1R - 425-38

REPORTS

DATE:

3-28-13

20055 Laredo Lane Monument, CO 80132 Tel: 719-339-6791 E-mail: lpg@texerra.com

March 28th, 2013

RECEIVED

Mr. Edward Hansen New Mexico Oil Conservation Division, Environmental Bureau 1220 S. St. Francis Drive Santa Fe, New Mexico 87504

APR 9 2013

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

RE: Annual Report and Remediation Termination Request

Rice Operating Company, Vacuum M-5 Junction Box, Unit M Sec 5 T18S R35E NMOCD Case Number - 1R425-38

Sent via Email and U.S. Certified Mail Return Receipt No. 7007 2560 0001 9727 8896

Mr. Hansen,

This letter summarizes the present status of Rice Operating Company's (ROC's) Vacuum M-5 Junction Box project (location given in Appendix - Figure 1) with respect to remedial actions and groundwater monitoring.

ROC completed the remedial work for the Vacuum Jct M-5 project in December 2010 as described in our Corrective Action Plan (CAP) Report and Remediation Termination Request of March 1st, 2011:

- 1) Removed the upper (approximately) four feet of chloride impacted soils (Appendix Figure 2) across the area affected by past operations of the M-5 junction box (approximately 80x40 ft) and disposed of these in an NMOCD approved facility.
- 2) Installed and properly seated a 20-mil plastic infiltration barrier at this depth encompassing the area impacted by the former junction box and <u>backfilled with clean fill dirt with a chloride concentration below 500 mg/kg and a PID (field) reading below 100 ppm.</u>
- 3) Prepared the surface soils over and surrounding the site and seeded to a native vegetation mix.

A photographic record of this work is given in the Appendix - Figure 3, and PID readings of imported and backfilled (blended) soil are given in the Appendix - Figures 4 & 5.

NMOCD granted soil closure on March 31st, 2011 (APPENDIX Figure 6) and asked ROC to continue monitoring groundwater until chloride concentrations fell below 250 mg/l for eight (8) consecutive quarters. ROC has thus continued sampling the near-source monitor well on a quarterly basis.

Rice Operating Company – Vacuum Jct M-5

A summary of groundwater monitoring data for a near-source monitor well is given in the Appendix - Table 1 and Figure 7. Groundwater chlorides have declined substantially since the installation of the infiltration barrier in December 2011, having remained below the WQCC groundwater standard of 250 mg/l since early 2011 for the past two years (eight sampling quarters). The laboratory analytical result for the most recent sampling event is included in Appendix - Figure 8.

The remedial measures taken by ROC have restored the surface to productive, natural use and have affected the protection of groundwater quality. We thus respectfully request that this project be granted remediation termination or similar closure status, to include the plugging and abandonment of the monitor well (MW-1) at this location.

ROC is the service provider (agent) for the Vacuum Salt Water Disposal System and has no ownership of any portion of pipeline, well or facility. The Vacuum SWD 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 request.

Sincerely,

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

Copy:

Rice Operating Company

Attachments: Appendix

Texerra LLC

2

Rice Operating Company Vacuum Jet M-5 NMOCD Case Number - 1R425-38 2012 Annual Report & Remediation Termination Rewquest

APPENDIX

- Figure 1 Location map.
- Figure 2 NMOCD approved soil infiltration barrier, soil bore and monitor well locations, soil analysis summary.
- **Figure 3** Photographic record of work performed in December 2010.
- Figure 4 PID field measurement values for imported soil material.
- Figure 5 PID field measurement values for blended backfill soil material installed above liner.
- Figure 6 NMOCD e-mail letter granting remediation termination status of vadose (soil) zone
- **Table 1** Summary of laboratory analyses of groundwater data from near-source, down-gradient monitor well (MW-1).
- Figure 7 Groundwater chloride concentrations from a down-gradient monitor well (MW-1).
- Figure 8 Laboratory analysis report February, 2013

Vacuum M-5 Jct 2012 Annual Report



Figure 1 – VAC M-5 Jct location.

