

1RP-459

**2013 Annual
Groundwater Report
Blinebry-Drinkard
BD K-4**

**DATE:
March 27, 2014**

From: [Hall, Sharon](#)
To: [Lowe, Leonard, EMNRD](#)
Cc: [VonGonten, Glenn, EMNRD](#); [Hack Conder, Katie Jones](#)
Subject: ROC BD K-4 Annual Groundwater Report, NMOCD Case #1R0459
Date: Thursday, March 27, 2014 9:33:01 AM
Attachments: [BD K-4 2013 Annual Groundwater Report.pdf](#)

Mr. Lowe,

Attached is the 2013 Annual Groundwater Report for BD K-4 (1R0459). Annual Reports are submitted yearly to update the NMOCD about groundwater quality and groundwater recovery, if applicable, for a particular site. This report does not require NMOCD approval; therefore, a flow chart is not included.

If you have any questions please contact Hack.

Regards,

Sharon

Sharon Hall | Associate Vice President | Sharon.Hall@arcadis-us.com
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ARCADIS, Imagine the result
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Infrastructure, buildings, environment, communications

Mr. Leonard Lowe
New Mexico Oil Conservation Division
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Subject:
2013 ANNUAL GROUNDWATER REPORT
NMOCD Case # 1R0459
Blinebry-Drinkard (BD) K-4 Release
T22S, R37E, Section 4, Unit K, Lea County, New Mexico

Mr. Lowe,

Date:
March 27, 2014

On behalf of Rice Operating Company (ROC), ARCADIS respectfully submits this 2013 Annual Groundwater Report for the BD K-4 site located in the Blinebry-Drinkard (BD) Salt Water Disposal (SWD) System.

Contact:
Sharon Hall

ROC completed the Corrective Action Plan (CAP) dated April 23, 2007, which was granted verbal approval by the New Mexico Oil Conservation Division (NMOCD) on December 16, 2009. The CAP was implemented in February 2010. A site Termination Request was submitted to the NMOCD on September 23, 2010 and denied by the NMOCD on October 13, 2010, requiring ROC to continue removing chloride impacted groundwater from MW-1 and to continue monitoring MW-1, MW-2 and MW-3 on a quarterly basis.

Phone:
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shall@arcadis-us.com

All wells were sampled quarterly per NMOCD guidelines. The attached tables summarize the analytical results from groundwater samples collected from the monitor wells at the site.

During 2013, approximately 3,120 gallons of chloride impacted groundwater were removed from MW-1 and quarterly sampling of the three monitor wells was completed. Since the removal of liquids that began on September 3, 2009, a total of 17,639 gallons of chloride impacted groundwater have been removed at the site. Results indicate the site chloride and TDS concentrations have overall decreased around MW-1 while remaining stable in MW-2 and MW-3. This indicates the removal of chloride impacted groundwater from MW-1 is decreasing the chloride plume. Chloride impacted groundwater removal and quarterly monitoring well sampling will continue in 2014.

ROC is the service provider (agent) for the BD Salt Water Disposal System and has no ownership of any portion of the pipelines, wells or facilities. The BD System is

Part of a bigger picture

owned by a consortium of oil producers, System Parties, who provide all operating capital on a percentage ownership/usage basis.

Thank you for your consideration concerning this summary of groundwater monitoring information. If you have any questions please do not hesitate to contact me or Hack Conder.

Best Regards,

ARCADIS U.S, Inc.

Sharon E. Hall

Sharon E. Hall
Associate Vice President

Copies: Hack Conder- ROC

Glen Von Gonten-NMOCD

Attachments:

