

**AP-97**

**2013**

**Annual Report**

**DATE**

**March 13, 2014**

**From:** [L. Peter Galusky](#)  
**To:** [Lowe, Leonard, EMNRD](#)  
**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](#)

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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: [lpg@texerra.com](mailto:lpg@texerra.com)

Web: [www.texerra.com](http://www.texerra.com)

## Texerra LLC

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20055 Laredo Ln Monument, CO 80132  
Tel: 719-339-6791 E-mail: [lpg@texerra.com](mailto:lpg@texerra.com)

March 31<sup>st</sup>, 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.

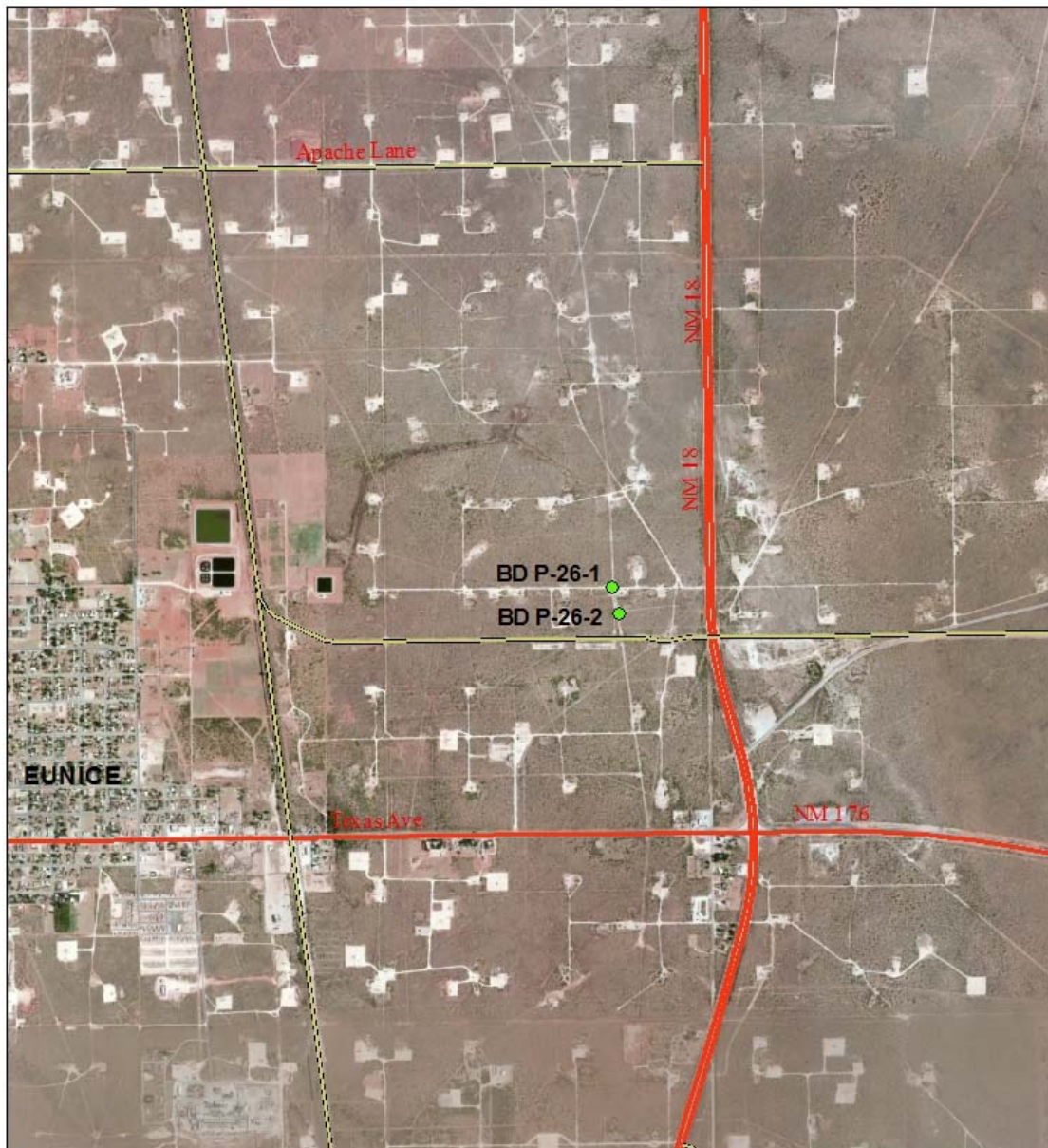
Sincerely,

A handwritten signature in black ink, appearing to read 'L. Peter Galusky, Jr.', with a stylized flourish at the end.

