

L. Peter Galusky, Jr. Ph.D., P.G.

Texerra

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627 Forest View Way Monument, Colorado 80132 Tel: 719-339-6791 E-mail: lpg@texerra.com

RECEIVED OCD

2011 AUG 15 P 1:25

August 8th, 2011

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 & CHARACTERIZATION PLAN (ICP) REPORT Rice Operating Company – Vacuum SWD System Vacuum Jct N-28-1: UL/N, Sec. 28, T17S, R35E (formerly Vacuum Jct K-28-1) NMOCD Case Number: 1R425-87

Sent via Certified U.S. Mail w/ Return Receipt No. 7008 1830 0004 2694 4293

Mr. Hansen:

RICE Operating Company (ROC) has retained Texerra to address potential environmental concerns at the above-referenced site in the abandoned Vacuum Salt Water Disposal (SWD) system. This report summarizes work to date completed per the OCD-approved Investigation and Characterization Plan of May 2nd, 2011 for this site.

The location of the Vacuum Jct N-28-1 site is given in Figure 1. A summary of soil boring analyses from samples taken in June and July 2011 are given in Figure 2. Representative photographs of this work are given in the Appendix, as are copies of laboratory analyses.

Residual soil chlorides are high in the at-source soil boring (SB-2) from the surface to a depth of 65 ft bgs. The depth to groundwater at this site is approximately 68 ft below ground surface (bgs). The lateral extent of residual soil chlorides was defined by SB-3 to the west, SB-8 to the north and SB-6 to the south where a three-point decline (with the lowest sample testing less than 250 mg/kg) was found in the lowest intervals sampled. The easterly extent was defined by SB-4, where chloride concentrations decreased from 4,000 mg/kg to 432 mg/kg at 65 ft bgs. SB-9, drilled east of SB-4, is encroaching upon an abandoned lease facility (Figure 3). Residual soil petroleum hydrocarbons were generally negligible in each of the soil bores. Petroleum hydrocarbons were therefore determined not to be of concern.

It is clear from this initial investigation that further sampling and analyses of surface samples are needed in order to characterize and delineate the extent of residual soil chlorides. Once the site is fully delineated, a report with recommendations will be submitted to the NMOCD.

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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.

We appreciate your consideration of this ICP report. Please do not hesitate to contact either Katie Jones of Rice Operating Company or myself if you have any questions or need additional information.

Sincerely,

L. Peter Galusky, Jr. Ph.D.

Copy: Rice Operating Company

Texerra

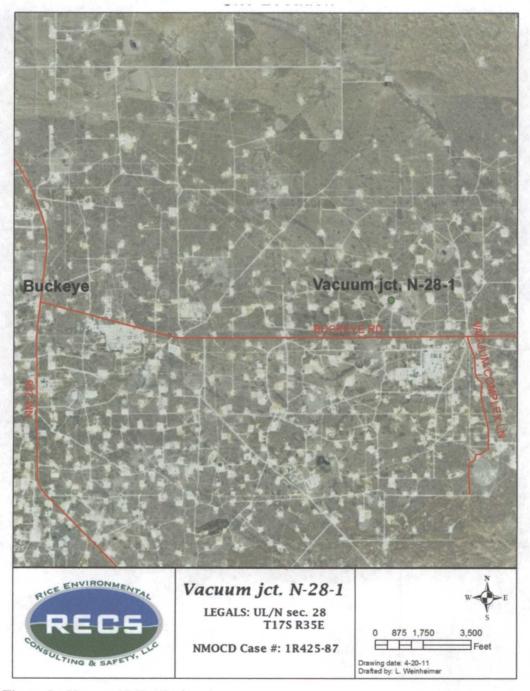
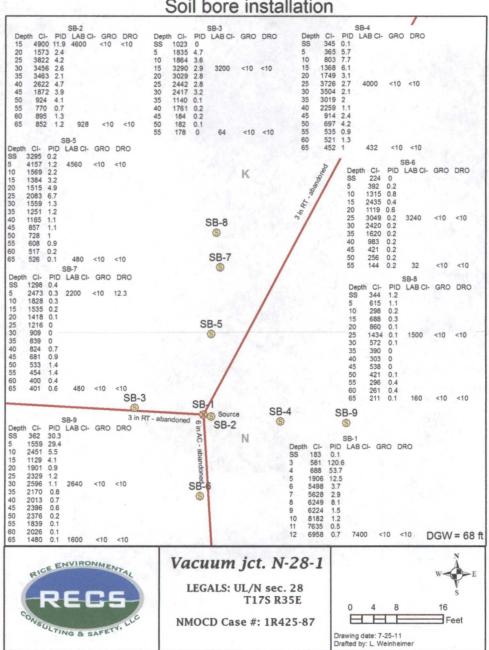


Figure 1 – Vacuum N-28-1 Jct location.



