

AP - 75

STAGE 1 & 2 REPORTS

DATE:

10-30-12 + 8-8-13

Hansen, Edward J., EMNRD

From: Katie Jones <kjones@riceswd.com>
Sent: Thursday, August 08, 2013 1:18 PM
To: Hansen, Edward J., EMNRD
Cc: Hack Conder; Laura Pena
Subject: BD J-26 (AP-75) Termination Request - Additional Information
Attachments: BD J-26 (AP-75) Groundwater Gradient.jpg; BD J-26 (AP-75) Up-gradient Map.pdf

Mr. Hansen,

The following is additional information in support of the BD J-26 (AP-75) Termination Request submitted to the NMOCD on October 30th, 2012. The site information was evaluated by Peter Galusky, Jr. Ph.D., P.E. of Texerra to determine the *groundwater gradient at the J-26 site. The gradient was determined to flow easterly, and a map showing the gradient is attached.* Chloride concentrations in the up-gradient well (MW-4) have remained above WQCC standards, indicating there is a non-ROC source contributing chloride to the groundwater up-gradient of MW-2 and up-gradient of the ROC BD J-26 pump station. The J-26 pump station was installed in 2002, and the area was properly lined with a 40-mil, reinforced poly liner prior to installation. The junction box installed at the pump station was installed as a water-tight concrete box and has had no reportable leaks. A plat showing the up-gradient area is also attached.

ROC was granted 'Soil Closure' for this site on October 11th, 2012. Based on the remediation actions for the soil being completed and the monitoring well sampling showing that the chloride in MW-2 is due to a non-ROC site up-gradient of the well, ROC requests 'remediation termination' or similar closure status of the regulatory file. Upon NMOCD approval of the Termination Request, ROC will plug and abandon the monitoring wells (MW-1, MW-2, MW-3, MW-4, and RW-1) located at this site. The wells will be plugged using a cement grout containing 1-3% bentonite and a 3 foot cap of cement at the surface.

If you have any questions, please contact Hack Conder at (575)631-6432.

Thank you,

Katie Jones
Environmental Project Manager
RICE Operating Company

Rice Operating Company BD Jct J-26



0 100 200 400 Feet

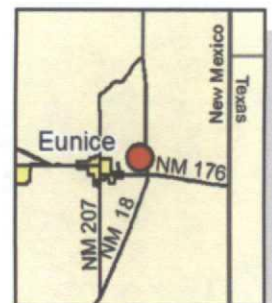


Texerra LLC

Erich Fowler 6/21/2013

Lea County, NM
32.448 N 103.130 W
1:800 Scale

Groundwater gradient determination was calculated based on January, 2013 depth-to-groundwater measurements. Groundwater chloride concentrations were analyzed from samples taken in January, 2013.



Imagery Date: April 2011.

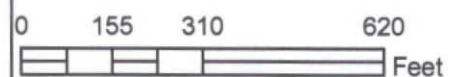
Well [Jan. 2013 DGW elevation ft., mg/l Cl-]

Up-gradient Site Map



BD J-26

Legals: UL/J sec. 26
T21S R37E
NMOCD Case #: AP-75



Drawing date: 10/23/12
Drafted by: L. Weinheimer

Rice Environmental Consulting & Safety

P.O. Box 5630 Hobbs, NM 88241
Phone 575.393.4411 Fax 575.393.0293

RECEIVED OCD

CERTIFIED MAIL
RETURN RECEIPT NO. 7007 2560 0003 0320 5457

2012 NOV -8 P 1:54

October 30th, 2012

Mr. Edward Hansen

New Mexico Energy, Minerals, & Natural Resources
Oil Conservation Division, Environmental Bureau
1220 S. St. Francis Drive
Santa Fe, New Mexico 87505

**RE: Termination Request
Rice Operating Company – BD SWD System
BD J-26 (AP-75): UL/J, Sec. 26, T21S, R37E**

Mr. Hansen:

RICE Operating Company (ROC) has retained Rice Environmental Consulting and Safety (RECS) to address potential environmental concerns at the above-referenced site in the BD Salt Water Disposal (SWD) system. ROC is the service provider (agent) for the BD SWD System and has no ownership of any portion of the pipeline, well, or facility. The system is owned by a consortium of oil producers, System Parties, who provide all operating capital on a percentage ownership/usage basis.

Background and Previous Work

The J-26 site is located in Township 21 South, Range 37 East, Section 26, unit letter J, approximately 1 mile north-northwest of the intersection of NM State Highway 18 and County Highway 176 near Eunice, NM. Depth to groundwater at this site is approximately 41 +/- ft below ground surface.

In September 2002, excavation of chloride and TPH-impacted soil was completed to a depth of 42 feet bgs. 480 yd³ of the impacted soils were removed and disposed of at a NMOCD approved facility. Imported backfill was placed in the deep excavation from 42 feet to 27 feet bgs. A 12-inch compacted clay layer was then installed prior to backfilling with the remediated soil in 3-foot lifts. A second 12-inch compacted clay layer was installed at 5 feet bgs. The remaining remediated soil was placed above the clay layer and contoured to drain rainwater away from the area. A new replacement junction box was installed about 60 feet north of the former location. The surface was then reseeded and monitored for growth which resulted in re-establishing the native vegetation. On October 10th, 2002, one monitoring well (MW-1) was installed immediately adjacent to the southeast corner of the excavated area to further assess if groundwater was impacted with chlorides. Between August 2003 and May 2010, two additional monitor wells and one recovery well were installed at the site. These wells indicated that the groundwater flow in this area is to the east.