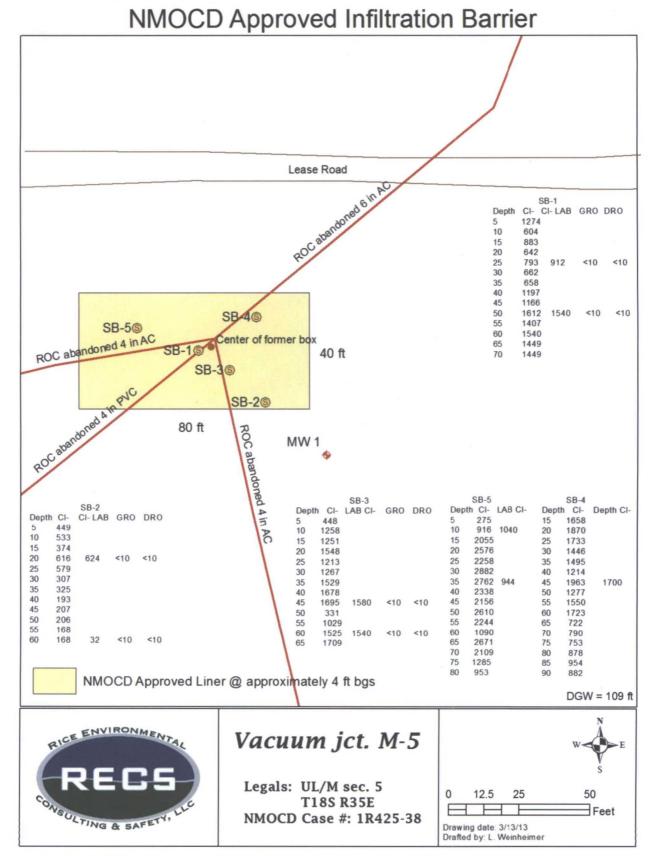


Figure 2 – NMOCD approved soil infiltration barrier plan view, soil bore and monitor well locations, soil analysis summary.

Vacuum Jct. M-5 (1R425-38) Unit M, Section 5, T18S, R35E excavating the south side of the site, facing west 12/8/2010 screening the excavated material, facing east 12/8/2010 hauling in blow sand hauling off contaminated soil 12/16/2010 12/16/2010 final 80x40x4.5-ft deep excavation, facing southwest 12/10/2010 excavation padded with 6 inches of imported soil, facing southwest 12/17/2010

Figure 3 – Photographic record of work performed in December 2010.



Figure 3 (continued) – Photographic record of work performed in December 2010 and February 2011.

	PHONE:	(575) 393-917	Hobbs, NM 88240 4 FAX: (575) 397-14 N & FIELD REPORT		
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Figure 4 – PID field measurement values for imported soil material.

	PHONE:	(575) 393-9174	lobbs, NM 88240 1 FAX: (575) 397-14 N & FIELD REPORT		·
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Figure 5 – PID field measurement values for blended backfill soil material installed above liner.

Soil Closure Approval (1R425-38) - ROC Vacuum Jct M-5 Site

Page 1 of 1

Soil Closure Approval (1R425-38) - ROC Vacuum Jct M-5 Site

From: Hansen, Edward J., EMNRD Sent: Thu, Mar 31, 2011 at 2:19 pm

To: Hack Conder

Cc: Leking, Geoffrey R, EMNRD, Katie Jones, lpg@texerra.com

RE: "Corrective Action Plan Report and Remediation Termination Request" for the Rice Operating Company's Vacuum Jct M-5 Site (1R425-38)
Unit Letter M, Section 5, T18S, R35E, NMPM, Lea County, New Mexico Soil Closure Approval

Dear Mr. Conder:

The New Mexico Oil Conservation Division (OCD) has received the Rice Operating Company's (ROC) report and request for closure of the above-referenced site (dated March 1, 2011). The above-referenced report, submitted in fulfillment of 19.15.29 NMAC (Part 29, formally, Rule 116), indicates that Rice Operating Company (ROC) has partially met the requirements of 19.15.29 NMAC for this site. Therefore, the OCD hereby conditionally approves the soil closure for the Vacuum Jct M-5 Site and no further soil remediation is required for this site.

The Vacuum Jct M-5 Site is still active under Remediation Plan, 1R425-38, and groundwater monitoring must continue at the Vacuum Jct M-5 Site.

Please be advised that OCD partial approval of this request does not relieve the owner/operator of responsibility should operations pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the owner/operator of responsibility for compliance with any OCD, federal, state, or local laws and/or regulations.

Thank you for your cooperation in this matter. If you have any questions regarding this matter, please contact at 505-476-3489.

Edward J. Hansen Hydrologist Environmental Bureau

Figure 6 – NMOCD letter granting remediation termination status to vadose (soil) zone.

Table 1 – Summary of laboratory analyses of groundwater data from near-source, down-gradient

monitor well (MW-1).

