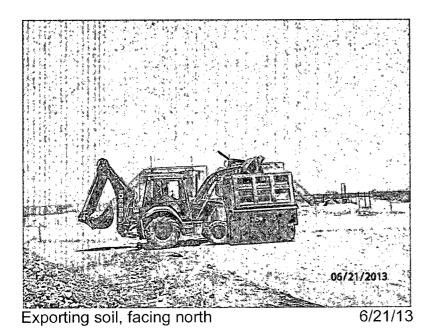
Excavating heater-treater area, facing east

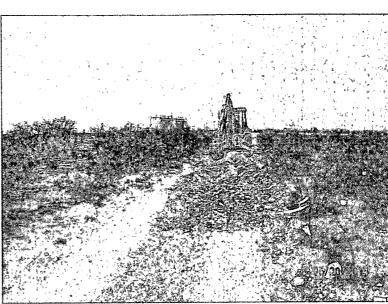




Excavating the west excavation, facing SW 6/20/13

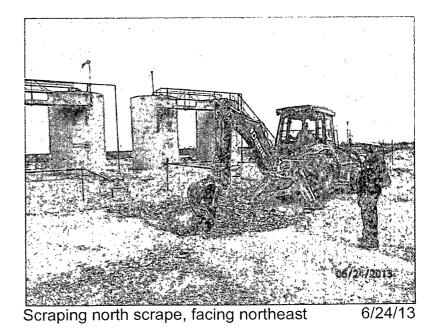


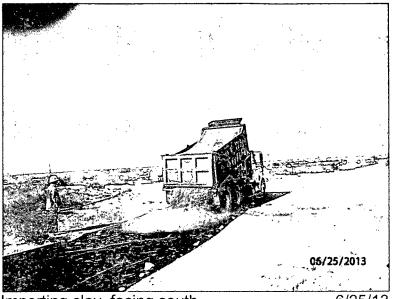




Scraping center scrape, facing northeast

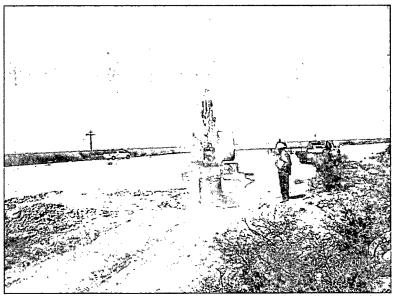
6/20/13





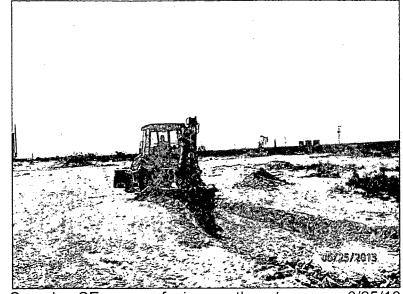
Importing clay, facing south

6/25/13



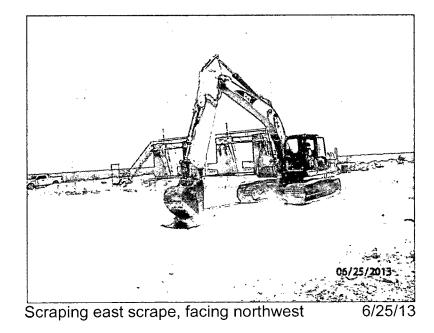
Scraping west scrape, facing west

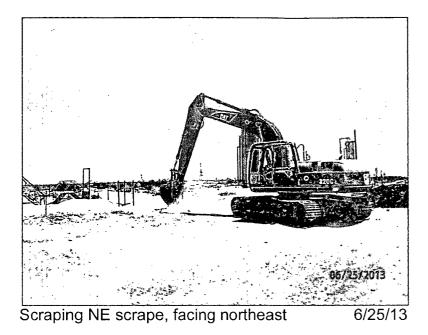
6/25/13

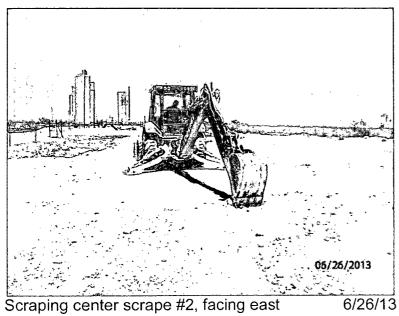