A Project Update was submitted to NMOCD on April 17th, 2012 and an Addendum to the Project Update Report was submitted on May 3rd, 2012. The report and addendum were approved by NMOCD on May 3rd, 2012. In the addendum report, ROC stated that they would install an up-gradient monitor well (MW-4) to further delineate groundwater at the site. On June 11th, 2012, MW-4 was installed at the site to a depth of 41 ft (Figure 1, Appendix A). Since its installation, MW-4 has been sampled as part of the quarterly monitor well sampling program conducted at the site (Figure 2, Appendix B). Given the chloride levels in MW-4, it is evident that there is an up-gradient source of contamination at the site (Figure 3).

On October 11th, 2012, ROC submitted a Soil Closure Request to NMOCD that was approved the same day. The Soil Closure Request stated that abatement actions performed on the soil at this site will have prevented the migration of any residual constituents in the soil. Since the remediation actions for the soil is completed and monitor well sampling shows that contamination of the site is due to an up-gradient source, ROC requests 'remediation termination' status of the regulatory file.

RECS appreciates the opportunity to work with you on this project. Please call Hack Conder at (575) 393-9174 or me if you have any questions or wish to discuss the site.

Sincerely,



Lara Weinheimer
Project Scientist
RECS
(575) 441-0431

Attachments:

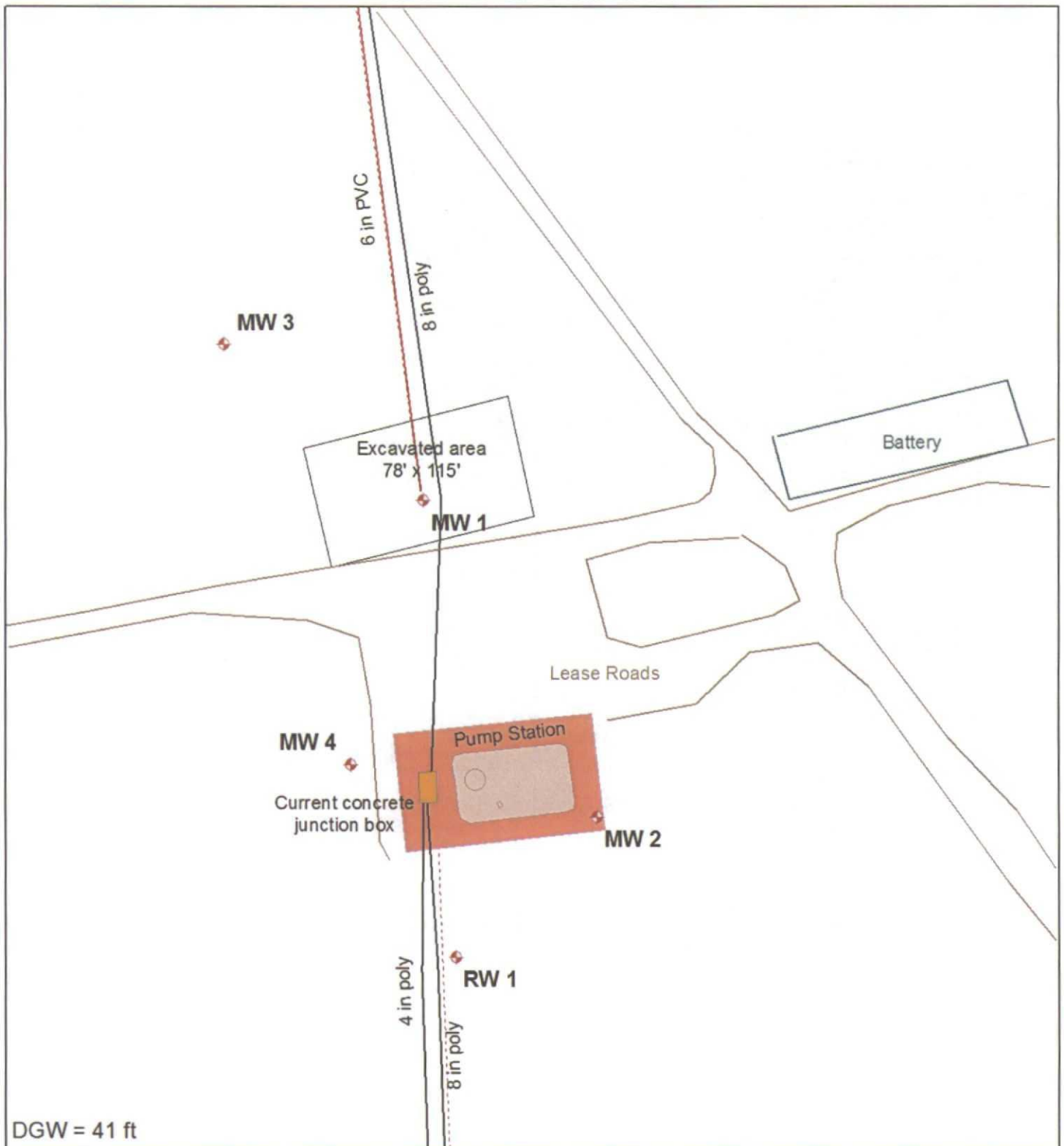
- Figure 1 – MW-4 Installation Map
- Figure 2 – Monitor Well Sampling Map
- Figure 3 – Up-gradient Site Map
- Appendix A – Installation of MW-4 Documentation
- Appendix B – Monitor Well Sampling Documentation



Figures

RICE Environmental Consulting and Safety (RECS)
P.O. Box 5630 Hobbs, NM 88241
Phone 575.393.4411 Fax 575.393.0293