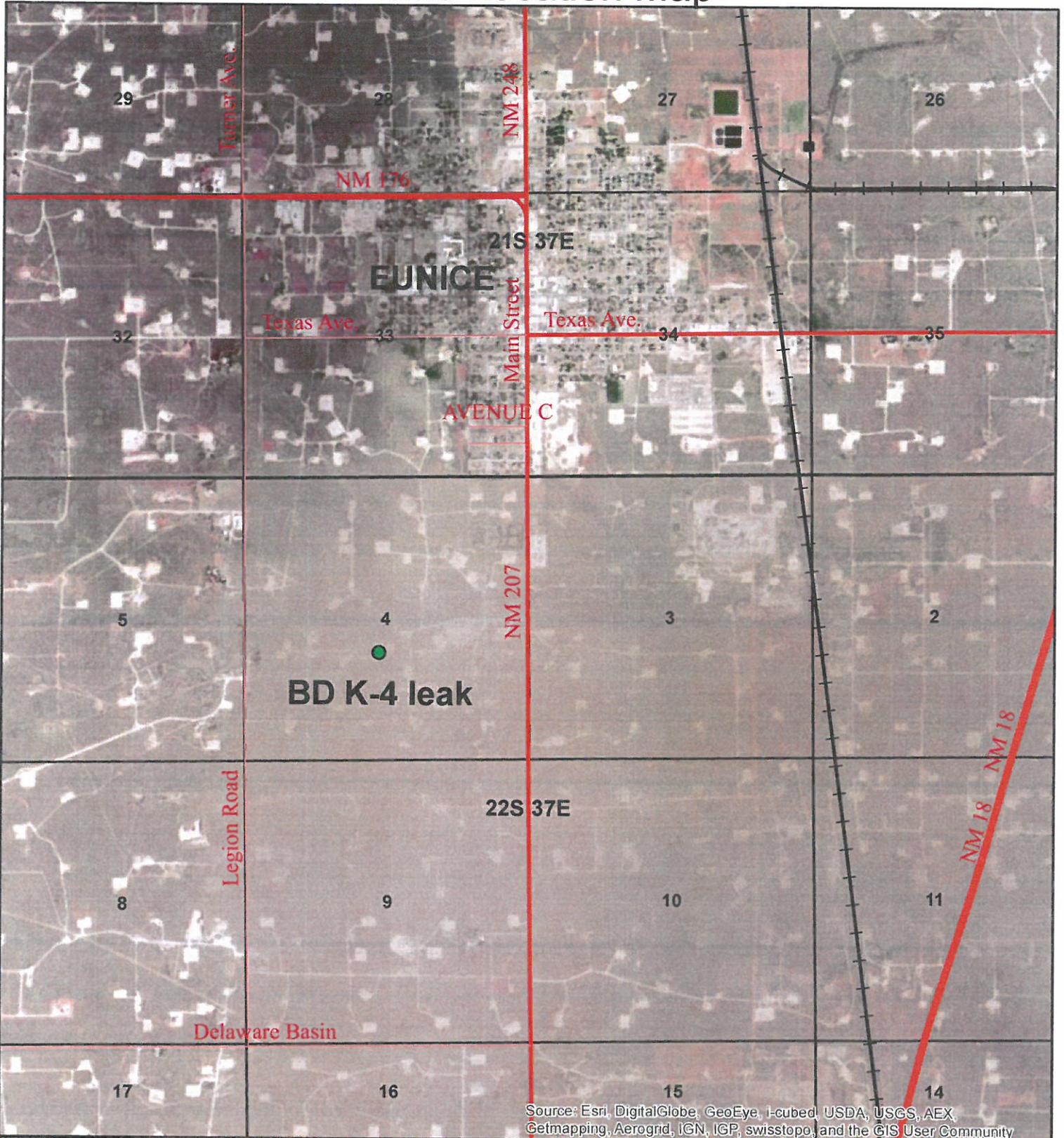
Site Location Map

Monitor Well Location Figure

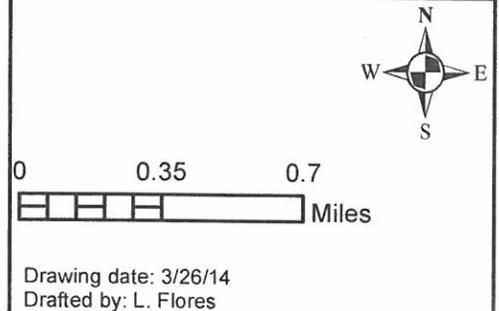
Monitor Well Summary Tables

October Monitor Well Lab Results