L. Peter Galusky, Jr. Ph.D.  
Principal

Copy: Glenn VonGonten, NMOCD; Rice Operating Company

Attachments: Appendix



## BD P-26-1 & 2

NMOCD Case#: AP-97

UL/P SECTION 26

T-21-S R-37-E

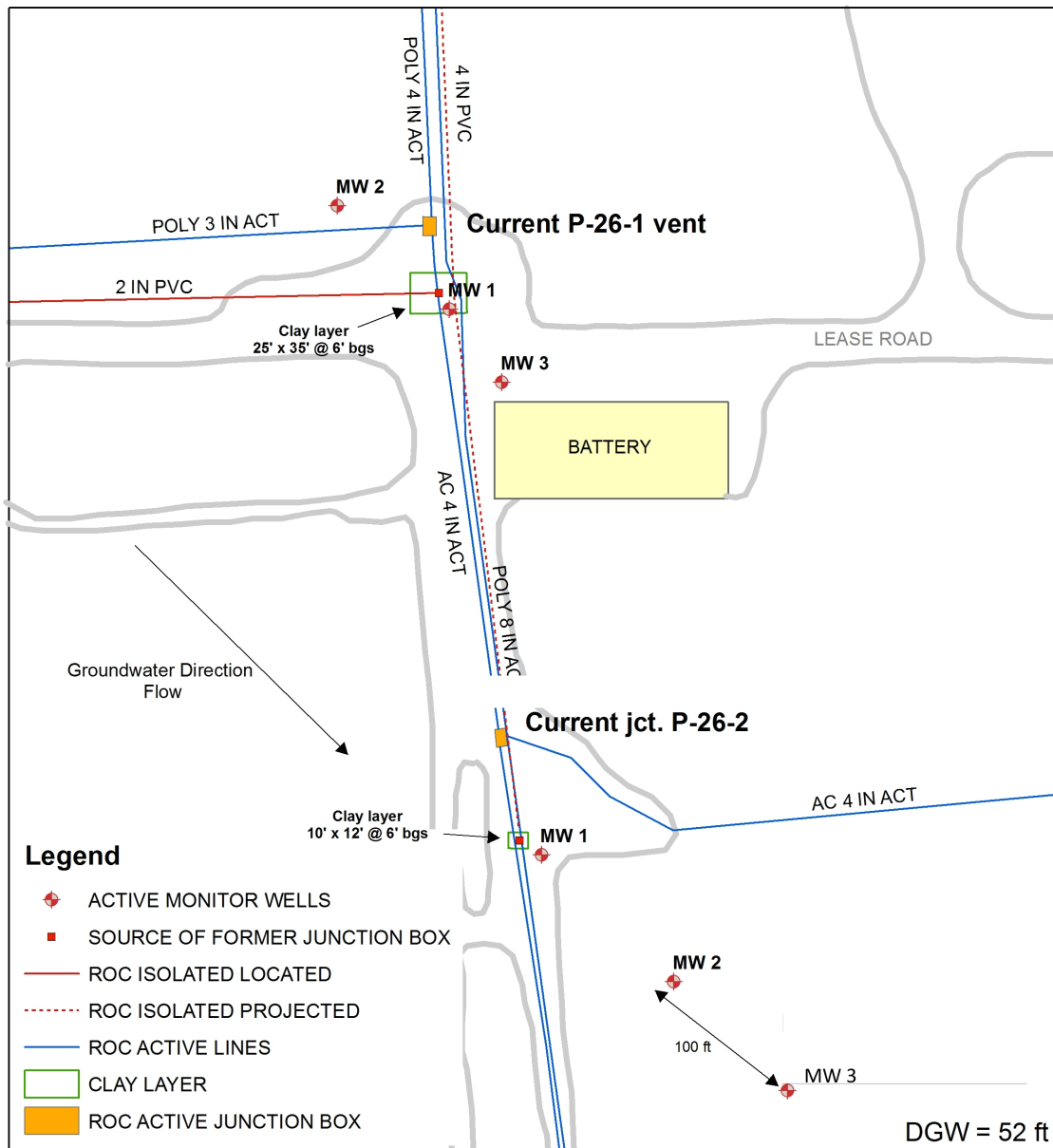
LEA COUNTY, NM

## Figure 1



0 0.25 0.5  
Miles

Drawing date: 3/28/12  
Drafted by: L. Weinheimer



## BD P-26-1 & 2

NMOCD Case#: AP-97

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

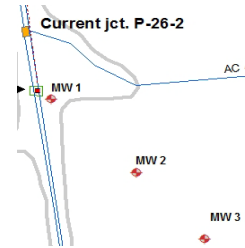

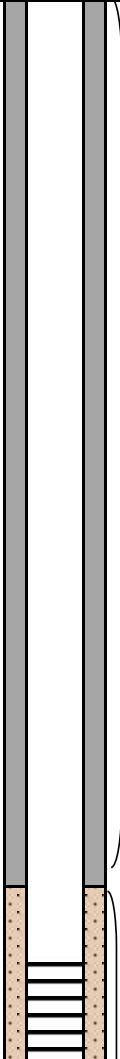
## Figure 2



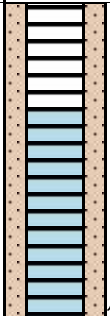
0 50 100  
Feet

Drawing date: 5/10/13  
Drafted by: L. Weinheimer

**Figure 3**

<b>Logger:</b>	Kyle Norman					
<b>Driller:</b>	Harrison & Cooper, Inc.					
<b>Drilling Method:</b>	Air rotary		<b>Project Name:</b>	<b>Well ID:</b>		
<b>Start Date:</b>	6/18/2013		BD P-26-2	MW-3		
<b>End Date:</b>	6/18/2013		<b>Project Consultant:</b> Texerra			
<b>Comments:</b> MW-3 is located 235 ft southeast of the former junction box site. <b>DRAFTED BY:</b> L. Weinheimer TD = 60 ft      GW = 52 ft		<b>Location:</b> UL/P sec. 26 T21S R37E <b>Lat:</b> 32°26'36.017"N <b>County:</b> Lea <b>Long:</b> 103°7'43.634"W <b>State:</b> NM				