MW-4 Installation



DGW = 41 ft



BD J-26

Legals: UL/J sec. 26
T21S R37E
NMOCD Case #: AP-75

Figure 1



0 25 50 100
Feet

Drawing date: 5-2-12
Drafted by: L. Weinheimer

MW Sampling Data

MW	Depth to Water	Total Depth	Sample Date	Cl	TDS	Sulfate
1	41.44	54.4	10/18/2011	172	910	243
1	41.49	54.4	1/23/2012	168	944	241
1	41.48	54.4	4/27/2012	164	941	213
1	42.05	54.4	7/18/2012	168	935	212
MW	Depth to Water	Total Depth	Sample Date	Cl	TDS	Sulfate
2	41.86	59.27	10/18/2011	1000	2280	298
2	41.93	59.27	1/23/2012	1380	2800	159
2	41.91	59.27	4/27/2012	740	1880	232
2	42.42	59.27	7/18/2012	1160	2700	233
MW	Depth to Water	Total Depth	Sample Date	Cl	TDS	Sulfate
3	41.08	60.22	10/18/2011	172	830	145
3	41.44	60.22	1/23/2012	152	857	153
3	41.12	60.22	4/27/2012	144	848	133
3	41.6	60.22	7/18/2012	144	864	125
MW	Depth to Water	Total Depth	Sample Date	Cl	TDS	Sulfate
RW-1 Deep	40.9	66.1	10/18/2011	136	845	161
RW-1 Deep	40.93	66.1	1/23/2012	156	849	157
RW-1 Deep	40.92	66.1	4/27/2012	160	933	233
RW-1 Deep	41.75	66.1	7/18/2012	156	820	138
MW	Depth to Water	Total Depth	Sample Date	Cl	TDS	Sulfate
RW-1 Shallow	40.9	66.1	10/18/2011	200	937	175
RW-1 Shallow	40.93	66.1	1/23/2012	148	871	158
RW-1 Shallow	40.92	66.1	4/27/2012	172	998	200
RW-1 Shallow	41.75	66.1	7/18/2012	212	1030	194
MW	Depth to Water	Total Depth	Sample Date	Cl	TDS	Sulfate
4	41.92	55.49	7/18/2012	316	1260	248
4	42.32	55.49	8/30/2012	412	1440	285
4	42.36	55.49	9/26/2012	340	1310	244

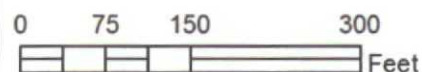
BTEX not sampled in any well in last three years.



BD J-26

Legals: UL/J sec. 26
T21S R37E
NMOCD Case #: AP-75

Figure 2



Drawing date: 10/25/12
Drafted by: L. Weinheimer

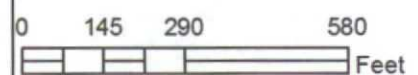
Up-gradient Site Map



BD J-26

Legals: UL/J sec. 26
T21S R37E
NMOCD Case #: AP-75

Figure 3

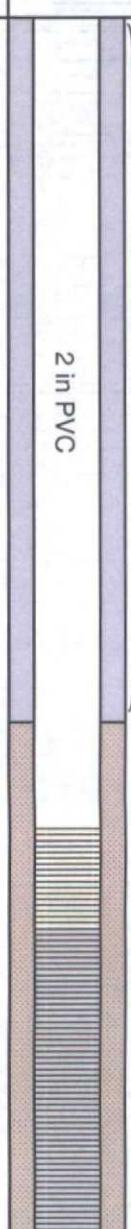


Drawing date: 10/23/12
Drafted by: L. Weinheimer

Appendix A

Installation of MW-4 Documentation

RICE Environmental Consulting and Safety (RECS)
P.O. Box 5630 Hobbs, NM 88241
Phone 575.393.4411 Fax 575.393.0293

Logger:	Kyle Norman					
Driller:	Harrison & Cooper, Inc.					
Drilling Method:	Air rotary					
Start Date:	6/11/2012					
End Date:	6/11/2012					
Comments: The soil was not sampled as the well was installed.			Project Name: BD J-26		Well ID: MW-4	
Location: UL/J sec. 26 T-21-S R-37-E			Project Consultant:			
DRAFTED BY: L. Weinheimer TD = 54 ft GW = 41 ft			Lat: 32°26'52.491"N Long: 103°7'46.961"W		County: Lea State: NM	
Depth (feet)	Chloride field tests	LAB	PID	Description	Lithology	Well Construction
SS				NO SAMPLES TAKEN		
5 ft						
10 ft						
15 ft						
20 ft						
25 ft						
30 ft						
35 ft						
40 ft						
45 ft						
50 ft						
54 ft						



Appendix B

Monitor Well Sampling Documentation

RICE Environmental Consulting and Safety (RECS)
P.O. Box 5630 Hobbs, NM 88241
Phone 575.393.4411 Fax 575.393.0293



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

July 27, 2012

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

RE: BD JUNCTION J-26

Enclosed are the results of analyses for samples received by the laboratory on 07/23/12 17:06.

