### **AP-97**

## 2013 Annual Report

# DATE March 13, 2014

From: <u>L Peter Galusky</u>
To: <u>Lowe, Leonard, EMNRD</u>

Cc: VonGonten, Glenn, EMNRD; Katie Jones; Laura Flores; Hack Conder

Subject: Rice Operating Company Annual Report for NMOCD No. AP-97, BD P-26 1&2

**Date:** Monday, March 31, 2014 9:44:18 AM

Attachments: BD P-26-12 (AP-97) 2013 RY Annual Report 03.31.2014s.pdf

Mr. Lowe,

Attached is the 2013 Annual Groundwater Report for BD P-26 1&2. Annual Reports are submitted yearly to update the NMOCD about groundwater quality for a particular site. This report does not require NMOCD approval; therefore, a flow chart is not included.

Please contact either myself or Hack Conder of Rice Operating Company if you have any questions or need additional information.

Thank you.

Sincerely,

Pete G.

--

L. Peter (Pete) Galusky, Jr. P.E. Principal Environmental Engineer Texerra LLC

Cell: 719-339-6791 E-mail: <a href="mailto:lpg@texerra.com">lpg@texerra.com</a> Web: <a href="https://www.texerra.com">www.texerra.com</a> 20055 Laredo Ln Monument, CO 80132 Tel: 719-339-6791 E-mail: lpg@texerra.com

March 31st, 2014

Mr. Leonard Lowe New Mexico Energy, Minerals, & Natural Resources Oil Conservation Division, Environmental Bureau 1220 S. St. Francis Drive Santa Fe, New Mexico 87504

RE: 2013 Annual Report

Rice Operating Company BD P-26-1 and BD P-26-2 (AP-97)

T21S, R37E, Sec. 26, UL P

Mr. Lowe,

This letter summarizes progress made over the past calendar year for these sites, which are operated by Rice Operating Company (ROC). Location and site schematic maps are given in the Appendix (Figures 1 and 2, respectively). An Additional Delineation Request for the P-26-1 and P-26-2 sites was submitted on May 2, 2013, with a subsequent Addendum submitted on May 29, 2013. According to the Additional Delineation Request and Addendum, ROC would install a monitoring well approximately 100 ft down-gradient of MW-2 at the P-26-2 site. NMOCD approved the Request and Addendum on May 30, 2013 and the monitor well (MW-3) was installed in June of 2013 (Appendix – Figures 3 & 4).

In brief:

BD P-26-1

Groundwater chloride concentrations in the near-source monitor well (MW-1) dropped substantially from their 2012 concentrations, continuing the general decline that began in late 2012 and ending the 2013 year at 280 mg/l (Appendix - Table 1, Figures 5 & 6). Groundwater concentrations in the down-gradient monitor well (MW-3) continued their oscillating pattern from the previous two years but ended the year at 600 mg/l, down substantially from the high value of 2,450 mg/l measured in 2011.

BTEX concentrations remained below the limits of laboratory detection, as they have since they were first sampled in 2007. The depth to groundwater at this site is approximately 54 ft bgs.

BD P-26-2

Groundwater chloride concentrations in the near-source monitor well (MW-1) resumed a declining trend, ending the year at 740 mg/l. Chloride concentrations in the down-gradient

### BD P-26 1&2 Annual Report

well (MW-2) ended 2013 with a concentration of 1,120 mg/l. On June 18, 2013, MW-3 was installed approximately 100 ft down-gradient of MW-2. Two quarterly samples collected from that well measured 670 and 740 mg/l for samples taken in July and October of 2013 (Appendix - Table 2, Figures 7 & 8). BTEX concentrations remained below the limits of laboratory detection, as they have since they were first sampled in 2007. The depth to groundwater at this site is approximately 52 ft bgs.

These data suggest that groundwater impacts from residual soil chlorides are gradually abating at both locations due to dilution. We plan to continue to monitor groundwater for chlorides during 2014 and use this data to elucidate trends to determine if remedial measures are warranted.

ROC is the service provider (agent) for the BD Salt Water Disposal System and has no ownership of any portion of pipeline, well or facility. The BD SWD System is owned by a consortium of oil producers, System Parties, who provide all operating capital on a percentage ownership/usage basis.

