

Rice Environmental Consulting & Safety

P.O. Box 5630 Hobbs, NM 88241 Phone 575.393.4411 Fax 575.393.0293

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CERTIFIED MAIL RETURN RECEIPT NO. 7008 1140 0001 3070 5801

April 11th, 2012

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: ICP Report and Corrective Action Plan (CAP) Rice Operating Company – BD SWD System BD G-16 vent (1R426-29): UL/G sec. 16 T22S R37E

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 BD Salt Water Disposal (SWD) system. ROC is the service provider (agent) for the BD 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 3 miles south of Eunice, New Mexico at UL/G sec. 16 T22S R37E as shown on the Site Location Map (Figure 1). Groundwater at this site is located approximately 96 +/- feet below ground surface (bgs).

In 2002, ROC initiated work on the former BD G-16 vent. The site was delineated using a backhoe and soil samples were screened at regular intervals for both hydrocarbons and chlorides. The excavation reached dimensions of $16 \times 16 \times 16$ feet bgs where composite samples were taken for laboratory verification. Laboratory tests of the site showed gasoline range organics (GRO) that were non-detect and diesel range organics (DRO) that were non-detect, with the exception of the remediated backfill which was 11.0 mg/kg. Laboratory chloride readings at the site were 3,240 mg/kg for the bottom composite, 3,640 mg/kg on the sidewall composite, and the remediated backfill had a reading of 144 mg/kg. At 16 feet bgs, a 1 ft clay layer was installed to inhibit further chloride migration. The soils were blended on site and the remediated backfill was returned to the excavation to bring it back to ground surface. The area was contoured to the surrounding landscape and an identification plate was placed on the surface of the site to mark its location for future environmental considerations. A junction box is no longer needed at the site. NMOCD was notified of potential groundwater impact on January 31^{st} , 2003, and a junction box

disclosure report was submitted to NMOCD with all the 2002 junction box closures and disclosures.

An Investigation and Characterization Plan (ICP) was submitted to the NMOCD on July 2nd, 2010 and approved on July 19th, 2010. The plan proposed additional investigation of the soils surrounding the former junction box, and the installation of monitoring well(s) to delineate groundwater quality if warranted.

ICP Investigative Results

Per the ICP, nine soil bores were advanced through the former junction box site on September 13th and 14th, 2010 (Figure 2). ROC personnel field tested the soil for chlorides and screened in the field with a photo-ionization detector (PID). Representative samples from the bore were taken to a commercial laboratory for confirmation of chloride and hydrocarbon field numbers (Appendix A). Laboratory readings in SB-3, SB-5, SB-6, SB-7, SB-8, and SB-9 exhibited chloride concentrations that decreased with depth. SB-3 decreased from 5,680 mg/kg at 20 ft to 2,720 mg/kg at 75 ft, SB-5 decreased from 3,800 mg/kg at 30 ft to 2,600 mg/kg at 75 ft, SB-6 decreased from 4,240 mg/kg at 20 ft to 1,090 mg/kg at 50 ft, SB-7 decreased from 3,160 mg/kg at 20 ft to 576 mg/kg at 75 ft, SB-8 decreased from 2,240 mg/kg at 55 ft to 1,760 mg/kg at 75 ft, and SB-9 decreased from 3,040 mg/kg at 30 ft to 1,380 mg/kg at 60 ft. SB-1 increased with depth from 2,320 mg/kg at 35 ft to 6,640 mg/kg at 75 ft, SB-2 increased with depth from 2,920 mg/kg at 45 ft to 3,680 mg/kg at 75 ft, and SB-4 increased with depth from 2,000 mg/kg at 65 ft to 3,840 mg/kg at 75 ft. Laboratory readings for GRO, DRO, and BTEX showed non-detect throughout all bores, except SB-7 where the GRO was 10.6 mg/kg at 20 ft and 12.5 mg/kg at 75 ft.

On January 13th, 2011, a monitor well was installed 26 ft southeast of the former junction box site (Figure 4). As the well was being installed, ROC personnel field tested the soil for chlorides and screened in the field with a photo-ionization detector (PID). Representative samples from the well were taken to a commercial laboratory for confirmation of chloride and hydrocarbon field numbers (Appendix A). Laboratory readings showed chloride numbers of 4,480 mg/kg at 10 ft bgs, 4,160 mg/kg at 75 ft bgs, and 1,390 mg/kg at 80 ft bgs. GRO and DRO readings were non-detect in all three samples.

On March 21st, 2011, an additional five soil bores (SB-10 through SB-15) were installed at the site (Figure 3). ROC personnel field tested the soil for chlorides and screened in the field with a photo-ionization detector (PID). Representative samples from SB-11, SB-13, SB-14, and SB-15 were taken to a commercial laboratory for confirmation of chloride and hydrocarbon field numbers (Appendix A). Laboratory chloride readings significantly decreased with depth. SB-11 decreased from 1,060 mg/kg at 10 ft to 208 mg/kg at 35 ft, SB-13 decreased from 2,400 mg/kg at 5 ft to 160 mg/kg at 40 ft, SB-14 decreased from 7,360 mg/kg at 5 ft to 160 mg/kg at 40 ft, and SB-15 decreased from 688 mg/kg at 15 ft to 128 mg/kg at 30 ft. GRO and DRO readings for all laboratory samples showed non-detect.

The monitor well has been sampled quarterly since its installation (Figure 4). The most recent (October 21, 2011) groundwater samples tested 64 mg/L in the near-source well (MW-1) (Appendix B). Five quarters of monitoring well sampling data have been collected, and each sampled constituent has remained below WQCC standards.

Recommendations

Based on the activities conducted during the Investigation and Characterization phase of delineation at the BD G-16 vent site, RECS submits the following as a Corrective Action Plan:

Five quarters of monitoring well sampling show no impact to groundwater above WQCC standards; as such ROC proposes to plug and abandon the near-source well (MW-1) with a 1-3% bentonite/concrete slurry with a 3 ft concrete cap.

The site has an existing clay liner measuring 16 ft x 16 ft at 16 ft bgs. ROC proposes to place a 20-mil, reinforced poly liner at 4-5 ft bgs that will measure 96 ft x 98 ft (Figure 5). The liner will cover all the soil bore points and extend past the farthest soil bores in each direction by five feet. The liner will provide a barrier that will inhibit the downward migration of chlorides to groundwater. The soils placed above the liner will have a laboratory chloride reading no greater than 500 mg/kg and a field PID measurement below 100 ppm. Excavated soil will be evaluated for use as backfill, and any soil requiring disposal will be properly disposed of at a NMOCD approved facility. The surface soils over and surrounding the site will be prepared with soil amendments as needed and then seeded with a native vegetative mix. Vegetation above the liner will also provide a natural infiltration barrier for the site since plants capture water through their roots thereby reducing the volume of water moving through the vadose zone to groundwater.

Upon completion of the CAP work elements, we anticipate ROC will submit a written report which will include a request for "remediation termination" and the closure of the regulatory file.

ROC 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.

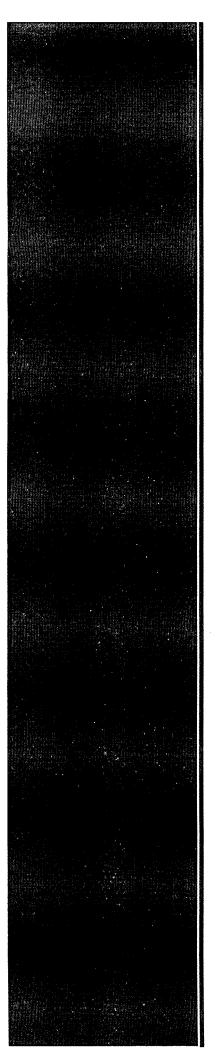
Sincerely,

ACWA

Lara Weinheimer Project Scientist RECS (575) 441-0431

Attachments:

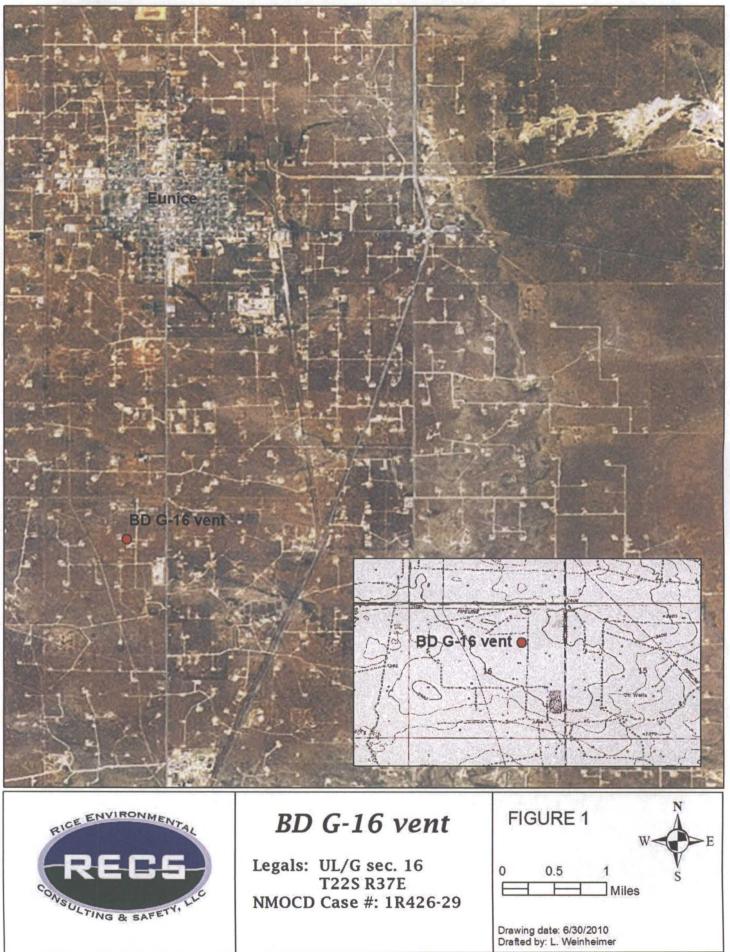
Figure 1 – Site Location map
Figure 2 – Soil Bore Installation (SB 1 – 9)
Figure 3 – Soil Bore Installation (SB 10 – 15)
Figure 4 – MW Installation and Sampling plat
Figure 5 – Proposed Liner
Appendix A – Soil Bore Logs and Laboratory Confirmation
Appendix B – Monitor Well Sampling Analysis