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_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:	07/23/2012	Sampling Date:	07/18/2012
Reported:	07/27/2012	Sampling Type:	Water
Project Name:	BD JUNCTION J-26	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Celey D. Keene
Project Location:	T21S R37E SEC26 J~LEA CTY, NM		

Sample ID: MONITOR WELL #1 (H201702-01)

Chloride, SM4500Cl-B		mg/L	Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	168	4.00	07/25/2012	ND	104	104	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*	212	10.0	07/24/2012	ND	19.9	99.4	20.0	2.74	
TDS 160.1		mg/L	Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	935	5.00	07/24/2012	ND	232	96.7	240	3.57	

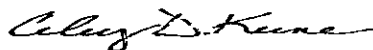
Sample ID: MONITOR WELL #2 (H201702-02)

Chloride, SM4500Cl-B		mg/L	Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	1160	4.00	07/25/2012	ND	104	104	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*	233	10.0	07/24/2012	ND	19.9	99.4	20.0	2.74	
TDS 160.1		mg/L	Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	2700	5.00	07/24/2012	ND	232	96.7	240	3.57	

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
 Fax To: (575) 397-1471

Received:	07/23/2012	Sampling Date:	07/18/2012
Reported:	07/27/2012	Sampling Type:	Water
Project Name:	BD JUNCTION J-26	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Celey D. Keene
Project Location:	T21S R37E SEC26 J~LEA CTY, NM		

Sample ID: MONITOR WELL #3 (H201702-03)

Chloride, SM4500Cl-B		mg/L	Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	144	4.00	07/25/2012	ND	104	104	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*	125	10.0	07/24/2012	ND	19.9	99.4	20.0	2.74	
TDS 160.1		mg/L	Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	864	5.00	07/24/2012	ND	232	96.7	240	3.57	

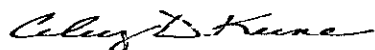
Sample ID: RECOVERY WELL 1 DEEP (H201702-04)

Chloride, SM4500Cl-B		mg/L	Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	156	4.00	07/25/2012	ND	104	104	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*	138	10.0	07/24/2012	ND	19.9	99.4	20.0	2.74	
TDS 160.1		mg/L	Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	820	5.00	07/24/2012	ND	232	96.7	240	3.57	

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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:	07/23/2012	Sampling Date:	07/18/2012
Reported:	07/27/2012	Sampling Type:	Water
Project Name:	BD JUNCTION J-26	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Celey D. Keene
Project Location:	T21S R37E SEC26 J~LEA CTY, NM		

Sample ID: RECOVERY WELL 1 SHALLOW (H201702-05)

Chloride, SM4500Cl-B		mg/L		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	212	4.00	07/25/2012	ND	104	104	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*	194	10.0	07/24/2012	ND	19.9	99.4	20.0	2.74	
TDS 160.1		mg/L		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	1030	5.00	07/24/2012	ND	232	96.7	240	3.57	

Sample ID: MONITOR WELL #4 (H201702-06)

Chloride, SM4500Cl-B		mg/L		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	316	4.00	07/25/2012	ND	104	104	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*	248	10.0	07/24/2012	ND	19.9	99.4	20.0	2.74	
TDS 160.1		mg/L		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	1260	5.00	07/24/2012	ND	232	96.7	240	3.57	

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

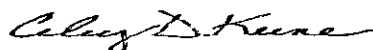
Notes and Definitions

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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Celest D. Keene, Lab Director/Quality Manager

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

Cardinal Laboratories, Inc.

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID #

ANALYSIS REQUEST

(Circle or Specify Method No.)

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 Junction J-26

Project Location: T21S R37E Sec26 J ~ Lea County New Mexico

[illegible][illegible]

Relinquished by: <u>Rozanne Johnson</u> Date: <u>7-23-2012</u> Time: <u>17:05</u>	Received by: _____ Date: _____ Time: _____
Relinquished by: _____ Date: _____ Time: _____	Received By: (Laboratory Staff) <u>C.V. Keene</u> Date: <u>7-23-2012</u> Time: <u>17:06</u>
Delivered By: (Circle One) <u>Sampler</u> - UPS - Bus - Other:	Sample Condition Cool ☒ Intact ☒ Yes ☒ Yes ☐ No ☐ No ☐ CHECKED BY: <u>C.V. Keene</u> (Initials)

Phone Results	Yes	No
Fax Results	Yes	No Additional Fax Number:
REMARKS:		
Email Results to: <u>hconder@riceswd.com</u> <u>swainheimer@nps-ecs.com</u> <u>kioneu@riceswd.com</u> <u>rozanne@valornet.com</u>		

