1R-425-84

REPORTS

DATE: 5-31-13

Rice Environmental Consulting & Safety

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

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2013 JUN -5 P 2: 15

May 31st, 2013

Mr. Edward Hansen

New Mexico Energy, Minerals, & Natural Resources Oil Conservation Division, Environmental Bureau 1220 S. St. Francis Drive Santa Fe, New Mexico 87505

RE: Investigation and Characterization Plan (ICP) Report and Request for Further Delineation Rice Operating Company – Vacuum SWD System Vacuum Jct. C-31 (1R425-84): UL/C sec. 31 T17S R35E

Mr. Hansen:

RICE Operating Company (ROC) has retained Rice Environmental Consulting and Safety (RECS) to address potential environmental concerns at the above-referenced site in the abandoned Vacuum Salt Water Disposal (SWD) system. ROC is the service provider (agent) for the Vacuum SWD System and has no ownership of any portion of the pipeline, well, or facility. The system is owned by a consortium of oil producers, System Parties, who provide all operating capital on a percentage ownership/usage basis.

Background and Previous Work

The site is located approximately 0.5 miles southwest of Buckeye, New Mexico in Unit C, Section 31, T17S, R35E as shown on the Site Location Map (Figure 1). Soil bore installation at the site indicates that groundwater is likely to be encountered at 100 ft bgs.

In 2009, ROC initiated work on the former Vacuum Jct. C-31 junction boxes. The site was delineated using a backhoe to collect soil samples at regular intervals, creating a 30 x 20 x 12-ft deep excavation. Soil samples were field tested for chlorides and hydrocarbons and resulted in elevated chloride concentrations. Representative samples were taken to a commercial laboratory for analysis. Laboratory analysis of the four-wall composite resulted in a chloride concentration of 2,400 mg/kg, a gasoline range organics (GRO) concentration of 69.1 mg/kg and a diesel range organics (DRO) concentration of 1,110 mg/kg. BTEX analysis of the four-wall composite resulted in benzene and toluene concentrations of non-detect, an ethyl benzene concentration of 0.363 mg/kg and a total xylenes concentration of 1,590 mg/kg. BTEX analysis of the bottom composite resulted in a chloride concentration of 944 mg/kg, a GRO concentration of 158 mg/kg and a DRO concentration of 1,590 mg/kg. BTEX analysis of the bottom composite resulted in benzene, toluene, and ethyl benzene concentrations of non-detect and a total xylenes concentration of 2,77 mg/kg.

The excavated soil was blended on site and a representative composite sample was sent to a commercial laboratory for analysis of chlorides and TPH. The laboratory analysis resulted in a chloride concentration of 1,200 mg/kg, a GRO concentration of 10.4 mg/kg and a DRO concentration of 1,130 mg/kg. The blended backfill was returned to the excavation to 5 ft below ground surface (bgs) and a geo-synthetic and plastic liner were installed and properly seated into the excavation. The remaining backfill was blended with clean, imported soil and analyzed by a commercial laboratory for chlorides and TPH. Laboratory analysis of the blended backfill II resulted in a chloride concentration of 400 mg/kg, a GRO concentration of non-detect and a DRO concentration of 312 mg/kg. The blended backfill II was returned to the excavation to ground surface and was used to contour the site to the surrounding area. On June 8th, 2009, the site was seeded with a blend of native vegetation.

NMOCD was notified of potential groundwater impact on March 12th, 2010, and a junction box disclosure report was submitted to NMOCD with all the 2009 junction box closures and disclosures.

On February 8th, 2013, ROC submitted an Investigation and Characterization Plan (ICP), which was approved on March 4th, 2013. As part of the ICP, RECS personnel were on site April 11th and 12th, 2013 to install soil bores (Figure 2). A total of six soil bores were drilled at the site and as they were advanced, soil samples were taken at regular intervals. The samples were field tested for chlorides and hydrocarbons and representative samples were taken to a commercial laboratory for analysis. Laboratory analysis of SB-1 returned chlorides results of 2,210 mg/kg at 30 ft bgs and decreased to 256 mg/kg at 75 ft bgs. GRO and DRO analyses showed non-detect in all samples except for at 30 ft bgs where the DRO reading was 14.4 mg/kg. In SB-2, laboratory chloride readings returned results of 3,960 mg/kg at 40 ft bgs and decreased to 1,710 mg/kg at 90 ft bgs. GRO and DRO analyses returned results of non-detect. In SB-3, laboratory chloride readings returned results of 4,000 mg/kg at 40 ft bgs and decreased to 928 mg/kg at 90 ft bgs. GRO and DRO analyses returned non-detect for all samples except for at 40 ft bgs where the DRO reading was 20.7 mg/kg. In SB-4, laboratory chloride readings returned 5,920 mg/kg at the surface, 4,880 mg/kg at 10 ft bgs and 1,150 mg/kg at 90 ft bgs. GRO and DRO analyses returned results of non-detect except at the surface where the DRO reading was 45.9 mg/kg. In SB-5, the laboratory chloride readings returned results of 4,160 mg/kg at the surface, 2,600 mg/kg at 50 ft bgs and decreased to 240 mg/kg at 85 ft bgs. GRO and DRO analyses returned results of non-detect except at the surface where the DRO reading was 11.3 mg/kg. In SB-6, the laboratory chloride readings returned results of 3,280 mg/kg at 40 ft bgs and decreased to 656 mg/kg at 90 ft bgs. GRO and DRO readings returned results of non-detect.