				* *.			;	
Sample		WQCC				Ethyl	Total	
Date	CI	standard	TDS	Benzene	Toluene	Benzene	Xylenes	Sulfate
3/3/09	352	250	972	<0.001	<0.001	< 0.001	< 0.003	47
4/29/09	368	250	851	<0.001	<0.001	<0.001	< 0.003	44
8/7/09	416	250	1,090	<0.001	<0.001	<0.001	< 0.003	47
10/22/09	380	250	1,030	<0.001	<0.001	< 0.001	< 0.003	45
2/11/10	332	250	929	<0.001	<0.001	<0.001	< 0.003	54
4/26/10	344	250	1,020	<0.001	<0.001	<0.001	< 0.003	56
8/5/10	336	250	945	<0.001	<0.001	<0.001	< 0.003	51
10/28/10	340	250	897	<0.001	<0.001	< 0.001	< 0.003	50
2/21/11	288	250	781	<0.001	<0.001	< 0.001	< 0.003	51
6/6/11	152	250	553	<0.001	<0.001	<0.001	< 0.003	47
9/2/11	108	250	347	< 0.001	<0.001	< 0.001	< 0.003	45
12/3/11	204	250	572	<0.001	< 0.001	< 0.001	< 0.003	44
2/24/12	228	250	517	<0.001	<0.001	<0.001	< 0.003	39
6/1/12	196	250	796	<0.001	< 0.001	< 0.001	< 0.003	48
8/29/12	160	250	622	<0.001	<0.001	<0.001	< 0.003	46
11/16/12	220	250	655	< 0.001	<0.001	<0.001	< 0.003	77
2/14/13	188	250	579	< 0.001	<0.001	< 0.001	< 0.003	50

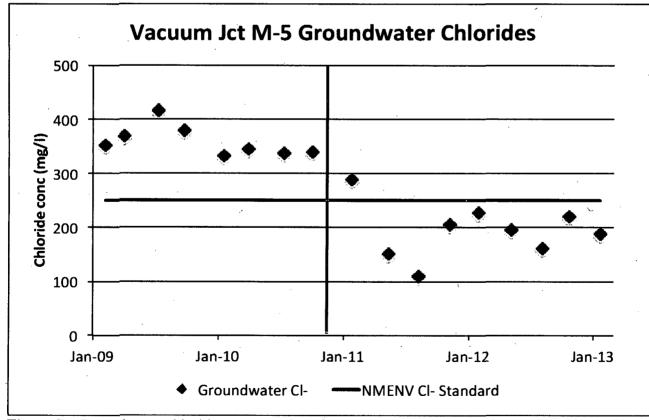


Figure 7 - Groundwater chloride concentrations from a down-gradient monitor well (MW-1). Vertical line indicates the installation of infiltration barrier in December, 2010. Groundwater chlorides have been below 250 mg/l for the last eight (8) quarterly samples.



February 22, 2013

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

RE: VACUUM JUNCTION M-5

Enclosed are the results of analyses for samples received by the laboratory on 02/15/13 11:01.

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/ga/lab accred certif.html.

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

Method EPA 552.2

Haloacetic Acids (HAA-5)

Method EPA 524.2

Total Trihalomethanes (TTHM)

Method EPA 524.4

Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

Celey D. Keene

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



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

Fax To: (575) 397-1471

Received:

02/15/2013

Sampling Date:

02/14/2013

Reported:

Sampling Type:

Water

Project Name:

02/22/2013

VACUUM JUNCTION M-5

Sampling Condition:

Cool & Intact

Project Number:

NONE GIVEN

Sample Received By:

Jodi Henson

Project Location:

T18S-R35E-SEC5 M-LEA CTY., NM

Sample ID: MONITOR WELL #1 (H300435-01)

BTEX 8021B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.001	0.001	02/20/2013	. ND	0.047	93.0	0.0500	4.23	
Toluene*	<0.001	0.001	02/20/2013	ND	0.047	93.7	0.0500	4.16	
Ethylbenzene*	< 0.001	0.001	02/20/2013	ND	0.044	88.7	0.0500	3.98	
Total Xylenes*	<0.003	0.003	02/20/2013	ND	0.139	92.5	0.150	3.87	
Total BTEX	<0.006	0.006	02/20/2013	· ND	•				
Surrogate: 4-Bromofluorobenzene (PIL	107 9	% 89.4-12	16						
Chloride, SM4500CI-B	mg/	<u>'L</u>	Analyze	d By: DW					
Analyte .	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	188	4.00	02/18/2013	ND .	432	108	400	0.00	
Sulfate 375.4	mg/	<u>′L</u>	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Sulfate*	49.8	10.0	02/15/2013	ND	21.3	106	20.0	1.21	
TDS 160.1	mg/	<u>'L</u>	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	579	5.00	02/20/2013	ND	223	92.9	240	1.36	
				*					

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 walved 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,

Celeg D. Keine



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

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 whistoever 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 jaboratories.