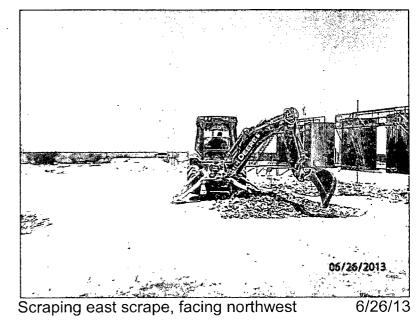
Scraping SE scrape, facing southeast

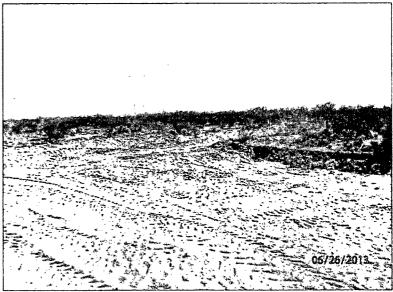
6/25/13



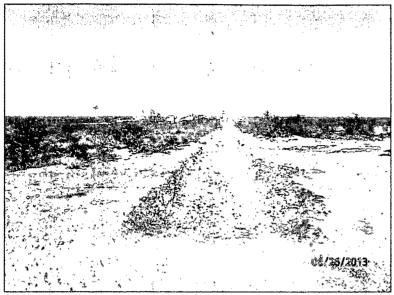




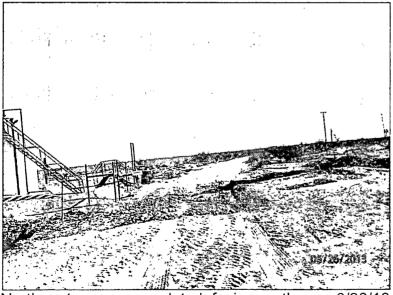




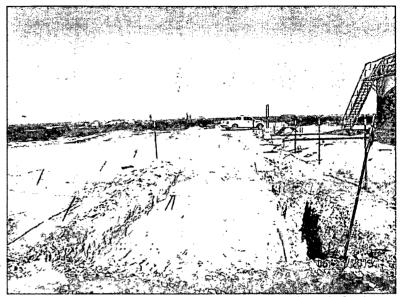
West scrape and excavation completed, facing NE 6/26/13



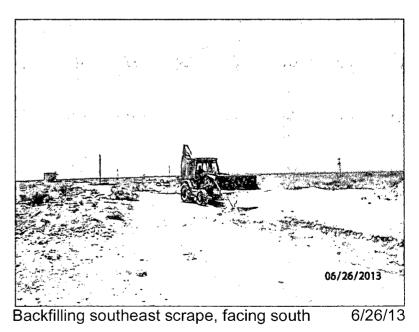
Center scrape completed, facing southwest 6/26/13

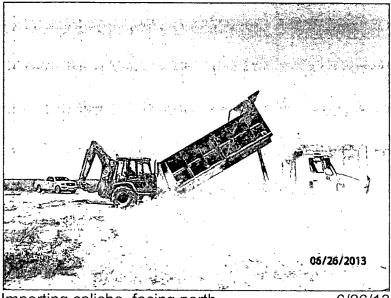


Northeast scrape completed, facing north 6/26/13



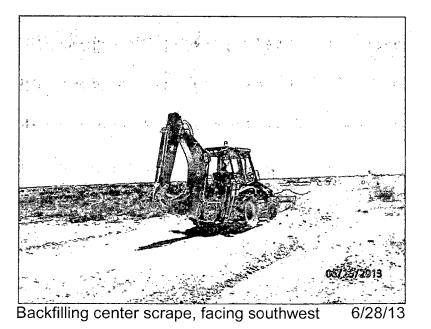
Lined excavation and north scrape completed, facing west 6/26/13

