

1R - 425-80

# WORKPLANS

Date:

4-16-12

## Hansen, Edward J., EMNRD

---

**From:** Katie Jones <kjones@riceswd.com>  
**Sent:** Wednesday, August 28, 2013 10:10 AM  
**To:** Hansen, Edward J., EMNRD  
**Cc:** Hack Conder; L Peter Galusky; Laura Pena  
**Subject:** ROC - Vacuum Jct. D-31-2 (1R425-80) CAP Addendum  
**Attachments:** Vacuum Jct. D-31-2 (1R425-80) SB 1-7 with Proposed Liner.jpg; Vacuum Jct. D-31-2 (1R425-80) SB 8-11 with Proposed Liner.jpg

Mr. Hansen,

ROC proposes the following as an Addendum to the Vacuum Jct. D-31-2 (1R425-80) Corrective Action Plan (CAP), submitted on April 16, 2012 and approved by the NMOCD on May 31, 2012.

The following paragraph (in blue) will replace the first four bullet points on Page 2 of the CAP (shown in red, strikethrough).

“In order to protect groundwater quality from the potential migration of residual soil chlorides ROC proposes the following actions to serve as a Corrective Action Plan (CAP) for this project.

ROC will:

*Install a 20-mil Reinforced Sub-surface Infiltration Barrier and Restore the Ground Surface*

There is an active, non-ROC line running through the southeast corner of the NMOCD approved liner. After numerous attempts, ROC was not obtain permission to excavated beneath the line. As such, ROC proposes to install two separate liners, as shown on the attached plats. Each liner will remain a safe distance from the active line, or at least 3 ft. Due to the presence of hard rock, ROC will excavate each area to depth of 3 ft bgs, and properly seat a 20-mil, reinforced poly liner. Each excavation will be backfilled with soil containing a chloride concentration less than 500 mg/kg and PID (field) reading less than 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 site will be contoured to the surrounding area and seeded with a blend of native vegetation.

- ~~Excavate a 75 by 65 ft area surrounding the former junction box (Figures 2a & 2b) to a depth of approximately 3 ft bgs (limited by the presence of hard rock).~~
- ~~Install a 20 mil, reinforced poly liner over a 6 inch layer of clean blow sand and pad this with another 6 inch layer of the same.~~
- ~~The excavation will then be backfilled with soil that chlorides measure less than 500 mg/kg and PID hydrocarbons measure less than 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.~~
- ~~Restore the ground surface to natural contours and seed with a blend of native vegetation mix.”~~

If you need any further information, please let me or Hack know.

Thank you.

Katie Jones  
Environmental Project Manager  
RICE Operating Company

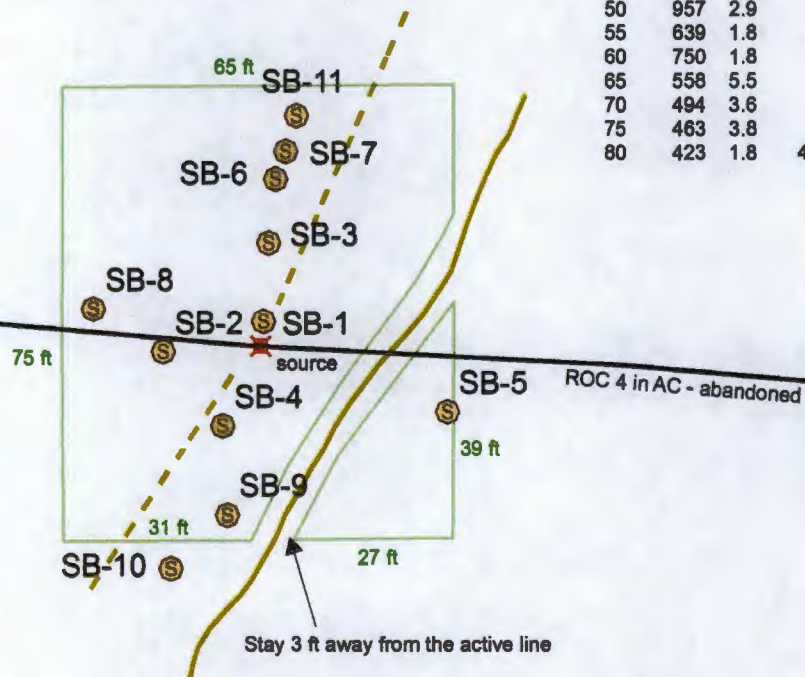
# Soil Bore Installation and Proposed Liner

SB-8					
Depth	CI-	PID	LAB CI-	GRO	DRO
SS	330	0.3			
5	1385	0.5			
10	2310	0.7			
15	2366	0.8	2320	<10	<10
20	2043	1.4			
25	1354	1.4			
30	1056	1.3			
35	815	1.8			
40	468	1.2			
45	408	1.8			
50	371	0.8			
55	852	0.7			
60	195	1.1			
65	149	1.7	112	<10	10.1

SB-9					
Depth	CI-	PID	LAB CI-	GRO	DRO
SS	119	0.9			
5	146	0.7			
10	174	1.1			
15	598	1.4			
20	1239	1.2			
25	2166	1.2			
30	3096	1.5	3160	<10	<10
35	1795	0.9			
40	2106	0.8			
45	2143	1.1			
50	1969	0.5			
55	1917	0.7			
60	1890	1.2			
65	1295	0.6			
70	1438	1.5			
75	1169	0.7			
80	1122	1.1	1120	<10	<10