Celeg D. Keine

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#26

Hansen, Edward J., EMNRD

From:

Hack Conder < hconder@riceswd.com>

Sent:

Tuesday, April 23, 2013 4:19 PM

To:

Hansen, Edward J., EMNRD

Attachments:

Vacuum jct. M-5 LAB 11.16.12.pdf; Vacuum jct. M-5 LAB 2.24.12.pdf; Vacuum jct. M-5

LAB 6.1.12.pdf; Vacuum jct. M-5 LAB 8.29.12.pdf

Mr. Hansen

Attached is the MW analytical data for 2012 .

Thanks

Hack



November 30, 2012

Hack Conder

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: VACUUM JUNCTION M-5

Enclosed are the results of analyses for samples received by the laboratory on 11/19/12 14:12.

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

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

Method EPA 552.2

Haloacetic Acids (HAA-5)

Method EPA 524.2

Total Trihalomethanes (TTHM)

Method EPA 524.4

Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene



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

Fax To:

(575) 397-1471

Received:

11/19/2012

Sampling Date:

11/16/2012

Reported:

11/30/2012

Sampling Type:

Water

Project Name:

VACUUM JUNCTION M-5

Sampling Condition:

Cool & Intact

Project Number:

NONE GIVEN

Sample Received By:

Jodi Henson

Project Location:

T18S-R35E-SEC5 M-LEA CTY., NM

Sample ID: MONITOR WELL #1 (H202815-01)

BTEX 8021B	mg/	L	Anaiyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.001	0.001	11/20/2012	ND	0.048	95.7	0.0500	1.37	
Toluene*	<0.001	0.001	11/20/2012	ND	0.052	103	0.0500	0.765	
Ethylbenzene*	<0.001	0.001	11/20/2012	ND	0.051	101	0.0500	0.899	
Total Xylenes*	<0.003	0.003	11/20/2012	ND	0.153	102	0.150	1.12	
Total BTEX	<0.006	0.006	11/20/2012	ND					
Surrogate: 4-Bromofluorobenzene (PIC	120 %	6 89.5-12	6						
Chloride, SM4500CI-B	mg/l	L	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	220	4.00	11/26/2012	ND	104	104	100	0.00	
Sulfate 375.4	mg/l	L	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Sulfate*	76.9	10.0	11/27/2012	ND	16.9	84.6	20.0	13.8	
TDS 160.1	mg/l	L	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	655	5.00	11/21/2012	ND	239	99.6	240	6.21	

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PLEASE NOTE: Liability and Damages. Cardinal's liability and clients 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 nepligence and any other cause whatsoever shall be deemed walved unless made in writing and received by Cardinal within thirty (30) days after competion 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 claims 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

Celey D. Keene, Lab Director/Quality Manager



Notes and Definitions

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

** Samples not received at proper temperature of 6°C or below.

*** Insufficient time to reach temperature.

Chloride by SM4500CI-B does not require samples be received at or below 6°C

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

Cardinal Laboratories *=Accredited Analyte

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Celey D. Keine

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September 11, 2012

Hack Conder

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: VACUUM JUNCTION M-5

Enclosed are the results of analyses for samples received by the laboratory on 08/30/12 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.

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

Method EPA 552.2

Haloacetic Acids (HAA-5)

Method EPA 524.2

Total Trihalomethanes (TTHM)

Method EPA 524.4

Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene



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

Fax To:

(575) 397-1471

Received:

08/30/2012

Sampling Date:

08/29/2012

Reported:

09/11/2012

Sampling Type:

Water

Sampling Condition:

Cool & Intact

Project Name:

VACUUM JUNCTION M-5 NONE GIVEN

Project Number: Project Location:

T18S-R35E-SEC5 M-LEA CTY., NM

Sample Received By:

Jodi Henson

Sample ID: MONITOR WELL #1 (H202098-01)

BTEX 8260B	mg/	L	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.001	0.001	08/31/2012	ND	0.019	93.6	0.0200	1.24	•
Toluene*	<0.001	0.001	08/31/2012	ND	0.020	101	0.0200	1.77	
Ethylbenzene*	<0.001	0.001	08/31/2012	ND	0.021	105	0.0200	3.23	
Total Xylenes*	<0.003	0.003	08/31/2012	ND	0.059	98.0	0.0600	2.80	
Surrogate: Dibromofluoromethane	89.5	% 59.8-16	1						
Surrogate: Toluene-d8	103 %	6 75.2-11.	5						
Surrogate: 4-Bromofluorobenzene	110 %	6 53.7-12	0						
Chloride, SM4500Cl-B	mg/	L	Analyze	d By: AP					·
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	160	4.00	09/07/2012	ND	100	100	100	3.92	
Sulfate 375.4	mg/	<u>. </u>	Analyze	d By: HM		· .			
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Sulfate*	45.6	10.0	09/10/2012	ND	19.2	96.0	20.0	3.58	
TDS 160.1	mg/	<u> </u>	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	622	5.00	08/31/2012	ND	231	96.2	240	0.322	

Cardinal Laboratories

*=Accredited Analyte

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



Notes and Definitions

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

** Samples not received at proper temperature of 6°C or below.

*** Insufficient time to reach temperature.

Chloride by SM4500CI-B does not require samples be received at or below 6°C

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

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keine

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June 12, 2012

Hack Conder

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: VACUUM JUNCTION M-5

Enclosed are the results of analyses for samples received by the laboratory on 06/06/12 12:06.