Please do not hesitate to contact either Rice Operating Company or myself if you have any questions or need additional information.

Thank you for your consideration.

Sincerely,

L. Peter Galusky, Jr. Ph.D.

Principal

Copy: Glenn VonGonten, NMOCD; Rice Operating Company

Attachments: Appendix

Texerra LLC 2





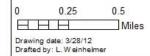
### BD P-26-1 & 2

NMOCD Case#: AP-97

UL/P SECTION 26 T-21-S R-37-E LEA COUNTY, NM

### Figure 1





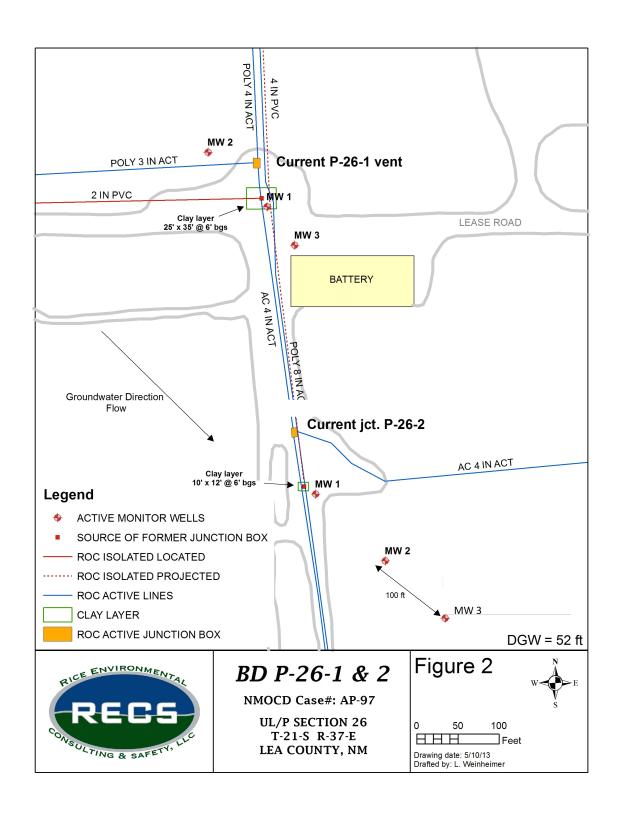
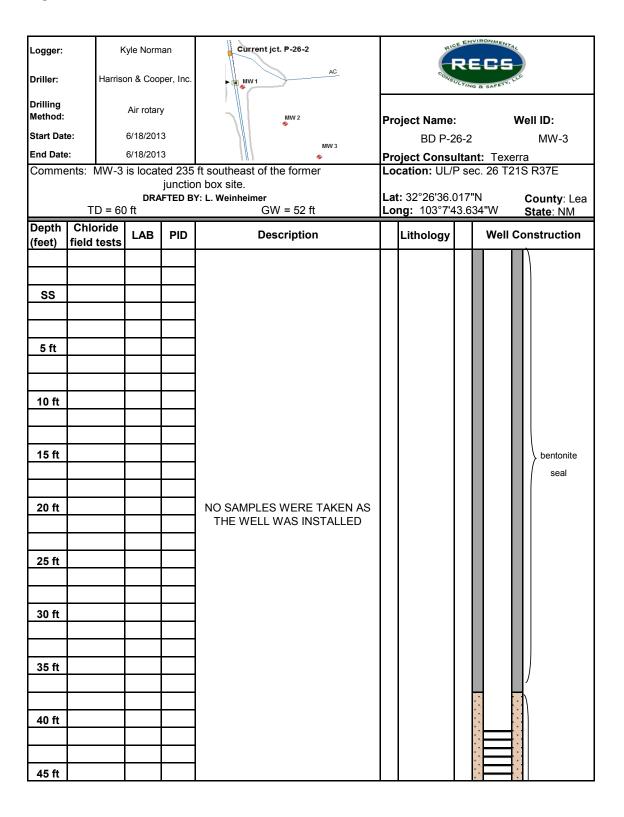


Figure 3



### Figure 3 (cont'd)

Depth (feet)	Chloride field tests	LAB	PID	Description	Lithology	Well Construction
						sand
50 ft				NO SAMPLES WERE TAKEN AS		pack
55 ft				THE WELL WAS INSTALLED		
60 ft						