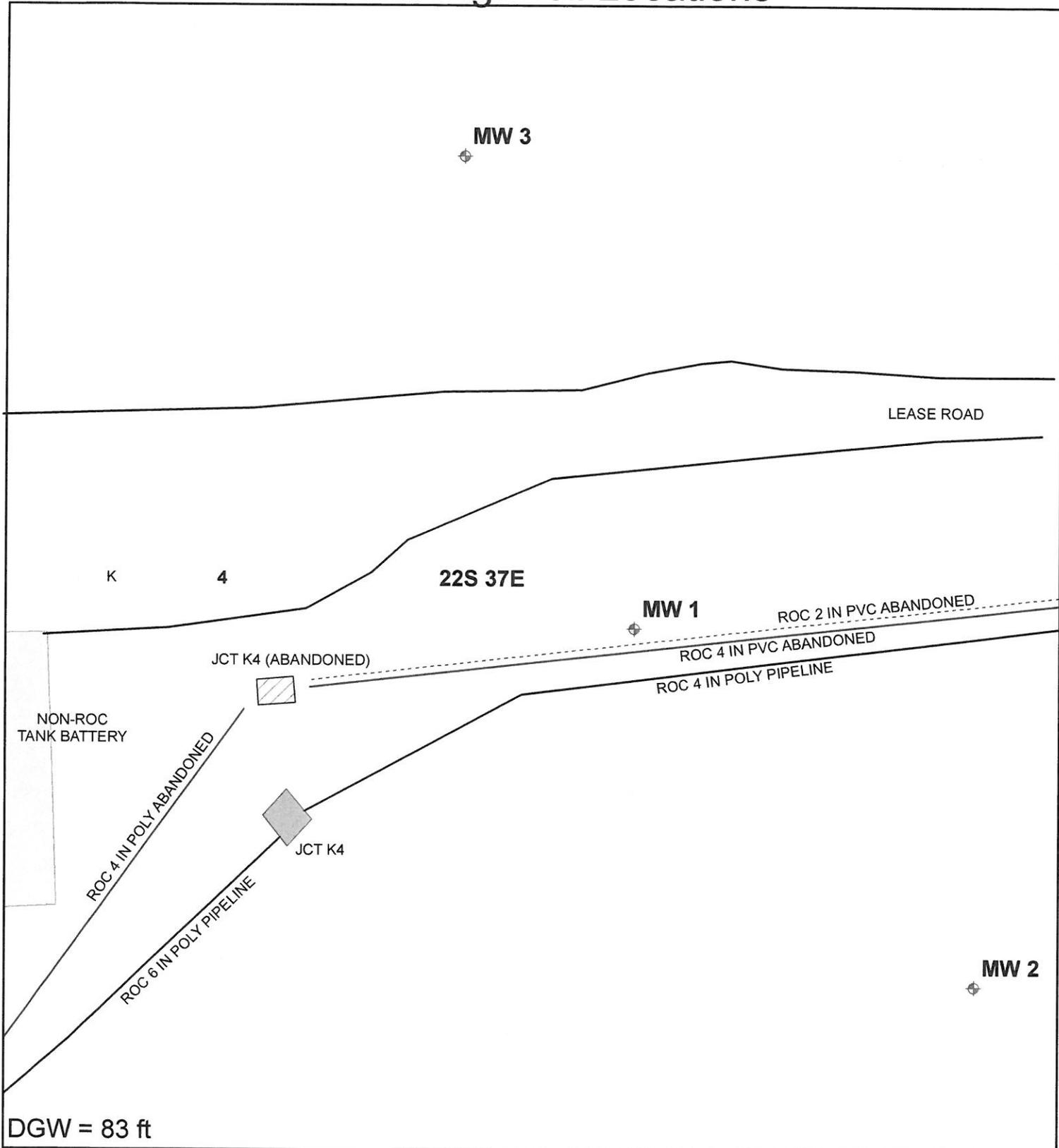
Site Location Map



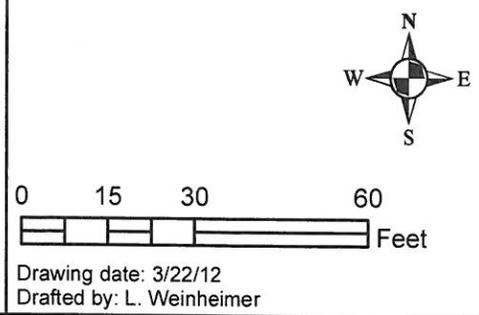
BD
K-4 leak
Legals: UL/K sec. 4
T-22-S R-37-E
LEA COUNTY, NM
NMOCD Case #: 1R0459