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

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

Method EPA 552.2

Haloacetic Acids (HAA-5)

Method EPA 524.2

Total Trihalomethanes (TTHM)

Method EPA 524.4

Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene



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

Fax To: (575) 397-1471

Received:

06/06/2012

Sampling Date:

06/01/2012

Reported:

06/12/2012

Sampling Type:

Water

Sampling Condition:

Project Name:

VACUUM JUNCTION M-5

Cool & Intact

Project Number:

NONE GIVEN

Sample Received By:

Jodi Henson

Project Location:

T18S-R35E-SEC5 M-LEA CTY., NM

Sample ID: MONITOR WELL #1 (H201263-01)

BTEX 8021B	mg/	L	Analyze	d By: ZZZ					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.001	0.001	06/11/2012	ND .	0.057	114	0.0500	2.22	
Toluene*	<0.001	0.001	06/11/2012	ND	0.050	100	0.0500	2.48	,
Ethylbenzene*	<0.001	0.001	06/11/2012	ND	0.048	95.5	0.0500	1.89	
Total Xylenes*	<0.003	0.003	06/11/2012	ND	0.142	94.5	0.150	1.96	
Surrogate: 4-Bromofluorobenzene (PIE	104 %	6 89.5-12	6						
Chloride, SM4500CI-B	mg/	L	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	196	4.00	06/07/2012	ND	104	104	100	0.00	
Sulfate 375.4	mg/	L	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Sulfate*	47.9	10.0	06/06/2012	ND	22.0	110	20.0	1.28	
TDS 160.1	mg/	L	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	796	5.00	06/06/2012	ND	221	92.1	240	0.892	

*=Accredited Analyte Cardinal Laboratories

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 competion 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 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. Keine

Celey D. Keene, Lab Director/Quality Manager



Notes and Definitions

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

** Samples not received at proper temperature of 6°C or below.

*** Insufficient time to reach temperature.

Chloride by SM4500Cl-B does not require samples be received at or below 6° C Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