Soil bore installation

Figure 2 - Vacuum N-28-1 Jct summary of soil boring sampling locations and analyses.



Figure 3 – Abandoned lease facility, next to SB-9.



Vacuum Jct. N-28-1 Unit N, Section 28, T17S, R35E



plugging SB-2 with bentonite, facing east



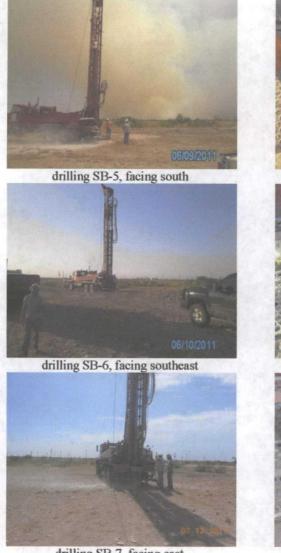
plugging SB-3 with bentonite, facing east



plugging SB-4 with bentonite, facing east

drilling SB-3, facing south

drilling SB-4, facing east



drilling SB-7, facing east



plugging SB-5 with bentonite, facing east



plugging SB-6 with bentonite, facing east



plugging SB-7 with bentonite, facing east



drilling SB-8, facing southwest



drilling SB-9, facing east



plugging SB-8 with bentonite, facing south



plugging SB-9 with bentonite, facing east

CARDINAL Laboratories

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

June 17, 2011

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

RE: VACUUM JCT N-28-1

Enclosed are the results of analyses for samples received by the laboratory on 06/10/11 16:20.

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)

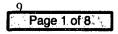
Accreditation applies to public drinking water matrices.

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,

Celez 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:	06/10/2011	Sampling Date:	06/09/2011
Reported:	06/17/2011	Sampling Type:	Soil
Project Name:	VACUUM JCT N-28-1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SB 2 @ 15' (H101212-01)

Chioride, SM4500CI-B	mg/	'kg	Analyze	d By: HM			· · · · · · · · · · · · · · · · · · ·		
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4600	16.0	06/14/2011	ND	432	108	400	7.14	
TPH 8015M	mg/	kg	Anaiyze	d By: ab					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	06/15/2011	ND	154	76.9	200	3.51	
DRO >C10-C28	<10.0	10.0	06/15/2011	ND	152	75.8	200	3.11	
Surrogate: 1-Chlorooctane	86.5	% 70-130							
Surrogate: 1-Chlorooctadecane	110 9	% 70-130							

Sample ID: SB 2 @ 65 (H101212-02)

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mg/	/kg	Analyze	d By: HM					
Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
928	16.0	06/14/2011	ND	432	108	400	7.14	
mg/	/kg	Analyze	d By: ab			<u></u>		
Result	Reporting Limit	Analyzed	Method Blank	85	% Recovery	True Value QC	RPD	Qualifier
<10.0	10.0	06/15/2011	ND	154	76.9	200	3.51	
<10.0	10.0	06/15/2011	ND	152	75.8	200	3.11	
73.1	% 70-130)		<u></u>	· · · · ·			
95.9	% 70-130)						
	Result 928 mg, Result <10.0 <10.0 73.1	Result Reporting Limit 928 16.0 mg/kg	Result Reporting Limit Analyzed 928 16.0 06/14/2011 mg/kg Analyzed Result Reporting Limit Analyzed <10.0	Result Reporting Limit Analyzed Method Blank 928 16.0 06/14/2011 ND mg/kg Analyzed By: ab By: ab Result Reporting Limit Analyzed Method Blank <10.0	Result Reporting Limit Analyzed Method Blank BS 928 16.0 06/14/2011 ND 432 mg/kg Analyzed By: ab BS Result Reporting Limit Analyzed By: ab Result Reporting Limit Analyzed Method Blank BS <10.0	Result Reporting Limit Analyzed Method Blank BS % Recovery 928 16.0 06/14/2011 ND 432 108 mg/kg Analyzed By: ab Method Blank BS % Recovery Result Reporting Limit Analyzed Method Blank BS % Recovery <10.0	Result Reporting Limit Analyzed Method Blank BS % Recovery True Value QC 928 16.0 06/14/2011 ND 432 108 400 mg/kg Analyzed By: ab BS % Recovery True Value QC Analyzed Method Blank BS % Recovery True Value QC <10.0	Result Reporting Limit Analyzed Method Blank BS % Recovery True Value QC RPD 928 16.0 06/14/2011 ND 432 108 400 7.14 mg/kg Analyzed By: ab BS % Recovery True Value QC RPD Result Reporting Limit Analyzed Method Blank BS % Recovery True Value QC RPD <10.0

