ARCADIS

Infrastructure, buildings, environment, communications

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Dr. Tomas Oberding
New Mexico Oil Conservation Division
1220 So. Saint Francis Drive
Santa Fe, New Mexico 87505

Subject:
2014 ANNUAL GROUNDWATER REPORT
NMOCD Case # 1R0459
Blinebry-Drinkard (BD) K-4 Release
T22S, R37E, Section 4, Unit K, Lea County, New Mexico

Date:
March 18, 2015

Contact:
Sharon Hall

Phone:
432 687-5400

Email:
shall@arcadis-us.com

Dr. Obering,

On behalf of Rice Operating Company (ROC), ARCADIS respectfully submits this 2014 Annual Groundwater Report for the BD K-4 site located in the Blinebry-Drinkard (BD) Salt Water Disposal (SWD) System.

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. Based on the completed CAP work, NMOCD granted 'Soil Closure' on October 11, 2012.

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 2014, approximately 3,640 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 21,279 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. Removed groundwater was utilized for pipeline maintenance. Chloride impacted groundwater removal and quarterly monitoring well sampling will continue in 2015.

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 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 at 432 687-5400 or Katie Jones at 575 393-9174.

Best Regards,

ARCADIS U.S, Inc.

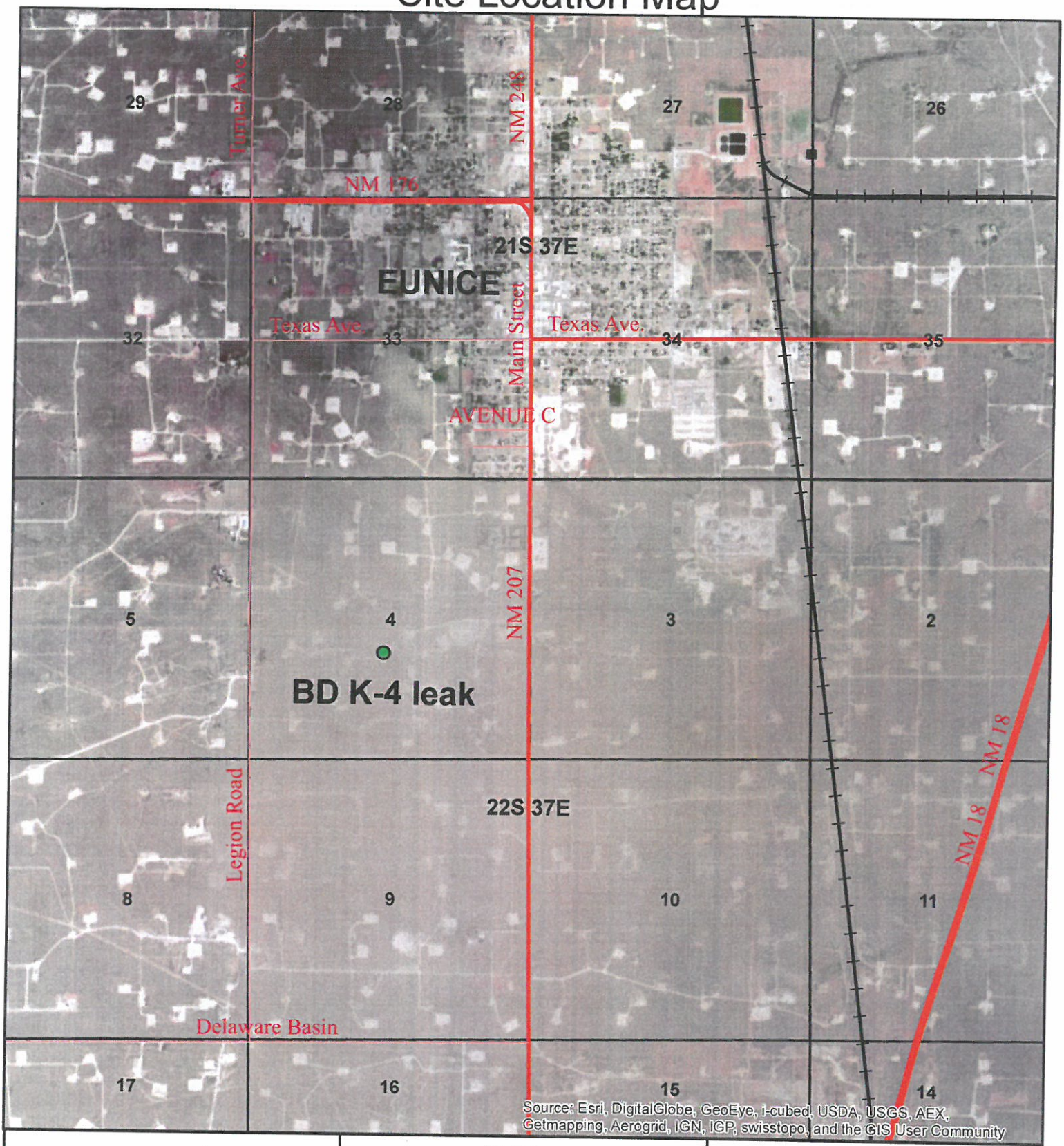
Sharon E. Hall

Sharon E. Hall
Associate Vice President

Copies: Katie Jones- ROC

Attachments:
Site Location Map
Monitor Well Location Figure
Monitor Well Summary Tables
October Monitor Well Lab Results