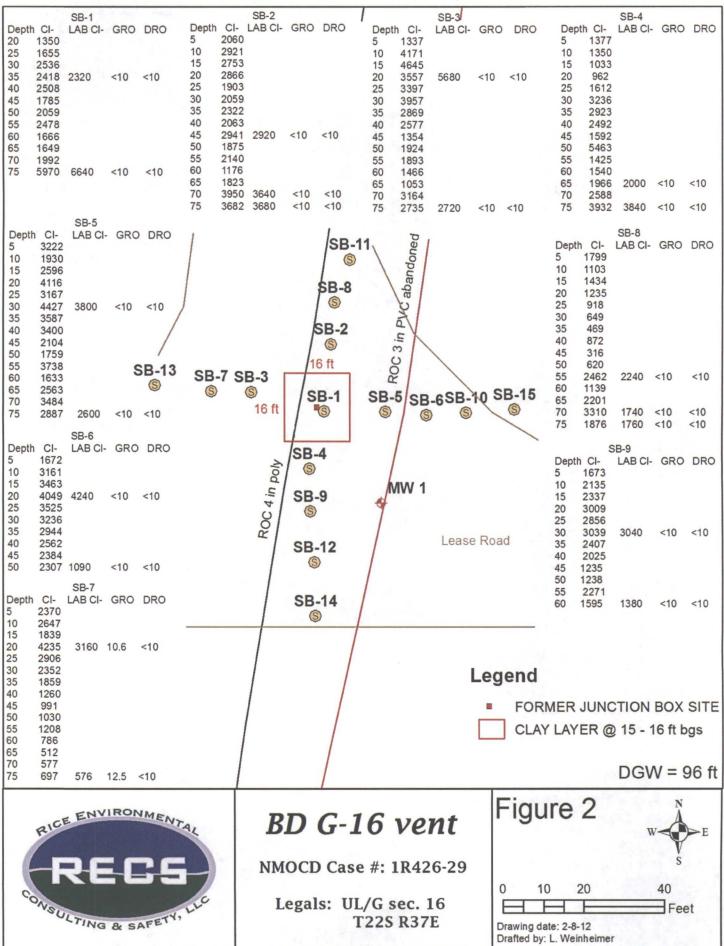
Figures

RICE Environmental Consulting and Safety (RECS) P.O. Box 5630 Hobbs, NM 88241 Phone 575.393.4411 Fax 575.393.0293

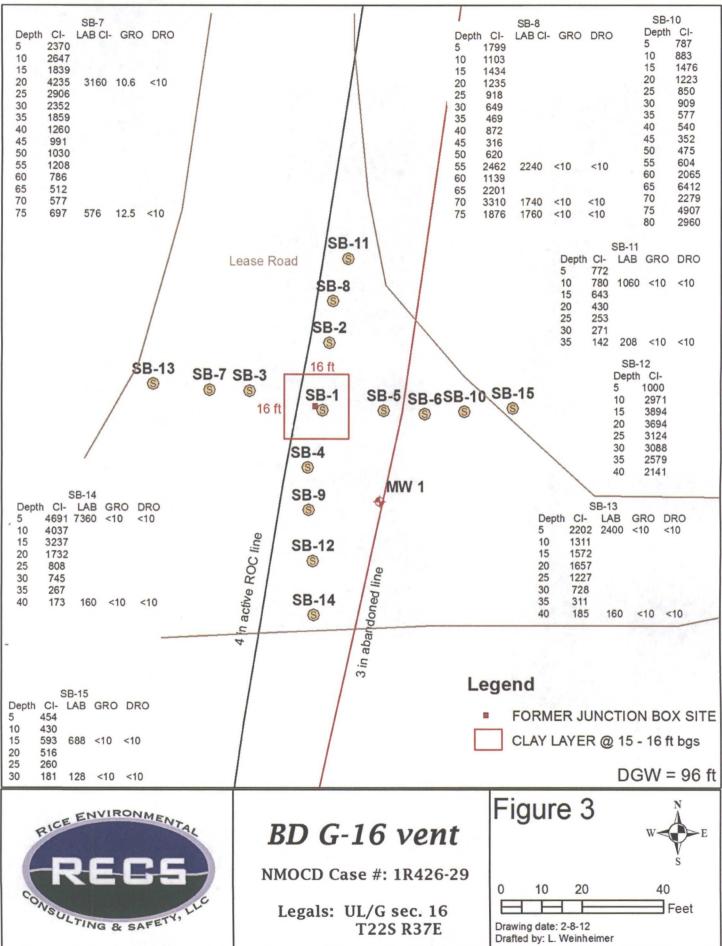
Site Location

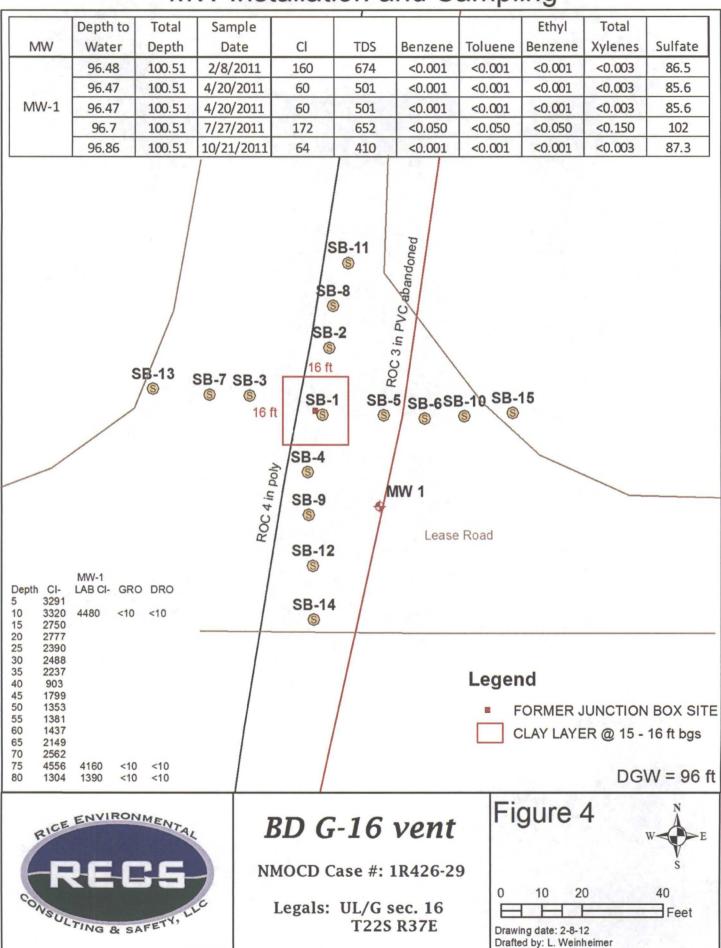


Soil Bore Installation



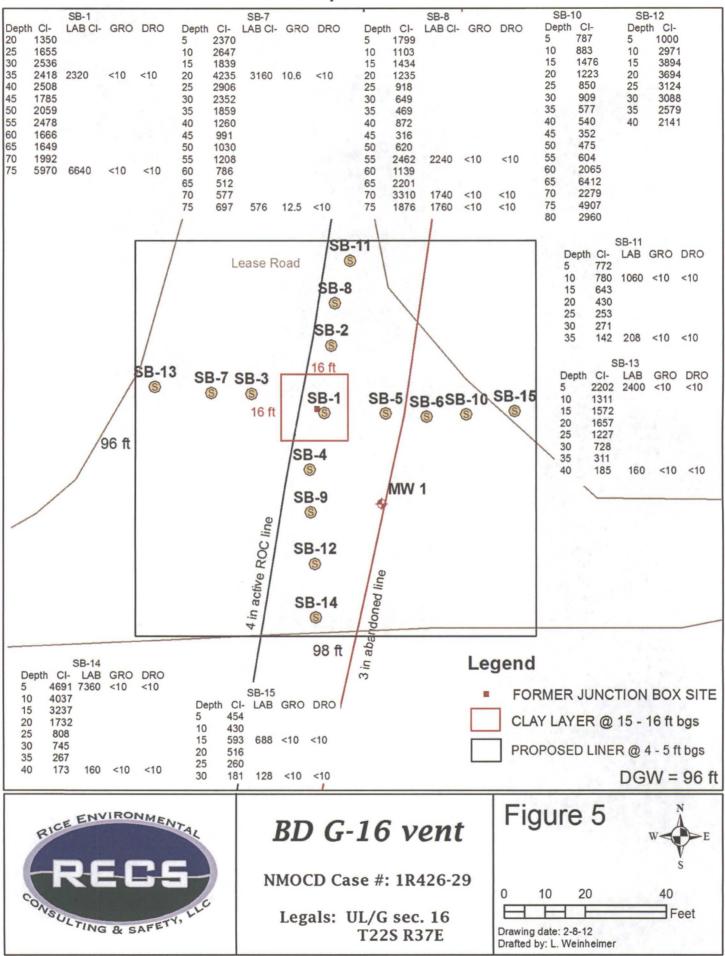
Soil Bore Information





MW Installation and Sampling

Proposed Liner



Appendix A Soil Bore Logs and Laboratory Confirmation

RICE Environmental Consulting and Safety (RECS) P.O. Box 5630 Hobbs, NM 88241 Phone 575.393.4411 Fax 575.393.0293

	ger: ller:	Harri	a Weinho ison & C nc. Drillin	ooper	SB-7 SB-3 SB-1 SB-5 SB-6		R	LECS	e de
Start End	Method Date: Date:	0.0	Air Rota 9/13/201 9/13/201	10 10	58-4 58-9		Project Nan BD G-16 ve ject Consulta	ent SB-1 Int: RECS	
Comme		= 75	Drafte		of the former junction box site. .ara Weinheimer GW = 82 ft	Lat	ation: UL/G s 32°23'36.578 g: 103°9'53.8	"N	County: LE/ State: NM
Depth (feet)	chlori field te	1000	LAB	PID	Description		Lithology	Well	Construction
					Light orangey brown very fine sand				
20 ft	135	0		0.2	with caliche particles. Dry. No odor.				
					Light orangey brown very fine sand. Dry. No odor.				
25 ft	165	5		0.2					
30 ft	253	0		1	-				
35 ft	241	8	CI- 2320	0.7					
			GRO <10 DRO <10		Orangey brown very fine sand. Slightly moist. No odor.				
40 ft	250	8		0.3					
45 ft	178	5		0.3					bentonite
50 ft	205	9		0.4					seal
					Tan very fine sand. Slightly moist. No odor.				
55 ft	247	8		0.4					
60 ft	166	6		0.3					12.41