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Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager

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

Received:	06/10/2011	Sampling Date:	06/09/2011
Reported:	06/17/2011	Sampling Type:	Soil
Project Name:	VACUUM JCT N-28-1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SB 3 @ 15' (H101212-03)

Chloride, SM4500CI-B mg/kg Analyzed By: HM Result Reporting Limit Analyzed Method Blank True Value QC Qualifier Analyte BS % Recovery RPD 3200 16.0 06/14/2011 400 Chioride ND 432 108 7.14 TPH 8015M mg/kg Analyzed By: ab Reporting Limit Qualifier Analyte Result Analyzed Method Blank BS % Recovery True Value OC RPD GRO C6-C10 <10.0 10.0 06/15/2011 ND 154 76.9 200 3.51 DRO >C10-C28 <10.0 10.0 06/15/2011 ND 152 75.8 200 3.11 Surrogate: 1-Chlorooctane 70-130 73.4 % Surrogate: 1-Chlorooctadecane 94.3 % 70-130

Sample ID: SB 3 @ 55' (H101212-04)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: HM	·			••••••	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chioride	64.0	16.0	06/14/2011	ND	432	108	400	7.14	
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	06/15/2011	ND	154	76.9	200	3.51	
DRO >C10-C28	<10.0	10.0	06/15/2011	ND	152	75.8	200	3.11	
Surrogate: 1-Chlorooctane	80.0	% 70-130	I						
Surrogate: 1-Chlorooctadecane	103 :	% 70-130	I						
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Celey D. Keene, Lab Director/Quality Manager

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Received:	06/10/2011	Sampling Date:	06/09/2011
Reported:	06/17/2011	Sampling Type:	Soil
Project Name:	VACUUM JCT N-28-1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SB 4 @ 25" (H101212-05)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4000	16.0	06/14/2011	ND	432	108	400	7.14	
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	06/15/2011	ND	154	76.9	200	3.51	
DRO >C10-C28	<10.0	10.0	06/15/2011	ND	152	75.8	200	3.11	
Surrogate: 1-Chlorooctane	74.8	% 70-130							
Surrogate: 1-Chlorooctadecane	98.5	% 70-130							

Sample ID: SB 4 @ 65' (H101212-06)

Chloride, SM4500CI-B	mg/	/kg	Analyze	d By: HM				·····	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chioride	432	16.0	06/14/2011	ND	432	108	400	3.64	
TPH 8015M	mg/	/kg	Analyze	d By: ab			· · · · · ·		
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO <u>C6-C10</u>	<10.0	10.0	06/15/2011	ND	154	76.9	200	3.51	
DRO >C10-C28	<10.0	10.0	06/15/2011	ND	152	75,8	200	3.11	
Surrogate: 1-Chlorooctane	69.6	% 70-130							
Surrogate: 1-Chlorooctadecane	91.9	% 70-130				i			
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Rice Operating Company Hack Conder 112 W. Taylor Hobbs NM, 88240 Fax To: (575) 397-1471

06/10/2011	Sampling Date:	06/09/2011
06/17/2011	Sampling Type:	Soil
VACUUM JCT N-28-1	Sampling Condition:	Cool & Intact
NONE GIVEN	Sample Received By:	Jodi Henson
NOT GIVEN		
	06/17/2011 VACUUM JCT N-28-1 NONE GIVEN	06/17/2011Sampling Type:VACUUM JCT N-28-1Sampling Condition:NONE GIVENSample Received By:

Sample ID: SB 5 @ 5' (H101212-07)

Chloride, SM4500CI-B mg/kg Analyzed By: HM Result Reporting Limit True Value QC Qualifier Analyte Analyzed Method Blank BS % Recovery RPD 06/14/2011 Chloride 4560 16.0 ND 432 108 400 3.64 TPH 8015M mg/kg Analyzed By: ab Analyte Qualifier Result Reporting Limit Analyzed Method Blank BS True Value QC RPD % Recovery GRO C6-C10 <10.0 10.0 06/15/2011 ND 154 76.9 200 3.51 DRO >C10-C28 <10.0 10.0 06/15/2011 75.8 200 ND 152 3.11 Surrogate: 1-Chlorooctane 70.1 % 70-130 Surrogate: 1-Chlorooctadecane 88.7 % 70-130