Request for Further Delineation

Soil borings completed thus far resulted in elevated chloride concentrations; however, the lateral extent of the contamination in the vadose zone has yet to be determined. RECS recommends that ROC continue to investigate the site to determine the lateral extent of

the chloride contamination. ROC will also review historical photos and, if warranted, install a near-source monitoring well. Additional monitoring wells may be required to fully delineate groundwater quality. All monitoring wells will be installed and sampled according to NMOCD and industry standards.

Once further sampling is conducted at the site and the data is evaluated, RECS will submit a Corrective Action Plan (CAP) that will suggest a vadose zone remedy and, if warranted, a groundwater investigation plan.

RECS appreciates the opportunity to work with you on this project. Please call Hack Conder at (575) 393-9174 or me if you have any questions or wish to discuss the site.

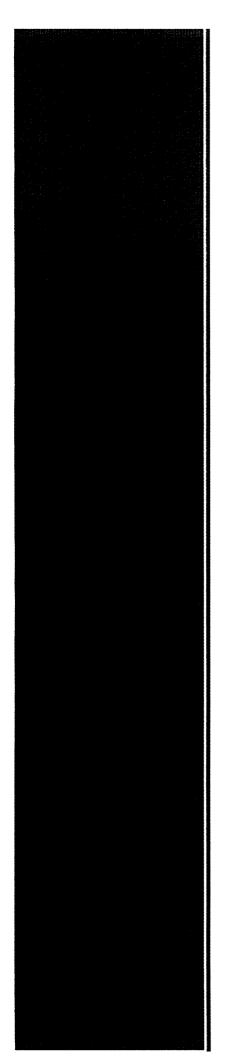
Sincerely,

ACW

Lara Weinheimer Project Scientist RECS (575) 441-0431

Attachments:

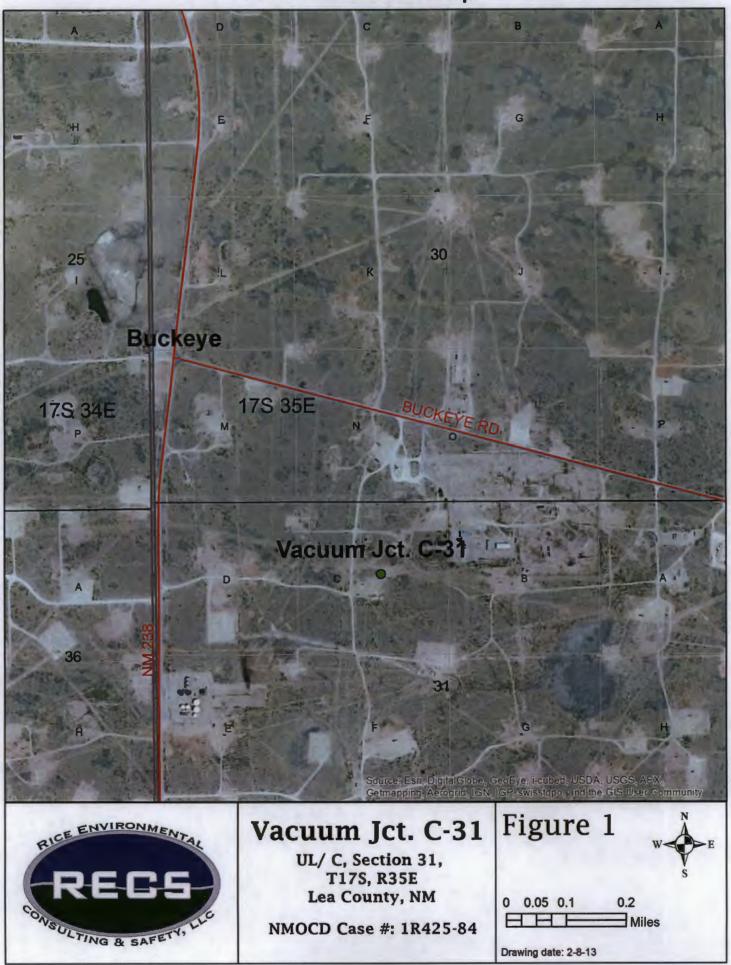
Figure 1 – Site Location Map Figure 2 – Soil Bore Installation Map Appendix A – Soil Bore Installation Documentation