Depth (feet)	chloride field tests	LAB	PID	Description	Lithology	Well Construction
				Orangey brown very fine sand. Slightly moist. No odor.		
65 ft	1649		0.1			
70 ft	1992		0.1			
75 ft	5970	CI- 6640 GRO	0.2			
		<10 DRO <10				

Dril Drilling Start End		Harr I	Draft	ooper ng iry 10 10 orth of t	he former junction box site. GW = 82 ft	Lo	Project Nar BD G-16 ve bject Consulta	ent ant: REC sec. 16 Ta 9"N	ECS Well ID: t SB-2 t: RECS c. 16 T22S R37E V County: LEA		
Depth (feet)	chlor field te		LAB	PID	Description		Lithology	Well	Construction		
		20									
5 ft	206	0		1.2	Light orangey brown very fine sand						
10 ft	292	1		0.1	with caliche. Dry. No odor.						
15 ft	275	3		0.3							
20 ft	286	6		0.0							
25 ft	190	3		0	Orangey brown very fine sand. Dry. No odor.						
30 ft	205	9		0.1							
35 ft	232	2		0.7	Light orangey brown very fine sand						
40 ft	206	3		0	with consolidated rock. Dry. No odor.				bentonite seal		
45 ft	294	1	CI- 2920	0							

Depth (feet)	chloride field tests	LAB	PID	Description	Lithology	Well Construction
	1	GRO				
	1	<10		Orangey brown very fine sand with		
10-11	12. 2. 2.	DRO <10		consolidated rock. Slightly moist.		
		<10		No odor.		
50 ft	1875		0			
				Light brown very fine sand. Slightly moist. No odor.		
55 ft	2140		0.2			
	1.11			Light orangey brown very fine sand. Slightly moist. No odor.		
60 ft	1176		0.2	Clightly molat. No odor.		
65 ft	1823		0.2			
				Orangey brown very fine sand.		
	7.5.7 8. 87	CI-		Slightly moist. No odor.		
70 ft	3950	3640	0.2			
	1.	GRO				
		<10 DRO				
		<10				
		CI-				
75 ft	3682	3680	0.2			
		GRO				
		<10				
		DRO				
		<10				

Drilling Start End Comme	Iler: Method Date: Date: Date: Ents: Locate TD =	Harrison Inc. D Air r 9/13/ 9/13/ ed 16 ft D 75 ft	otary 2010 2010 west of th	e former junction box site. GW = 82 ft	Loc Lat:	F	ent ant: RECS sec. 16 T22 6"N	
Depth (feet)	chlorid field tes		B PID	Description		Lithology	Well C	onstruction
5 ft	1,337		0.9	Light orangey brown very fine sand with caliche. Dry. No odor.				
10 ft	4,171		0.1					
15 ft	4,645		0.3	Light orangey brown very fine sand.				
20 ft	3,557	CI 568 GR <1 DR	0.2 0	Dry. No odor.				
25 ft	3,397	<1	0.9					
30 ft	3,957		1.8					
35 ft	2,869		0.5	•				
				Light orangey brown very fine sand with sanstone. Dry. No odor.				bentonite
40 ft	2,577		0.3	Orangey brown very fine sand with				> seal
45 ft	1,354		0.4	sandstone particles. Slightly moist. No odor.				

Depth (feet)	chloride field tests	LAB	PID	Description	Lithology	Well Construction
50 ft	1,924		0.1			
6						
55 ft	1,893		0			
				Orangey brown very fine sand. Slightly moist. No odor.		
60 ft	1,466		0.1			
65 ft	1,053		0.4			
70 ft	3,164		0.2			
75 ft	2,735	CI- 2720 GRO	0.1	이 이 성격을 많이 가 있는		
		<10 DRO <10				

Dril Drilling Start End	Driller: Harrison Inc. D Drilling Method Air r Start Date: 9/13, End Date: 9/13,		nc. Drillin Air rota 9/13/20 ⁻ 9/13/20 ⁻	ooper ng ry 10 10	SB-7 SB-3 SB-7 SB-3 SB-1 SB-5 SB-6 SB-4 SB-9	Project Name: Well III BD G-16 vent SB-4 Project Consultant: RECS				
Comme		ated 1 = 75	Drafte		e former junction box site. ara Weinheimer GW = 82 ft	Location: UL/G sec. 16 Lat: 32°23'36.44"N Long: 103°9'53.858"W			County: LEA	
Depth (feet)	chlori field te		LAB	PID	Description		Lithology	Well	Construction	
					Brown sand and caliche (excavation)	3				
5 ft	1377	7		0						
10 ft	1350)		0		1000				
					Dark Red Clay					
15 ft	1033	3		0	-					
20 ft	962			0.8		-				
25 ft	1612	2		0.8						
30 ft	3236	6		0.9	Very fine tan sand					
35 ft	2923	3		0						
40 ft	2492	2		0.1					bentonite	
45 ft	1592	2		0					seal	

Depth (feet)	chloride field tests	LAB	PID	Description	Lithology	Well Construction
1						
3.0				Very fine tan sand with caliche rubble		
50 ft	5463		0			
				Very fine white sand		
55 ft	1425		0			
60 ft	1540		0			
		CI-				
65 ft	1966	2000	0			
		GRO <10				
		DRO		reddieb brown yery fine good		
		<10		reddish brown very fine sand		
70 ft	2588		0			
75 ft	3932	CI- 3840	0			
		GRO <10				
		DRO			The second second	
		<10				

Dri	jger: Iler: Method	Harris Ir	dan Woo son & C nc. Drillin Air rotai	ooper ng	\$8-7 58-7 58-7 58-1 58-1 58-5 58-6 58-6		R	ECS	e: Well ID:	
End		9	Drafte	0 st of the	e former junction box site. ra Weinheimer GW = 82 ft	BD G-16 vent Project Consultant: R Location: UL/G sec. 16 Lat: 32°23'36.576"N Long: 103°9'53.639"W			SB-5 ECS T22S R37E County: LEA	
Depth (feet)	chlorid field te	de	LAB	PID	Description		Lithology		State: NM Construction	
5 ft	3222	2	1	0						
10 ft	1930)		0	Tan very fine sand					
15 ft	2596	5		0						
20 ft	4116	6		0	Reddish brown very fine sand with caliche rubble					
25 ft	3167	,		0						
30 ft	4427	,	CI- 3800 GRO <10	0	Tan very fine sand					
35 ft	3587	7	DRO <10	0						
40 ft	3400)		0					bentonite seal	
-					Brownish red very fine sand					
45 ft	2104			0						

Depth (feet)	chloride field tests	LAB	PID	Description	Lithology	Well Construction
100						
	1 N 100					
50 ft	1759		0			
				Light tan very fine sand		
55 ft	3738		0	Light tan voly into cana		
	1990 N.M.					
				Tan very fine sand		
60 ft	1633		0	and the second		
		-				
65 ft	2563		0			
00 11	2000	1.				
				Brownish red very fine sand		
70 ft	3484		0			
		CI-				
75 ft	2887	2600	0			
		GRO <10				
		DRO				
		<10				

Drilling Start End Comme	Method Date: Date: ents: Locat	Draft 50 ft	Cooper ing ary 10 10 ast of th	e former junction box site. ara Weinheimer GW = 82 ft	Project Nan BD G-16 ve Project Consulta	ent SB-6 ent: RECS sec. 16 T22S R37E 66" County: LEA
Depth (feet)	chlorid field tes		PID	Description	Lithology	Well Construction
5 ft	1672		0	Tan very fine sand with caliche mix		
10 ft	3161		0	Red very fine sand with caliche mix		
15 ft	3463		0			
20 ft	4049	Cl- 4240 GRO <10 DRO	0			
25 ft	3525	<10	0	Very fine tan sand		bentonite
30 ft	3236		0			seal
35 ft	2944		0			
40 ft	2562		0			
45 ft	2384		0	Very fine tan sand with caliche rubble		

Depth (feet)	chloride field tests	LAB	PID	Description	Lithology	Well Construction
50 ft	2307	CI- 1090	0	Reddish brown very fine sand		
0011	2007	GRO <10				
		DRO <10				

Dri Drilling Start End Comme	Method Date: Date: ents: Locat	Harrison & Cooper Inc. Drilling Air rotary 9/13/2010 9/13/2010 Located 28 ft west of the former junction box site. Drafted by: Lara Weinheimer TD = 75 ft GW = 82 ft				Project Name: Wa BD G-16 vent S Project Consultant: RECS Location: UL/G sec. 16 T22S R3 Lat: N32°23'36.631" Cou Long: W103°9'54.138" Stat		
Depth (feet)	chloride field test		PID	Description		Lithology	Well	Construction
5 ft	2370		0	Very fine sand with tan caliche				
10 ft	2647		0	Very fine red sand with caliche				
15 ft	1839		0	Very fine white sand with caliche				
20 ft	4235	CI- 3160 GRO	0					
25 ft	2906	10.6 DRO <10	0	Very fine tan sand with caliche rubble				
30 ft	2352	A 4	0					
35 ft	1859		0					
40 ft	1260		0	Brown to tan very fine sand with caliche rubble				bentonite seal
45 ft	991		0					

Depth (feet)	chloride field tests	LAB	PID	Description	Lithology	Well Construction
				Brown to tan very fine sand with caliche rubble		
50 ft	1030		0			
55 ft	1208		0			
				Brown fine sand		
60 ft	786		0			
65 ft	512		0			
70 ft	577		0			
75 ft	697	Cl- 576 GRO 12.5	0			
		DRO <10				