Monitoring Well Locations



BD
K-4 leak
Legals: UL/K sec. 4
T-22-S R-37-E
LEA COUNTY, NM
NMOCD Case #: 1R0459



ROC - BD K-4 (1R-459)
 Unit Letter K, Section 4, T22S, R37E

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
1	85.02	93.63	1.4	5	11/13/2006	1040	2120	<0.001	<0.001	<0.001	<0.001	152	silt to clear no odor
1	84.99	93.62	1.4	6	3/8/2007	916	2100	<0.001	<0.001	<0.001	<0.001	148	silt to clear no odor
1	84.96	93.62	1.4	6	4/23/2007	917	1950	<0.001	<0.001	<0.001	<0.001	339	silt to clear no odor
1	XXX	XXX	XXX	XXX	8/7/2007	XXX	XXX	XXX	XXX	XXX	XXX	XXX	converted from a 2 in well to a 4 in well
1	86.06	97.7	7.6	6	9/14/2007	760	2028	<0.001	<0.001	<0.001	<0.003	159	silt to clear no odor
1	86.06	97.7	7.6	20	10/31/2007	736	1770	<0.002	<0.002	<0.002	<0.006	124	silt to clear no odor
1	85.93	98.6	8.2	30	2/15/2008	760	1880	<0.002	<0.002	<0.002	<0.006	157	clear no odor
1	85.73	98.6	8.4	30	5/5/2008	720	1880	<0.002	<0.002	<0.002	<0.006	195	clear no odor
1	85.81	98.6	8.3	30	8/11/2008	620	1590	<0.001	<0.001	<0.001	<0.003	106	clear no odor
1	85.65	98.6	8.4	30	11/13/2008	570	1470	<0.001	<0.001	<0.001	<0.003	148	clear no odor
1	85.64	98.4	8.3	30	1/21/2009	630	1560	<0.001	<0.001	<0.001	<0.003	143	clear no odor
1	85.61	98.4	8.3	30	4/22/2009	600	1680	<0.001	<0.001	<0.001	<0.003	123	clear no odor

1	85.48	98.4	8.4	30	7/20/2009	520	1380	<0.001	<0.001	<0.001	<0.001	<0.003	113	clear no odor
1	85.49	98.4	8.4	30	10/13/2009	700	1700	<0.001	<0.001	<0.001	<0.001	<0.003	131	clear no odor
1	85.32	98.41	8.5	30	1/19/2010	780	1860	<0.001	<0.001	<0.001	<0.001	<0.003	173	clear no odor
1	85.31	98.41	8.5	30	4/15/2010	680	1610	<0.001	<0.001	<0.001	<0.001	<0.003	155	clear no odor
1	85.23	98.41	8.6	30	7/20/2010	610	1550	<0.001	<0.001	<0.001	<0.001	<0.003	143	clear no odor
1	85.15	98.41	8.6	30	10/15/2010	600	1460	<0.001	<0.001	<0.001	<0.001	<0.003	125	clear no odor
1	85.14	98.4	8.6	30	1/26/2011	680	1580	<0.001	<0.001	<0.001	<0.001	<0.003	164	clear no odor
1	84.97	98.4	8.7	30	4/22/2011	740	1620	<0.001	<0.001	<0.001	<0.001	<0.003	144	clear no odor
1	84.96	98.4	8.7	30	7/29/2011	640	1530	<0.001	<0.001	<0.001	<0.001	<0.001	108	clear no odor
1	85.07	98.4	8.7	30	10/24/2011	650	1510	<0.001	<0.001	<0.001	<0.001	<0.003	122	clear no odor
1	84.88	98.4	8.8	30	1/31/2012	660	1500	<0.001	<0.001	<0.001	<0.001	<0.003	140	clear no odor
1	84.82	98.4	8.8	125	5/3/2012	670	1440	<0.001	<0.001	<0.001	<0.001	<0.003	143	clear no odor
1	XXX	98.4	0	Running	7/25/2012	730	1670	<0.001	<0.001	<0.001	<0.001	<0.003	165	clear no odor
1	XXX	98.4	0	Running	10/25/2012	870	1960	<0.001	<0.001	<0.001	<0.001	<0.003	182	clear no odor
1	84.58	98.4	9	80	3/26/2013	520	1240	<0.001	<0.001	<0.001	<0.001	<0.003	129	Clear No odor
1	85.65	98.4	8.3	80	4/24/2013	524	1290	<0.001	<0.001	<0.001	<0.001	<0.003	143	Clear no odor
1	84.61	98.4	9	80	7/30/2013	500	1300	<0.001	<0.001	<0.001	<0.001	<0.003	129	clear no odor.
1	84.5	98.4	9	80	10/23/2013	500	1320	<0.001	<0.001	<0.001	<0.001	<0.003	131	clear no odor