Figures

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

Site Location Map



Soil Bore Installation

SS 5'	1158 (370	0.1 1.3		GRO	DRO	Depth SS 5'	771 0.7 600 1.2		GRO	DRO	Dept SS 5'	h Cl- 641 508	PID 0.7 1.2	SB-3 Lab Cl-	GRO	DRO
30' 35' 40'	443 335 682 1425 2216 2226 1724 2026 1545 949 903 996	3.9 2.2 1.2 0.6 0.8 0.8 0.8 0.9 0.7 0.7	2210	<10.0	14.4	10' 15' 20' 25' 30' 35' 40' 45' 50' 55'	677 10. 173 5. 1264 3.0 1096 3. 2099 3.0 3385 3. 3619 3. 1841 2. 1696 1.0 1788 2.	7 5 1 3 7 7 3960 2 3 5	<10.0	<10.0	10' 15' 20' 25' 30' 35' 40' 45' 50' 55'	1767 3905 2982 3179 3531 2476 4242 3402 3722 3722 3284	96.8 22.1 24.5 4.5 4.9 3.1 3.3 2.5 2.7 4.1	4000	<10	20.7
65' 70' 75'	534 302 242	1.2 1.1 0.8	256	<10.0	<10.0	60' 65' 70' 75' 80' 85'	1076 3.8 1296 3 591 2.8 1813 4.6 2014 3.6 1400 3.5	B 5 3			60' 65' 70' 75' 80' 85'	1544 2194 1431 753 841 707	2.5 3 1.5 1.9 2.3 3.3			
Depth			B-4 Lab Cl- 5920	GR0 <10.0	DRO 45.9	90'	1693 3.4		<10.0	<10.0	90'	892	4.2	928	<10	<10
5' 10'	1092	1.4 2.1	4880		<10.0					nRT						
15' 20' 25'	1926 743 2271	2 2	1000							ned/2 li						
30' 35'		1.7								opuec						
40' 45' 50'	826 1072 1481	1.8 2.1								ROC abandoned/2 in RT	SB-4					
55' 60' 65'	1794 1749 1002	2.3 2.7								30	ft					
70' 75'	796 858	1.5			•		-0-							ROC	C abando	oned 4 in A
80' 85' 90'	1097 701 1053	2.3 2.1	1150	<10.0	<10.0		SB-3		20 ft	Tos	SB B-2	-1		SB-5		
		SI	B-5							RT						
Depth SS		PID L	ab CI-	GRO	DRO					Zin	SB-6					
5'		4.2	4160	<10.0	11.3	-	-			Peep	9000	De	pth Cl		3-6 ab Cl- (RO DRO
5' 10' 15' 20'	780 4 1609 1 1479 600	4.2 16.5 8.4 40	4160	<10.0	11.3	-/-		-	abando	The second of the second secon		De SS 5' 10	978 462			GRO DRO
5' 10' 15' 20' 25' 30' 35'	780 1609 1479 600 334 657 1424	4.2 16.5 8.4 40 8.1 5.3 4.5	4160	0 <10.0	11.3	↓ ↓	•		ROC abando	Pelice		55 10 15 20 25	978 462 495 693 1081 2933	PID La 0.9 2.6 3.9 1.6 2.5 3.2		BRO DRO
5' 10' 15' 20' 25' 30' 35' 40' 45' 50' 55'	780 1609 1479 600 334 657 1424 2096 1995 2440 1676	4.2 16.5 8.4 40 8.1 5.3 4.5 4 2.9 3 3.4) <10.0) <10.0		Legend	IM SOIL BOP	RES	ROC abando	peline		SS 5' 10 15 20 25 30 35 40 45	978 462 495 693 1081 2933 2838 2825 2963 1762	PID La 0.9 2.6 3.9 1.6 2.5 3.2 3.1 2.6 2.4 3.1 2.6 2.4 3.2 3.1 2.6 3.2 3.1 2.6 3.2 3.1 3.2 3.1 3.2 3.1 3.2 3.2 3.1 3.2 3.2 3.2 3.2 3.2 3.2 3.2 3.2	ab CI- (
5' 10' 15' 20' 25' 30' 35' 40' 45' 55' 60' 65' 70'	780 4 1609 1479 600 334 657 1424 2096 1995 2440 1676 1420 385 556	4.2 16.5 8.4 40 8.1 5.3 4.5 4 2.9 3.4 3.6 4.2 4.3				Legend S VACUU DEADA - NON R	MAN CC BURIED	PIPELINE	ROC abando	Dell'on		SS 5' 10 15 20 25 30 35 40 45 50 55 60	978 462 495 693 1081 2933 2838 2825 2963 1762 2678 2198 2046	PID La 3 0.9 2 2.6 3 3.9 4 1.6 2.5 3 3.2 4 3.1 2.6 2.4 3 2.1 4 2.4 3 2.1 4 2.4 3 2.1 4 1.9 4 1.8	ab CI- (
5' 10' 15' 20' 25' 30' 35' 40' 45' 50' 55' 60' 65' 70' 75' 80'	780 4 1609 1479 600 334 657 1424 2096 1995 2440 1676 1420 385	4.2 16.5 8.4 40 8.1 5.3 4.5 4 2.9 3.4 3.6 4.2 4.3 1.3	2600		<10.0	Legend S VACUU → DEADM - NON R NON R VACUU	MAN COC BURIED COC SURFAC	PIPELINE E LINES D BOX	ROC abando	pellon.		SS 5' 10 15 20 25 30 35 40 45 50 50 60 65 70 75	978 462 495 693 1081 2933 2838 2825 2963 1762 2678 2046 1908 1053 1092	- PID La 3 0.9 2 2.6 3 3.9 4 1.6 2.5 3 3.2 4 3.1 5 2.6 4 2.4 3 3.1 5 2.6 4 2.4 3 2.4 5 2.1 1.9 5 1.8 5 1.8 5 1.9 5 1.8 5 2.4 5 2.4 5 2.4 5 1.9 5 1.8 5 2.4 5 2.4 5 2.4 5 1.9 5 1.8 5 2.4 5 2	ab CI- (
5' 10' 15' 20' 25' 30' 35' 40' 45' 50' 55' 60' 65' 70' 75' 80' 85'	780 4 1609 1 1479 600 334 657 1424 2096 1995 2440 1676 1420 385 556 497 277 248	4.2 16.5 8.4 40 8.1 5.3 4.5 4 2.9 3 4.5 3.4 3.6 4.2 4.3 1.3 1.6	2600	• <10.0	<10.0	Legend VACUU DEADA NON R NON R VACUU	MAN COC BURIED COC SURFAC UM REMOVE	PIPELINE E LINES D BOX NED LINE	ROC	PLASTIC LIM		SS 5' 10 15 20 25 30 35 40 45 50 55 60 65 70	978 462 495 693 1081 2933 2838 2825 2963 1762 2678 2046 1908 1053 1092 1049 581	- PID La 3 0.9 2 2.6 3 3.9 3 1.6 2.5 3 3.2 3 3.1 3 2.6 4 2.4 3 3.4 3	ab CI- (SRO DRO 10.0 <10.0
5' 10' 15' 20' 25' 30' 35' 40' 45' 55' 60' 65' 70' 75' 80' 85' 80' 85'	780 1609 1479 600 334 657 1424 2096 1995 2440 1676 1420 385 556 497 277 248 V: 10	4.2 16.5 8.4 40 8.1 5.3 3.4 5.3 4.5 4.2 9 3.3.4 3.6 4.2 4.3 1.3 1.6 2 00 f	2600 240 t .	<10.0	<10.0	Legend VACUU DEADA 	MAN LOC BURIED LOC SURFAC JIM REMOVE JIM ABANDOI (NTHETIC LI	PIPELINE E LINES D BOX NED LINE INER COVEI	RED BYA	PLASTIC LIM	NER @ 5 ft	SS 5' 10 15 20 25 305 40 45 50 60 65 70 55 80 85	978 462 495 693 1081 2933 2838 2825 2963 1762 2678 2046 1908 1053 1092 1049 581 717	PID La 9 0.9 2 2.6 3 3.9 1 1.6 2.5 3 3.2 3 3.1 2 2.6 2 2.4 3 2.4 3 2.4 3 2.4 3 2.4 3 1.9 1.8 1.7 1.8 2.3 3.4 3.1 2.2 3.4 3.1 2.2 3.4 3.1 2.2 3.4 3.1 3.2 3.2 3.2 3.2 3.2 3.2 3.2 3.2	ab CI- (10.0 <10.0
5' 10' 15' 20' 25' 30' 35' 40' 45' 55' 60' 65' 70' 75' 80' 85' 80' 85'	780 1609 1479 600 334 657 1424 2096 1995 2440 1676 1420 385 556 497 277 248 V: 10	4.2 16.5 8.4 40 8.1 5.3 3.4 5.3 4.5 4.2 9 3.3.4 3.6 4.2 4.3 1.3 1.6 2 00 f	2600 240 t .	• <10.0	<10.0	Legend VACUU DEADA 	MAN LOC BURIED LOC SURFAC JIM REMOVE JIM ABANDOI (NTHETIC LI	PIPELINE E LINES D BOX NED LINE INER COVEI	RED BYA	PLASTIC LIP	NER @ 5 ft	SS 5' 10 15 20 25 30 30 30 30 55 60 65 70 75 80 85 90	978 462 495 693 1081 2933 2838 2825 2963 1762 2678 2046 1908 1053 1092 1049 581 717	PID La 9 0.9 2 2.6 3 3.9 1 1.6 2.5 3 3.2 3 3.1 2 2.6 2 2.4 3 2.4 3 2.4 3 2.4 3 2.4 3 1.9 1.8 1.7 1.8 2.3 3.4 3.1 2.2 3.4 3.1 2.2 3.4 3.1 2.2 3.4 3.1 3.2 3.2 3.2 3.2 3.2 3.2 3.2 3.2	ab CI- (10.0 <10.0
5' 10' 15' 20' 25' 30' 35' 40' 45' 55' 60' 65' 70' 75' 80' 85' DGW	780 1609 1479 600 334 657 1424 2096 1995 2440 1676 1420 385 556 497 277 248 V: 10 310 100 1479 100 1479 1474 1470 1477 2440 1676 1420 1477 248 1477 248 1477 248 1477 11 11 11 1477 1477 11 11 1477	4.2 16.5 8.4 40 8.1 5.3 3.4 5.3 4.5 4 2.9 3 3.4 4.2 4.3 1.3 1.6 2 00 f	2600 240 t.	<10.0	<10.0 <10.0	Legend VACUU DEADA 	AAN COC BURIED COC SURFAC UM REMOVE UM ABANDO (NTHETIC LI CUUL/ C T	PIPELINE E LINES D BOX NED LINE INER COVEI	RED BYA Ct. ion 3 35E	PLASTIC LIN C-3	NER @ 5 ft	SS 5' 10 15 20 25 30 30 30 30 55 60 65 70 75 80 85 90	978 462 495 693 1081 2938 2825 2963 1762 2678 21986 1908 1053 1092 1049 581 717	PID La 9 0.9 2.6 3.9 1.6 2.5 3.1 2.6 3.1 2.6 2.4 3.1 1.8 1.7 1.8 2.3 3.4 3.1 2.2 2.4 2.1 1.9 3.4 3.1 2.2 2.3 3.4 3.1 2.2 2.3 3.4 3.1 2.2 3.4 3.1 2.2 3.4 3.1 2.2 3.4 3.4 3.1 3.4 3.4 3.1 2.2 3.4 3.4 3.4 3.4 3.4 3.4 3.4 3.4	ab CI- (10.0 <10.0 (10.0 <10.0 N S E