Dril Drilling Start End	ger: Iler: Method Date: Date: ents: Loc	Harr I	ed 26 ft north of the former junction box site.		the second se			Well ID: SB-8 SS		
Depth		= 75	Drafte ft	ed by: L	ara Weinheimer GW = 82 ft	Lat: 32°23'36.841"N Long: 103°9'53.781"W County State:				
(feet)	field te	sts	LAB	PID	Description	14	Lithology	weil	Construction	
					Light orangey brown very fine sand with consolidated rock. Dry. No					
5 ft	1799	9		0	odor.				i e	
10 ft	1103	3	-	0						
IUI	1100	5		0	and the second second					
					Light orangey brown very fine sand with caliche. Dry. No odor.					
15 ft	1434	4		0						
		-								
20 ft	1235	5		0						
		-			Orangey brown very fine sand. Dry.					
25 ft	918			0	No odor.					
2011	010									
	14									
30 ft	649			0						
					Orangey brown very fine sand with					
35 ft	469			0	consolidated rock. Dry. No odor.					
									bentonite	
40 ft	872			0					seal	

chloride field tests	LAB	PID	Description	Lithology	Well Construction
				and the second	
			. No odor.		
620		0			
	-		Light orangey tan very fine sand		
S. A. Maria	01		Slightly moist. No odor.		
2462	2240	0			
	GRO			Sec. Sec. Sec.	
14.00 gr (DRO		Light orangey brown very fine sand.		
Contraction of the second	<10		Slightly moist. No odor.		
1139		0			
State In					
2201		0			
			and the second second		
st.					
0010	CI-		Slightly moist. No odor.		
3310		0.2			
	<10				
1070	CI-	-	1		
18/6		0			
	<10				
	DRO <10				
	field tests 620 2462 1139	field tests LAB 620 - 620 - 620 - 620 - 620 - 620 - 620 - 620 - 620 - 620 - 620 - 620 - 620 - 620 - 620 - 620 - 620 - 620 - 680 - 1139 - 2201 - 2201 - 2201 - 3310 1740 6R0 -<10	field tests LAB PID I I I 620 0 0 620 0 I 620 0 I 620 I 0 620 I 0 620 I I 2462 CI- 2240 0 GRO <10	field testsLABPIDDescriptionIIIIIIIIII620006200IIIIIIIIII246222400GROIIIIIIIBROIII11390II <t< td=""><td>field testsLABPIDDescriptionLithologyII<</td></t<>	field testsLABPIDDescriptionLithologyII<

Dri	iger: Iler: Method	Harr I	a Weinh ison & C nc. Drillin Air rota	ooper ng	SB-7 SB-3 SB-7 SB-3 SB-1 SB-5 SB-6 SB-4		F	RECS	Well ID:		
Start End	Date: Date:	0.00	9/14/20 ⁻ 9/14/20 ⁻	10 10	the former junction box site.	BD G-16 vent Project Consultant: REC Location: UL/G sec. 16 T2			SB-9		
Depth (feet)	chlori field te		LAB	PID	Description		Lithology	Well	Construction		
					Light brown very fine sand with						
5 ft	1673	3		0	. caliche. Dry. No odor.						
					Light orangey brown very fine sand						
10 ft	213	5		0	with caliche particles. Dry. No odor.						
	210	<u> </u>									
15 ft	233	7		0							
15 11	200	/		0	Light orangey brown very fine sand						
	-				with consolidated rock. Dry. No odor.						
20 ft	300	9		0							
	3.4	174	· ·								
25 ft	285	6		0.1					8		
1.1					Light orangey brown very fine sand. Dry. No odor.						
30 ft	303	9	CI- 3040 GRO	0.1							
			<10 DRO		Orangey brown very fine sand.				bentonite		
35 ft	240	7	<10	0.2	Slightly moist. No odor.				seal		
					Light orangey brown very fine sand.						
40.4	000	_			Slightly moist. No odor.						
40 ft	202	5		0	Light orangey brown very fine sand						
					with consolidated rock. Slightly moist. No odor.						
45 ft	123	5		0.2							

Depth (feet)	chloride field tests	LAB	PID	Description	Lithology	Well Construction
				Orangey brown very fine sand with		
				consolidated rock. Slightly moist.		
50 ft	1238		0.1	No odor.		
55 ft	2271		0			
		e				
				Light orangey brown very fine sand. Slightly moist. No odor.		
60 ft	1595	CI- 1380	0			
		GRO <10				
		DRO <10				

lethod: e: nts: All sam former jund	3/21/201 3/21/201 ples are f ction box s	y 1 1 rom cuttin site. No la	bs taken for this soil bore. Weinheimer	Project Name: Well ID: BD G-16 vent SB-10 Project Consultant: RECS SB-10 Location: UL/G sec. 16 T22S R37E Lat: 32°23'36.566"N County: LEA Long: 103°9'53.402"W State: NM				
chloride	LAR	PID	Description				onstruction	
787 883		1.9	Tan silty fine caliche					
1476		1.9	Tan fine silty sand					
1223		1.6	r an into sity sand	_				
850		1.9						
909		1.7						
577		1.5	Tan to red fine silty sand					
540		0.9					bentonite	
	former jund TD = 8 chloride field tests 787 883 1476 1223 850 850 909 909	a: 3/21/201 3/21/201 3/21/201 1/201 1/201 3/21/201 3/21/201 1/20	3/21/2011 Ints: All samples are from cutting former junction box site. No law DRAFTED BY: L. TD = 80 ft Chloride field tests LAB PID 787 1.9 787 1.9 787 1.9 883 1.7 1476 1.9 1223 1.6 850 1.9 909 1.7 909 1.7 577 1.5 577 1.5	lethod:Air rotary 3/21/20113/21/20113/21/20113/21/20113/21/20113/21/20113/21/2011set. 3/23/21/2011set. 3/2Set. 4set. 3/2Set. 4former junction box site. No labs taken for this soil bore. DRAFTED BY: L. Weinheimer GW = 82 ftTD = 80 ftGW = 82 ftChloride field testsLABPIDDescription7871.97871.97871.97871.97871.97871.97871.97871.97871.97871.97871.97881.7114761.912231.68501.99091.79091.71.5Tan to red fine silty sand5771.5	Air rotary 3/21/2011 ##4-4 ##5-10 Pro 3/21/2011 3/21/2011 ##4-4 ##5-10 Pro 3/21/2011 3/21/2011 ##5-10 Pro Pro 13/21/2011 10/2014 ##5-10 Pro Description Loc Inst: All samples are from cuttings. Located 35 ft east of the former junction box site. No labs taken for this soil bore. DRAFTED BY: L. Weinheimer Lat Loc Intervention Intervention <td>Air rotary Bathod: Air rotary 3/21/2011 3/21/2011 Bathod: 3/21/2011 3/21/2011 Bathod: article 3/21/2011 Bathod: article 3/21/2011 Bathod: article DRAFTED BY: L. Weinheimer Location: UL/G s DRAFTED BY: L. Weinheimer GW = 82 ft Location: UL/G s chloride LAB PID Description Litthology 787 1.9 Tan silty fine caliche Lithology 787 1.9 Tan silty fine caliche Image: Start Start</td> <td>Air rotary 3/21/2011 3/21</td>	Air rotary Bathod: Air rotary 3/21/2011 3/21/2011 Bathod: 3/21/2011 3/21/2011 Bathod: article 3/21/2011 Bathod: article 3/21/2011 Bathod: article DRAFTED BY: L. Weinheimer Location: UL/G s DRAFTED BY: L. Weinheimer GW = 82 ft Location: UL/G s chloride LAB PID Description Litthology 787 1.9 Tan silty fine caliche Lithology 787 1.9 Tan silty fine caliche Image: Start	Air rotary 3/21/2011 3/21	

Depth (feet)	chloride field tests	LAB	PID	Description	Lithology	Well Construction
45 ft	352		1.9			
50 ft	475		1.9			
55 ft	604		1.9	Too to brown find allty could with array		
60 ft	2065		2.5	Tan to brown fine silty sand with grey gravel		
65 ft	6412		1.7			
70 ft	2279		1.6	Yellowish very fine sand		
75 ft	4907		0			
				Brownish red very fine sand (moist)		
80 ft	2960		0			

Logger: Driller:	F		dan Woo n & Coop		\$B-11 \$B-8 \$B-2 \$B-13\$\$B-7\$\$B-3 \$B-13\$\$B-7\$\$B-6 \$B-15 \$B-4 \$B-10		F	RECS	in the
Drilling M Start Dat			Air rotary 3/21/201		SB-9 SB-9 SB-12 SB-14 SB-14		bject Name: BD G-16 ve	ent	Well ID: SB-11
End Date Comme	ents: All s	= 35 ft GW = 82 ft Long: 103°9'53.732"W S de sts LAB PID Description Lithology Well Cor							
Depth (feet)	chlorid field te		LAB	PID	Description		Lithology	Well	Construction
					Tan very fine caliche				
5 ft	772			5.9		-			
10 ft	780	_	CI- 1060	6.1	Tan very fine sand				
			GRO <10 DRO		Tan well consolidated caliche				
15 ft	643		<10	4.1					
20 ft	430			4.7					bentonite
25 ft	253			6.9	Brownish red very fine sand				
30 ft	271			7.7					
35 ft	142		Cl- 208	5.1	Tan to red fine sand with some caliche				
			GRO <10 DRO <10						

Logger: Driller:	н		dan Woo n & Cooj		SB-11 SB-2 SB-13SB-75B-3 SB-15SB-6 SB-4 SB-10		CON	REC	S STATUC	
Drilling M Start Dat End Date	e:		Air rotary 3/21/201 3/21/201	1	SB-12 SB-14	Project Name: BD G-16 vent Project Consultant: RE			Well ID: SB-12	
	ne former		tion bo	x site.	uttings. Located 37 ft south of No labs taken for this soil bore. /: L. Weinheimer GW = 82 ft	Location: UL/G sec. 16 T22S R37E Lat: 32°23'36.218"N County: L Long: 103°9'53.845"W State: NM				
Depth (feet)	chlorid field te		LAB	PID	Description		Lithology	Well Construction		
					Brown fine sand and caliche					
5 ft	1,000	0		0.0		100				
10 ft	2,971	1		0.0	Tan very fine silty sand with caliche					
15 ft	3,894	4		0.0		Direction of the				
20 ft	3,694	4		0.0					bentonite	
25 ft	3,124	4		0.0					seal	
30 ft	3,088	8		0.0	Light brown very fine silty sand					
35 ft	2,579	9		0.0						
40 ft	2,141	1		0.0		10 m				

Logger: Driller:			rdan Woo on & Cooj		SB-13 SB-75B-3 SB-13SB-75B-3 SB-15B-55B-6 SB-10 SB-10		F	RECS	and a state	
Drilling I Start Dat End Date	te: e:		Air rotar 3/21/201 3/21/201	1	5B-9 5B-12 5B-14 5B-14	Pro	bject Name: BD G-16 ve bject Consulta	ent ant: RECS		
Comme		samp) = 40	the fo	rmer jur	ttings. Located 42 ft west of action box site. L. Weinheimer GW = 82 ft	Location: UL/G sec. 16 T22S R37E Lat: 32°23'36.647"N County: LE/ Long: 103°9'54.298"W State: NM				
Depth (feet)	chlor field t		LAB	PID	Description		Lithology	Well	Construction	
		1								
5 ft	220)2	CI- 2400 GRO <10 DRO	0.3	Tan silty caliche					
10 ft	131	1	<10	0.6						
					Tan fine sand and caliche					
15 ft	157	72		0.3						
20 ft	165	57		0.2					bentonite seal	
25 ft	122	27		0.2	Tan to red fine sand with some					
30 ft	72	8		0.1	caliche					
35 ft	31	1		0.1						
40 ft	18	5	CI- 160 GRO	0.1						
			<10 DRO <10							