Source

ROC BD J-26													
MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
1	43.02	XXX	XXX	XXX	10/29/2002	4520	9020	<0.001	<0.001	<0.001	<0.001	391	XXX
1	42.33	XXX	XXX	XXX	2/28/2003	3470	6870	<0.001	<0.001	<0.001	<0.001	501	XXX
1	42.52	52.6	1.61	4.8	6/5/2003	1460	3280	<0.001	<0.001	<0.001	<0.001	330	XXX
1	43.72	53.5	1.17	12	8/22/2003	957	2620	<0.001	<0.001	<0.001	<0.001	431	XXX
1	43.91	53.5	XXX	XXX	10/30/2003	620	2040	<0.001	<0.001	<0.001	<0.001	394	XXX
1	43.7	XXX	XXX	XXX	2/18/2004	478	1630	<0.001	<0.001	<0.001	<0.001	292	XXX
1	40.8	XXX	XXX	XXX	5/5/2004	390	1440	<0.001	<0.001	<0.001	<0.001	291	XXX
1	37.02	XXX	XXX	XXX	8/10/2004	195	1080	<0.001	<0.001	<0.001	<0.001	322	XXX
1	36.61	XXX	XXX	XXX	11/9/2004	177	1100	<0.001	<0.001	<0.001	<0.001	505	XXX
1	36.62	XXX	XXX	XXX	2/9/2005	179	1090	<0.001	<0.001	<0.001	<0.001	254	XXX
1	37	XXX	XXX	XXX	5/5/2005	179	1060	<0.001	<0.001	<0.001	<0.001	264	XXX
1	XXX	XXX	XXX	XXX	8/13/2005	193	1000	<0.001	<0.001	<0.001	<0.001	227	XXX
1	37.98	52.7	2.4	8	11/7/2005	233	1020	<0.001	<0.001	<0.001	<0.001	197	clear no odor
1	38.39	52.7	2.3	7	2/6/2006	262	1080	<0.001	<0.001	<0.001	<0.001	201	clear no odor
1	38.55	52.7	2.3	10	5/8/2006	282	1140	<0.001	<0.001	<0.001	<0.001	209	XXX
1	39.21	52.71	2.2	10	10/23/2006	193	1010	XXX	XXX	XXX	XXX	263	clear
1					2/8/2007	182	912	XXX	XXX	XXX	XXX	239	XXX
1	39.66	52.8	2.1	8	4/18/2007	161	898	XXX	XXX	XXX	XXX	227	clear no odor
1	39.86	52.8	2.1	8	7/18/2007	149	900	XXX	XXX	XXX	XXX	210	clear no odor
1	40.07	52.8	2	8	10/10/2007	160	915	XXX	XXX	XXX	XXX	228	clear no odor
1	40.35	52.78	2	8	1/14/2008	152	904	XXX	XXX	XXX	XXX	281	clear no odor
1	40.41	52.78	2	8	4/4/2008	140	890	XXX	XXX	XXX	XXX	284	clear no odor
1	41.07	53.03	1.9	8	7/14/2009	144	893	XXX	XXX	XXX	XXX	206	clear no odor
1	40.44	52.78	2	8	7/15/2008	132	907	XXX	XXX	XXX	XXX	232	clear no odor
1	40.76	52.78	1.9	8	10/8/2008	128	952	XXX	XXX	XXX	XXX	259	clear no odor
1	41.01	53.03	1.9	8	1/16/2009	136	890	XXX	XXX	XXX	XXX	245	clear no odor
1	40.94	53.03	1.9	8	4/13/2009	140	899	XXX	XXX	XXX	XXX	243	clear no odor
1	41.02	53.03	1.9	8	10/13/2009	148	911	XXX	XXX	XXX	XXX	199	clear no odor
1	41.01	54.25	2.1	8	1/14/2010	144	891	XXX	XXX	XXX	XXX	130	clear no odor
1	41.17	54.25	2.1	8	4/12/2010	156	922	XXX	XXX	XXX	XXX	250	clear no odor
1	41.22	54.25	2.1	8	7/16/2010	164	939	XXX	XXX	XXX	XXX	231	clear no odor
1	41.26	54.25	2.1	8	10/12/2010	164	922	XXX	XXX	XXX	XXX	234	clear no odor
1	41.05	54.4	2.1	8	1/20/2011	164	918	XXX	XXX	XXX	XXX	235	clear no odor
1	41.21	54.4	2.1	8	4/18/2011	164	910	XXX	XXX	XXX	XXX	220	clear no odor
1	41.23	54.4	2.1	8	7/22/2011	168	860	XXX	XXX	XXX	XXX	209	clear no odor
1	41.44	54.4	2.1	8	10/18/2011	172	910	XXX	XXX	XXX	XXX	243	clear no odor
1	41.49	54.4	2.1	8	1/23/2012	168	944	XXX	XXX	XXX	XXX	241	clear no odor
1	41.48	54.4	2.1	8	4/27/2012	164	941	XXX	XXX	XXX	XXX	213	clear no odor
1	42.05	54.4	2	8	7/18/2012	168	935	XXX	XXX	XXX	XXX	212	clear no odor