Appendix A Soil Bore Installation Documentation

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

Logger: Driller:		Kyle Harrison &	Norman Cooper,	Inc.	SB-3 SB-1 SB-5	R	ECS		
Drilling Me Start Date End Date:	:	4/1	Rotary 1/2013 1/2013		SB-3 SB-1 SB-5 SB-2 5 SB-2 SB-6 SB-6	Project Name: Well ID: Vacuum Jct. C-31 SB-1 Project Consultant: RECS			
		Alls	amples	were	of the former junction box site. from cuttings. Jennings GW = 100 ft	Location: UL/C, Sec. 31, T17S, R35E Lat: 32º79'72.61N County:Let			
T	Field	-	AB				11W State:NM		
Depth	Cľ	Cľ	TPH	PID	Description	Lithology	Well Construction		
	(mg/kg)	(mg/kg)	(mg/kg)	(ppm)					
SS	1,158	-		0.1					
					Brown Sand Regolith				
5 ft	370			1.3					
					Brown Sand Regolith (plastic liner)				
10 ft	443			2.4					
					Brown Sand Regolith				
15 ft	335			3.9					
					Caliche/Sandstone				
20 ft	682			2.2					
25 ft	1,425			1.2					
30 ft	2,216	2,210	GRO <10 DRO 14.4	0.6					
	-				Tan Sand				
35 ft	1,724			0.8			bentonite		
							seal		
40 ft	2,026			0.8					