ROC - BD K-4 (1R-459)
Unit Letter K, Section 4, T22S, R37E

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
2	83.35	94.1	1.7	7	11/13/2006	77	542	<0.001	<0.001	<0.001	<0.001	85	silt to clear no odor
2	83.28	94.08	1.7	7	3/8/2007	75.3	574	<0.001	<0.001	<0.001	<0.001	80.8	silt to clear no odor
2	83.25	94.08	1.7	7	4/23/2007	83.5	564	<0.001	<0.001	<0.001	<0.001	83	silt to clear no odor
2	83.12	94.08	1.8	7	9/14/2007	110	588	<0.001	<0.001	<0.001	<0.003	130	silt to clear no odor
2	83.11	94.08	1.8	6	10/31/2007	84	596	<0.002	<0.002	<0.002	<0.006	82.7	silt to clear no odor
2	82.97	94.05	1.8	6	2/15/2008	92	574	<0.002	<0.002	<0.002	<0.006	86.6	silt to clear no odor
2	82.81	94.05	1.8	6	5/5/2008	100	570	<0.002	<0.002	<0.002	<0.006	117	silt to clear no odor
2	82.86	94.05	1.8	6	8/11/2008	108	596	<0.001	<0.001	<0.001	<0.003	94	silt to clear no odor
2	82.75	94.05	1.8	6	11/13/2008	144	578	<0.001	<0.001	<0.001	<0.003	93.7	silt to clear no odor
2	82.77	93.98	1.8	6	1/21/2009	104	598	<0.001	<0.001	<0.001	<0.003	95.4	silt to clear no odor
2	82.69	93.98	1.8	6	4/22/2009	108	621	<0.001	<0.001	<0.001	<0.003	89.8	silt to clear no odor
2	82.61	93.98	1.8	6	7/20/2009	144	628	<0.001	<0.001	<0.001	<0.003	95.4	silt to clear no odor
2	82.58	93.98	1.8	6	10/13/2009	108	641	<0.001	<0.001	<0.001	<0.003	78.9	silt to clear no odor
2	82.4	93.67	1.8	6	1/19/2010	116	605	<0.001	<0.001	<0.001	<0.003	105	silt to clear no odor