2 MWX mod

downgradient

ROC BD J-26													
MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Bénzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
2	43.99	59.2	XXX	12	8/22/2003	239	1180	<0.001	<0.001	<0.001	<0.001	384	XXX
2	44.17	XXX	XXX	XXX	10/30/2003	239	1240	<0.001	<0.001	<0.001	<0.001	363	XXX
2	43.91	XXX	XXX	XXX	2/18/2004	221	1150	<0.001	0.000954	<0.001	<0.001	308	XXX
2	40.98	XXX	XXX	XXX	5/5/2004	204	1060	<0.001	<0.001	<0.001	<0.001	293	XXX
2	37.14	XXX	XXX	XXX	8/10/2004	230	1120	<0.001	<0.001	<0.001	<0.001	352	XXX
2	36.99	XXX	XXX	XXX	11/9/2004	230	1120	<0.001	<0.001	<0.001	<0.001	479	XXX
2	37.03	XXX	XXX	XXX	2/9/2005	294	1220	<0.001	<0.001	<0.001	<0.001	248	XXX
2	37.46	XXX	XXX	XXX	5/6/2005	257	1210	<0.001	<0.001	<0.001	<0.001	264	XXX
2	XXX	XXX	XXX	XXX	8/13/2005	237	1180	<0.001	<0.001	<0.001	<0.001	260	XXX
2	37.44	58.5	3.4	12	11/7/2005	206	1130	<0.001	<0.001	<0.001	<0.001	212	clear no odor
2	38.83	58.5	3.1	10	2/6/2006	250	1090	<0.001	<0.001	<0.001	<0.001	250	XXX
2	39.02	58.5	3.1	15	5/8/2006	332	1500	<0.001	<0.001	<0.001	<0.001	230	XXX
2	39.71	58.5	3	10	10/23/2006	395	1370	XXX	XXX	XXX	XXX	231	clear
2	XXX	XXX	XXX	XXX	2/8/2007	378	1220	XXX	XXX	XXX	XXX	246	XXX
2	40.09	58.47	2.9	10	4/18/2007	446	1380	XXX	XXX	XXX	XXX	174	clear
2	40.3	58.47	2.9	10	7/18/2007	679	1720	XXX	XXX	XXX	XXX	228	clear no odor
2	40.52	58.47	2.9	10	10/10/2007	730	1838	XXX	XXX	XXX	XXX	204	clear no odor
2	40.74	58.45	2.8	10	1/14/2008	810	2061	XXX	XXX	XXX	XXX	272	clear no odor
2	40.8	58.45	2.8	10	4/4/2008	860	2470	XXX	XXX	XXX	XXX	292	clear no odor
2	41.42	59.2	2.8	10	7/14/2009	690	2030	XXX	XXX	XXX	XXX	264	clear no odor
2	40.84	58.45	2.8	10	7/15/2008	600	2270	XXX	XXX	XXX	XXX	473	clear no odor
2	41.2	58.45	2.8	10	10/8/2008	730	2470	XXX	XXX	XXX	XXX	289	clear no odor
2	41.39	59.14	2.8	10	1/16/2009	710	1960	XXX	XXX	XXX	XXX	294	clear no odor
2	40.94	53.03	1.9	8	4/13/2009	670	1890	XXX	XXX	XXX	XXX	279	clear no odor
2	41.31	59.2	2.9	10	10/13/2009	720	2010	XXX	XXX	XXX	XXX	282	clear no odor
2	41.33	59.22	2.9	10	1/14/2010	740	2000	XXX	XXX	XXX	XXX	327	clear no odor
2	41.49	59.22	2.9	10	4/12/2010	760	2000	XXX	XXX	XXX	XXX	282	clear no odor
2	41.52	59.22	2.8	10	7/16/2010	1000	2220	XXX	XXX	XXX	XXX	250	clear no odor
2	XXX	59.22	0	Pumping	10/12/2010	1060	2910	XXX	XXX	XXX	XXX	473	clear no odor
2	41.43	59.27	2.9	10	1/20/2011	1140	2440	XXX	XXX	XXX	XXX	286	clear no odor
2	41.64	59.27	2.8	10	4/18/2011	1200	2410	XXX	XXX	XXX	XXX	258	clear no odor
2	41.63	59.27	2.8	10	7/22/2011	1180	2590	XXX	XXX	XXX	XXX	225	clear no odor
2	41.86	59.27	2.8	10	10/18/2011	1000	2280	XXX	XXX	XXX	XXX	298	clear no odor
2	41.93	59.27	2.8	10	1/23/2012	1380	2800	XXX	XXX	XXX	XXX	159	clear no odor
2	41.91	59.27	2.8	10	4/27/2012	740	1880	XXX	XXX	XXX	XXX	232	clear no odor
2	42.42	59.27	2.7	10	7/18/2012	1160	2700	XXX	XXX	XXX	XXX	233	clear no odor

upgradient

ROC BD J-26													
MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
3	43.06	60.25	XXX	12	8/22/2003	160	904	<0.001	<0.001	<0.001	<0.001	183	XXX
3	43.28	XXX	XXX	XXX	10/30/2003	168	1070	<0.001	<0.001	<0.001	<0.001	421	XXX
3	43.03	XXX	XXX	XXX	2/18/2004	160	862	<0.001	<0.001	<0.001	<0.001	223	XXX
3	40.04	XXX	XXX	XXX	5/5/2004	160	891	<0.001	<0.001	<0.001	<0.001	266	XXX
3	36.55	XXX	XXX	XXX	8/10/2004	164	941	<0.001	<0.001	<0.001	<0.001	337	XXX
3	36.22	XXX	XXX	XXX	11/9/2004	142	1160	<0.001	<0.001	<0.001	<0.001	464	XXX
3	36.17	XXX	XXX	XXX	2/9/2005	138	1010	<0.001	<0.001	<0.001	<0.001	205	XXX
3	36.56	XXX	XXX	XXX	5/6/2005	141	870	<0.001	<0.001	<0.001	<0.001	241	XXX
3	XXX	XXX	XXX	XXX	8/13/2005	125	842	<0.001	<0.001	<0.001	<0.001	207	XXX
3	37.55	60.1	3.6	11	11/7/2005	125	826	<0.001	<0.001	<0.001	<0.001	170	clear no odor
3	37.84	60.1	3.6	11	2/6/2006	119	748	<0.001	<0.001	<0.001	<0.001	161	XXX
3	38	60.1	3.5	15	5/8/2006	142	806	<0.001	<0.001	<0.001	<0.001	168	XXX
	38.68	60.1	3.4	15	10/23/2006	147	834	XXX	XXX	XXX	XXX	206	clear no odor
3	39.01	60.05	3.4	15	2/8/2007	147	788	XXX	XXX	XXX	XXX	183	clear no odor
3	39.16	60.05	3.3	15	4/18/2007	150	818	XXX	XXX	XXX	XXX	180	clear no odor
3	39.4	60.05	3.3	15	7/18/2007	139	848	XXX	XXX	XXX	XXX	158	clear no odor
3	39.6	60.05	3.3	15	10/10/2007	164	857	XXX	XXX	XXX	XXX	160	clear no odor
3	39.9	60.05	3.2	15	1/14/2008	160	886	XXX	XXX	XXX	XXX	186	clear no odor
3	39.95	60.05	3.2	15	4/4/2008	152	911	XXX	XXX	XXX	XXX	191	clear no odor
3	40.63	60.19	3.1	10	7/14/2009	144	831	XXX	XXX	XXX	XXX	146	clear no odor
3	39.99	60.05	3.2	15	7/15/2008	120	840	XXX	XXX	XXX	XXX	231	clear no odor
3	40.27	60.05	3.2	15	10/8/2008	148	929	XXX	XXX	XXX	XXX	186	clear no odor
3	40.54	60.19	3.1	15	1/16/2009	148	853	XXX	XXX	XXX	XXX	170	clear no odor
3	40.5	60.19	3.2	10	4/13/2009	148	844	XXX	XXX	XXX	XXX	163	clear no odor
3	40.61	60.19	3.1	10	10/13/2009	144	835	XXX	XXX	XXX	XXX	136	clear no odor
3	40.6	60.23	3.1	10	1/14/2010	144	865	XXX	XXX	XXX	XXX	122	clear no odor
3	40.65	60.23	3.1	10	4/12/2010	148	776	XXX	XXX	XXX	XXX	139	clear no odor
3	40.64	60.23	3.1	10	7/16/2010	156	811	XXX	XXX	XXX	XXX	155	clear no odor
3	40.68	60.23	3.1	10	10/12/2010	152	881	XXX	XXX	XXX	XXX	206	clear no odor
3	40.67	60.22	3.1	10	1/20/2011	152	807	XXX	XXX	XXX	XXX	161	clear no odor
3	40.83	60.22	3.1	10	4/18/2011	152	845	XXX	XXX	XXX	XXX	146	clear no odor
3	40.82	60.22	3.1	10	7/22/2011	156	791	XXX	XXX	XXX	XXX	126	clear no odor
3	41.08	60.22	3.1	10	10/18/2011	172	830	XXX	XXX	XXX	XXX	145	clear no odor
3	41.44	60.22	3	10	1/23/2012	152	857	XXX	XXX	XXX	XXX	153	clear no odor
3	41.12	60.22	3.1	10	4/27/2012	144	848	XXX	XXX	XXX	XXX	133	clear no odor
3	41.6	60.22	3	10	7/18/2012	144	864	XXX	XXX	XXX	XXX	125	clear no odor