			-	Tan Sand	
45 ft	1,545		0.9		
50 ft	949		0.7	Tan Sand/Caliche	
55 ft	903		0.7		
60 ft	996		0.5		
65 ft	534		1.2		
70 ft	302		1.1	Moist Red Sand	
75 ft	242	256 GRO <10 DRO <10	0.8		

Logger: Driller: Drilling Meth Start Date: End Date: Comments	od: : SB-2 is lo	Harrison & Air I 4/11 4/11 cated 10 sar	Rotary 1/2013 1/2013 ft. west nples we	of the	sB-3 sB-3 sB-3 sB-3 sB-3 sB-3 sB-5 sB-			
Depth	Field Cl ⁻ (mg/kg)	Cľ	AB TPH	PID	Description	Lithology	Well Construction	
SS	771	(mg/kg)	(mg/kg)	(ppm) 0.7	Brown Sand Regolith			
5 ft	600			1.2	Brown Sand Regolith (plastic Liner)			
10 ft	677			10.3	Brown Sand Regolith			
15 ft	173			5.7				
20 ft	1,264			3.6	Caliche/Sandstone			
25 ft	1,096			3.1				
30 ft	2,099			3.8	Tan Sand			
35 ft	3,385			3.7				

40 ft	3,619	3,960 DR	0<10 0<10 3.7	
45 ft	1,841		2.2	bentonite seal
50 ft	1,696		1.8	Tan Sand
55 ft	1,788		2.5	
60 ft	1,076		3.8	
65 ft	1,296		3	
70 ft	591		2.8	
75 ft	1,813		4.6	Moist Red Sand
80 ft	2,014		3.6	
85 ft	1,400		3.3	
90 ft	1,693	1,710 GI	RO <10 RO <10 3.4	

Logger: Driller:		Kyle I Harrison &	Norman Cooper, I	nc.	SB-3	R	ECS	
Drilling Me Start Date: End Date:	thod:	Air F 4/12 4/12	Rotary 2/2013 2/2013		SB-2	Project Name: Well ID: Vacuum Jct. C-31 SB-3 Project Consultant: RECS Location: UL/C, Sec. 31, T17S, R35		
Commen		Alls	samples	were	ne former junction box site. from cuttings. . Jennings GW = 100 ft	Lat: 32°47'50.066	"N County:Lea	
Depth	Field				Description	Long: 103°29'56.487"W State: N Lithology Well Construct		
Depin	(mg/kg)	Cl ⁻ (mg/kg)	(mg/kg)	(ppm)				
SS	641			0.7	6" Brown Sand Top Soil			
5 ft	508			1.2	Caliche/Sandstone (Hydrocarbon Smell)			
10 ft	1,767			96.8				
15 ft	3,905			22.1	Caliche (Hydrocarbon Smell)			
20 ft	2,982			24.5				
25 ft	3,179			4.5	Caliche/Tan Sand Mix (Hydrocarbon Smell)			
30 ft	3,531			4.9				
35 ft	0.470			0.1	Tan Sand (Slight Hydro Carbine Smell)			
35 11	2,476			3.1				

40 ft	4,242	4,000	GRO <10 DRO 20.7	3.3	
45 ft	3,402			2.5	Tan Sand (Slight Hydro Carbine Smell)
50 ft	3,722			2.7	
55 ft	3,284			4.1	Damp Tan Sand with some Sandstone
60 ft	1,544			2.5	
65 ft	2,194			3	
70 ft	1,431			1.5	
75 ft	753			1.9	Moist Red Sand
80 ft	841			2.3	
85 ft	707			3.3	
90 ft	892	928	GRO <10 DRO <10	4.2	

Logger: Driller: Drilling Meth	od:	Harrison &	Norman Cooper, In Rotary	ю	SB-3	Project Name: Well ID:			
Start Date:			/2013		SB-2 5 5 5 5 5 5 5 5 5 5 5 5 5	Vacuum Jct. C-31 SB-4 Project Consultant: RECS			
End Date:	mmonte: S		/2013	north of	the former junction box site.				
CO		All sa		ere from	n cuttings.	Location: UL/C, Sec. 31, T17S, R35 Lat: 32 °47'50.252"N County:L Long: 103 °29'55.88"W State:NM			
	Field	LA	B						
Depth	Cľ (mg/kg)	Cľ (mg/kg)	TPH (mg/kg)	PID (ppm)	Description	Lithology	Well Construction		
SS	4,425	5,920	GRO <10 DRO 45.9	1.0					
					6" Brown Sand Top Soil				
5 ft	1,092			1.4					
					Caliche/Sandstone				
10 ft	3,520	4,880	GRO <10 DRO <10	2.1					
	0,010				Caliche				
15 ft	1,926			2.0					
20 ft	743			2.0	Caliche/Sandstone				
25 ft	2,271			0.9					
30 ft	1,545			1.7					
					Tan Sand				
35 ft	997			1.8					
40.4	000			10					
40 ft	826			1.8					
							bentonite seal		