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Celey D. Keine

101 East Marland - Hotbs, New Mexico 88240,			CHAIN-OF-CUSTODY AND ANALYSIS REQUEST
Tal (575) 393-2476 Fex (575) 393-2476	al Laborat	ories, inc.	LAB Order ID #
Company Name	BILL TO Company:	PO#	ANALYSIS REQUEST
RICE Operating Company	RICE Operating Com		(Circle of Specify Method No.)
Project Manager	Address:	(Street, City, Zip)	A Carle of Specify wellow to the first of the first section of the
Hack Conder	122 W Taylor Street ~ Hobbs.	New Mexico 88240	
Address: (Street City Zip)	Phone#s		
122 W Taylor Street - Hobbs, New Mexico 88240		(575)397-1471	
Phone # Fex (575) 393-9174 (57	5) 397-1471	Λ	60108/200
Project #: Project Name:	11		1. 8021B/602 (8021B/602 (8021B/602 (8021B/602 (8021B/602 (8021B/602 (8021B/602 (8021B/602 (8021B/603 (80
Vacuum Junction M-5		(abassa (675)(691 0210	
Project Location	Sampler Signatur	Prozanne Johnson (575)631-9310	
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	MATRIX ()	METHOD SAMPLING	MTBE 8021B/602 BTEX 8021B/602 TPH 418.1/TX1005 / TX1005 E PAH 8270C: Total Metals Ag As Ba Cd Cr Pt TCLP Metals Ag As Ba Cd Cr Pt TCLP Pesticides TCLP Pestici
	CONTAINERS MATER OIL IR		8021B/602 8021B/602 418.1/TX1005 /1 8270C Metals Ag As Ba Metals Ag As Ba Metals Ag As Ba Wolatiles Semi Volatiles Semi Vol 827 Semi Vol
LAB# FIELD.CODE CO	L Z	HCL (2 40mt v0A) HNO3. VaHSO4. H2SO4. CE.(1-1-tite) HIPE NONE DATE (2012)	WTBE 8021B/602 3TEX 8021B/602 TPH 418.1/TX1006 PAH 8270C Total Metals Ag As TCLP Metals Ag As TCLP Wolatiles TCLP Pesticides TCLP Pesticides SCIAIS Vol. 8260B SCIAIS Semi: Vol. Pesticides BCI SCIAIS Semi: Vol. Pesticides ACI SCIAIS Semi: Vol. ACI SCIAIS Semi: Vol. ACI SCIAIS Semi: Vol. ACI SCIAIS Semi: Vol. ACI SCIAIS Semi: Vol. ACI SCIAIS Semi: Vol. ACI SCIAIS Semi: Vol. ACI SCIAIS SEMI: Vol. ACI SCIAIS SEMI: Vol. ACI Anions (Cl. SO4. C Sulfates Total Dissolved Sc Chlorides Turn Around Time
	Z Z W	<u>\$</u>	MTBE 8021 TPH 418.1/ PAH 8270C Total Metals Total Disso Chlorides
(LAB USE)			MTBE 803 MTPH 418, 94H 9277 Otal Meta Cotal
GONLY GE	# CONTA WATER SOIL AIR SLUDGE	HCL (2 40mt von HNO3 NaHSO4 H2SO4 ICE (1-1che HDPI NONE DATE (2012)	MTBE 8021B/60 BTEX 8021B/60 BTEX 8021B/60 TPH 418.1/TX10 PAH 8270C: Total Metals Ag / TCLP Wetals Ag / TCLP Volatiles TCLP Pesticides TCLP Pesticides RCI GC/MS Semi: Volatiles COMPC Semi: Volatiles Composition (CI, SO4 Sulfates Total Dissolved Chlorides
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Relinquished by Date: Time: Re	ceived by:	Date: Time	Phone Résults Yes No
			Fax Results Yes No Additional Fax Number.
Rozarine Johnson // (e-1-2012 12'5) Relinquished by: // Date: Time: Re	ceived By: (Laboratory Staff)	Date: Time:	REMARKS:
The state of the s			
18 : A	type S-Movens	- 6-6-2012 12:00	Email Results to: hconder@riceswd:com Weinheimer@rice-ecc.com
Delivered By: (Circle One) Sar	mp/e Condition	CHECKED BY:	kiones@ricesyG.ccm
	Yes Yes	(Initials)	rozanne@valomet.com
Sampler - UPS - Bus - Other	No No	15W	



March 05, 2012

Hack Conder

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: VACUUM JUNCTION M-5

Enclosed are the results of analyses for samples received by the laboratory on 02/27/12 12:10.

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

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

Method EPA 552.2

Haloacetic Acids (HAA-5)

Method EPA 524.2

Total Trihalomethanes (TTHM)

Method EPA 524.4

Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

Celey D. Keine

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



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

Fax To: (575) 397-1471

Received:

02/27/2012

Sampling Date:

02/24/2012

Reported:

03/05/2012

Sampling Type:

Water

Project Name:

VACUUM JUNCTION M-5

Sampling Condition:

Cool & Intact

Project Number:

NONE GIVEN

Sample Received By:

Celey D. Keene

Project Location:

T18S-R35E-SEC5 M-LEA CTY., NM

Sample ID: MONITOR WELL #1 (H200504-01)

mg/	<u>'L</u>	Analyze	d By: AP					
Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<0.001	0.001	03/01/2012	ND	0.047	93.5	0.0500	1.74	
<0.001	0.001	03/01/2012	ND	0.049	97.3	0.0500	1.51	
<0.001	0.001	03/01/2012	ND	0.050	99.2	0.0500	2.45	
<0.003 0.003		03/01/2012	ND	0.153	102	0.150	2.42	
105 9	% 70.7-11	8						
mg/	<u>L</u>	Analyze	d By: AP					
Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
228	4.00	02/28/2012	ND	100	100	100	3.92	
mg/	'L	Analyze	d By: CK					
Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
39.4	10.0	03/05/2012	ND	17.5	87.4	20.0	22.5	
mg/	<u>'L</u>	Analyze	d By: HM					
Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
	Result <0.001 <0.001 <0.003 /05 9 mg/ Result 228 mg/ Result 39.4 mg/	<0.001 0.001 <0.001 0.001 <0.001 0.001 <0.003 0.003 //05 % 70.7-11 mg/L Result Reporting Limit 228 4.00 mg/L Result Reporting Limit 39.4 10.0 mg/L	Result Reporting Limit Analyzed <0.001	Result Reporting Limit Analyzed Method Blank <0.001	Result Reporting Limit Analyzed Method Blank BS <0.001	Result Reporting Limit Analyzed Method Blank BS % Recovery <0.001	Result Reporting Limit Analyzed Method Blank BS % Recovery True Value QC <0.001	Result Reporting Limit Analyzed Method Blank BS % Recovery True Value QC RPD < 0.001