2	82.37	93.67	1.8	6	4/15/2010	112	625	<0.001	<0.001	<0.001	<0.001	<0.003	91.2	silt to clear no odor
2	82.32	93.67	1.8	6	7/20/2010	116	596	<0.001	<0.001	<0.001	<0.001	<0.003	74.2	silt to clear no odor
2	82.23	93.67	1.8	6	10/15/2010	116	609	<0.001	<0.001	<0.001	<0.001	<0.003	93.9	silt to clear no odor
2	82.18	93.7	1.8	6	1/26/2011	112	549	<0.001	<0.001	<0.001	<0.001	<0.003	91.2	silt to clear no odor
2	82.08	93.7	1.9	6	4/22/2011	112	575	<0.001	<0.001	<0.001	<0.001	<0.003	89.7	silt to clear no odor
2	82.05	93.7	1.9	6	7/29/2011	112	601	<0.001	<0.001	<0.001	<0.001	<0.003	75.5	silt to clear no odor
2	82.03	93.7	1.9	6	10/24/2011	116	612	<0.001	<0.001	<0.001	<0.001	<0.003	81.4	silt to clear no odor
2	81.94	93.7	1.9	6	1/31/2012	104	603	<0.001	<0.001	<0.001	<0.001	<0.003	94.9	silt to clear no odor
2	81.93	93.7	1.9	6	5/3/2012	112	607	<0.001	<0.001	<0.001	<0.001	<0.003	96	silt to clear no odor
2	81.88	93.7	1.9	6	7/25/2012	112	592	<0.001	<0.001	<0.001	<0.001	<0.003	82	silt to clear no odor
2	81.77	93.7	1.9	6	10/24/2012	96	564	<0.001	<0.001	<0.001	<0.001	<0.003	79	silt to clear no odor
2	81.72	93.7	1.9	6	3/26/2013	108	583	<0.001	<0.001	<0.001	<0.001	<0.003	91	silt to clear no odor
2	81.73	93.7	1.9	6	4/24/2013	104	560	<0.001	<0.001	<0.001	<0.001	<0.003	101	Silt to Clear. No odor.
2	81.69	93.7	1.9	6	7/30/2013	104	583	<0.001	<0.001	<0.001	<0.001	<0.003	122	silt to clear no odor
2	81.59	93.7	1.9	6	10/23/2013	104	551	<0.001	<0.001	<0.001	<0.001	<0.003	90	Silt to clear/ no odor

ROC - BD K-4 (1R-459)
 Unit Letter K, Section 4, T22S, R37E

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
3	86.45	94.6	1.3	5	11/13/2006	148	622	<0.001	<0.001	<0.001	<0.001	97.6	silt to clear no odor
3	86.41	94.5	1.3	5	3/8/2007	199	678	<0.001	<0.001	<0.001	<0.001	103	silt to clear no odor
3	86.35	94.5	1.3	6	4/23/2007	145	674	<0.001	<0.001	<0.001	<0.001	92.1	silt to clear no odor
3	86.23	94.5	1.3	6	9/14/2007	170	710	<0.001	<0.001	<0.001	<0.003	151	silt to clear no odor
3	86.19	94.5	1.3	6	10/31/2007	156	689	<0.002	<0.002	<0.002	<0.006	106	silt to clear no odor
3	86.09	94.35	1.3	6	2/15/2008	160	668	<0.002	<0.002	<0.002	<0.006	110	silt to clear no odor
3	85.89	94.35	1.4	6	5/5/2008	160	710	<0.002	<0.002	<0.002	<0.006	166	silt to clear no odor
3	85.94	94.35	1.3	6	8/11/2008	172	691	<0.001	<0.001	<0.001	<0.003	117	silt to clear no odor
3	85.84	94.35	1.4	6	11/13/2008	168	711	<0.001	<0.001	<0.001	<0.003	124	silt to clear no odor
3	85.84	94.2	1.3	6	1/21/2009	164	713	<0.001	<0.001	<0.001	<0.003	116	silt to clear no odor
3	85.76	94.2	1.4	6	4/22/2009	168	730	<0.001	<0.001	<0.001	<0.003	108	silt to clear no odor
3	85.64	94.2	1.4	6	7/20/2009	172	718	<0.001	<0.001	<0.001	<0.003	107	silt to clear no odor
3	85.63	94.2	1.4	6	10/13/2009	168	688	<0.001	<0.001	<0.001	<0.003	94.1	silt to clear no odor
3	85.52	94.58	1.4	6	1/19/2010	176	729	<0.001	<0.001	<0.001	<0.003	108	silt to clear no odor