SB-10					
Depth	CI-	PID	LAB CI-	GRO	DRO
SS	164	7.5	48	<10	<10
5	141	9.2			
10	91	7.4			
15	89	13.9	48	<10	<10

SB-11					
Depth	CI-	PID	LAB CI-	GRO	DRO
SS	173	5.2			
5	1196	5.5			
10	2499	3.3			
15	2160	4.5			
20	2591	3.7	2920	<10	<10
25	2366	4.3			
30	1693	5.3			
35	1717	8.2			
40	1706	4			
45	1040	1.6			
50	957	2.9			
55	639	1.8			
60	750	1.8			
65	558	5.5			
70	494	3.6			
75	463	3.8			
80	423	1.8	464	<10	<10



## Legend

- ABANDONED LINES
- - - BURIED LINE HIT
- CHEVRON SURFACE POLY
- ⊙ SOIL BORES
- MARKING PLATE
- PROPOSED EXCAVATION 20 mil reinforced liner @ 3 ft

DGW: 83 ft



**Vacuum jct. D-31-2**

LEGALS: UL/D sec. 31  
T17S R35E

NMOCD Case #: 1R425-80



0 10 20 40  
Feet

Drawing date: 8/23/13  
Drafted by: L. Weinheimer



# Soil Bore Installation and Proposed Liner

SB-1					
Depth	CI-	PID	LAB CI-	GRO	DRO
15	1391	82	1880	<10.0	645
20	3890	5.1			
25	3299				
30	3660				
35	3231				
40	3050		3120	<10.0	<10.0
45	2460				
50	2411				
55	2533				
60	2584		2280	<10.0	<10.0

SB-2					
Depth	CI-	PID	LAB CI-	GRO	DRO
SS	223	0.2			
5	2556	1.5	2760	<10	<10
10	1918	1.5			
15	366	1.7			
20	2421	1.1			
25	2519	2			
30	2070	2.9			
35	2496	2.1			
40	2047	1.3			
45	1677	0.7			
50	308	1.2			
55	1575	2.6			
60	1859	2.3			
65	1087	2.9			
70	1074	1.5			
75	1143	3			
80	812	0.9	352	<10	<10

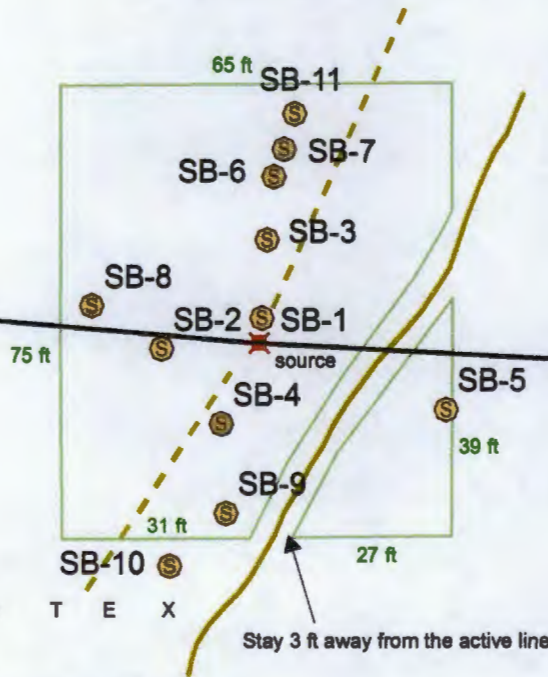
SB-3					
Depth	CI-	PID	LAB CI-	GRO	DRO
SS	117	0.2			
5	1715	4.6			
10	4859	2.8			
15	3671	1.7			
20	3890	2.2			
25	3031	2.2			
30	4279	2.2			
35	2421	2.3			
40	4081	2.5			
45	3397	1.9			
50	4862	1.8	3680	<10	<10
55	3338	0.1			
60	3284	0			
65	2825	0			
70	2384	0			
75	2162	0			
80	2437	0	1600	<10	<10

SB-5					
Depth	CI-	PID	LAB CI-	GRO	DRO
SS	142	0.4			
5	750	0.5			
10	502	0.8			
15	1046	0.6	1340	<10	<10
20	684	0.7			
25	489	0.6			
30	338	0.9			
35	234	0.8	272	<10	<10

SB-6					
Depth	CI-	PID	LAB CI-	GRO	DRO
SS	554	0.9			
5	278	1.1			
10	607	0.9			
15	3521	1.3	3560	<10	<10
20	3119	0.9			
25	557	1.2			
30	374	1.2			
35	440	1.3			
40	671	0.8			
45	994	1.4			
50	1901	1.6			
55	1742	2.6			
60	1706	2.3			
65	963	0.6			
70	1047	0.8			
75	1033	1.2			
80	978	1.4	1180	<10	10.9

SB-4					
Depth	CI-	PID	LAB CI-	GRO	DRO
SS	149	0.2			
5	993	10.9			
10	112	307			
15	208	1136	112	<50	2390
20	994	279		<0.05	<0.05
25	1462	158		2.65	1.78
30	2069	120			
35	2876	34.9			
40	2941	19.7	2640	<10	<10
45	2165	21.2			
50	2560	6.6			
55	2322	5.2			
60	2726	2.9			
65	1727	1.4			
70	1723	2.9			
75	2572	2.8			
80	1644	0.9	1790	<10	<10