Sample ID: SB 5 @ 65' (H101212-08)

Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	480	16.0	06/14/2011	ND	432	108	400	3.64	
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	06/15/2011	ND	154	76.9	200	3.51	
DRO >C10-C28	<10.0	10.0	06/15/2011	ND	152	75.8	200	3.11	
Surrogate: 1-Chlorooctane	75.9	% 70-130)						
Surrogate: 1-Chlorooctadecane	`103 :	% 70-130	1			;			

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Celey D. Keene, Lab Director/Quality Manager

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

Received:	06/10/2011	Sampling Date:	06/10/2011
Reported:	06/17/2011	Sampling Type:	Soil
Project Name:	VACUUM JCT N-28-1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SB 6 @ 25' (H101212-09)

Chloride, SM4500CI-B mg/kg Analyzed By: HM Result Reporting Limit Method Blank True Value QC RPD Qualifier Analyte Analyzed BS % Recovery 16.0 06/14/2011 Chloride 3240 ND 432 108 400 3.64 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 06/15/2011 ND 154 76.9 200 3.51 DRO >C10-C28 <10.0 10.0 06/15/2011 75.8 3.11 ND 152 200 Surrogate: 1-Chlorooctane 70-130 81.0% 110% Surrogate: 1-Chlorooctadecane 70-130

Sample ID: SB 6 @ 55' (H101212-10)

Chioride, SM4500CI-B	mg/l	kg	Analyze	d By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BŞ	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	06/14/2011	ND	432	108	400	3.64		
TPH 8015M	mg/l	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	06/16/2011	ND	167	83.6	200	3.30		
DRO >C10-C28	<10.0	10.0	06/16/2011	ND	150	75.0	200	2.31		
Surrogate: 1-Chlorooctane	85.5 %	6 70-130		·						
Surrogate: 1-Chlorooctadecane	116%	6 70-130								

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Celey D. Kune

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 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

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† Cardinal c	Delivered By: (Circle One) Sampler - UPS - Bus - Other	Rolinguishod By:	Jordan	alluties or successors arising out Relinguished By:	PLEASE NOTE: Calkay and antifyees. All claims including ceivice. To no overst deall Cale	Õ	2	6	! [10	L.	,¢	<u>. </u>	2 2		HIDIAN	Lab I.D.			Project Location:	Project Namo: Va	Project #:	Phone #: 575-393-9174	city: Hobbs	Address: 122 West Taylor	Project Managor: Hack Conder	Company Name:	AR
Cardinal cannot accept verbal changes. Please fax written changes to 505-39 $3-2476$	(Circle One) Bus - Other:		Jordan Woodfin	mining out of or related to the performance	A for a	SB 6 @ 55'	SB 6 @ 25'	SB 5 @ 65'	SB 5 @ 5'	SB 4 @ 65'	SB 4 @ 25'	SB 3 @ 55	SB 3 @ 15'	SB 2 @ 65'	SB 2 @15'		Sample I.D.		Jordan Woodfin	Project Location: Vacuum Jct N-28-1	Project Namo: Vacuum Jct N-28-1		3-9174		Vest Taylor	Hack Conder	Rice Operating Company	101 East Marland, Hobbs, NM 88240 (505) 393-2326 FAX (505) 393-2476
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2476	CHECKED BY:		LA-V	any of the above stated by e	tanied to the smount pate		6/10/11		1		~	~	1		6/9/11	OTHER	سيبته بهم		7		Zip:				ıy:		BILL TO	e, TX 79603 673-7020
	Hconder@riceswd.com; jwoodfin@rice-ecs.com; Lweinheimer@rice-ecs.com kjones@riceswd.con	email results	Fax Result: REMARKS:	Ioni, is substances some or otherwise. Phomo Rocu	try the client for the	06:45	06:30	03:30	03:00	02:30	02:00	01:30	01:00	12:30	12:00	TIME		į										
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July 18, 2011

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

RE: VACUUM JCT N-28-1

Enclosed are the results of analyses for samples received by the laboratory on 07/14/11 10:30.