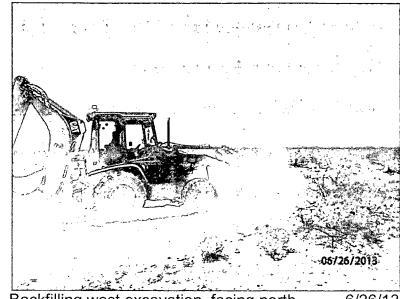




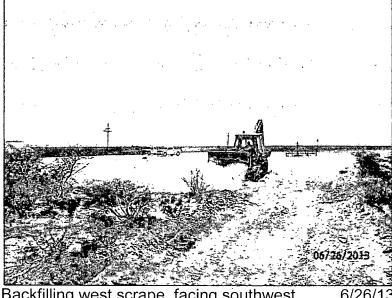
Importing caliche, facing north

6/26/13



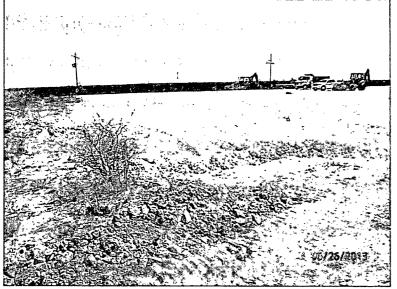


Backfilling west excavation, facing north 6/26/13

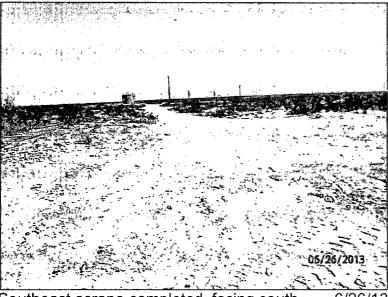


Backfilling west scrape, facing southwest

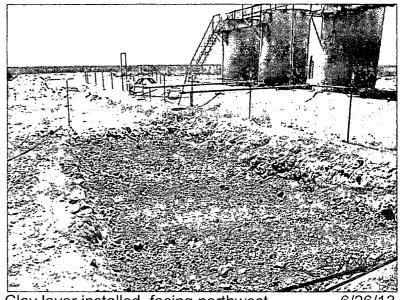
6/26/13



West excavation completed, facing southwest 6/26/13



Southeast scrape completed, facing south 6/26/13

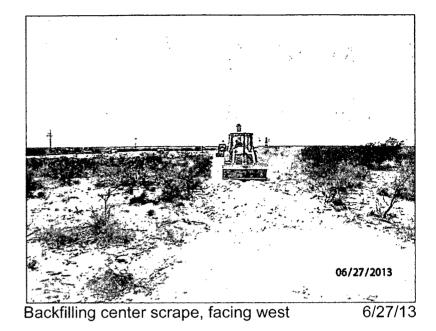


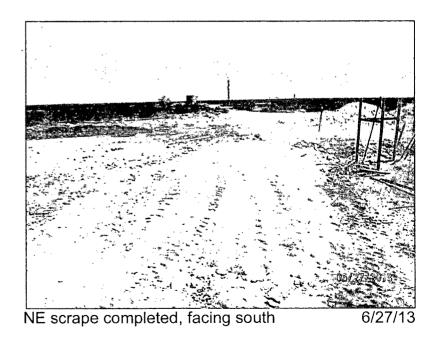
Clay layer installed, facing northwest 6/26/13