SB-7					
Depth	CI-	PID	LAB CI-	GRO	DRO
SS	347	0.8			
5	279	1.5			
10	401	1.5			
15	1926	1.4			
20	866	1.2			
25	1594	1.5			
30	2111	1.4	2200	<10	<10
35	1453	1.4			
40	1428	1			
45	1339	1.2			
50	2022	1.5			
55	701	1.9			
60	1006	1.3			
65	1041	1.1			
70	877	1.1			
75	632	1.4			
80	550	1.2	480	<10	12.3



## Legend

- ABANDONED LINES
- - - BURIED LINE HIT
- CHEVRON SURFACE POLY
- ⊙ SOIL BORES
- MARKING PLATE
- PROPOSED EXCAVATION 20 mil reinforced liner @ 3 ft

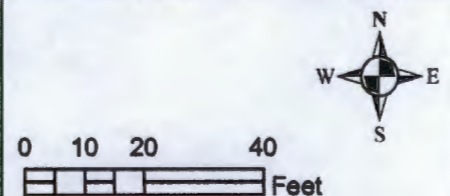
DGW: 83 ft



**Vacuum jct. D-31-2**

LEGALS: UL/D sec. 31  
T17S R35E

NMOCD Case #: 1R425-80



Drawing date: 8/23/13  
Drafted by: L. Weinheimer

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

**Texerra**

20055 Laredo Lane Monument, Colorado 80132

Tel: 719-339-6791 E-mail: lpg@texerra.com

April 16<sup>th</sup>, 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

RECEIVED

APR 25 2012

RE: **Corrective Action Plan (CAP)**

Rice Operating Company – Vacuum SWD System

**Vacuum Jct. D-31-2:** UL/D, Sec. 31, T17S, R35E (formerly Vacuum Jct. C-31-2)

**NMOCD Case Number: 1R425-80**

Oil Conservation Division  
1220 S. St. Francis Drive  
Santa Fe, NM 87505

Sent via Certified U.S. Mail w/ Return Receipt No. 7011 0110 0001 5863 4875

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 additional soil characterization work completed since our submittal of the Investigation and Characterization Report of August 8<sup>th</sup>, 2011, approved by OCD on October 19<sup>th</sup>, 2011, and presents a Corrective Action Plan (CAP) for the protection of groundwater quality.

The location of the Vacuum Jct. D-31-2 site is given in Figure 1. A summary of soil boring analyses from samples taken to date is presented in Figures 2a and 2b and lab analysis is found in the Appendix.

The depth to groundwater at this site is estimated to be approximately 83 ft below ground surface (bgs). Residual soil petroleum hydrocarbons were essentially insignificant (PID readings < 100 ppm) in all soil borings except for SB-4 (approx. 14 ft southwest of the former junction box location) at 15 ft bgs where the PID reading measured 1,136 ppm. Residual soil chloride concentrations exceed 250 mg/kg in portions of most of the soil borings taken. Chloride concentrations in SB-5 decreased with depth from 1,340 mg/kg at 15 ft to 272 mg/kg at 35 ft, and concentrations in SB-8 decreased from 2,320 mg/kg at 15 ft to 112 mg/kg at 65 ft. Chloride concentrations were low throughout SB-10 with 48 mg/kg in the surface sample and the 15 ft sample, and SB-11 concentrations also decreased from 2,920 mg/kg at 20 ft to 464 mg/kg at 80 ft.

In order to protect groundwater quality from the potential migration of residual soil chlorides ROC proposes the following actions to serve as a Corrective Action Plan (CAP) for this project.

## Vacuum Jct. D-31-2

ROC will:

*Install a 20-mil Reinforced Sub-surface Infiltration Barrier and Restore the Ground Surface*

- Excavate a 75 by 65 ft area surrounding the former junction box (Figures 2a & 2b) to a depth of approximately 3 ft bgs (limited by the presence of hard rock).
- Install a 20-mil, reinforced poly liner over a 6-inch layer of clean blow sand and pad this with another 6 inch layer of the same.
- The excavation will then be backfilled with soil that chlorides measure less than 500 mg/kg and PID hydrocarbons measure less than 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.
- Restore the ground surface to natural contours and seed with a blend of native vegetation mix.

*Install a near-source Monitor Well*

- Install a near-source monitor well to determine if groundwater has been impacted by chlorides. Additional monitoring wells may be required to fully delineate groundwater quality.

*Report the Course and Results of Work to NMOCD*

- Provide a brief report with photographs summarizing the course of these corrective actions and presenting the results of the groundwater sampling.

Depending upon the results of the groundwater sample, ROC may then submit a request for remediation termination. Otherwise, additional groundwater sampling may be proposed.