east

[illegible]

South

ROC BD J-26

[illegible]

South

ROC BD J-26

[illegible]

up. gradient

[illegible]

MW 3			
DATE SAMPLED	DGW (FT)	CI- (PPM)	TDS (PPM)
10-18-11	41.08	172	830
1-23-12	41.44	152	857
4-27-12	41.12	144	848
7-18-12	41.60	144	864

MW 1			
DATE SAMPLED	DGW (FT)	CI- (PPM)	TDS (PPM)
10-18-11	41.44	172	910
1-23-12	41.49	168	944
4-27-12	41.48	164	941
7-18-12	42.05	168	935

MW 4			
DATE SAMPLED	DGW (FT)	CI- (PPM)	TDS (PPM)
7-18-12	41.92	316	1260
8-30-12	42.32	412	1440
9-26-12	42.36	340	1310

MW 2			
DATE SAMPLED	DGW (FT)	CI- (PPM)	TDS (PPM)
10-18-11	41.86	1000	2280
1-23-12	41.93	1380	2800
4-27-12	41.91	740	1880
7-18-12	42.42	1160	2700

WINDMILL			
DATE SAMPLED	DGW (FT)	CI- (PPM)	TDS (PPM)
4-13-09	39.05	520	1570
10-13-09	39.12	530	1520
1-14-10	39.10	530	1660
4-12-10	39.15	520	1600

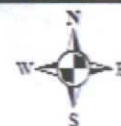
RW 1 SHALLOW			
DATE SAMPLED	DGW (FT)	CI- (PPM)	TDS (PPM)
10-18-11	40.90	200	937
1-23-12	40.93	148	871
4-27-12	40.92	172	998
7-18-12	41.75	212	1030

RW 1 DEEP			
DATE SAMPLED	DGW (FT)	CI- (PPM)	TDS (PPM)
10-18-11	40.90	136	845
1-23-12	40.93	156	849
4-27-12	40.92	160	933
7-18-12	41.75	156	820



BD J-26

Legals: UL/J sec. 26
T21S R37E
NMOCD Case #: AP-75



0 150 300 600
Feet

Drawing date: 11/12/12
Drafted by: T. Grieco

MW Sampling Data

MW	Depth to Water	Total Depth	Sample Date	Cl	TDS	Sulfate
MW-1	41.01	54.25	1/14/2010	144	891	130
	41.17	54.25	4/12/2010	156	922	250
	41.22	54.25	7/16/2010	164	939	231
	41.26	54.25	10/12/2010	164	922	234
	41.05	54.4	1/20/2011	164	918	235
	41.21	54.4	4/18/2011	164	910	220
	41.23	54.4	7/22/2011	168	860	209
	41.44	54.4	10/18/2011	172	910	243
	41.49	54.4	1/23/2012	168	944	241
	41.48	54.4	4/27/2012	164	941	213
			7/18/2012	168	935	212