Depth (feet)	Chloride field tests	LAB	PID	Description	Lithology	Well Construction
				NO SAMPLES WERE TAKEN AS THE WELL WAS INSTALLED		
SS						
5 ft						
10 ft						
15 ft						
20 ft						
25 ft						
30 ft						
35 ft						
40 ft						
45 ft						

**Figure 3 (cont'd)**

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

**Figure 4**

**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

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

## BD P-26-1

Date	Groundwater Total BTEX Conc (mg/l)		
	MW-1 near-source	MW-2 up-gradient	MW-3 down-gradient
7/16/08	nd	nd	nd
10/6/08	nd	nd	nd
1/16/09	nd	nd	nd
4/15/09	nd	nd	nd
7/15/09	nd	nd	nd
10/9/09	nd	nd	nd
1/15/10	nd	nd	nd
4/13/10	nd	nd	nd
7/13/10	nd	nd	nd
10/8/10	nd	nd	nd
1/18/11	nd	nd	nd
4/14/11	nd	nd	nd
7/21/11	nd	nd	nd
10/17/11	nd	nd	nd
1/20/12	nd	nd	nd
4/19/12	nd	nd	nd
7/17/12	nd	nd	nd
10/15/12	nd	nd	nd
1/9/13	nd	nd	nd
4/22/13	nd	nd	nd
7/18/13	nd	nd	nd
10/18/13	nd	nd	nd