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 Corrective Action Plan. 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



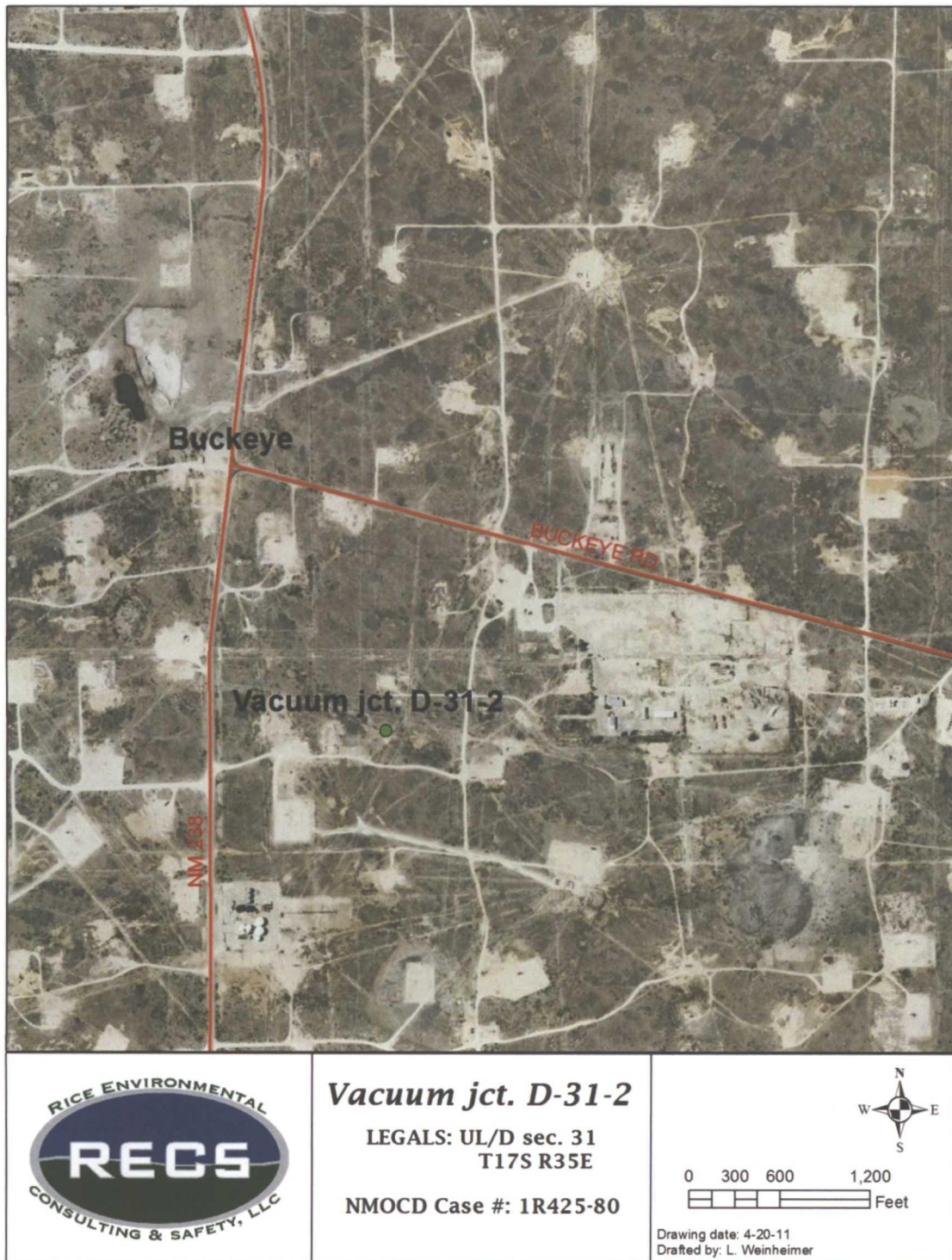


Figure 1 – Vacuum Jct. D-31-2 location.