Cardinal Laboratories *=Accredited Analyte

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Celey D. Kune



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

Cardinal Laboratories *=Accredited Analyte

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Celey D. Keene

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1103-1331	Seco IVI ~ Lea County New IVI	EXICO		4		JA,	Z					IVE	T					ğ	9						GC/MS Semi Vol. 8270C/625					Cations (Ca, Mg, Na, K)	위			Turn Around Time ~ 24 Hours
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December 09, 2011

Hack Conder

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: VACUUM JUNCTION M-5

Enclosed are the results of analyses for samples received by the laboratory on 12/06/11 16:00.

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.

Celey D. Keine

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

Hansen, Edward J., EMNRD

From:

Hack Conder hconder@riceswd.com

Sent:

Tuesday, April 23, 2013 4:44 PM Hansen, Edward J., EMNRD

To: Subject:

lah

Attachments:

Vacuum jct. M-5 LAB 9.2.11.pdf; Vacuum jct. M-5 LAB 12.3.11.pdf; Vacuum jct. M-5 LAB

6.6.11.pdf; Vacuum jct. M-5 LAB 2.21.11.pdf

Mr. Hansen,

Attached is the 2011 Lab Data for M-5.

Thanks Hack



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

Fax To:

(575) 397-1471

Received:

12/06/2011

Sampling Date:

12/03/2011

Reported:

12/09/2011

Sampling Type:

Water

Project Name:

VACUUM JUNCTION M-5

Sampling Condition:

Cool & Intact

Project Number:

NONE GIVEN

Sample Received By:

Jodi Henson

Project Location:

T18S-R35E-SEC5 M-LEA CTY., NM

Sample ID: MONITOR WELL #1 (H102606-01)

BTEX 8021B	mg/	'L	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.001	0.001	12/07/2011	ND	0.048	95.6	0.0500	0.725	
Toluene*	< 0.001	0.001	12/07/2011	ND	0.046	91.7	0.0500	0.131	
Ethylbenzene*	< 0.001	0.001	12/07/2011	ND	0.053	106	0.0500	0.246	
Total Xylenes*	<0.003	0.003	12/07/2011	ND	0.153	102	0.150	0.368	
Surrogate: 4-Bromofluorobenzene (PIL	108 9	% 70.7-11	8					· · · · · ·	
Chloride, SM4500CI-B	mg/	<u>L</u>	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	204	4.00	12/07/2011	ND	104	104	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*	ulfate* 43.7		12/07/2011	ND	18.8	94.0	20.0	2.70	
TDS 160.1	mg/	L	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	572	5.00	12/09/2011	ND	241	100	240	1.43	

*≈Accredited Analyte Cardinal Laboratories

PLEASE NOTE: Liability and Damages. Cardinal's (liability and clients 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 whistoever shall be deemed walved unless made in writing and received by Cardinal within thirty (30) days after competion of the applicable service. In no event shall Cardinal be liable for inodental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successions arising out or or related to the performance of the services hereunder by Cardinal, regardless of whether such claims 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. Keine

Celey D. Keene, Lab Director/Quality Manager



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

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 waved unless made in writing and received by Cardinal within thirty (30) days after competion 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 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. Keine

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#26



September 09, 2011

Hack Conder

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: VACUUM JUNCTION M-5

Enclosed are the results of analyses for samples received by the laboratory on 09/06/11 9:50.

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.

Celey D. Keens

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



Analytical Results For:

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

Fax To:

(575) 397-1471

Received:

09/06/2011

Sampling Date:

09/02/2011

Reported:

09/09/2011

Sampling Type:

Water

Project Name:

VACUUM JUNCTION M-5

Sampling Condition:

Cool & Intact

Project Number:

NONE GIVEN

Sample Received By:

Jodi Henson

Project Location:

T18S-R35E-SEC5 M-LEA CTY., NM

Sample ID: MONITOR WELL #1 (H101888-01)

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	09/07/2011	ND	0.020	98.8	0.0200	2.46	
Toluene*	< 0.001	0.001	09/07/2011	ND	0.020	99.4	0.0200	1.47	
Ethylbenzene*	< 0.001	0.001	09/07/2011	ND	0.021	105	0.0200	2.31	
Total Xylenes*	<0.003	0.003	09/07/2011	ND	0.055	92.2	0.0600	1.68	
Surrogate: Dibromofluoromethane	126%	6 59.8-16	1						,
Surrogate: Toluene-d8	95.2 %	6 75.2-11.	5						
Surrogate: 4-Bromofluorobenzene	78.3 %	6 53.7-12	0						
Chloride, SM4500CI-B	mg/	L	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	108	4.00	09/08/2011	ND	104	104	100	0.00	
Sulfate 375.4	mg/	L	Analyze	d By: HM			·— <u> </u>		<u> </u>
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Sulfate	44.5	10.0	09/08/2011	ND	19.7	98.5	20.0	6.86	
TDS 160.1	mg/	<u> </u>	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS	347	5.00	09/07/2011	ND	223	92.9	240	12.1	