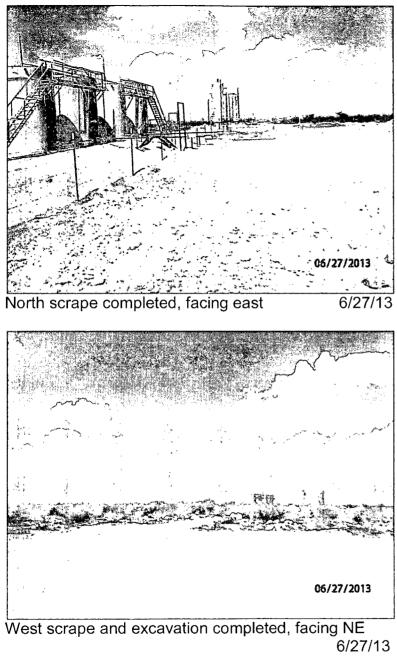


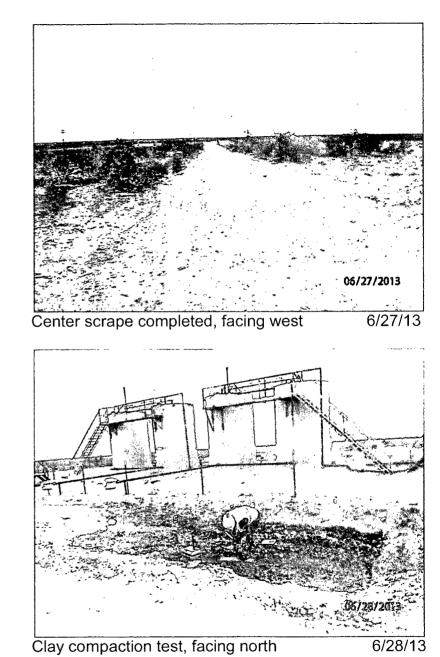


C6/27/2013 Backfilling north scrape, facing east 6/27/13

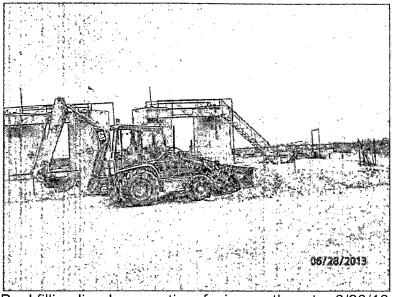




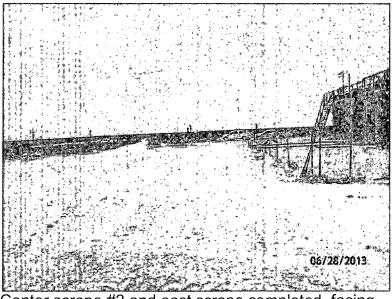




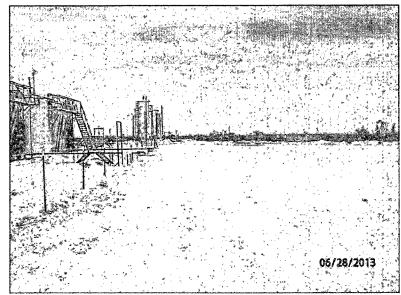
6/28/13



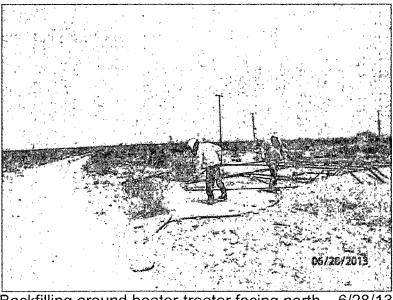
Backfilling lined excavation, facing northeast 6/28/13



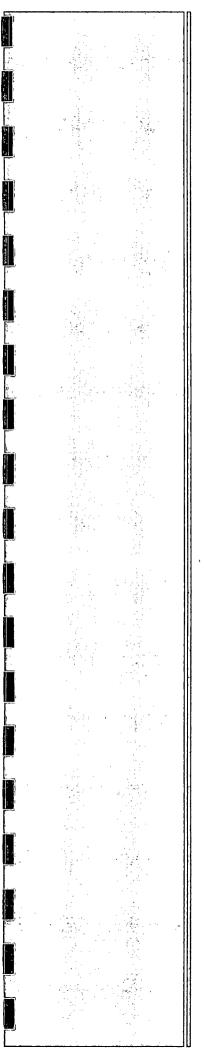
Center scrape #2 and east scrape completed, facing 6/28/13 west



Backfilling north scrape and lined excavation completed, 6/28/13 Facing east



Backfilling around heater-treater facing north 6/28/13



Appendix F

RICE Environmental Consulting and Safety (RECS) P.O. Box 2948 Hobbs, NM 88241 Phone 575.393.2967

State of New Mexico Energy Minerals and Natural Resources

Form C-141 Revised August 8, 2011

Oil Conservation Division 1220 South St. Francis Dr.