**Figure 5**

## BD P-26-1 Groundwater Chlorides

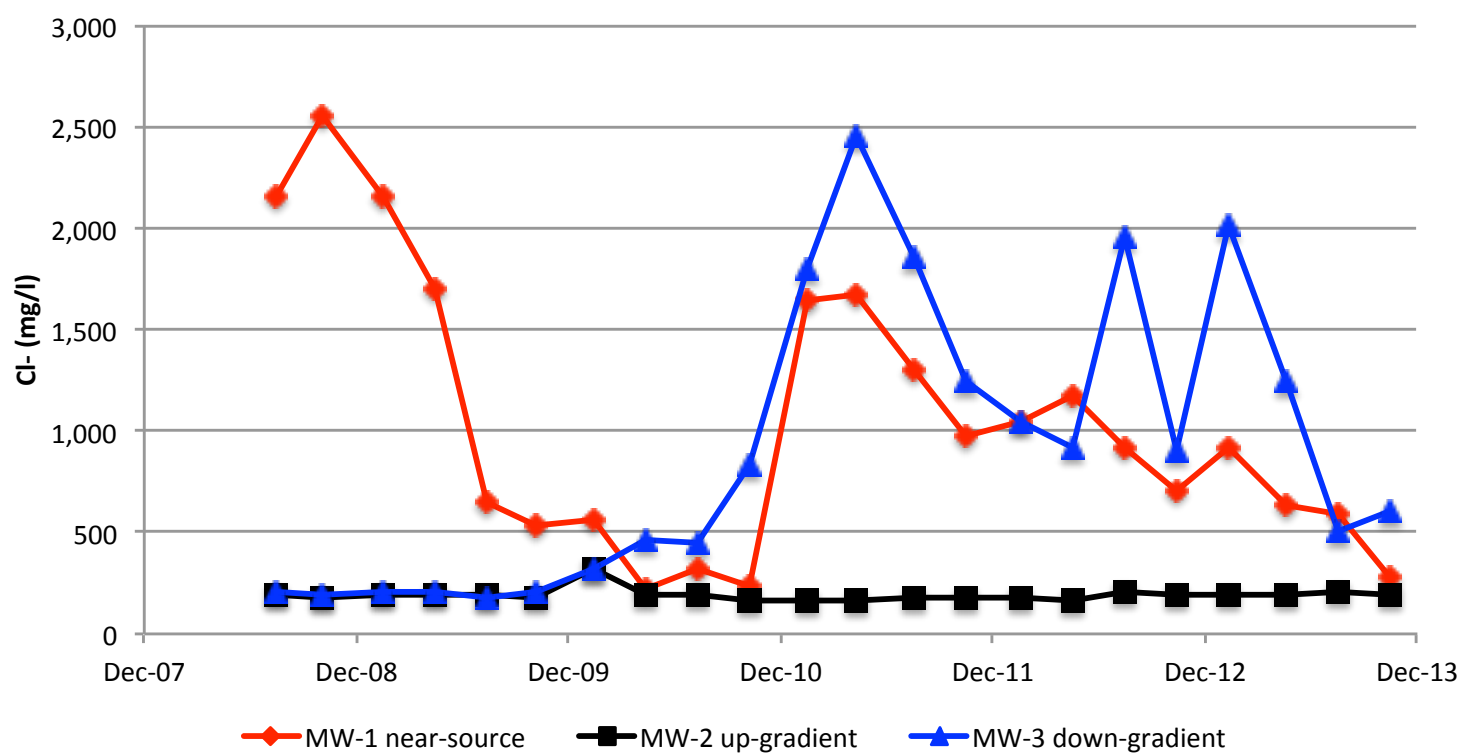


Figure 6



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

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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 [www.tceq.texas.gov/field/ga/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/ga/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,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

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:	10/23/2013	Sampling Date:	10/18/2013
Reported:	11/01/2013	Sampling Type:	Water
Project Name:	BD P-26-1 VENT	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	T21S R37E SEC26 P-LEA CTY., NM		

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

BTX 8260B		mg/L		Analyzed 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 BTX	<0.006	0.006	10/31/2013	ND					