### BD P-26-1 and P-26-2 (AP-97) Unit Letter P, Section 26, T-21-S, R-37-E



Installing MW-3, facing northwest

6/18/13



Installing the casing, facing northwest 6/18/13



Installing the sand pack

6/18/13



Installing the bentonite seal

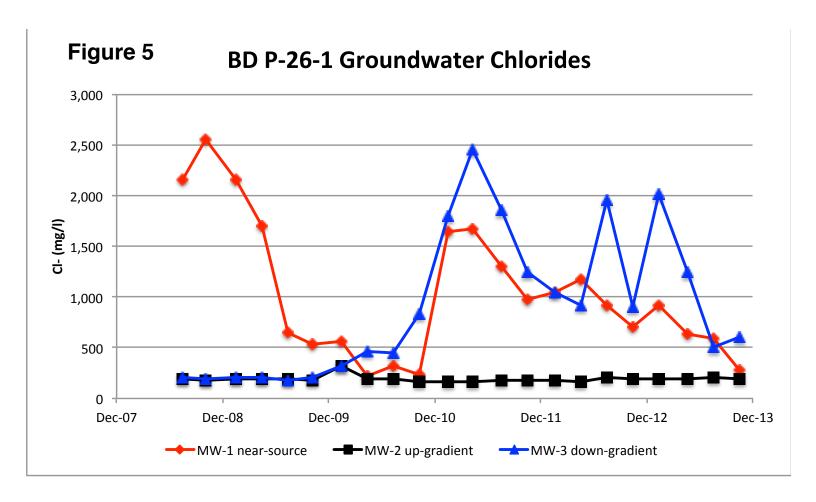
6/18/13



Installing the monitor well casing prior to cementing the monitor well in, facing north 6/18/13

Table 1

BD P-26-1				BD P-26-1			
	Groundwate	er Chloride Co	onc (mg/l)		Groundwater	Total BTEX (	Conc (mg/l)
	MW-1 near-	MW-2 up-	MW-3 down-		MW-1 near-	MW-2 up-	MW-3 down-
<u>Date</u>	<u>source</u>	gradient	gradient	<u>Date</u>	source	gradient	gradient
7/16/08	2,160	196	212	7/16/08	nd	nd	nd
10/6/08	2,560	184	188	10/6/08	nd	nd	nd
1/16/09	2,160	192	208	1/16/09	nd	nd	nd
4/15/09	1,700	188	204	4/15/09	nd	nd	nd
7/15/09	650	192	176	7/15/09	nd	nd	nd
10/9/09	540	180	204	10/9/09	nd	nd	nd
1/15/10	560	328	328	1/15/10	nd	nd	nd
4/13/10	220	192	460	4/13/10	nd	nd	nd
7/13/10	316	196	450	7/13/10	nd	nd	nd
10/8/10	232	168	830	10/8/10	nd	nd	nd
1/18/11	1,640	164	1,800	1/18/11	nd	nd	nd
4/14/11	1,670	168	2,450	4/14/11	nd	nd	nd
7/21/11	1,300	180	1,860	7/21/11	nd	nd	nd
10/17/11	980	172	1,240	10/17/11	nd	nd	nd
1/20/12	1,040	176	1,040	1/20/12	nd	nd	nd
4/19/12	1,180	168	920	4/19/12	nd	nd	nd
7/17/12	920	204	1,950	7/17/12	nd	nd	nd
10/15/12	700	192	910	10/15/12	nd	nd	nd
1/9/13	920	196	2,020	1/9/13	nd	nd	nd
4/22/13	630	196	1,240	4/22/13	nd	nd	nd
7/18/13	590	208	500	7/18/13	nd	nd	nd
10/18/13	280	188	600	10/18/13	nd	nd	nd





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

November 01, 2013

Hack Conder

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: BD P-26-1 VENT

Enclosed are the results of analyses for samples received by the laboratory on 10/23/13 16:31.