## Soil Bore Installation

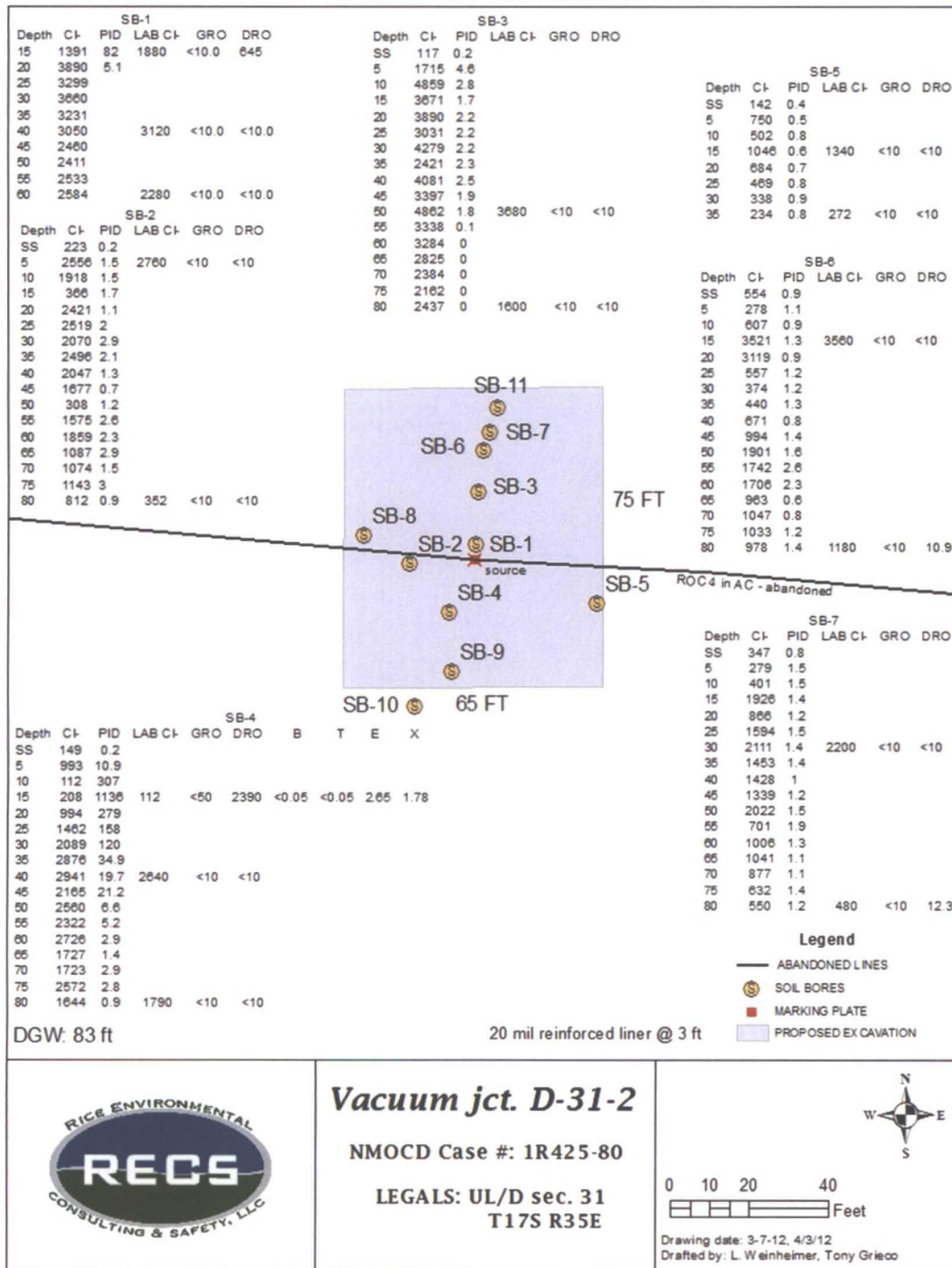


Figure 2a – Vacuum Jct. D-31-2 soil boring locations and analytical results.



## Soil Bore Installation

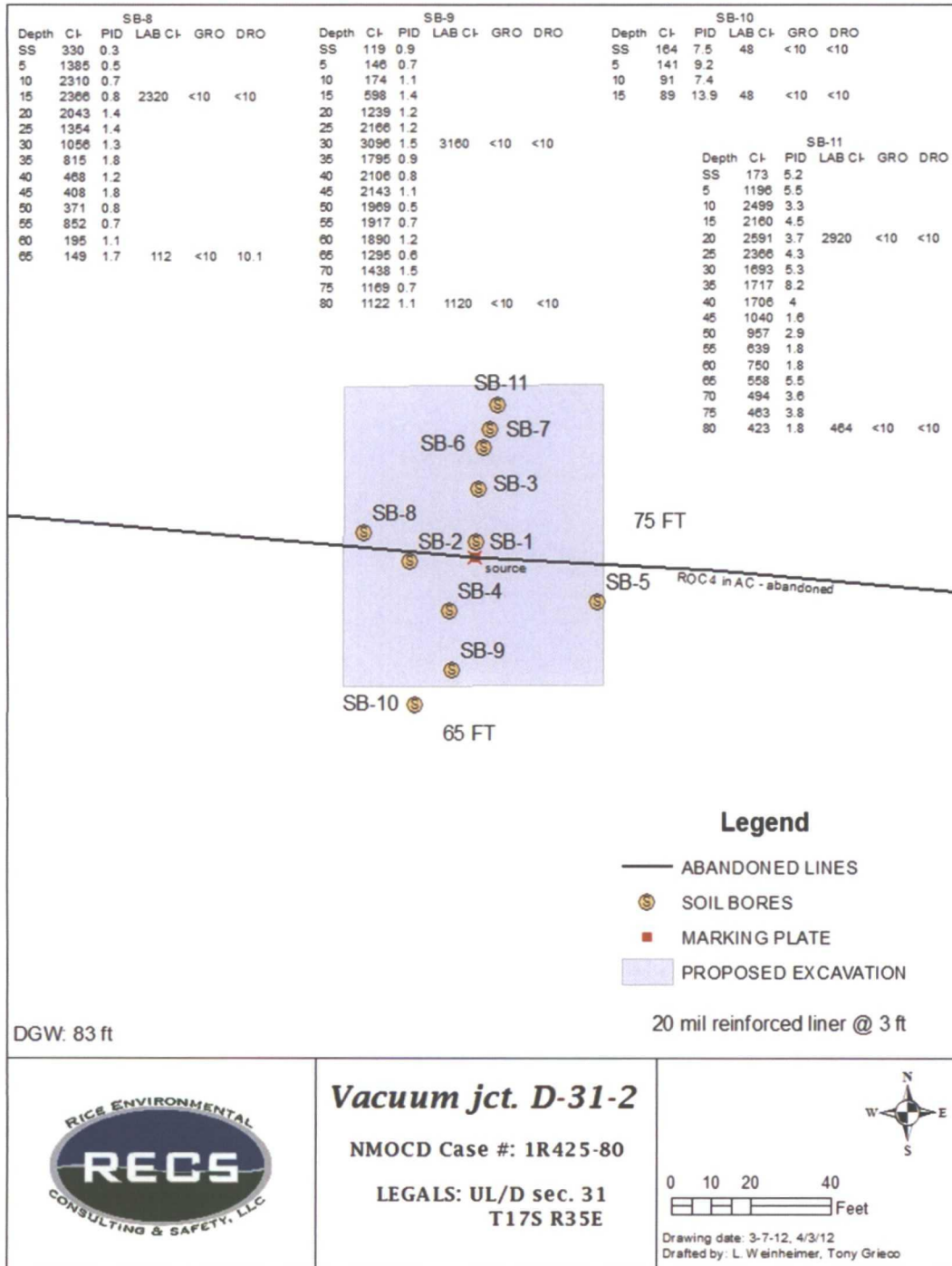


Figure 2b – Vacuum Jct. D-31-2 soil boring locations and analytical results.