Site Location Map



RECS
RICE ENVIRONMENTAL
CONSULTING & SAFETY

BD K-4 leak

Legals: UL/K sec. 4
T-22-S R-37-E
LEA COUNTY, NM

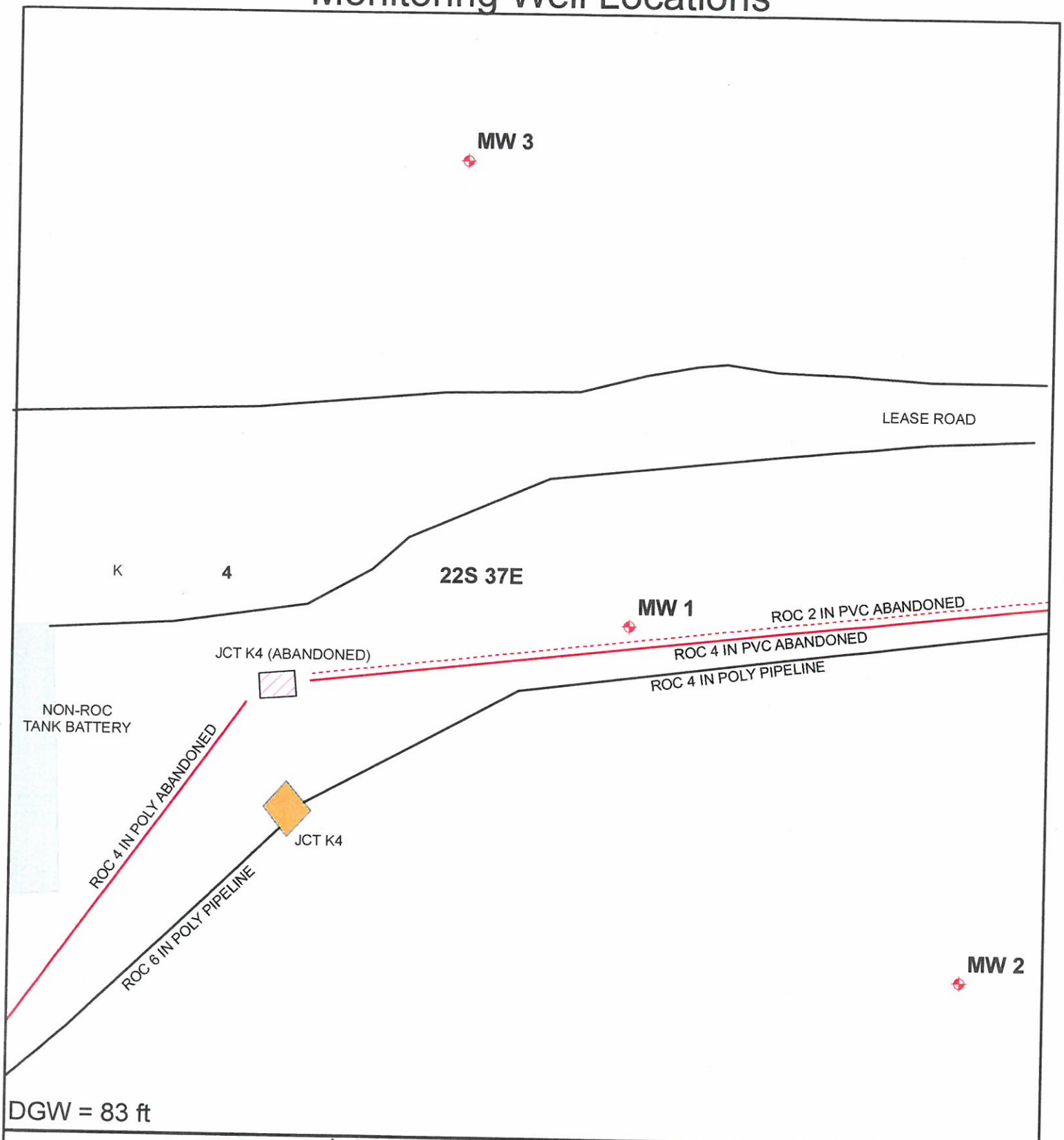
NMOCD Case #: 1R0459

N
W E
S

0 0.35 0.7
Miles

Drawing date: 3/26/14
Drafted by: L. Flores

Monitoring Well Locations



RECS
RICE ENVIRONMENTAL
CONSULTING & SAFETY

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

N
W E
S

0 15 30 60
Feet

Drawing date: 3/22/12
Drafted by: L. Weinheimer

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	<0.003	113	Clear No odor
1	85.49	98.4	8.4	30	10/13/2009	700	1700	<0.001	<0.001	<0.001	<0.003	131	Clear No odor
1	85.32	98.41	8.5	30	1/19/2010	780	1860	<0.001	<0.001	<0.001	<0.003	173	Clear No odor
1	85.31	98.41	8.5	30	4/15/2010	680	1610	<0.001	<0.001	<0.001	<0.003	155	Clear No odor
1	85.23	98.41	8.6	30	7/20/2010	610	1550	<0.001	<0.001	<0.001	<0.003	143	Clear No odor
1	85.15	98.41	8.6	30	10/15/2010	600	1460	<0.001	<0.001	<0.001	<0.003	125	Clear No odor
1	85.14	98.4	8.6	30	1/26/2011	680	1580	<0.001	<0.001	<0.001	<0.003	164	Clear No odor
1	84.97	98.4	8.7	30	4/22/2011	740	1620	<0.001	<0.001	<0.001	<0.003	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	108	Clear No odor
1	85.07	98.4	8.7	30	10/24/2011	650	1510	<0.001	<0.001	<0.001	<0.003	122	Clear No odor

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
1	84.88	98.4	8.8	30	1/31/2012	660	1500	<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	<0.003	143	Clear No odor
1	XXX	98.4	0	Running	7/25/2012	730	1670	<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	<0.003	182	Clear No odor
1	84.58	98.4	9	80	3/26/2013	520	1240	<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	<0.003	143	Clear No odor
1	84.61	98.4	9	80	7/30/2013	500	1300	<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	<0.003	131	Clear No odor
1	84.39	98.4	9.1	80	2/7/2014	470	1160	<0.001	<0.001	<0.001	<0.003	122	Clear No odor
1	84.53	98.4	9	80	4/10/2014	510	1210	<0.001	<0.001	<0.001	<0.003	131	Clear No odor
1	84.36	98.4	9.1	80	7/28/2014	424	1170	<0.001	<0.001	<0.001	<0.003	116	Clear No odor
1	84.34	98.4	9.1	100	10/30/2014	770	1900	<0.001	<0.001	<0.001	<0.003	136	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	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	84	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	<0.003	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	<0.003	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	<0.003	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	<0.003	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	<0.003	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	<0.003	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	<0.003	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	<0.003	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	<0.003	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	<0.003	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	<0.003	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	<0.003	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	<0.003	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	<0.003	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	<0.003	90	Silt to clear No odor