Surrogate: Dibromofluoromethane 98.2 % 59.8-161

Surrogate: Toluene-d8 102 % 75.2-115

Surrogate: 4-Bromofluorobenzene 112 % 53.7-120

Chloride, SM4500CI-B		mg/L		Analyzed 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		Analyzed 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		Analyzed 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



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**Analytical Results For:**

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

Received:	10/23/2013	Sampling Date:	10/18/2013
Reported:	11/01/2013	Sampling Type:	Water
Project Name:	BD P-26-1 VENT	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	T21S R37E SEC26 P-LEA CTY., NM		

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

BTX 8260B		mg/L		Analyzed 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 BTX	<0.006	0.006	10/31/2013	ND					

Surrogate: Dibromofluoromethane 106 % 59.8-161

Surrogate: Toluene-d8 102 % 75.2-115

Surrogate: 4-Bromofluorobenzene 114 % 53.7-120

Chloride, SM4500CI-B		mg/L		Analyzed 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		Analyzed 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		Analyzed 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	

Cardinal Laboratories

\*=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:	10/23/2013	Sampling Date:	10/18/2013
Reported:	11/01/2013	Sampling Type:	Water
Project Name:	BD P-26-1 VENT	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	T21S R37E SEC26 P-LEA CTY., NM		

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

BTEX 8260B		mg/L		Analyzed 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 % 59.8-161

Surrogate: Toluene-d8 105 % 75.2-115

Surrogate: 4-Bromofluorobenzene 114 % 53.7-120

Chloride, SM4500Cl-B		mg/L		Analyzed 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		Analyzed 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		Analyzed 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	

Cardinal Laboratories

\*=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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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



Table 2

BD P-26-2

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

BD P-26-2

Groundwater Total BTEX Conc (mg/l)			
<u>Date</u>	<u>MW-1 near-</u>	<u>MW-2 down-</u>	<u>MW-3</u>
	<u>source</u>	<u>gradient</u>	
7/16/08	nd	nd	nd
10/6/08	nd	nd	nd
1/16/09	nd	nd	nd
4/15/09	nd	nd	nd
7/15/09	nd	nd	nd
10/9/09	nd	nd	nd
1/15/10	nd	nd	nd
4/13/10	nd	nd	nd
7/13/10	nd	nd	nd
10/8/10	nd	nd	nd
1/18/11	nd	nd	nd
4/14/11	nd	nd	nd
7/19/11	nd	nd	nd
10/17/11	nd	nd	nd
1/20/12	nd	nd	nd
4/19/12	nd	nd	nd
7/17/12	nd	nd	nd
10/15/12	nd	nd	nd
1/9/13	nd	nd	nd
4/22/13	nd	nd	nd
7/18/13	nd	nd	nd
10/18/13	nd	nd	nd