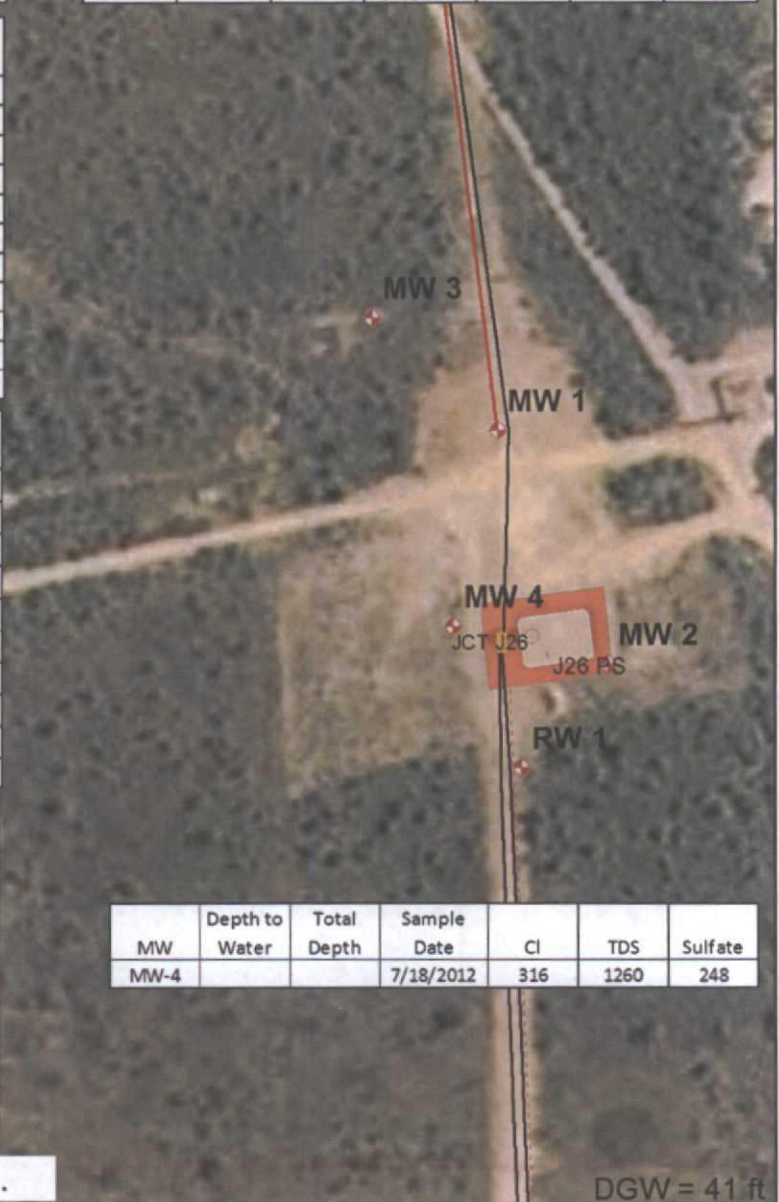
MW	Depth to Water	Total Depth	Sample Date	Cl	TDS	Sulfate
MW-2	41.33	59.22	1/14/2010	740	2000	327
	41.49	59.22	4/12/2010	760	2000	282
	41.52	59.22	7/16/2010	1000	2220	250
	XXX	59.22	10/12/2010	1060	2910	473
	41.43	59.27	1/20/2011	1140	2440	286
	41.64	59.27	4/18/2011	1200	2410	258
	41.63	59.27	7/22/2011	1180	2590	225
	41.86	59.27	10/18/2011	1000	2280	298
	41.93	59.27	1/23/2012	1380	2800	159
	41.91	59.27	4/27/2012	740	1880	232
			7/18/2012	1160	2700	233

MW	Depth to Water	Total Depth	Sample Date	Cl	TDS	Sulfate
MW-3	40.6	60.23	1/14/2010	144	865	122
	40.65	60.23	4/12/2010	148	776	139
	40.64	60.23	7/16/2010	156	811	155
	40.68	60.23	10/12/2010	152	881	206
	40.67	60.22	1/20/2011	152	807	161
	40.83	60.22	4/18/2011	152	845	146
	40.82	60.22	7/22/2011	156	791	126
	41.08	60.22	10/18/2011	172	830	145
	41.44	60.22	1/23/2012	152	857	153
	41.12	60.22	4/27/2012	144	848	133
			7/18/2012	144	864	125

MW	Depth to Water	Total Depth	Sample Date	Cl	TDS	Sulfate
RW-1 Deep	40.83	66.1	5/24/2010	152	825	152
	40.8	66.1	7/16/2010	152	820	135
	40.79	66.1	10/12/2010	144	858	114
	40.52	66.1	1/20/2011	152	819	155
	40.68	66.1	4/18/2011	160	842	155
	40.67	66.1	7/22/2011	168	934	199
	40.9	66.1	10/18/2011	136	845	161
	40.93	66.1	1/23/2012	156	849	157
	40.92	66.1	4/27/2012	160	933	233
			7/18/2012	156	820	138

MW	Depth to Water	Total Depth	Sample Date	Cl	TDS	Sulfate
RW-1 Shallow	40.83	66.1	5/24/2010	152	846	143
	40.8	66.1	7/16/2010	152	834	137
	40.79	66.1	10/12/2010	144	833	108
	40.52	66.1	1/20/2011	156	804	151
	40.68	66.1	4/18/2011	152	874	158
	40.67	66.1	7/22/2011	168	913	201
	40.9	66.1	10/18/2011	200	937	175
	40.93	66.1	1/23/2012	148	871	158
	40.92	66.1	4/27/2012	172	998	200
			7/18/2012	212	1030	194

MW	Depth to Water	Total Depth	Sample Date	Cl	TDS	Sulfate
MW-4			7/18/2012	316	1260	248



BTEX not sampled in any well in last three years.



BD J-26

Legals: UL/J sec. 26
T21S R37E
NMOCD Case #: AP-75



0 75 150 300
Feet

Drawing date: 8/6/12
Drafted by: L. Weinheimer