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

220 S. St. Fran	cis Dr., Santa	a Fe, NM 87505	5	Sa	anta Fe	, NM 875	05				
			Rele	ease Notifi	cation	and Co	orrective A	ction			
						OPERA	FOR	🗌 Initi	al Report	\boxtimes	Final Report
Name of Co	mpany (Juantum Re	sources				artin Williams		· · · · · · · · · · · · · · · · ·		<u>-</u>
	V	Spring, Suite		· ·			No. (432) 269-8	3667			
	lidland, TZ					r	() _) _) _) _)				
Facility Nar			erv]	Facility Typ	e Battery				
Surface Ow	mer Stat	e of New M	exico	Mineral (Owner			API N	0.		
				LOC	ATION	NOF RE	LEASE				
Unit Letter	Section	Township	Range	Feet from the		South Line	Feet from the	East/West Line	County		···-
		r									
F	27	18S	28E	1							
			La	titude		_ Longitud	le				
				NAT	FURE	OF REL	EASE	1			
Type of Rele	ase Prod	luced water/oi	il			Volume of		Volume	Recovered		
Source of Re				· · · · · · · · · · · · · · · · · · ·			Iour of Occurrence		Hour of Dis	coverv	· · · · · ·
Was Immedi	ate Notice (Given?				If YES, To					
]Yes 🗌] No 🗌 Not R	lequired						
By Whom?						Date and H	Iour				
Was a Water	course Read	ched?				If YES, V	olume Impacting	the Watercourse.			
]Yes 🗵	No							
If a Watercou	urse was Im	nacted. Descr	ibe Fully.	*		1					· · · · · · · · · · · · · · · · · · ·
		▲ '					RECEI				
<u> </u>	<u> </u>	1.0					- AUG 21	2013			
Describe Cau	ise of Probl	em and Reme	dial Actio	n Taken.*							
							NMOCD A	RTESIA			
						L					
Describe Are	a Affected	and Cleanup	Action Tal	ken.* A total of	8,737 sq	ft of battery	pad, lease road ar	nd pasture was affe	ected. RECS	persor	nel were on
site beginnin	g on Octob	er 31 st , 2012 t	o take init	ial samples of the	release,	which were	aken to a comme	rcial laboratory fo	r analysis. E	ased or	n this data, 5
verticals and	4 soil bores	s were installe	d at the si	te. RECS person	nel met w	vith NMOCL	$D = District 2 \text{ on } \mathbb{N}$	May 21 st , 2013 and	agreed on a	path fo	rward. On
								ere scraped down s of soil and 12 ya			
the site The	scraped are	as were back	filled with	the clean impor	ted soil	At SR-3 at a	depth of 3 ft bas	a 1 ft thick clay la	iver was inst	iy was i alled ar	imported to
seated into th	ne excavatio	n. On June 2	8 th , 2013.	Pettigrew & Asso	ociates we	ere on site to	conduct a clav co	ompaction test on	the clay lave	r The	excavation
was then bac	kfilled with	the stockpile	d soil to b	ring the excavation	on back to	o surface leve	el.				oned ration
I hereby certi	ify that the	information g	iven above	e is true and com	plete to th	ne best of my	knowledge and u	inderstand that put	rsuant to NM	íOCD r	ules and
regulations a	ll operators	are required t	to report a	nd/or file certain	release no	otifications a	nd perform corre	ctive actions for re	leases which	n may e	ndanger
								eport" does not re			
should their o	operations h	ave failed to	adequately	investigate and	remediato	e contaminat	on that pose a thi	reat to ground wat	er, surface w	ater, hu	man health
or the enviro	nment. In a	iddition, NMC ws,and/or regi	JCD accept	stance of a C-141	report de	bes not reliev	e the operator of	responsibility for	compliance	with any	y other
icucial, state	, or local la	ws and/or reg	uiations.	_//				ODDU ATTON			
	NI			Vini	.7		<u>UIL CON</u>	SERVATION	DIVISI	<u> </u>	
Signature:	/////	Win P	XI	Villiame	ν						
			Ju			Annroved by	Environmental S	necialist:			
Data da J Mara	a. Maria	Williama			4	approved by	Linvironmental 3	pooranse.			

Printed Name: Marun Williams					.
Title: Safety and Environmental C	oordinator	Approval Date:	Expiration I	Date:	
E-mail Address: Mwilliams@qrac	q.com	_ Conditions of Approval:		Attached	
Date: 8-20-13	Phone: (432) 269-8667				

Attach Additional Sheets If Necessary