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 <a href="https://www.tceg.texas.gov/field/ga/lab">www.tceg.texas.gov/field/ga/lab</a> 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:
 10/23/2013

 Reported:
 11/01/2013

 Project Name:
 BD P-26-1 VENT

 Project Number:
 NOT GIVEN

Sampling Date: Sampling Type: Sampling Condition: Sample Received By:

Water Cool & Intact Jodi Henson

10/18/2013

Project Location: T21S R37E SEC26 P-LEA CTY., NM

### Sample ID: MONITOR WELL #1 (H302574-01)

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	10/31/2013	ND	0.022	108	0.0200	1.01	
Toluene*	< 0.001	0.001	10/31/2013	ND	0.021	104	0.0200	3.92	
Ethylbenzene*	< 0.001	0.001	10/31/2013	ND	0.022	109	0.0200	1.77	
Total Xylenes*	<0.003	0.003	10/31/2013	ND	0.065	109	0.0600	3.10	
Total BTEX	<0.006	0.006	10/31/2013	ND					
Surrogate: Dibromofluoromethane	98.2	% 59.8-16	1						
Surrogate: Toluene-d8	102	% 75.2-11	5						
Surrogate: 4-Bromofluorobenzene	112	% 53.7-12	0						
Chloride, SM4500CI-B	mg,	/L	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	280	4.00	10/24/2013	ND	100	100	100	3.92	
Sulfate 375.4	mg,	/L	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Sulfate*	177	50.0	10/25/2013	ND	17.5	87.6	20.0	5.09	
TDS 160.1	mg,	/L	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	1060	5.00	10/28/2013	ND	238	99.2	240	0.336	

Cardinal Laboratories \*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

10/18/2013

Cool & Intact

Jodi Henson

Water



### Analytical Results For:

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

Fax To: (575) 397-1471

 Received:
 10/23/2013

 Reported:
 11/01/2013

 Project Name:
 BD P-26-1 VENT

 Project Number:
 NOT GIVEN

13 Sampling Type: 1 VENT Sampling Condition: EN Sample Received By:

Sampling Date:

Project Location: T21S R37E SEC26 P-LEA CTY., NM

### Sample ID: MONITOR WELL #2 (H302574-02)

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	10/31/2013	ND	0.022	108	0.0200	1.01	
Toluene*	< 0.001	0.001	10/31/2013	ND	0.021	104	0.0200	3.92	
Ethylbenzene*	< 0.001	0.001	10/31/2013	ND	0.022	109	0.0200	1.77	
Total Xylenes*	<0.003	0.003	10/31/2013	ND	0.065	109	0.0600	3.10	
Total BTEX	<0.006	0.006	10/31/2013	ND					
Surrogate: Dibromofluoromethane	106	% 59.8-16	1						
Surrogate: Toluene-d8	102	% 75.2-11	5						
Surrogate: 4-Bromofluorobenzene	114 9	% 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*	188	4.00	10/24/2013	ND	100	100	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*	160	50.0	10/25/2013	ND	17.5	87.6	20.0	5.09	
TDS 160.1	mg,	'L	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	878	5.00	10/28/2013	ND	238	99.2	240	0.336	

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Celey D. Keene, Lab Director/Quality Manager



### Analytical Results For:

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

Fax To: (575) 397-1471

 Received:
 10/23/2013

 Reported:
 11/01/2013

 Project Name:
 BD P-26-1 VENT

 Project Number:
 NOT GIVEN

Sampling Date:
Sampling Type:
Sampling Condition:
Sample Received By:

10/18/2013 Water Cool & Intact Jodi Henson

Project Location: T21S R37E SEC26 P-LEA CTY., NM

### Sample ID: MONITOR WELL #3 (H302574-03)

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	10/31/2013	ND	0.022	108	0.0200	1.01	
Toluene*	< 0.001	0.001	10/31/2013	ND	0.021	104	0.0200	3.92	
Ethylbenzene*	< 0.001	0.001	10/31/2013	ND	0.022	109	0.0200	1.77	
Total Xylenes*	<0.003	0.003	10/31/2013	ND	0.065	109	0.0600	3.10	
Total BTEX	<0.006	0.006	10/31/2013	ND					
Surrogate: Dibromofluoromethane	104	% 59.8-16	1						
Surrogate: Toluene-d8	105	% 75.2-11	5						
Surrogate: 4-Bromofluorobenzene	114 9	% 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*	600	4.00	10/24/2013	ND	100	100	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*	234	50.0	10/25/2013	ND	17.5	87.6	20.0	5.09	
TDS 160.1	mg,	/L	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	1640	5.00	10/28/2013	ND	238	99.2	240	0.336	

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Celey D. Keene, Lab Director/Quality Manager



### **Notes and Definitions**

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

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

\*\*\* Insufficient time to reach temperature.