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
2	81.48	93.7	2	6	2/7/2014	120	581	<0.001	<0.001	<0.001	<0.003	101	Silt to clear No odor
2	81.64	93.7	1.9	6	4/10/2014	104	568	<0.001	<0.001	<0.001	<0.003	96.6	Silt to clear No odor
2	81.46	93.7	2	6	7/28/2014	112	588	<0.001	<0.001	<0.001	<0.003	85.1	Silt to clear No odor
2	81.52	93.7	1.9	6	10/30/2014	100	504	<0.001	<0.001	<0.001	<0.003	71	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	<0.003	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	<0.003	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	<0.003	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	<0.003	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	<0.003	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	<0.003	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	<0.003	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	<0.003	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	<0.003	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	<0.003	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	<0.003	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	<0.003	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	<0.003	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	<0.003	167	Silt to clear No odor

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
3	84.63	94.61	1.6	6	10/23/2013	228	733	<0.001	<0.001	<0.001	<0.003	116	Silt to clear No odor
3	84.54	94.61	1.6	6	2/7/2014	220	748	<0.001	<0.001	<0.001	<0.003	106	Silt to clear No odor
3	84.66	94.61	1.6	6	4/10/2014	152	622	<0.001	<0.001	<0.001	<0.003	121	Silt to clear No odor
3	84.48	94.61	1.6	6	7/28/2014	188	636	<0.001	<0.001	<0.001	<0.003	89.8	Silt to clear No odor
3	84.34	94.61	1.6	6	10/30/2014	144	656	<0.001	<0.001	<0.001	<0.003	92	Silt to clear No odor

CARDINAL Laboratories

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

November 12, 2014

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 11/05/14 15:21.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. 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

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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:	11/05/2014	Sampling Date:	10/30/2014
Reported:	11/12/2014	Sampling Type:	Water
Project Name:	BD K-4 RELEASE	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	T22S R37E SEC4K - LEA CTY., NM		

Sample ID: MONITOR WELL #1 (H403413-01)

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	11/11/2014	ND	0.020	102	0.0200	5.71	
Toluene*	<0.001	0.001	11/11/2014	ND	0.017	86.4	0.0200	7.57	
Ethylbenzene*	<0.001	0.001	11/11/2014	ND	0.017	85.3	0.0200	9.17	
Total Xylenes*	<0.003	0.003	11/11/2014	ND	0.054	90.2	0.0600	8.64	
Total BTEX	<0.006	0.006	11/11/2014	ND					

Surrogate: Dibromofluoromethane	*110 %*	*88.3-113*
Surrogate: Toluene-d8	*92.7 %*	*90.3-115*
Surrogate: 4-Bromofluorobenzene	*96.8 %*	*87.2-114*

Chloride, SM4500Cl-B mg/L **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**770**	4.00	11/06/2014	ND	104	104	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*	**136**	25.0	11/06/2014	ND	18.2	90.8	20.0	8.08	

TDS 160.1 mg/L **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	**1900**	5.00	11/11/2014	ND	430	81.6	527	2.29	

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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:	11/05/2014	Sampling Date:	10/30/2014
Reported:	11/12/2014	Sampling Type:	Water
Project Name:	BD K-4 RELEASE	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	T22S R37E SEC4K - LEA CTY., NM		

Sample ID: MONITOR WELL #2 (H403413-02)

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	11/11/2014	ND	0.020	102	0.0200	5.71	
Toluene*	<0.001	0.001	11/11/2014	ND	0.017	86.4	0.0200	7.57	
Ethylbenzene*	<0.001	0.001	11/11/2014	ND	0.017	85.3	0.0200	9.17	
Total Xylenes*	<0.003	0.003	11/11/2014	ND	0.054	90.2	0.0600	8.64	
Total BTEX	<0.006	0.006	11/11/2014	ND					

Surrogate: Dibromofluoromethane	*96.9 %*	*88.3-113*
Surrogate: Toluene-d8	*96.1 %*	*90.3-115*
Surrogate: 4-Bromofluorobenzene	*104 %*	*87.2-114*