Logger: Driller:			dan Woo n & Cooj		SB-11 SB-8 SB-2 SB-13SB-75B-3 SB-15B-55B-6 SB-15		R	ECS	tree to the test of test o			
Drilling M Start Dat End Date	e: e:	3/21/2011 3/21/2011			3/21/2011 3/21/2011 3/21/2011			Project Name: Well ID: BD G-16 vent SB-14 Project Consultant: RECS				
Comme		sampl	the fo	rmer jui	uttings. Located 50 ft south of nction box site. : L. Weinheimer GW = 82 ft	La	Location: UL/G sec. 16 T22S R37E Lat: 32°23'36.085"N County: L8 Long: 103°9'53.847"W State: NM					
Depth (feet)	chlor field to	ide	LAB	PID	Description		Lithology		Construction			
		-			Tan to red silty caliche							
5 ft	469	1	CI- 7360 GRO	0.3								
			<10 DRO <10		Red sand and caliche							
10 ft	403	7		0.2		-	<i></i>					
15 ft	323	7		0.2								
					Tan to red fine sand with caliche							
20 ft	173	2		0.2					> bentonite			
25 ft	808	2		0.6					seal			
2011				0.0								
30 ft	74	5		0.4								
						1						
35 ft	267	7		0.5	Reddish brown very fine sand							
40 ft	173	3	CI- 160	0.5								
			GRO <10 DRO									
			<10						IJ			

Logger: Driller:		Jordan Woodfin Harrison & Cooper, Inc.			SB-11 SB-8 SB-2 SB-13SB-7SB-3 SB-15B-5SB-6 SB-15	RECS SONGULTING & SAFETYI LCC				
Drilling I	Method:		Air rotar	y	SB-4 SB-10 SB-9 mv 1	Project Name: Well ID:				
Start Date:		3/21/2011			8 SB-12		BD G-16 vent SB-15			
End Date: 3/21/2011					SB-14		Project Consultant: RECS			
Comments: All samples are from cuttings. Located 47 ft east of the former junction box site. DRAFTED BY: L. Weinheimer TD = 30 ft GW = 82 ft							Location: UL/G sec. 16 T22S R37E Lat: 32°23'36.579"N County: LEA Long: 103°9'53.27"W State: NM			
Depth (feet)	chlo field t		LAB	PID	Description	1	Lithology	1	Construction	
5 ft	45	4		0.6	Tan fine caliche					
0 11		-			Tan very fine sand					
10 ft	430			0.3						
			CI-		Tan very fine sand with caliche					
15 ft	59	3	688 GRO <10	0.5						
			DRO <10		Tan very fine sand with caliche				seal	
20 ft	51	6		0.6		-				
25 ft	26	0		0.5	Light brown very fine sand					
30 ft	18	1	CI- 128	0.6						
30 11	18	1	GRO <10 DRO	0.0						
			<10							

Logger: Driller:		Jordan Woo arrison & Coo	per, Inc.	58-7 SB-3 58-7 SB-3 58-7 SB-3 58-7 SB-4 58-6 58-6		- Sana	RECS	
Drilling M Start Date End Date	e:	Air rotar 1/13/201 1/13/201	1	SB-4 SB-9 © MW 1		oject Name: BD G-16 ve oject Consulta	ent ant: RECS	/ell ID: MW-1
Comme	ents: Locat	DRAF		of the former junction box site. L. Weinheimer GW = 82 ft	La	t: 32°23'36.358	8"N	County: LEA
Depth (feet)	chloride field test		PID	Description		Lithology	1	State: NM onstruction
5 ft	3291							
				Tan very fine silty sand				
10 ft	3320	CI- 4480 GRO						
		<10 DRO <10						
15 ft	2750							
							in. PVC	
20 ft	2777						2 ir	
25 ft	2390							
25 11	2390							
30 ft	2488			Light brown very fine silty sand				5.4
35 ft	2237							bentonite
40 ft	903							seal
			a second					

Depth (feet)	chloride field tests	LAB	PID	Description	Lithology	Well Construction
45 ft	1799					
50 ft	1353					
55 ft	1381	3				
60 ft	1437					
65 ft	2149			Tannish yellow very fine silty sand		
70 ft	2562					
75 ft	4556	CI- 4160 GRO		Brown very fine moist sand		
		<10 DRO <10 CI-				
80 ft	1304	1390 GRO <10 DRO				
85 ft		<10		NO SAMPLES TAKEN		sand
						pack
90 ft						
95 ft						
97 ft						J

September 20, 2010

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

RE: BD G-16 VENT

Enclosed are the results of analyses for samples received by the laboratory on 09/14/10 9:16.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021Benzene, Toluene, Ethyl Benzene, and Total XylenesMethod SW-846 8260Benzene, Toluene, Ethyl Benzene, and Total XylenesMethod TX 1005Total Petroleum Hydorcarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

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 (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,

Celux BKeine

Celey D. Keene Lab Director/Quality Manager

Analytical Results For:

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

Received:	09/14/2010	Sampling Date:	09/13/2010
Reported:	09/20/2010	Sampling Type:	Soil
Project Name:	BD G-16 VENT	Sampling Condition:	** (See Notes)
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	BD G-16 VENT		

Sample ID: SB-1 @ 35' (H020841-01)

Chloride, SM4500CI-B	mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2320	16.0	09/14/2010	ND	448	112	400	3.51	
TPH 8015M	mg/kg		Analyzed By: AB						A-01a
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/17/2010	ND	159	79.5	200	1.65	
DRO >C10-C28	<10.0	10.0	09/17/2010	ND	166	82.9	200	1.18	
Surrogate: I-Chlorooctane	89.3	% 70-130	1						
Surrogate: 1-Chlorooctadecane	134	% 70-130							

Sample ID: SB-1 @ 75' (H020841-02)

Chloride, SM4500CI-B	mg/kg		Analyzed By: HM		<u> </u>				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6640	16.0	09/14/2010	ND	448	112	400	3.51	
TPH 8015M	mg/kg		Analyzed By: AB						A-01a
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/17/2010	ND	159	79.5	200	1.65	
DRO >C10-C28	<10.0	10.0	09/17/2010	ND	166	82.9	200	1.18	
Surrogate: 1-Chlorooctane	96.5	% 70-130							
Surrogate: 1-Chlorooctadecane	152	% 70-130							

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received: Reported:	09/14/2010 09/20/2010	Sampling Date: Sampling Type:	09/13/2010 Soil
Project Name:	BD G-16 VENT	Sampling Condition:	** (See Notes)
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	BD G-16 VENT		

Sample ID: SB-2 @45' (H020841-03)

Chloride, SM4500CI-B	mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2920	16.0	09/14/2010	ND	448	112	400	3.51	
TPH 8015M	mg/kg		Analyzed By: AB						A-01a
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/17/2010	ND	159	79.5	200	1.65	
DRO >C10-C28	<10.0	10.0	09/17/2010	ND	166	82.9	200	1.18	
Surrogate: 1-Chlorooctane	92.2	% 70-130							
Surrogate: 1-Chlorooctadecane	131	% 70-130	I						

Sample ID: SB-2 @ 70' (H020841-04)

Chloride, SM4500CI-B	mg/kg		Analyze	Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3640	16.0	09/14/2010	ND	448	112	400	3.51	
TPH 8015M	mg/kg		Analyzed By: AB						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/17/2010	ND	159	79.5	200	1.65	
DRO >C10-C28	<10.0	10.0	09/17/2010	ND	166	82.9	200	1.18	
Surrogate: 1-Chlorooctane	87.3	% 70-130							
Surrogate: I-Chlorooctadecane	117	% 70-130							

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received:	09/14/2010	Sampling Date:	09/13/2010
Reported:	09/20/2010	Sampling Type:	Soil
Project Name:	BD G-16 VENT	Sampling Condition:	** (See Notes)
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	BD G-16 VENT		

Sample ID: SB- 2 @ 75' (H020841-05)

Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3680	16.0	09/14/2010	ND	448	112	400	3.51	
ТРН 8015М	mg/kg		Analyzed By: AB						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/17/2010	ND	159	79.5	200	1.65	
DRO >C10-C28	<10.0	10.0	09/17/2010	ND	166	82.9	200	1.18	
Surrogate: 1-Chlorooctane	97.4	% 70-130	1					-	
Surrogate: 1-Chlorooctadecane	122	% 70-130	1						

Sample ID: SB-3 @ 15' (H020841-06)

Chloride, SM4500CI-B	mg/kg		Analyze	Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	5680	16.0	09/14/2010	ND	448	112	400	3.51	
TPH 8015M	mg/kg		Analyzed By: AB						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/17/2010	ND	159	79.5	200	1.65	
DRO >C10-C28	<10.0	10.0	09/17/2010	ND	166	82.9	200	1.18	
Surrogate: 1-Chlorooctane	87.0	% 70-130							
Surrogate: 1-Chlorooctadecane	99.1	% 70-130							

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Celey D. Keene, Lab Director/Quality Manager

Page 4 of 12

Analytical Results For:

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

Received:	09/14/2010	Sampling Date:	09/13/2010
Reported:	09/20/2010	Sampling Type:	Soil
Project Name:	BD G-16 VENT	Sampling Condition:	** (See Notes)
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	BD G-16 VENT		

Sample ID: SB-3 @ 75' (H020841-07)

Chloride, SM4500Cl-B	mg/	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2720	16.0	09/14/2010	ND	448	112	400	3.51	
TPH 8015M	mg/	'kg	Analyze	d By: AB					A-01
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/17/2010	ND	159	79.5	200	1.65	
DRO >C10-C28	<10.0	10.0	09/17/2010	ND	166	82.9	200	1.18	
Surrogate: 1-Chlorooctane	88.1	% 70-130							
Surrogate: 1-Chlorooctadecane	137 9	% 70-130							