45 ft	1,072			2.1				
50 ft	1,481			2.6	Tan Sand			
						UCTION AND		
55 ft	1,794			2.3	Damp Tan Sand With Some Sandstone			
60 ft	1,749			2.7				
65 ft	1,002			2.6				
70 ft	796			1.5				
75 ft	858			1.9	Moist Red Sand			
80 ft	1,097			2.3				
85 ft	701			2.1				
90 ft	1,053	1,150	GRO <10 DRO <10	0.9				

Logger: Driller:		Kyle I Harrison &	Norman Cooper, I	nc.	SB-3 88-4 ROI SB-3 SB-1 SB-5	R	ECS		
Drilling Me Start Date: End Date:		4/12 4/12	Rotary 2/2013 2/2013	4	\$58-2 Ez \$58-6	Project Name: Well ID: Vacuum Jct. C-31 SB-5 Project Consultant: RECS Location: UL/C, Sec. 31, T17S, R35			
Commen			samples	were	er junction box site. from cuttings. . Jennings GW = 100 ft	Location: UL/C, Lat: 32°47'50.04 Long: 103°29'55	4"N County:Lea		
Depth	Field Cl ⁻	C	AB TPH	PID	Description	Lithology	Well Construction		
SS	(mg/kg) 2,621	(mg/kg)	(mg/kg) GRO <10 DRO 11.3	(ppm) 0.8					
					6" Brown Sand Top Soil				
5 ft	780			4.2	Caliche/Sandstone				
10 ft	1,609			16.5					
15 ft	1,479			8.4					
20 ft	600			40.0	Caliche/Sandstone (Hydrocarbon Smell)				
25 ft	334			8.1					
30 ft	657			5.3					
35 ft	1,424			4.5	Tan Sand				
40 ft	2,096			4.0			bentonite		

45 ft	1,995			2.9			
50 ft	2,440	2,600	GRO <10 DRO <10	3.0	Tan Sand		
55 ft	1,676			3.4	Damp Tan Sand With Some Sandstone		
60 ft	1,420			3.6			
65 ft	385			4.2			
70 ft	556			4.3			
75 ft	497			1.3	Moist Red Sand		
80 ft	277			1.6			
85 ft	248	240	GRO <10 DRO <10	2.0			

Logger: Driller:		Kyle I Harrison &	Norman Cooper, I	nc.	B-3 SB-1 SB-1				
Drilling Me Start Date End Date:	:	4/12 4/12	Rotary 2/2013 2/2013		SB-2	Project Name: Well ID: Vacuum Jct. C-31 SB-6 Project Consultant: RECS			
Cor			samples		of the former junction box site. om cuttings. lennings GW = 100 ft	Location: UL/C, Lat: 32°47'49.816 Long: 103°29'55.	e ourrey. Los		
		energianie alterative data		-		Long. 103 29 33.			
Depth	Field Cl ⁻ (mg/kg)	CI ⁻ (mg/kg)	AB TPH (mg/kg)	PID (ppm)	Description	Lithology	Well Construction		
SS	978	((mg/ng/	0.9					
33	970			0.9	6" Brown Sand Top Soil				
5 ft	462			2.6					
10 ft	495			3.9					
					Caliche/Sandstone				
15 ft	693			1.6					
20 ft	1,081			2.5					
					Caliche				
25 ft	2,933			3.2					
30 ft	2,838			3.1					
35 ft	2,825			2.6	Tan Sand				
40 ft	2,963	3,280	GRO <10 DRO <10	2.4					

45 ft	1,762			2.4			bentonite seal
50 ft	2,678			2.1	Tan Sand		
55 ft	2,198			1.9			
60 ft	2,046			1.8			
65 ft	1,908			1.7			
70 ft	1,053	-		1.8			
75 ft	1,092			2.3	Moist Red Sand		
80 ft	1,049			3.4			
85 ft	581			3.1			
90 ft	717	656	GRO <10 DRO <10	2.2			



April 16, 2013

Hack Conder Rice Operating Company 112 W. Taylor Hobbs, NM 88240

RE: VACUUM JCT C-31 17S-35E

Enclosed are the results of analyses for samples received by the laboratory on 04/11/13 16:25.

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 accredited 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,

Celeg D. Keine

Celey D. Keene Lab Director/Quality Manager



Rice Operating Company Hack Conder 112 W. Taylor Hobbs NM, 88240 Fax To: (575) 397-1471

Received:	04/11/2013	Sampling Date:	04/11/2013
Reported:	04/16/2013	Sampling Type:	Soil
Project Name:	VACUUM JCT C-31 17S-35E	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SB - 1 @ 30' (H300870-01)

Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: DW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2210	16.0	04/12/2013	ND	432	108	400	0.00	
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	04/15/2013	ND	195	97.6	200	3.04	
DRO >C10-C28	14.4	10.0	04/15/2013	ND	195	97.3	200	3.66	
Surrogate: 1-Chlorooctane	85.0	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	<i>99.7</i>	% 63.6-15	4						

Sample ID: SB - 1 @ 75' (H300870-02)

Chloride, SM4500CI-B	mg/kg		Analyze	d By: DW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	256	16.0	04/12/2013	ND	432	108	400	0.00	
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	04/15/2013	ND	195	97.6	200	3.04	
DRO >C10-C28	<10.0	10.0	04/15/2013	ND	195	97.3	200	3.66	
Surrogate: 1-Chlorooctane	81.1	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	98.6	% 63.6-15	4						