Cardinal Laboratories *=Accredited Analyte

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Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

Cardinal Laboratories

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Celey D. Keine

*=Accredited Analyte

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June 13, 2011

Hack Conder

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: VACUUM JUNCTION M-5

Enclosed are the results of analyses for samples received by the laboratory on 06/09/11 12:36.

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.

Celey D. Keens

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



Analytical Results For:

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

Received:

06/09/2011

Sampling Date:

06/06/2011

Reported:

06/13/2011

Sampling Type:

Water

Project Name:

VACUUM JUNCTION M-5

Sampling Condition:

Cool & Intact

Project Number:

NONE GIVEN

Sample Received By:

Jodi Henson

Project Location:

T18S-R35E-SEC5 M-LEA CTY., NM

Sample ID: MONITOR WELL #1 (H101198-01)

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	06/10/2011	ND .	0.021	107	0.0200	2.07	
Toluene*	<0.001	0.001	06/10/2011	ND	0.023	115	0.0200	2.03	
Ethylbenzene*	<0.001	0.001	06/10/2011	ND	0.023	113	0.0200	1.97	
Total Xylenes*	<0.003	0.003	06/10/2011	ND	0.071	118	0.0600	2.10	
Surrogate: Dibromofluoromethane	133 9	% 80-120		-					,
Surrogate: Toluene-d8	102 9	% 80-120							
Surrogate: 4-Bromofluorobenzene	84.2	% 80-120							
Chloride, SM4500CI-B	mg/	<u>′L</u>	Analyze	d By: HM					<u></u>
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	152	4.00	06/10/2011	ND	112	112	100	3.64	
Sulfate 375.4	mg/	<u>′L</u>	Analyzé	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Sulfate	46.5	10.0	06/10/2011	ND	42.4	2.65	1600	1.68	
TDS 160.1	mg/	<u>'L</u>	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS	553	5.00	06/10/2011	ND	213	88.8	240	3.02	

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Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager



A-01 1 Surrogate failed QC limits, high, but there are no hits above PQL in the sample so reanalysis is not required.

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. Keine

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September 11, 2012

Hack Conder

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: VACUUM JUNCTION M-5

Enclosed are the results of analyses for samples received by the laboratory on 08/30/12 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 accredited certif.html.

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

Method EPA 552.2

Haloacetic Acids (HAA-5)

Method EPA 524.2

Total Trihalomethanes (TTHM)

Method EPA 524.4

Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

Celey D. Keene

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



Analytical Results For:

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

Fax To:

(575) 397-1471

Received:

08/30/2012

Sampling Date:

08/29/2012

Reported:

09/11/2012

Sampling Type:

Water

Project Name:

VACUUM JUNCTION M-5

Sampling Condition:

Cool & Intact

Project Number:

NONE GIVEN

Sample Received By:

Jodi Henson

Project Location:

T18S-R35E-SEC5 M-LEA CTY., NM

Sample ID: MONITOR WELL #1 (H202098-01)

BTEX 8260B	mg/	L	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.001	0.001	08/31/2012	ND	0.019	93.6	0.0200	1.24	
Toluene*	<0.001	0.001	08/31/2012	ND	0.020	101	0.0200	1.77	
Ethylbenzene*	<0.001	0.001	08/31/2012	ND	0.021	105	0.0200	3.23	
Total Xylenes*	<0.003	0.003	08/31/2012	ND	0.059	98.0	0.0600	2.80	
Surrogate: Dibromofluoromethane	89.5 9	% 59.8-16	1						
Surrogate: Toluene-d8	103 %	6 75.2-11.	5						
Surrogate: 4-Bromofluorobenzene	110 %	6 53.7-120	9						
Chloride, SM4500CI-B	mg/	L	Analyze	d By: AP		. <u></u> .			
Analyte	Result	Reporting Limit	. Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	160	4.00	09/07/2012	ND	100	100	100	3.92	
Sulfate 375.4	mg/	L	Analyze	d By: HM				·	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Sulfate*	45.6	10.0	09/10/2012	ND	19.2	96.0	20.0	3.58	
TDS 160.1	mg/	L	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	622	5.00	08/31/2012	ND	231	96.2	240	0.322	

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Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager



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. Keine

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