Sample ID: SB #4 @ 65' (H020841-08)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2000	16.0	09/14/2010	ND	448	112	400	3.51	
ТРН 8015М	mg,	/kg	Analyze	d By: AB					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/17/2010	ND	159	79.5	200	1.65	
DRO >C10-C28	<10.0	10.0	09/17/2010	ND	166	82.9	200	1.18	
Surrogate: 1-Chlorooctane	86.2	% 70-130							
Surrogate: 1-Chlorooctadecane	130	% 70-130							

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

	Sampling Date:	09/13/2010
	Sampling Type:	Soil
- ·	Sampling Condition:	** (See Notes)
	Sample Received By:	Jodi Henson
-		
I	іт [.] і іт	IT Sampling Condition: Sample Received By:

Sample ID: SB #4 @ 75' (H020841-09)

Chloride, SM4500CI-B	mg/	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3840	16.0	09/14/2010	ND	448	112	400	3,51	
TPH 8015M	mg/	′kg	Analyze	d By: AB					A-01a
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/17/2010	ND	159	79.5	200	1.65	
DRO >C10-C28	<10.0	10.0	09/17/2010	ND	166	82.9	200	1.18	
Surrogate: I-Chlorooctane	86.1	% 70-130	•						
Surrogate: 1-Chlorooctadecane	133	% 70-130	1						

Sample ID: SB #5 30' (H020841-10)

Chloride, SM4500CI-B	mg/	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3800	16.0	09/14/2010	ND	448	112	400	3.51	
TPH 8015M	mg/	/kg	Analyze	d By: AB					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/17/2010	ND	159	79.5	200	1.65	
DRO >C10-C28	<10.0	10.0	09/17/2010	ND	166	82.9	200	1.18	
Surrogate: 1-Chlorooctane	86.7	% 70-130							
Surrogate: 1-Chlorooctadecane	126 9	% 70-130							

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Celey D. Keene, Lab Director/Quality Manager

Page 6 of 12

Analytical Results For:

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

Received:	09/14/2010	Sampling Date:	09/13/2010
Reported:	09/20/2010	Sampling Type:	Soil
Project Name:	BD G-16 VENT	Sampling Condition:	** (See Notes)
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	BD G-16 VENT		

Sample ID: SB #5 75' (H020841-11)

Chloride, SM4500CI-B	mg/	′kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2600	16.0	09/14/2010	ND	448	112	400	3.51	
TPH 8015M	mg/	/kg	Analyze	d By: AB					A-01a
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/17/2010	ND	159	79.5	200	1.65	
DRO >C10-C28	<10.0	10.0	09/17/2010	ND	166	82.9	200	1.18	
Surrogate: 1-Chlorooctane	85.3	% 70-130							
Surrogate: 1-Chlorooctadecane	145 9	% 70-130							

Sample ID: SB #6 20' (H020841-12)

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4240	16.0	09/14/2010	ND	416	104	400	3.77	
TPH 8015M	mg	/kg	Analyze	d By: AB					A-01a
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/17/2010	ND	159	79.5	200	1.65	
DRO >C10-C28	<10.0	10.0	09/17/2010	ND	166	82.9	200	1.18	
Surrogate: 1-Chlorooctane	87.5	% 70-130							
Surrogate: 1-Chlorooctadecane	137	% 70-130							

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received:	09/14/2010	Sampling Date:	09/13/2010
Reported:	09/20/2010	Sampling Type:	Soil
Project Name:	BD G-16 VENT	Sampling Condition:	** (See Notes)
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	BD G-16 VENT		

Sample ID: SB #6 50' (H020841-13)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1090	16.0	09/14/2010	ND	416	104	400	3.77	
TPH 8015M	mg,	/kg	Analyze	d By: AB					A-01a
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/17/2010	ND	159	79.5	200	1.65	
DRO >C10-C28	<10.0	10.0	09/17/2010	ND	166	82.9	200	1.18	
Surrogate: 1-Chlorooctane	87.5	% 70-130	1						
Surrogate: 1-Chlorooctadecane	134	% 70-130	ł						

Sample ID: SB #7 20' (H020841-14)

Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3160	16.0	09/14/2010	ND	416	104	400	3.77	
TPH 8015M	mg,	/kg	Analyze	d By: AB					A-01a
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	10.6	10.0	09/17/2010	ND	159	79.5	200	1.65	
DRO >C10-C28	<10.0	10.0	09/17/2010	ND	166	82.9	200	1.18	
Surrogate: 1-Chlorooctane	88. <i>9</i>	% 70-130							
Surrogate: 1-Chlorooctadecane	134	% 70-130							

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received:09/14/2010Reported:09/20/2010Project Name:BD G-16 VENTProject Number:NONE GIVENProject Location:BD G-16 VENT

Sampling Date:09/13/2010Sampling Type:SoilSampling Condition:** (See Notes)Sample Received By:Jodi Henson

Sample ID: SB #7 75' (H020841-15)

Chloride, SM4500CI-B	mg/	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	576	16.0	09/14/2010	ND	416	104	400	3.77	
TPH 8015M	mg/	/kg	Analyze	d By: AB					A-01a
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	12.5	10.0	09/17/2010	ND	159	79.5	200	1.65	
DRO >C10-C28	<10.0	10.0	09/17/2010	ND	166	82.9	200	1.18	
Surrogate: 1-Chlorooctane	88.0	% 70-130							
Surrogate: 1-Chlorooctadecane	153 9	% 70-130							

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Celey D. Keene, Lab Director/Quality Manager

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PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

A-01a	Surrogate outside historical limits.
A-01	Surrogate outside historical limits
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. Keene, Lab Director/Quality Manager

Page 10 of 12

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

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NEED SAMPLES BACK, PLEASE

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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 Operating Company										LL TO	illitijsninstipi)	j:		· • • • • • • • • • • • • • • • • • • •	<u> </u>		Vei	<u></u>					,
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Project Name:	BD 67-16 Ver	5		ستنبسن		City:				SS.			T	U.S.			i.							
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Page 12 of 12

September 20, 2010

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

RE: BD G-16 VENT

Enclosed are the results of analyses for samples received by the laboratory on 09/14/10 16:10.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021Benzene, Toluene, Ethyl Benzene, and Total XylenesMethod SW-846 8260Benzene, Toluene, Ethyl Benzene, and Total XylenesMethod TX 1005Total Petroleum Hydorcarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

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 (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,

Celux D. Keine

Celey D. Keene Lab Director/Quality Manager

Analytical Results For:

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

Received:	09/14/2010	Sampling Date:	09/14/2010
Reported:	09/20/2010	Sampling Type:	Soil
Project Name:	BD G-16 VENT	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	BD G-16 VENT		

Sample ID: SB - 8 @ 55' (H020851-01)

Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: HM			·		
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2240	16.0	09/16/2010	ND	416	104	400	3.77	
TPH 8015M	mg,	/kg	Analyze	d By: AB					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/18/2010	ND	165	82.5	200	2.83	
DRO >C10-C28	<10.0	10.0	09/18/2010	ND	164	82.1	200	0.607	
Surrogate: 1-Chlorooctane	90.4	% 70-130							
Surrogate: 1-Chlorooctadecane	124	% 70-130							
		2.1							

Sample ID: SB - 8 @ 70' (H020851-02)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1740	16.0	09/16/2010	ND	416	104	400	3.77	
TPH 8015M	mg,	/kg	Analyze	d By: AB		<u>.</u>			
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/18/2010	ND	165	82.5	200	2.83	
DRO >C10-C28	<10.0	10.0	09/18/2010	ND	164	82.1	200	0.607	
Surrogate: 1-Chlorooctane	91.8	% 70-130							
Surrogate: 1-Chlorooctadecane	125	% 70-130							

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Celey D. Keene, Lab Director/Quality Manager

Page 2 of 6

Analytical Results For:

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

Received:	09/14/2010	Sampling Date:	09/14/2010
Reported:	09/20/2010	Sampling Type:	Soil
Project Name:	BD G-16 VENT	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	BD G-16 VENT		

Sample ID: SB - 8 @ 75' (H020851-03)

Chloride, SM4500Cl-B	mg/	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	8S	% Recovery	True Value QC	RPD	Qualifier
Chloride	1760	16.0	09/16/2010	ND	416	104	400	3.77	
TPH 8015M	mg/	'kg	Analyze	d By: AB					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/18/2010	ND	165	82.5	200	2.83	
DRO >C10-C28	<10.0	10.0	09/18/2010	ND	164	82.1	200	0.607	
Surrogate: 1-Chlorooctane	92.2	% 70-130							
Surrogate: 1-Chlorooctadecane	114 9	% 70-130							

Sample ID: SB - 9 @ 30' (H020851-04)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3040	16.0	09/16/2010	ND	416	104	400	3.77	
TPH 8015M	mg/kg		Analyzed By: AB						S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/18/2010	ND	165	82.5	200	2.83	
DRO >C10-C28	<10.0	10.0	09/18/2010	ND	164	82.1	200	0.607	
Surrogate: 1-Chlorooctane	91.9	% 70-130					, , , , , , , , , , , , , , , , ,		
Surrogate: I-Chlorooctadecane	134	% 70-130							

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Page 3 of 6

Analytical Results For:

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

Received:	09/14/2010	Sampling Date:	09/14/2010
Reported:	09/20/2010	Sampling Type:	Soil
Project Name:	BD G-16 VENT	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	BD G-16 VENT		

Sample ID: SB - 9 @ 60' (H020851-05)

Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1380	16.0	09/16/2010	ND	464	116	400	3.51	
TPH 8015M	mg/kg		Analyzed By: AB						S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/18/2010	ND	165	82.5	200	2.83	
DRO >C10-C28	<10.0	10.0	09/18/2010	ND	164	82.1	200	0.607	
Surrogate: 1-Chlorooctane	94.1	% 70-130							
Surrogate: I-Chlorooctadecane	143	% 70-130	1						

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Celey D. Keene, Lab Director/Quality Manager

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
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. Keene, Lab Director/Quality Manager