3	85.46	94.58	1.5	6	4/15/2010	180	708	<0.001	<0.001	<0.001	<0.001	<0.003	108	silt to clear no odor
3	85.38	94.58	1.5	6	7/20/2010	192	706	<0.001	<0.001	<0.001	<0.001	<0.003	89.5	silt to clear no odor
3	85.33	94.58	1.5	6	10/15/2010	188	675	<0.001	<0.001	<0.001	<0.001	<0.003	87.7	silt to clear no odor
3	85.29	94.61	1.5	6	1/26/2010	188	696	<0.001	<0.001	<0.001	<0.001	<0.003	114	silt to clear no odor
3	85.15	94.61	1.5	6	4/22/2011	208	719	<0.001	<0.001	<0.001	<0.001	<0.003	111	silt to clear no odor
3	85.11	94.61	1.5	6	7/29/2011	224	743	<0.001	<0.001	<0.001	<0.001	<0.003	74.7	silt to clear no odor
3	85.07	94.61	1.5	6	10/24/2011	252	765	<0.001	<0.001	<0.001	<0.001	<0.003	101	silt to clear no odor
3	85.04	94.61	1.5	6	1/31/2012	196	728	<0.001	<0.001	<0.001	<0.001	<0.003	101	silt to clear no odor
3	84.64	94.61	1.6	6	5/3/2012	272	824	<0.001	<0.001	<0.001	<0.001	<0.003	104	silt to clear no odor
3	84.9	94.61	1.6	6	7/25/2012	184	723	<0.001	<0.001	<0.001	<0.001	<0.003	109	silt to clear no odor
3	84.82	94.61	1.6	6	10/24/2012	124	617	<0.001	<0.001	<0.001	<0.001	<0.003	96	silt to clear no odor
3	84.81	94.61	1.6	6	3/26/2013	220	751	<0.001	<0.001	<0.001	<0.001	<0.003	109	silt to clear no odor
3	84.78	94.61	1.6	6	4/24/2013	208	741	<0.001	<0.001	<0.001	<0.001	<0.003	128	Silt to clear/no odor
3	84.77	94.61	1.6	6	7/30/2013	188	725	<0.001	<0.001	<0.001	<0.001	<0.003	167	Silt to clear/no odor
3	84.63	94.61	1.6	6	10/23/2013	228	733	<0.001	<0.001	<0.001	<0.001	<0.003	116	Silt to clear/ no odor

November 05, 2013

Hack Conder

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: BD K-4 RELEASE

Enclosed are the results of analyses for samples received by the laboratory on 10/29/13 15:22.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

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

 Received: 10/29/2013
 Reported: 11/05/2013
 Project Name: BD K-4 RELEASE
 Project Number: NONE GIVEN
 Project Location: T22S R37E SEC4K - LEA CTY., NM

 Sampling Date: 10/23/2013
 Sampling Type: Water
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: MONITOR WELL #1 (H302624-01)

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 107 % 59.8-161
 Surrogate: Toluene-d8 104 % 75.2-115
 Surrogate: 4-Bromofluorobenzene 119 % 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*	500	4.00	10/31/2013	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*	131	25.0	11/05/2013	ND	17.1	85.6	20.0	0.410	

TDS 160.1		mg/L		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	1320	5.00	11/01/2013	ND	238	99.2	240	0.336	

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* = 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
 Fax To: (575) 397-1471

 Received: 10/29/2013
 Reported: 11/05/2013
 Project Name: BD K-4 RELEASE
 Project Number: NONE GIVEN
 Project Location: T22S R37E SEC4K - LEA CTY., NM

 Sampling Date: 10/23/2013
 Sampling Type: Water
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: MONITOR WELL #2 (H302624-02)

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 111 % 59.8-161
 Surrogate: Toluene-d8 104 % 75.2-115
 Surrogate: 4-Bromofluorobenzene 115 % 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*	104	4.00	10/31/2013	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*	90.0	25.0	11/05/2013	ND	17.1	85.6	20.0	0.410	

TDS 160.1		mg/L		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	551	5.00	11/01/2013	ND	238	99.2	240	0.336	

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Analytical Results For:

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

 Received: 10/29/2013
 Reported: 11/05/2013
 Project Name: BD K-4 RELEASE
 Project Number: NONE GIVEN
 Project Location: T22S R37E SEC4K - LEA CTY., NM

 Sampling Date: 10/23/2013
 Sampling Type: Water
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: MONITOR WELL #3 (H302624-03)

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 103 % 59.8-161
 Surrogate: Toluene-d8 101 % 75.2-115
 Surrogate: 4-Bromofluorobenzene 115 % 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*	228	4.00	10/31/2013	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*	116	25.0	11/05/2013	ND	17.1	85.6	20.0	0.410		

TDS 160.1		mg/L		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	733	5.00	11/01/2013	ND	234	97.5	240	1.66		

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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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