**Figure 7**

## BD P-26-2 Groundwater Chlorides

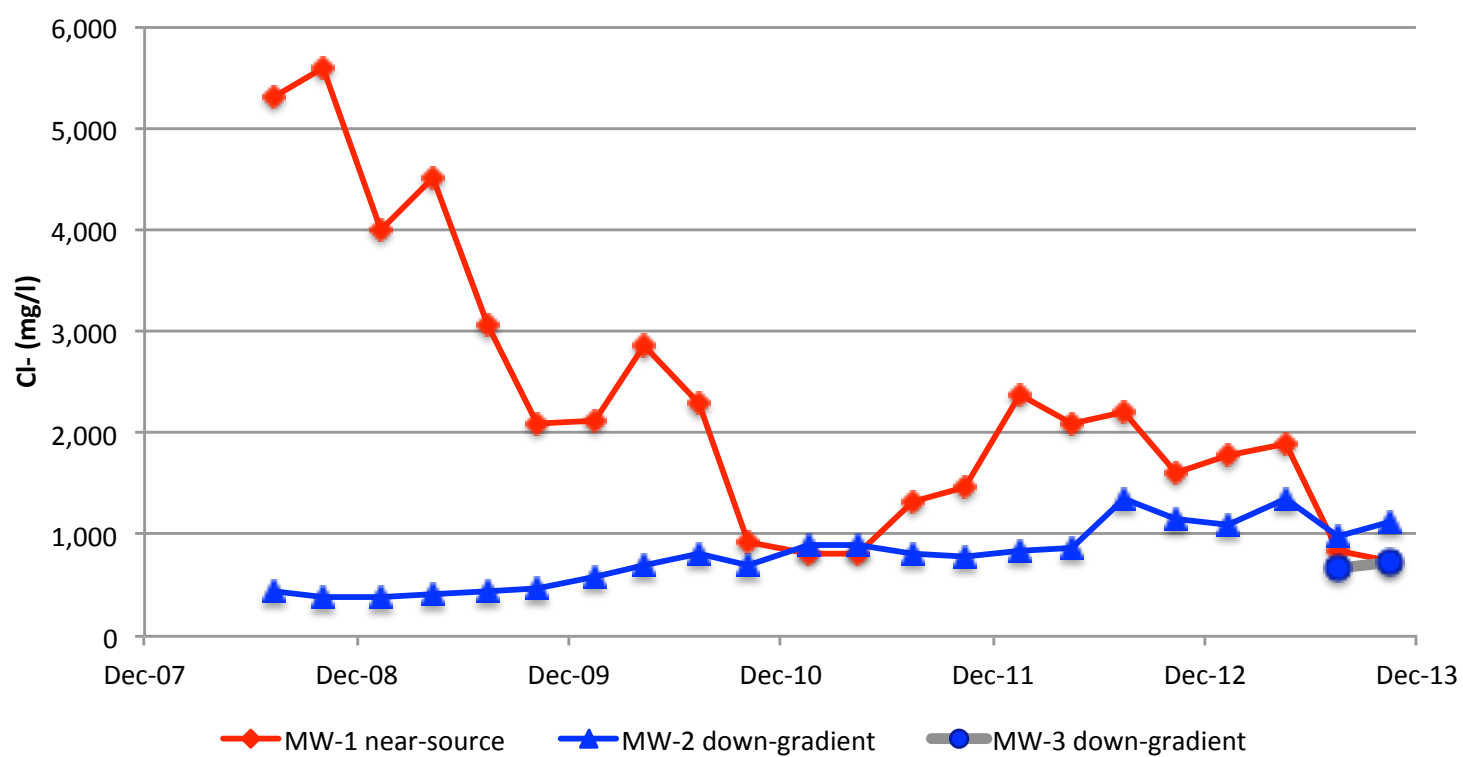


Figure 8



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

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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 [www.tceq.texas.gov/field/ga/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/ga/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,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

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:	10/22/2013	Sampling Date:	10/18/2013
Reported:	10/28/2013	Sampling Type:	Water
Project Name:	BD JUNCTION P-26-2	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Celey D. Keene
Project Location:	T21S R37E SEC26 P-LEA CTY., NM		

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

BTX 8021B		mg/kg		Analyzed 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 BTX	<0.006	0.006	10/23/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 104 % 89.4-126

Chloride, SM4500Cl-B		mg/L		Analyzed 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		Analyzed 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		Analyzed 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	

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\*=Accredited Analyte

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*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:	10/22/2013	Sampling Date:	10/18/2013
Reported:	10/28/2013	Sampling Type:	Water
Project Name:	BD JUNCTION P-26-2	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Celey D. Keene
Project Location:	T21S R37E SEC26 P-LEA CTY., NM		

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

BTEX 8021B		mg/kg		Analyzed 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 (PIE) 104 % 89.4-126

Chloride, SM4500Cl-B		mg/L		Analyzed 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		Analyzed 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		Analyzed 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		

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*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:	10/22/2013	Sampling Date:	10/18/2013
Reported:	10/28/2013	Sampling Type:	Water
Project Name:	BD JUNCTION P-26-2	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Celey D. Keene
Project Location:	T21S R37E SEC26 P-LEA CTY., NM		

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

BTEX 8021B		mg/kg		Analyzed 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 (PIE) 103 % 89.4-126

Chloride, SM4500Cl-B		mg/L		Analyzed 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		Analyzed 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		Analyzed 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*

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, reading "Celey D. Keene".

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Celey D. Keene, Lab Director/Quality Manager