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*=Accredited Analyte

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Celey D. Kune

Celey D. Keene, Lab Director/Quality Manager



Rice Operating Company Hack Conder 112 W. Taylor Hobbs NM, 88240 Fax To: (575) 397-1471

Received:	04/11/2013	Sampling Date:	04/11/2013
Reported:	04/16/2013	Sampling Type:	Soil
Project Name:	VACUUM JCT C-31 17S-35E	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SB - 2 @ 40' (H300870-03)

Chloride, SM4500Cl-B	mg/kg		Analyzed By: DW						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3960	16.0	04/12/2013	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	04/15/2013	ND	195	97.6	200	3.04	
DRO >C10-C28	<10.0	10.0	04/15/2013	ND	195	97.3	200	3.66	
Surrogate: 1-Chlorooctane	79.7	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	97.0	% 63.6-15	4						

Sample ID: SB - 2 @ 90' (H300870-04)

Chloride, SM4500Cl-B	mg/kg		Analyzed By: DW						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1710	16.0	04/12/2013	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	04/15/2013	ND	195	97.6	200	3.04	
DRO >C10-C28	<10.0	10.0	04/15/2013	ND	195	97.3	200	3.66	
Surrogate: 1-Chlorooctane	79.4	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	94.6	% 63.6-15	4						

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Celey D. Kune

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 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

Cardinal Laboratories

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Celez D. Kune

Celey D. Keene, Lab Director/Quality Manager

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 5 of 5

RDINAL LABORATORIES

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101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603

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

#



April 19, 2013

Hack Conder Rice Operating Company 112 W. Taylor Hobbs, NM 88240

RE: VACUUM JCT C-31 17S-35E

Enclosed are the results of analyses for samples received by the laboratory on 04/12/13 16:00.

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 accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab accredited certif.html.

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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,

Celeg D. Keine

Celey D. Keene Lab Director/Quality Manager



Rice Operating Company Hack Conder 112 W. Taylor Hobbs NM, 88240 Fax To: (575) 397-1471

Received:	04/12/2013	Sampling Date:	04/12/2013
Reported:	04/19/2013	Sampling Type:	Soil
Project Name:	VACUUM JCT C-31 17S-35E	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SB 3 @ 40' (H300891-01)

Chloride, SM4500Cl-B	mg/kg		Analyze	d By: DW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4000	16.0	04/16/2013	ND	432	108	400	0.00	
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	04/15/2013	ND	195	97.6	200	3.04	
DRO >C10-C28	20.7	10.0	04/15/2013	ND	195	97.3	200	3.66	
Surrogate: 1-Chlorooctane	67.1	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	97.8	% 63.6-15	4						

Sample ID: SB 3 @ 90' (H300891-02)

Chloride, SM4500CI-B	mg,	kg	Analyze	d By: DW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	928	16.0	04/16/2013	ND	432	108	400	0.00	
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	04/16/2013	ND	214	107	200	1.59	
DRO >C10-C28	<10.0	10.0	04/16/2013	ND	231	116	200	8.38	
Surrogate: 1-Chlorooctane	92.0	% 65.2-14	0					22700	
Surrogate: 1-Chlorooctadecane	112	63.6-15	4						

Cardinal Laboratories

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Celey D. Kune

Celey D. Keene, Lab Director/Quality Manager



Rice Operating Company Hack Conder 112 W. Taylor Hobbs NM, 88240 Fax To: (575) 397-1471

Received:	04/12/2013	Sampling Date:	04/12/2013
Reported:	04/19/2013	Sampling Type:	Soil
Project Name:	VACUUM JCT C-31 17S-35E	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SB 4 @ SURFACE (H300891-03)

Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: DW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	5920	16.0	04/16/2013	ND	432	108	400	0.00	
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	04/17/2013	ND	214	107	200	1.59	
DRO >C10-C28	45.9	10.0	04/17/2013	ND	231	116	200	8.38	
Surrogate: 1-Chlorooctane	91.4	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	114	% 63.6-15	4						

Sample ID: SB 4 @ 10' (H300891-04)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: DW			· · · · · · · · · · · · · · · · · · ·		
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4880	16.0	04/16/2013	ND	432	108	400	0.00	
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	04/17/2013	ND	214	107	200	1.59	
DRO >C10-C28	<10.0	10.0	04/17/2013	ND	231	116	200	8.38	
Surrogate: 1-Chlorooctane	94.9	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	113	% 63.6-15	4						

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Kune

Celey D. Keene, Lab Director/Quality Manager



Rice Operating Company Hack Conder 112 W. Taylor Hobbs NM, 88240 Fax To: (575) 397-1471

Received:	04/12/2013	Sampling Date:	04/12/2013
Reported:	04/19/2013	Sampling Type:	Soil
Project Name:	VACUUM JCT C-31 17S-35E	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SB 4 @ 90' (H300891-05)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: DW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1150	16.0	04/16/2013	ND	432	108	400	0.00	
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	04/17/2013	ND	214	107	200	1.59	
DRO >C10-C28	<10.0	10.0	04/17/2013	ND	231	116	200	8.38	
Surrogate: 1-Chlorooctane	86.2	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	106	% 63.6-15	4						

Sample ID: SB 5 @ SURFACE (H300891-06)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: DW					1880 188 - F - F - F
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4160	16.0	04/16/2013	ND	432	108	400	0.00	
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	04/17/2013	ND	214	107	200	1.59	
DRO >C10-C28	11.3	10.0	04/17/2013	ND	231	116	200	8.38	
Surrogate: 1-Chlorooctane	94.3	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	115	% 63.6-15	4						