## **Vacuum Jct. D-31-2**

Appendix: Laboratory results of soil analysis



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 D-31-2

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 Hydrocarbons

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

Cardinal Laboratories is accredited 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,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene  
Lab Director/Quality Manager



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:	06/10/2011	Sampling Date:	06/10/2011
Reported:	06/17/2011	Sampling Type:	Soil
Project Name:	VACUUM JCT D-31-2	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: SB 2 @ 5' (H101213-01)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>2760</b>	16.0	06/15/2011	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	06/16/2011	ND	206	103	200	5.32		
DRO >C10-C28	<10.0	10.0	06/16/2011	ND	187	93.3	200	5.61		
Surrogate: 1-Chlorooctane	90.8 %	70-130								
Surrogate: 1-Chlorooctadecane	111 %	70-130								

**Sample ID: SB 2 @ 80' (H101213-02)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>352</b>	16.0	06/15/2011	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	06/16/2011	ND	206	103	200	5.32		
DRO >C10-C28	<10.0	10.0	06/16/2011	ND	187	93.3	200	5.61		
Surrogate: 1-Chlorooctane	83.9 %	70-130								
Surrogate: 1-Chlorooctadecane	99.1 %	70-130								

Cardinal Laboratories

\* = Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, 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 claim whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager

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**Analytical Results For:**

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

Received: 06/10/2011  
 Reported: 06/17/2011  
 Project Name: VACUUM JCT D-31-2  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 06/10/2011  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SB 3 @ 50' (H101213-03)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3680	16.0	06/15/2011	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	06/16/2011	ND	206	103	200	5.32	
DRO >C10-C28	<10.0	10.0	06/16/2011	ND	187	93.3	200	5.61	
Surrogate: 1-Chlorooctane	89.3 %	70-130							
Surrogate: 1-Chlorooctadecane	103 %	70-130							

**Sample ID: SB 3 @ 80' (H101213-04)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1600	16.0	06/15/2011	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	06/16/2011	ND	206	103	200	5.32	
DRO >C10-C28	<10.0	10.0	06/16/2011	ND	187	93.3	200	5.61	
Surrogate: 1-Chlorooctane	91.9 %	70-130							
Surrogate: 1-Chlorooctadecane	107 %	70-130							

Cardinal Laboratories

\* = Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, 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 whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager

Page 3 of 7



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: 06/10/2011  
Reported: 06/17/2011  
Project Name: VACUUM JCT D-31-2  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 06/10/2011  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: SB 4 @ 15' (H101213-05)**

BTX 8260B		mg/kg		Analyzed By: CMS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/14/2011	ND	2.21	111	2.00	7.93		
Toluene*	<0.050	0.050	06/14/2011	ND	2.24	112	2.00	7.82		
Ethylbenzene*	2.65	0.050	06/14/2011	ND	2.32	116	2.00	8.13		
Total Xylenes*	1.78	0.150	06/14/2011	ND	6.54	109	6.00	8.53		

Surrogate: Dibromofluoromethane 90.9 % 80-120

Surrogate: Toluene-d8 95.2 % 80-120

Surrogate: 4-Bromofluorobenzene 110 % 80-120

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	06/15/2011	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	<50.0	50.0	06/16/2011	ND	206	103	200	5.32	
DRO >C10-C28	2390	50.0	06/16/2011	ND	187	93.3	200	5.61	

Surrogate: 1-Chlorooctane 117 % 70-130

Surrogate: 1-Chlorooctadecane 103 % 70-130

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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:	06/10/2011	Sampling Date:	06/10/2011
Reported:	06/17/2011	Sampling Type:	Soil
Project Name:	VACUUM JCT D-31-2	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: SB 4 @ 40' (H101213-06)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2640	16.0	06/15/2011	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	06/16/2011	ND	206	103	200	5.32		
DRO >C10-C28	<10.0	10.0	06/16/2011	ND	187	93.3	200	5.61		
Surrogate: 1-Chlorooctane	94.6 %	70-130								
Surrogate: 1-Chlorooctadecane	104 %	70-130								

**Sample ID: SB 4 @ 80' (H101213-07)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1790	16.0	06/15/2011	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	06/16/2011	ND	206	103	200	5.32		
DRO >C10-C28	<10.0	10.0	06/16/2011	ND	187	93.3	200	5.61		
Surrogate: 1-Chlorooctane	90.7 %	70-130								
Surrogate: 1-Chlorooctadecane	112 %	70-130								

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\* = Accredited Analyte

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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.
-	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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A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager

Page 6 of 7



**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**

<b>Company Name:</b> Rice Operating Company <b>Project Manager:</b> Hack Conder <b>Address:</b> 122 West Taylor <b>City:</b> Hobbs <b>State:</b> NM <b>Zip:</b> 88240 <b>Phone #:</b> 575-393-9174 <b>Fax #:</b> 575-397-1471 <b>Project #:</b> <b>Project Owner:</b> <b>Project Name:</b> Vacuum Jct D-31-2 <b>Project Location:</b> Vacuum Jct D-31-2 <b>Sampler Name:</b> Jordan Woodfin				<b>BILL TO</b> <b>P.O. #:</b> <b>Company:</b> <b>Attn:</b> <b>Address:</b> <b>City:</b> <b>State:</b> <b>Zip:</b> <b>Phone #:</b> <b>Fax #:</b>				<b>ANALYSIS REQUEST</b>															
								Chlorides TPH 8015 M BTEX Texas TPH Complete Cations/Anions TPH 8015 M Extended Thru C40															
FOR LAB USE ONLY		Lab I.D.		Sample I.D.		(GRAB OR COMPOUND) # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER:		MATRIX ACID/BASE: ICE/COOL: OTHER:		PRESERV		SAMPLING		DATE		TIME							
		HTD1213												6/10/11		10:00							
		-1 SB 2 @ 5'												"		10:15							
		-2 SB 2 @ 80'												"		10:30							
		3 SB 3 @ 50'												"		11:00							
		4 SB 3 @ 80'												"		01:15							
		5 SB 4 @ 15'												"		01:30							
		6 SB 4 @ 40'												"		02:00							
		7 SB 4 @ 80'																					
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<b>Relinquished By:</b> Jordan Woodfin <b>Date:</b> 6/10/11 <b>Time:</b> 4:20				<b>Received By:</b> Jodi Newson <b>Date:</b> <b>Time:</b>				<b>Phone Result:</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>Fax Result:</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>REMARKS:</b> email results				<b>Add'l Phone #:</b> <b>Add'l Fax #:</b>											
<b>Delivered By: (Circle One)</b> Sampler - UPS - Bus - Other:				<b>Sample Condition</b> Cool Intact <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> Yes				<b>CHECKED BY:</b> (Initials) EA				Hconder@riceswd.com; jwoodfin@rice-ecs.com; Lweinheimer@rice-ecs.com jkones@riceswd.com											

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

NEED SAMPLES BACK, PLEASE



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March 01, 2012

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

RE: VACUUM D-31-2 JCT 17S-35E

Enclosed are the results of analyses for samples received by the laboratory on 02/27/12 16:30.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene  
Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 02/27/2012  
Reported: 03/01/2012  
Project Name: VACUUM D-31-2 JCT 17S-35E  
Project Number: NOT GIVEN  
Project Location: NOT GIVEN

Sampling Date: 02/27/2012  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Celey D. Keene

**Sample ID: SB-5 @ 15' (H200512-01)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1340	16.0	02/28/2012	ND	416	104	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	02/29/2012	ND	177	88.4	200	8.22	
DRO >C10-C28	<10.0	10.0	02/29/2012	ND	187	93.6	200	7.89	
Surrogate: 1-Chlorooctane	83.7 %	55.5-154							
Surrogate: 1-Chlorooctadecane	91.7 %	57.6-158							

**Sample ID: SB-5 @ 35' (H200512-02)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	272	16.0	02/28/2012	ND	416	104	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	02/29/2012	ND	177	88.4	200	8.22	
DRO >C10-C28	<10.0	10.0	02/29/2012	ND	187	93.6	200	7.89	
<hr/>									
Surrogate: 1-Chlorooctane	85.2 %	55.5-154							
Surrogate: 1-Chlorooctadecane	90.3 %	57.6-158							

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 02/27/2012  
Reported: 03/01/2012  
Project Name: VACUUM D-31-2 JCT 17S-35E  
Project Number: NOT GIVEN  
Project Location: NOT GIVEN

Sampling Date: 02/27/2012  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Celey D. Keene

**Sample ID: SB-6 @ 15' (H200512-03)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3560	16.0	02/28/2012	ND	416	104	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	02/29/2012	ND	177	88.4	200	8.22	
DRO >C10-C28	<10.0	10.0	02/29/2012	ND	187	93.6	200	7.89	
Surrogate: 1-Chlorooctane		96.3 %	55.5-154						
Surrogate: 1-Chlorooctadecane		99.5 %	57.6-158						

**Sample ID: SB-6 @ 80' (H200512-04)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1180	16.0	02/28/2012	ND	416	104	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	02/29/2012	ND	177	88.4	200	8.22	
DRO >C10-C28	10.9	10.0	02/29/2012	ND	187	93.6	200	7.89	
Surrogate: 1-Chlorooctane		83.3 %	55.5-154						
Surrogate: 1-Chlorooctadecane		92.9 %	57.6-158						

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

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

Received:	02/27/2012	Sampling Date:	02/27/2012
Reported:	03/01/2012	Sampling Type:	Soil
Project Name:	VACUUM D-31-2 JCT 17S-35E	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Celey D. Keene
Project Location:	NOT GIVEN		

**Sample ID: SB-7 @ 30' (H200512-05)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>2200</b>	16.0	02/28/2012	ND	416	104	400	0.00		
TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	02/29/2012	ND	177	88.4	200	8.22		
DRO >C10-C28	<10.0	10.0	02/29/2012	ND	187	93.6	200	7.89		
<i>Surrogate: 1-Chlorooctane</i>		93.8 %	55.5-154							
<i>Surrogate: 1-Chlorooctadecane</i>		99.6 %	57.6-158							