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. Kune

Celey D. Keene Lab Director/Quality Manager

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

Analytical Results For:

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

Received:	07/14/2011	Sampling Date:	07/13/2011
Reported:	07/18/2011	Sampling Type:	Soil
Project Name:	VACUUM JCT N-28-1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SB 7 @ 5' (H101453-01)

Chloride, SM4500Ci-B	mg,	/kg	Analyze	d By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2200	16.0	07/15/2011	ND	416	104	400	0.00		
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 10.0		ND	197	98.6	200	0.112		
DRO >C10-C28	12.3 10.0		07/17/2011	ND	182	90.8	200	0.814		
Surrogate: 1-Chlorooctane	97.5	% 70-130) ·	······································						
Surrogate: 1-Chlorooctadecane	108	% [.] 70-130)							

Sample ID: SB 7 @ 65' (H101453-02)

Chloride, SM4500CI-B	mg/	kg	Analyze	d By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	480	16.0	07/15/2011	ND	416	104	400	0.00		
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	07/17/2011	ND	197	98,6	200	0.112		
DRO >C10-C28	<10.0	10.0	07/17/2011	ND	182	90.8	200	0.814		
Surrogate: 1-Chlorooctane	106 %	6 70-130								
Surrogate: 1-Chlorooctadecane	113 %	6 70-130				:				
						:				

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PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any data artising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause wholeover shall be deemed waked unless made in writing and received by Cardinal within thitly (30) days after completion of the applicable service. In no event shall be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profils incurred by client, its aubidates, effiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such datin is based upon any of the above stated receiver or otherwise. Results related records in litik whether approach of Cardinal Cardinal Litika

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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

Analytical Results For:

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

Received:	07/14/2011	Sampling Date:	07/13/2011
Reported:	07/18/2011	Sampling Type:	Soil
Project Name:	VACUUM JCT N-28-1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SB 8 @ 25' (H101453-03)

Chloride, SM4500Cl-B mg/kg Analyzed By: HM Analyte Result Reporting Limit Analyzed Method Blank BS % Recovery True Value QC RPD Qualifier Chloride 1500 16.0 07/15/2011 ND 416 104 400 0.00 TPH 8015M mg/kg Analyzed By: ab Analyte Reporting Limit Result Analyzed Method Blank BS % Recovery True Value QC RPD Qualifier GRO C6-C10 <10.0 10.0 07/17/2011 ND 197 98.6 200 0.112 DRO >C10-C28 <10.0 10.0 07/17/2011 ND 182 90.8 200 0.814 Surrogate: 1-Chlorooctane 105 % 70-130 Surrogate: 1-Chlorooctadecane 114 % 70-130

Sample ID: SB 8 @ 65' (H101453-04)

Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	8S	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1.60	16.0	07/15/2011	ND	416	104	400	0.00		
TPH 8015M	mg/i	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	07/17/2011	ND	197	98.6	200	0.112		
DRO >C10-C28	<10.0	10.0	07/17/2011	ND	182	90.8	200	0.814		
Surrogate: 1-Chlorooctane	108 %	6 70-130				·····				
Surrogate: 1-Chlorooctadecane	118 %	6 70-130					,			
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Celey D. Kune

Celey D. Keene, Lab Director/Quality Manager

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

Analytical Results For:

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

Received:	07/14/2011	Sampling Date:	07/13/2011
Reported:	07/18/2011	Sampling Type:	Soil
Project Name:	VACUUM JCT N-28-1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SB 9 @ 30' (H101453-05)

Chioride, SM4500Cl-B mg/kg Analyzed By: HM Result Reporting Limit Method Blank True Value OC RPD Qualifier Analyte Analyzed BS % Recovery Chloride 2640 07/15/2011 16.0 ND 416 104 400 0.00 TPH 8015M mg/kg Analyzed By: ab Qualifier Analyte Result Reporting Limit Analyzed Method Blank True Value QC RPD BS % Recovery GRO C6-C10 <10.0 10.0 07/17/2011 ND 197 98.6 200 0.112 DRO >C10-C28 <10.0 10.0 07/17/2011 ND 182 90.8 200 0.814 Surrogate: 1-Chlorooctane 108 % 70-130 Surrogate: 1-Chlorooctadecane 122 % 70-130

Sample ID: SB 9 @ 65' (H101453-06)

Chloride, SM4500Cl-B	mg/l	kg	Analyze	d By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	rpd	Qualifier	
Chloride	1600	16.0	07/15/2011	ND	416	104	400	0.00		
TPH 8015M	mg/l	g	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	07/17/2011	ND	197	98.6	200	0.112		
DRO >C10-C28	<10.0	10.0	07/17/2011	ND	182	90.8	200	0.814		
Surrogate: 1-Chlorooctane	108 %	5 70-130								
Surrogate: 1-Chlorooctadecane	118 %	5 70-130				i				

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Celey D. Keene, Lab Director/Quality Manager

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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.

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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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