Page 5 of 6

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: Rice Operating Company. BILL TO ANALYSIS REQUEST Project Manager: Hack Conder P.O. #: Address: 122 West Taylor Čòmpany: Complete Cations/Anions City: Hobbs State: NM Zip: 88240 Attn: Fax #: 397-1471 Phone #: 393-9174 Address: Project Owner: \geq Project #: City: HdT Chlorides TPH 8015 C=18 8.0 Ne St. Project Name: State: Zip: BTEX Project Location: Ser. Texas Phone #: Fax #: Sampler Name: Lara Weinheimer. FOR LAB USE ONLY MATRIX PRESERV SAMPLING C (G)RAE OR (C)OMP CONTAINERS GROUNDWATE NÀSTEWATER Sample I.D. SLUDGE: OTHER: ACID/BASE: Lab I.D. ICE//COOF OTHER: SOIL ē DATE TIME H20651 10-9° 5.5 Ż 10. 12: 35 Print the go 1 Ż . تركي 1 2 1819.8 10 ż 10 19.99 3 123 Tr. ľ. Ĵ, À 1 53.6 行的官臣 تمر Υ. 1 \mathcal{I} 36-9 30 1:22 P. le ÅT Ň ÷ 4 \$ 1 5 85 -S. Cast 17 1:57 * تحقی 4

PLEASE NOTE: Listely and Damages: Cardwal's failed y and effects exclusive remark for any claim aiking whether have in contract or part shall be juncted to the automatical by the cleant in the analysis. All claims including these for negligence and my office cause whiteover that be deemed wared unless made in writing and received by Cardmal within 30 tays after completion of the applicable: service, in the event shall cardinal be lighter for includents or conservational damapes (including whether have

althoutes or successors arising out of or related to the performan	de ut services hereunder by C	ardinal, regardless of whether such claim is based upon any of the above stated re	soons or otherwise,
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T Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476



March 28, 2011

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

RE: BD G-16 VENT (SOIL)

Enclosed are the results of analyses for samples received by the laboratory on 03/22/11 8:00.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydorcarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

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 (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,

Celey 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:	03/22/2011	Sampling Date:	03/21/2011
Reported:	03/28/2011	Sampling Type:	Soil
Project Name:	BD G-16 VENT (SOIL)	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SB 11 @ 10 FT. (H100544-01)

Chloride, SM4500CI-B mg/kg Analyzed By: HM Analyte Result Reporting Limit Analyzed Method Blank BS % Recovery True Value QC RPD Qualifier Chloride 1060 16.0 03/23/2011 ND 432 108 400 3.77 TPH 8015M Analyzed By: AB mg/kg Analyte Result Reporting Limit Analyzed True Value QC RPD Qualifier Method Blank BS % Recovery GRO C6-C10 <10.0 10.0 03/25/2011 ND 214 107 200 2.22 DRO >C10-C28 <10.0 10.0 03/25/2011 ND 216 108 200 3.48 Surrogate: 1-Chlorooctane 105 % 70-130 Surrogate: 1-Chlorooctadecane 101 % 70-130

Sample ID: SB 11 @ 35 FT. (H100544-02)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	03/23/2011	ND	432	108	400	3.77	
TPH 8015M	mg.	/kg ·	Analyze	d By: AB					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	03/25/2011	ND	214	107	200	2.22	
DRO >C10-C28	<10.0	10.0	03/25/2011	ND	216	108	200	3.48	
Surrogate: 1-Chlorooctane	107	% 70-130							
Surrogate: 1-Chlorooctadecane	101	% 70-130							

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Celeg 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:	03/22/2011	Sampling Date:	03/21/2011
Reported:	03/28/2011	Sampling Type:	Soil
Project Name:	BD G-16 VENT (SOIL)	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SB 13 @ 5FT (H100544-03)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2400	16.0	03/23/2011	ND	432	108	400	3.77	
ТРН 8015М	mg/kg		Analyzed By: AB						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	03/26/2011	ND	214	107	200	2.22	
DRO >C10-C28	<10.0	10.0	03/26/2011	ND	216	108	200	3.48	
Surrogate: 1-Chlorooctane	103	% 70-130)						
Surrogate: 1-Chlorooctadecane	97.5	% 70-130)						

Sample ID: SB 13 @ 40 FT (H100544-04)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: HM	-				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	03/23/2011	ND	432	108	400	3.77	
TPH 8015M	mg,	/kg	Analyzed By: AB						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	03/26/2011	ND	214	107	200	2.22	
DRO >C10-C28	<10.0	10.0	03/26/2011	ND	216	108	200	3.48	
Surrogate: 1-Chlorooctane	103	% 70-130							
Surrogate: 1-Chlorooctadecane	98.2	% 70-130							

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Celuz 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:	03/22/2011	Sampling Date:	03/21/2011
Reported:	03/28/2011	Sampling Type:	Soil
Project Name:	BD G-16 VENT (SOIL)	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SB 14 @ 5 FT (H100544-05)

Chloride, SM4500Ci-B	mg,	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	7360	16.0	03/23/2011	ND	432	108	400	3.77	
TPH 8015M	mg,	/kg	Analyzed By: AB						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	03/26/2011	ND	214	107	200	2.22	
DRO >C10-C28	<10.0	10.0	03/26/2011	ND	216	108	200	3.48	
Surrogate: 1-Chlorooctane	104	% 70-130							
Surrogate: 1-Chlorooctadecane	100	% 70-130							

Sample ID: SB 14 @ 40 FT (H100544-06)

Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	03/23/2011	ND	432	108	400	3.77	
TPH 8015M	mg/kg		Analyzed By: AB						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	03/26/2011	ND	214	107	200	2.22	
DRO >C10-C28	<10.0	10.0	03/26/2011	ND	216	108	200	3.48	
Surrogate: 1-Chlorooctane	105	% 70-130)						
Surrogate: 1-Chlorooctadecane	103	% 70-130	1						

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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:	03/22/2011	Sampling Date:	03/21/2011
Reported:	03/28/2011	Sampling Type:	Soil
Project Name:	BD G-16 VENT (SOIL)	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SB 15 @ 15 FT (H100544-07)

Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	688	16.0	03/23/2011	ND	432	108	400	3.77		
TPH 8015M	IPH 8015M mg/kg		Analyzed By: AB							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	03/26/2011	ND	214	107	200	2.22		
DRO >C10-C28	<10.0	10.0	03/26/2011	ND	216	108	200	3.48		
Surrogate: 1-Chlorooctane	106	% 70-130								
Surrogate: 1-Chlorooctadecane	102	% 70-130	I							

Sample ID: SB 15 @ 30 FT (H100544-08)

Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	03/23/2011	ND	432	108	400	3.77	
TPH 8015M	mg,	/kg	Analyzed By: AB						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	03/26/2011	ND	214	107	200	2.22	
DRO >C10-C28	<10.0	10.0	03/26/2011	ND	216	108	200	3.48	
Surrogate: 1-Chlorooctane	106	% 70-130							
Surrogate: 1-Chlorooctadecane	102	% 70-130							

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Celing 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

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Celuy D. Kune

Celey D. Keene, Lab Director/Quality Manager

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

ARDINAL LABORATORIES

Company Name	Rice Operating Company				đ		L TO	增4. • ;	<u> </u>		-	ļ	NAL	YSIS	RE	QUES	ST_		
Project Manage	Hack Conder				Ρ.(), # . ⁹			·	·				40					
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Phone #: 575-3						dress:							Į.	Ē					
Project #:	Project Owner	11			Cit	iy D			10	Σ			s/F	Ŋ					
Project Name:	BD G-16 Vent				Sta	ate:	Zip:		e e	Ω Ω	×	HdT	Ë	ğ					
Project Location	i:BD'G-16 Vent				Phone #:				ric.	801	ΞÛ		ați,	ē					
Sampler Name:	Jordan Woodfin	-			City: State: Zip: Phone #: Fax # ATRIX PRESERV SAMPLING PRESERV SAMPLING														
FOR LAB USE ONLY	1	1 1		MATRIX.		PRESERV.	SAMPLI	NG	Ū.	ΗЧ		e G	e E	Σ					
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP	# CONTAINERS	GROUNDWATER WASTEWATER Soll Oll Silubge	OTHER	ACID/BASE: ICE / COOL	DATE	TIME	•	T			Complete Cations/Anions	TPH 8015					
14100544-1	SB.11 @ 10ft	6	1	V- 1	t.	1	3/21/11	09:30	1	1									
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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

PLEASE NOTE: Labelay and Dunages. Conducte labelay and cleant acceluative remody for any dama along whatper based in compact of toys, shall be leaded to the amount peld by the cleant for the onalyzes? All claims: Indexing that is to notificance and any other cause whatperson shall be deemed within a diverse index made in willing and received by Cardnal within 30 days after completion of the dependent service, is no event shall Cardnal be Lable to incidental or conservent and canages, including within a transmission shall be acceled by Cardnal within 30 days after completion of the dependent service, is no event shall Cardnal be Lable to incidental or conservent and canages, including within a labelay and received by Cardnal within 30 days after completion of the dependents. All habe for successions within solid or in foldental or conserventiate being within a labelay and within 30 days after completion of the dependents. All habe for successions within solid or in foldental or conserventiate being within a labelay and within a labelay and and the based upon any of the above stated related to remain a labelay. Received By: Received By: Phone Result: Date: Da

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Jordan Woodfin	REMARKS:
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Sampler - UPS' - Bus - Other:	Lweinh

émail results Hoonder@riceswd.com; jwoodfin@rice-ecs.com; Lweinheimer@rice-ecs.com kjones@riceswd.com

' Yes

ZI No

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

NEED SAMPLES BACK, PLEASE

Add'I Fax #:

Page 7 of 7

January 25, 2011

Hack Conder Rice Operating Company 112 W. Taylor

RE: BD G-16 VENT

Hobbs, NM 88240

Enclosed are the results of analyses for samples received by the laboratory on 01/14/11 8:07.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021Benzene, Toluene, Ethyl Benzene, and Total XylenesMethod SW-846 8260Benzene, Toluene, Ethyl Benzene, and Total XylenesMethod TX 1005Total Petroleum Hydorcarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

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 (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,

Celuy D. Kune

Celey D. Keene Lab Director/Quality Manager

Analytical Results For:

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

Received:	01/14/2011	Sampling Date:	01/13/2011
Reported:	01/25/2011	Sampling Type:	- Soil
Project Name:	BD G-16 VENT	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	BD G-16 VENT		

Sample ID: MW 1 @ 10 FT. (H100097-01)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: LR					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4480	16.0	01/14/2011	ND	432	108	400	7.69	
ТРН 8015М	mg/kg		Analyzed By: AB						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	01/15/2011	ND	224	112	200	0.319	
DRO >C10-C28	<10.0	10.0	01/15/2011	ND	160	80.1	200	3.86	
Surrogate: 1-Chlorooctane	82.1	% 70-130)						
Surrogate: 1-Chlorooctadecane	83.4	% 70-130)						

Sample ID: MW 1 @ 75 FT. (H100097-02)

Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: LR					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4160	16.0	01/14/2011	ND	432	108	400	3.77	
TPH 8015M	/kg	g Analyzed By: AB							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	01/15/2011	ND	224	112	200	0.319	
DRO >C10-C28	<10.0	10.0	01/15/2011	ND	160	80.1	200	3.86	
Surrogate: 1-Chlorooctane	88.6	% 70-130							
Surrogate: 1-Chlorooctadecane	95.1	% 70-130							

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Celuy D.Kune

Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received:	01/14/2011	Sampling Date:	01/13/2011
Reported:	01/25/2011	Sampling Type:	Soil
Project Name:	BD G-16 VENT	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	BD G-16 VENT		

Sample ID: MW 1 @ 80 FT. (H100097-03)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1390	16.0	01/17/2011	ND	432	108	400	3.77	
TPH 8015M	mg/kg		Analyzed By: AB						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	01/15/2011	ND	224	112	200	0.319	
DRO >C10-C28	<10.0	10.0	01/15/2011	ND	160	80.1	200	3.86	
Surrogate: 1-Chlorooctane	85.5	% 70-130)						
Surrogate: 1-Chlorooctadecane	91.3	% 70-130	,						

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Celuy D.1 Tune

Celey D. Keene, Lab Director/Quality Manager

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PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

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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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

ARDINAL LABORATORIES

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Company Name	Rice Operating Company				BILL TO				ANALYSIS REQUEST						·			
Project Manager: Hack Conder				P.O. #.	-						0		· · ·					
Address: 122					Company:						S	C40					;	
City: Hobbs	State: NM	Zip:	882	240	Attn:						j	Thru		ľ.		÷.		
Phone #: 575-	393-9174 Fax #: 575-39	7-14	71		Address:		ľ				Yn	4						
Project #:	Project Owner				City	· · · · · · · · · · · · · · · · · · ·	1 10	Σ		Î	sli	D						
Project Náme:	3D G-16 Vent.				State:	Zip:	ğ	<u>i</u>	×	TPH	i U O	مر م						
Project Location	n: BD G-16 Vent		· •		Phone #:		Chlorides	801	BTEX	່ທັ	ati	5 M Extended						
Sampler Name:	Jordan Woodfin				Fax #:		Ξ		Ш	Texas	Ö	Ш			t			
FOR LAB USE ONLY				MATRIX	PRESER	V. SAMPLING	U	H		e	fe	Σ						
Lab I.D.	Sample I.D.	(G)RAB OR (C)OM	# CONTAINERS	GROUNDWATER WASTEWATER SOIL OIL SLUDGE	OTHER: ACID/BASE: ICE / COOL	DATE TIME					Complete Cations/Anions	TPH 8015						-
H100097-1	MW.1 @ 10ft		<u>Î.</u>	1		1/13/11 9:00	1	1.										
2	MW 1 @ 75ft		1			1/13/11 9:15	1	1										
3	MW 1 @ 80ft		1.			1/13/11 9:20	<u> </u>	1					. 	•••••				
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101 East Marland, Hobbs, NM, 88240 2111 Beechwood, Abilene, TX, 79603

PLEASE NOTE: Listelary and Damages, Cardma's kubdy and clerit's exclusive remedy for any clein action whether fused in contact or tot, shall be lenied to the unount paid by the clerit for the, improver, Al clains, inclusing these for negligence and any other cashe whatever shall be denied valued crites a mich a writing and received by Card all whith 30 days after completion of the applicable survice, in no event shall Continable fable for incidental or consequential damages including whether that the burness instructions (loss of use; or base of protain round by dient, its substantias) of fabors of successory substantiation of the performance of services bereating to your for successory substantiation of the state researce or preference.

	Date 14/11 Received By:	Phone Result:
Relinguished By:	Date: 14/11 Received By	email results
Delivered By: (Circle One)	Tripe OT Other Checked By: Sample Condition CHECKED BY: (Infitials)	Hconder@riceswd.com; jwoodfin@riceswd.com;
Sampler UPS - Bus - Other:		Lweinheimer@riceswd.com kjones@riceswd.com

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

#26

NEED SAMPLES BACK, PLEASE

Page 5 of 5

Appendix B Monitor Well Sampling Analysis

RICE Environmental Consulting and Safety (RECS) P.O. Box 5630 Hobbs, NM 88241 Phone 575.393.4411 Fax 575.393.0293



October 31, 2011

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

RE: BD G-16 VENT

Enclosed are the results of analyses for samples received by the laboratory on 10/24/11 12:00.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydorcarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

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 (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,

Celey 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:	10/24/2011	Sampling Date:	10/21/2011
Reported:	10/31/2011	Sampling Type:	Water
Project Name:	BD G-16 VENT	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Celey D. Keene
Project Location:	T22S R37E SEC 16G - LEA CTY., NM		

Sample ID: MONITOR WELL #1 (H102304-01)

BTEX 8260B	mg/	L	Analyze	d By: CMS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.001	0.001	10/24/2011	ND	0.021	103	0.0200	3.72	
Toluene*	<0.001	0.001	10/24/2011	ND	0.020	99.8	0.0200	2.44	
Ethylbenzene*	<0.001	0.001	10/24/2011	ND	0.021	103	0.0200	1.56	
Total Xylenes*	<0.003	0.003	10/24/2011	ND	0.061	102	0.0600	1.88	
Surrogate: Dibromofluoromethane	149 9	% 59.8-16	1						
Surrogate: Toluene-d8	102 9	75.2-11	5						
Surrogate: 4-Bromofluorobenzene	78.8	53.7-12	0						
Chloride, SM4500CI-B	mg/	L	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	4.00	10/28/2011	ND	108	108	100	0.00	
Sulfate 375.4	mg/	L	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Sulfate	87.3	10.0	10/28/2011	ND	20.9	104	20.0	13.8	
TDS 160.1	mg/	L	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS	410	5.00	10/26/2011	ND	235	97.9	240	0.00	

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Celey D. Keene, Lab Director/Quality Manager



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RPD	Relative Percent Difference
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***	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

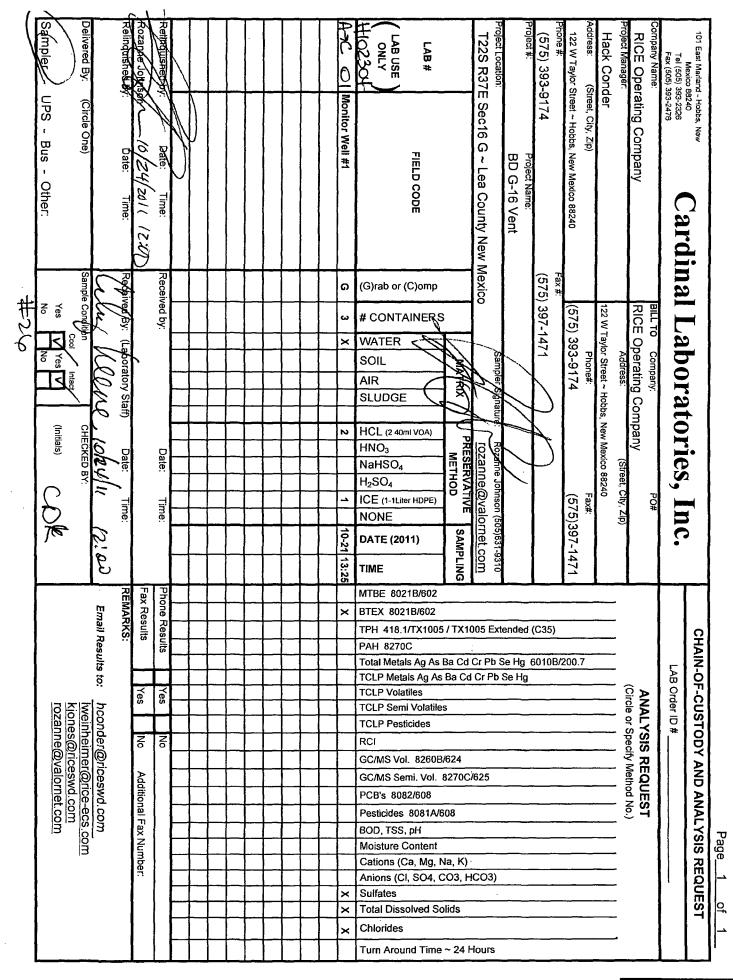
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Celey D. Kune

Celey D. Keene, Lab Director/Quality Manager



Hansen, Edward J., EMNRD

From:Hack Conder [hconder@riceswd.com]Sent:Tuesday, April 17, 2012 10:10 AMTo:Hansen, Edward J., EMNRDCc:Katie Jones; Laura PenaSubject:ROC - BD G-16 vent (1R426-29)Attachments:ROC - BD G-16 vent (1R426-29) Sampling Notes.pdf

Mr. Hansen,

Attached is a description of the aquifer beneath the BD G-16 vent (1R426-29) site. If you have any questions or require any additional information, please contact me at (575)631-6432.

Thank you.

Hack Conder Environmental Manager RICE Operating Company

Arc Envíronmental

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

April 16, 2012

<u>NOTES</u>

The following summarizes the field activities at the RICE BD G-16 Vent, Lea County T22S, R37E, Sec 16 Unit Letter G:

- There is one 2-inch monitor well drilled at the site. A Solinist Water Level Meter is used during each sampling event to check the depth to water prior to pumping and bailing the well. The meter indicated on January 27, 2012 water within the well at a depth of 96.67 with the total depth of the well of 100.51 feet, giving 3.84 feet (0.61 gallons) of water within the well bore. The well is pumped at 0.25 gallons per minute until the well will no longer pump. The well is then bailed dry with a bailer. The well recovers to within 10 percent of the original depth in just over an hour and a half or about 0.04 feet per minute. Purging the well dry is done three times before allowing the well to recover for 24 hours before sampling with a bailer.
- The site is located in the eastern Eunice Plain area of Lea County, which is underlain by a hard caliche surface and is covered by a thin layer of reddishbrown dune sand. The dominant vegetation is bear grass, mesquite and grama grass. Cattle ranchers and oil production activities currently use the area.
- In this arid region the rate of recharge is very slow due to small rainfall amounts, the porosity of the formation consisting of low permeable rock and a presence of clay, which leaves sediments that are thinly saturated or dry. There is little underground flow of water in the area, again due to the formation.

Sincerely, Arc Environmental

Rozanne Johnson Rozanne Johnson

Electronic Copy:

Hack Conder Katie Jones