**Sample ID: SB-7 @ 80' (H200512-06)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>480</b>	16.0	02/28/2012	ND	416	104	400	0.00		
TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	03/01/2012	ND	177	88.4	200	8.22		
<b>DRO &gt;C10-C28</b>	<b>12.3</b>	10.0	03/01/2012	ND	187	93.6	200	7.89		
<i>Surrogate: 1-Chlorooctane</i>		99.0 %	55.5-154							
<i>Surrogate: 1-Chlorooctadecane</i>		105 %	57.6-158							

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**Analytical Results For:**

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

Received: 02/27/2012  
Reported: 03/01/2012  
Project Name: VACUUM D-31-2 JCT 17S-35E  
Project Number: NOT GIVEN  
Project Location: NOT GIVEN

Sampling Date: 02/27/2012  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Celey D. Keene

**Sample ID: SB-8 @ 15' (H200512-07)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>2320</b>	16.0	02/28/2012	ND	416	104	400	0.00		
TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	03/01/2012	ND	177	88.4	200	8.22		
DRO >C10-C28	<10.0	10.0	03/01/2012	ND	187	93.6	200	7.89		
<hr/>										
Surrogate: 1-Chlorooctane	94.4 %	55.5-154								
Surrogate: 1-Chlorooctadecane	99.2 %	57.6-158								

**Sample ID: SB-8 @ 65' (H200512-08)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>112</b>	16.0	02/28/2012	ND	416	104	400	0.00		
TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	03/01/2012	ND	177	88.4	200	8.22		
<b>DRO &gt;C10-C28</b>	<b>10.1</b>	10.0	03/01/2012	ND	187	93.6	200	7.89		
<hr/>										
Surrogate: 1-Chlorooctane	93.8 %	55.5-154								
Surrogate: 1-Chlorooctadecane	101 %	57.6-158								

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 02/27/2012  
Reported: 03/01/2012  
Project Name: VACUUM D-31-2 JCT 17S-35E  
Project Number: NOT GIVEN  
Project Location: NOT GIVEN

Sampling Date: 02/27/2012  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Celey D. Keene

**Sample ID: SB-9 @ 30' (H200512-09)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3160	16.0	02/28/2012	ND	416	104	400	0.00		
TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	03/01/2012	ND	177	88.4	200	8.22		
DRO >C10-C28	<10.0	10.0	03/01/2012	ND	187	93.6	200	7.89		
Surrogate: 1-Chlorooctane	96.6 %	55.5-154								
Surrogate: 1-Chlorooctadecane	102 %	57.6-158								

**Sample ID: SB-9 @ 80' (H200512-10)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1120	16.0	02/28/2012	ND	416	104	400	0.00		
TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	03/01/2012	ND	177	88.4	200	8.22		
DRO >C10-C28	<10.0	10.0	03/01/2012	ND	187	93.6	200	7.89		
Surrogate: 1-Chlorooctane	94.2 %	55.5-154								
Surrogate: 1-Chlorooctadecane	102 %	57.6-158								

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\* = Accredited Analyte

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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.
-	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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A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager

Page 7 of 8



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(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325) 673-7020

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

March 05, 2012

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

RE: VACUUM D-31-2 JCT 17S-35E

Enclosed are the results of analyses for samples received by the laboratory on 02/28/12 15:40.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene  
Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 02/28/2012  
Reported: 03/05/2012  
Project Name: VACUUM D-31-2 JCT 175-35E  
Project Number: NOT GIVEN  
Project Location: NOT GIVEN

Sampling Date: 02/28/2012  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: SB 10 @ SURFACE (H200527-01)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	02/29/2012	ND	400	100	400	7.69		
TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	03/02/2012	ND	202	101	200	9.46		
DRO >C10-C28	<10.0	10.0	03/02/2012	ND	201	101	200	9.80		
<hr/>										
Surrogate: 1-Chlorooctane	88.8 %	55.5-154								
Surrogate: 1-Chlorooctadecane	92.8 %	57.6-158								

**Sample ID: SB 10 @ 15' (H200527-02)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	02/29/2012	ND	400	100	400	7.69		
TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	03/02/2012	ND	202	101	200	9.46		
DRO >C10-C28	<10.0	10.0	03/02/2012	ND	201	101	200	9.80		
<hr/>										
Surrogate: 1-Chlorooctane	92.3 %	55.5-154								
Surrogate: 1-Chlorooctadecane	101 %	57.6-158								

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\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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**Analytical Results For:**

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

Received: 02/28/2012  
 Reported: 03/05/2012  
 Project Name: VACUUM D-31-2 JCT 175-35E  
 Project Number: NOT GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 02/28/2012  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SB 11 @ 20' (H200527-03)**

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	03/01/2012	ND	400	100	400	7.69	
TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	03/02/2012	ND	202	101	200	9.46	
DRO >C10-C28	<10.0	10.0	03/02/2012	ND	201	101	200	9.80	
Surrogate: 1-Chlorooctane		91.1 %	53.5-154						
Surrogate: 1-Chlorooctadecane		99.4 %	57.6-158						

**Sample ID: SB 11 @ 80' (H200527-04)**

Chloride, SM4500CI-B		mg/kg	Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	464	16.0	03/01/2012	ND	400	100	400	7.69	
TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	03/02/2012	ND	202	101	200	9.46	
DRO >C10-C28	<10.0	10.0	03/02/2012	ND	201	101	200	9.80	
Surrogate: 1-Chlorooctane		86.7 %	53.5-154						
Surrogate: 1-Chlorooctadecane		93.2 %	57.6-158						

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\* = Accredited Analyte

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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.  
- 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. Keene, Lab Director/Quality Manager

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