Chloride, SM4500Cl-B mg/L **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**100**	4.00	11/06/2014	ND	104	104	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*	**71.0**	25.0	11/06/2014	ND	18.2	90.8	20.0	8.08	

TDS 160.1 mg/L **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	**504**	5.00	11/11/2014	ND	430	81.6	527	2.29	

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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:	11/05/2014	Sampling Date:	10/30/2014
Reported:	11/12/2014	Sampling Type:	Water
Project Name:	BD K-4 RELEASE	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	T22S R37E SEC4K - LEA CTY., NM		

Sample ID: MONITOR WELL #3 (H403413-03)

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	11/11/2014	ND	0.020	102	0.0200	5.71	
Toluene*	<0.001	0.001	11/11/2014	ND	0.017	86.4	0.0200	7.57	
Ethylbenzene*	<0.001	0.001	11/11/2014	ND	0.017	85.3	0.0200	9.17	
Total Xylenes*	<0.003	0.003	11/11/2014	ND	0.054	90.2	0.0600	8.64	
Total BTEX	<0.006	0.006	11/11/2014	ND					

Surrogate: Dibromofluoromethane	*97.4 %*	*88.3-113*
Surrogate: Toluene-d8	*90.7 %*	*90.3-115*
Surrogate: 4-Bromofluorobenzene	*92.6 %*	*87.2-114*

Chloride, SM4500Cl-B mg/L **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**144**	4.00	11/06/2014	ND	104	104	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*	**92.0**	25.0	11/06/2014	ND	18.2	90.8	20.0	8.08	

TDS 160.1 mg/L **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	**656**	5.00	11/11/2014	ND	430	81.6	527	2.29	

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager

101 East Marland - Hobbs, New Mexico 88240
Tel (575) 393-2326
Fax (575) 393-2476

Cardinal Laboratories, Inc.

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # _____

Company Name: RICE Operating Company	BILL TO Company: RICE Operating Company — PO#
Project Manager: Hack Conder	Address: (Street, City, Zip) 122 W Taylor Street ~ Hobbs, New Mexico 88240
Address: (Street, City, Zip) 122 W Taylor Street ~ Hobbs, New Mexico 88240	Phone#: (575) 393-9174 — Fax#: (575)397-1471
Phone #: (575) 393-9174	Fax #: (575) 397-1471
Project #:	Project Name: BD K-4 Release
Project Location: T22S R37E Sec4 K ~ Lea County New Mexico	Sampler Signature: Rozanne Johnson (575)631-9310

LAB # (LAB USE ONLY)	FIELD CODE	(G)rab or (C)omp	# CONTAINERS	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL (2 40ml VOA)	HNO_3	$NaHSO_4$	H_2SO_4	ICE (1-1Liter HDPE)	NONE	SAMPLING: DATE (2014)	TIME
H403413-1	Monitor Well #1	G	3	X				2				1		10/30	15:50
-2	Monitor Well #2	G	3	X				2				1		10/30	12:30
-3	Monitor Well #3	G	3	X				2				1		10/30	13:35

ANALYSIS REQUEST

(Circle or Specify Method No.)

MTBE 8021B/602	BTEX 8021B/602	TPH 418.1/TX1005 / TX1005 Extended (C35)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B/624	GC/MS Semi. Vol. 8270C/625	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH	Moisture Content	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, CO3, HCO3)	Sulfates	Total Dissolved Solids	Chlorides	Turn Around Time ~ 24 Hours
	X																	X	X	X	
	X																	X	X	X	
	X																	X	X	X	

Relinquished by: Rozanne Johnson	Date: 11/5/2014	Time: 15:20	Received by:	Date: Time:
Relinquished by:	Date:	Time:	Received By: (Laboratory Staff) Jodi Henson	Date: 11/5/2014 Time: 15:21

Phone Results	Yes	No	
Fax Results	Yes	No	Additional Fax Number:

Delivered By: (Circle One) Sampler - UPS - Bus - Other:

Sample Condition: Cool: Yes / No; Intact: Yes / No

CHECKED BY: (Initials)

REMARKS:

Email Results to: hconder@riceswd.com, lweinheimer@rice-ecs.com, kjones@riceswd.com, rozanne11@windstream.net

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