- Chloride by SM4500Cl-B does not require samples be received at or below 6°C

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

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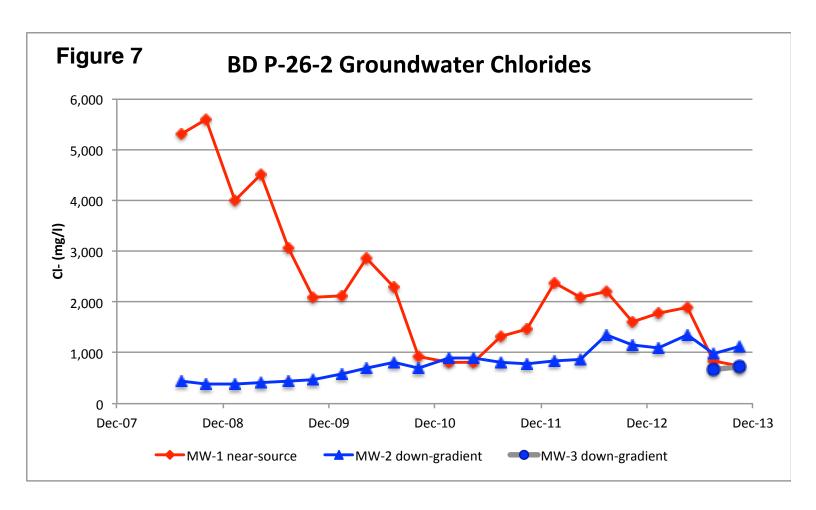
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Table 2

BD P-26-2 BD P-26-2

	Groundwa	ter Chloride Co	nc (mg/l)		Groundwat	er Total BTEX C	onc (mg/l)
	MW-1 near-	MW-2 down-			MW-1 near-	MW-2 down-	
<u>Date</u>	source	gradient	MW-3	<u>Date</u>	source	gradient	MW-3
7/16/08	5,300	432		7/16/08	nd	nd	nd
10/6/08	5,600	384		10/6/08	nd	nd	nd
1/16/09	4,000	400		1/16/09	nd	nd	nd
4/15/09	4,500	412		4/15/09	nd	nd	nd
7/15/09	3,050	432		7/15/09	nd	nd	nd
10/9/09	2,100	480		10/9/09	nd	nd	nd
1/15/10	2,120	590		1/15/10	nd	nd	nd
4/13/10	2,850	690		4/13/10	nd	nd	nd
7/13/10	2,300	820		7/13/10	nd	nd	nd
10/8/10	920	690		10/8/10	nd	nd	nd
1/18/11	820	900		1/18/11	nd	nd	nd
4/14/11	800	890		4/14/11	nd	nd	nd
7/19/11	1,320	810		7/19/11	nd	nd	nd
10/17/11	1,480	780		10/17/11	nd	nd	nd
1/20/12	2,370	830		1/20/12	nd	nd	nd
4/19/12	2,100	870		4/19/12	nd	nd	nd
7/17/12	2,220	1,340		7/17/12	nd	nd	nd
10/15/12	1,620	1,140		10/15/12	nd	nd	nd
1/9/13	1,780	1,090		1/9/13	nd	nd	nd
4/22/13	1,900	1,340		4/22/13	nd	nd	nd
7/18/13	840	980	670	7/18/13	nd	nd	nd
10/18/13	740	1,120	740	10/18/13	nd	nd	nd





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

October 28, 2013

Hack Conder

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: BD JUNCTION P-26-2

Enclosed are the results of analyses for samples received by the laboratory on 10/22/13 12:55.