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Celey D. Kune

Celey D. Keene, Lab Director/Quality Manager



Rice Operating Company Hack Conder 112 W. Taylor Hobbs NM, 88240 Fax To: (575) 397-1471

Received:	04/12/2013	Sampling Date:	04/12/2013
Reported:	04/19/2013	Sampling Type:	Soil
Project Name:	VACUUM JCT C-31 17S-35E	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SB 5 @ 50' (H300891-07)

Chloride, SM4500Cl-B	mg/	/kg	Analyze	d By: DW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2600	16.0	04/16/2013	ND	432	108	400	0.00	
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	04/17/2013	ND	214	107	200	1.59	
DRO >C10-C28	<10.0	10.0	04/17/2013	ND	231	116	200	8.38	
Surrogate: 1-Chlorooctane	92.9	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	113 9	63.6-15	4						

Sample ID: SB 5 @ 85' (H300891-08)

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: DW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	04/16/2013	ND	432	108	400	0.00	
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	04/17/2013	ND	214	107	200	1.59	
DRO >C10-C28	<10.0	10.0	04/17/2013	ND	231	116	200	8.38	
Surrogate: 1-Chlorooctane	92.0	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	113	% 63.6-15	4						

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Celey D. Kune

Celey D. Keene, Lab Director/Quality Manager



Rice Operating Company Hack Conder 112 W. Taylor Hobbs NM, 88240 Fax To: (575) 397-1471

Received:	04/12/2013	Sampling Date:	04/12/2013
Reported:	04/19/2013	Sampling Type:	Soil
Project Name:	VACUUM JCT C-31 17S-35E	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SB 6 @ 40' (H300891-09)

Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: DW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3280	16.0	04/16/2013	ND	432	108	400	0.00	
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	04/17/2013	ND	214	107	200	1.59	
DRO >C10-C28	<10.0	10.0	04/17/2013	ND	231	116	200	8.38	
Surrogate: 1-Chlorooctane	91.7	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	111	% 63.6-15	4						

Sample ID: SB 6 @ 90' (H300891-10)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: DW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	656	16.0	04/16/2013	ND	432	108	400	0.00	
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	04/17/2013	ND	214	107	200	1.59	
DRO >C10-C28	<10.0	10.0	04/17/2013	ND	231	116	200	8.38	
Surrogate: 1-Chlorooctane	86.0	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	107	% 63.6-15	4						

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Celey D.Kune

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°C
 Samples reported on an as received basis (wet) unless otherwise noted on report

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 8 of 8

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: Rice					BILL TO					ANALYSIS REQUEST													
Project Manager: Hack Conder					P.O. #:			ŀ	4 8015 M	BTEX					T								
Address:					Company:]			Texas TPH	Cations/Anions	TDS										
City: Hobbs State: NM Zip: 88240					Attn:										ľ								
Phone #: Fax #:					Address:																		
Project #: Project Owner:					City:										Chlorides				- 1 <u>1</u> 1				
Project Name:						State: Zip:																	
Project Location: Vacuum Jc+ C-31 178-35E						Phone #:												[
Sampler Name: Kyle Norman						Fax #:																	
FOR LAB USE ONLY			Т	A	ATRI	K T	Pl	RESE	RV.	SAMPL	NG	B TPH G			6	te l	·						
·		(C)OMP	ERS	GROUNDWATER WASTEWATER												Complete						-	
Lab I.D.	Sample I.D.	B OR	ITAIN	NDV EVA	- · .	ШU	R: BASE	SOOL	 62							õ							
13000066		(G)RA	# CONTAINERS	GROUNDWATE WASTEWATER	GF SOF	SLUDGE	OTHER : ACID/RASE	ICE / COOL	OTHE	DATE	TIME					Ŭ							
1	SB 3@40'	G	1					$\boldsymbol{\nabla}$		4-12-13	8,30	\checkmark	11										
2	583090'	G	1		4			V,	•	11	9125	1	1										
3	SB4 C. Sarface	G	1		/			1		11	9:40	V	0	$\mathcal{I}(\mathbf{q}^{*})$		· .		· · ·					
Ц	SB4 @ 10'	G	1		4_			14		11	10:30	V	4								1.1	L	<u></u>
5	SB4 @ 90'	Gī	11		V			4		<u>h</u>	11:00	4	1				ľ.,		ļ	 		L	
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- 4	5B5 C 85'	(c	¥-		4	$\left \right $	_	V		- 11	1.60	V,	VI				-						
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ν	5000 70	0	11		V					1	וציב	10	10			1	1	L	1	1		1	

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Relinguished By:	UAZ-B Time: DD	Receive		nson
Relinguished By:	Date:	Receive	ed By:	
	Time:			
Delivered By: (Circle One)		. 10	Sample Condition	CHECKED BY:
Sampler - UPS - Bus - Other:		42	No No	UT

 Phone Result:
 I Yes
 Ø No
 Add'l Phone #:

 Fax Result:
 I Yes
 Ø No
 Add'l Fax #:

 REMARKS:
 I Yes
 I No
 Add'l Fax #:

email results: zconder@rice-ecs.com Knorman@rice-ecs.com; lpena@riceswd.com Kjones@riceswd.com; Bbaker@rice-ecs.com; hconder@rice-ecs.com; Lweinheimer@rice-ecs.com

† Cardinal cannot accept verbal changes. Please fax written changes to 505-391-2476