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 <a href="https://www.tceg.texas.gov/field/ga/lab">www.tceg.texas.gov/field/ga/lab</a> 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

10/18/2013

Cool & Intact

Celey D. Keene

Water



### Analytical Results For:

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

Fax To: (575) 397-1471

Received:10/22/2013Sampling Date:Reported:10/28/2013Sampling Type:Project Name:BD JUNCTION P-26-2Sampling Condition:Project Number:NONE GIVENSample Received By:

Project Location: T21S R37E SEC26 P-LEA CTY., NM

### Sample ID: MONITOR WELL #1 (H302550-01)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.001	0.001	10/23/2013	ND	0.020	98.5	0.0200	1.86	
Toluene*	< 0.001	0.001	10/23/2013	ND	0.020	101	0.0200	1.41	
Ethylbenzene*	< 0.001	0.001	10/23/2013	ND	0.019	97.2	0.0200	2.41	
Total Xylenes*	< 0.003	0.003	10/23/2013	ND	0.059	97.7	0.0600	2.59	
Total BTEX	<0.006	0.006	10/23/2013	ND					
Surrogate: 4-Bromofluorobenzene (PIL	104 %	% 89.4-12	6						
Chloride, SM4500Cl-B	mg/	L	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	740	4.00	10/22/2013	ND	100	100	100	3.92	
Sulfate 375.4	mg/	L	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Sulfate*	312	50.0	10/23/2013	ND	21.2	106	20.0	2.24	
TDS 160.1	mg/	L	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	2110	5.00	10/23/2013	ND	238	99.2	240	0.336	

Cardinal Laboratories \*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

10/18/2013

Cool & Intact

Celey D. Keene

Water



### Analytical Results For:

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

Fax To: (575) 397-1471

 Received:
 10/22/2013

 Reported:
 10/28/2013

 Project Name:
 BD JUNCTION P-26-2

 Project Number:
 NONE GIVEN

NCTION P-26-2 Sampling Condition: GIVEN Sample Received By:

Sampling Date:

Sampling Type:

Project Location: T21S R37E SEC26 P-LEA CTY., NM

### Sample ID: MONITOR WELL #2 (H302550-02)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.001	0.001	10/23/2013	ND	0.020	98.5	0.0200	1.86	
Toluene*	< 0.001	0.001	10/23/2013	ND	0.020	101	0.0200	1.41	
Ethylbenzene*	< 0.001	0.001	10/23/2013	ND	0.019	97.2	0.0200	2.41	
Total Xylenes*	<0.003	0.003	10/23/2013	ND	0.059	97.7	0.0600	2.59	
Total BTEX	<0.006	0.006	10/23/2013	ND					
Surrogate: 4-Bromofluorobenzene (PIL	104 %	6 89.4-12	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*	1120	4.00	10/22/2013	ND	100	100	100	3.92	
Sulfate 375.4	mg/	L	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Sulfate*	304	50.0	10/23/2013	ND	21.2	106	20.0	2.24	
TDS 160.1	mg/	L	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	2560	5.00	10/23/2013	ND	238	99.2	240	0.336	

Cardinal Laboratories \*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



### Analytical Results For:

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

(575) 397-1471 Fax To:

Received: 10/22/2013 Reported: 10/28/2013 Project Name: BD JUNCTION P-26-2 Project Number: NONE GIVEN

Project Location: T21S R37E SEC26 P-LEA CTY., NM Sampling Date: 10/18/2013 Sampling Type: Water Sampling Condition: Cool & Intact

Sample Received By: Celey D. Keene

### Sample ID: MONITOR WELL #3 (H302550-03)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.001	0.001	10/23/2013	ND	0.020	98.5	0.0200	1.86	
Toluene*	< 0.001	0.001	10/23/2013	ND	0.020	101	0.0200	1.41	
Ethylbenzene*	< 0.001	0.001	10/23/2013	ND	0.019	97.2	0.0200	2.41	
Total Xylenes*	<0.003	0.003	10/23/2013	ND	0.059	97.7	0.0600	2.59	
Total BTEX	<0.006	0.006	10/23/2013	ND					
Surrogate: 4-Bromofluorobenzene (PIL	103 9	% 89.4-12	6						
Chloride, SM4500Cl-B	mg/	L	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	740	4.00	10/22/2013	ND	100	100	100	3.92	
Sulfate 375.4	mg/	L	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Sulfate*	216	50.0	10/23/2013	ND	21.2	106	20.0	2.24	
TDS 160.1	mg/	L	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	1710	5.00	10/23/2013	ND	238	99.2	240	0.336	

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Celey D. Keene, Lab Director/Quality Manager



### **Notes and Definitions**

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

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

\*\*\* Insufficient time to reach temperature.

- Chloride by SM4500Cl-B does not require samples be received at or below 6°C

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

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