

1R - 426-03

**Annual GW Mon.  
REPORTS**

**DATE:**

**2007**



Infrastructure, environment, buildings

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Midland  
Texas 79701  
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Mr. Ed Hansen  
New Mexico Energy, Minerals, & Natural Resources Dept.  
Oil Conservation Division, Environmental Bureau  
1220 S. St. Francis Drive  
Santa Fe, New Mexico 87505

Environmental

Subject: **2007 MONITOR WELL REPORT/SAMPLING SUMMARY**  
**Jcts. K-27, BD SWD SYSTEM**  
**Unit K, SEC. 27, T21S, R37E**  
**NMOCD CASE #s 1R0426-02 and 1R0426-03**

K-27            K-27-1

Date:  
21 March 2008

Contact:  
Sharon E. Hall

Phone:  
432 687-5400

Email:  
shall@arcadis-us.com

Our ref:  
MT000834.0001

Dear Mr. Hansen:

On behalf of Rice Operating Company (ROC), ARCADIS G&M, Inc. (ARCADIS) respectfully submits the 2007 Monitor Well Report for the BD K-27 site located in the Blinebry-Drinkard (BD) Salt Water Disposal (SWD) System.

One monitoring well was installed at each of two junction box locations (K-27-1 and K-27 North) on May 9 and 10, 2005 during delineation as part of the NMOCD approved ICP.

A letter informing NMOCD that due to their proximity to each other the sites would be combined as one site referred to as the K-27 site was submitted on June 12, 2006. The letter also informed NMOCD of our intent to drill 4 additional monitoring wells at the K-27 site. Approval to drill the monitor wells was received on July 18, 2007.

Monitor wells MW-2 through MW-5 were installed on July 24 and 25, 2006. All wells are sampled quarterly per NMOCD guidelines. The attached tables summarize the analytical results from groundwater samples collected from the monitor wells at the site. 2007 groundwater laboratory reports are also attached.

Based on data collected for published reports, groundwater in this area has been impacted by brine as far back as 1953. This site is adjacent to the City of Eunice. Impacted groundwater conditions are documented in this area since the 1950s. (Ground- Water Report 6; Geology and Ground-Water Conditions in Southern Lea

Part of a bigger picture

ARCADIS

Mr. Ed Hansen  
21 March 2008

County, New Mexico; Alexander Nicholson, Jr. and Alfred Clebsch, Jr.; U.S. Geological Survey in cooperation with State Bureau of Mines and Mineral Resources Division of the New Mexico Institute of Mining and Technology and with the New Mexico State Engineer.)

Based on the widespread chloride impacts documented since the 1950s and the fact that the potential sources of additional impacts to groundwater (the junction boxes and impacted soil) at this site have been removed ROC requests closure of this site.

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 Partners, who provide all operating capital on a percentage ownership/usage basis.

Thank you for your consideration concerning this annual summary of groundwater monitoring information and request for closure. If you have any questions, do not hesitate to contact me.

Sincerely,  
ARCADIS G&M, Inc.



Sharon E. Hall  
Site Evaluation Department Manager

Copies:  
Kristin Farris Pope- ROC (3 copies)

Attachments:  
MW Summary Tables  
Monitor Well Location Figure  
Laboratory Analytical Results

*Use or disclosure of information contained on this sheet is subject to the restriction and disclaimer located on the signature page of this document.*

BD Jct. K-27-N MW-1  
Groundwater Results

Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Laboratory and Field Results (mg/kg)							
					Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	
43.5	52.5	XXX	17.5	6/27/2005	1060	2760	<0.001	<0.001	<0.001	<0.001	<0.001	422
43.31	52.5	XXX	18	9/6/2005	810	2270	<0.001	<0.001	<0.001	<0.001	<0.001	290
43.21	52.5	6	18	10/17/2005	978	2240	<0.001	<0.001	<0.001	{0.000886}	<0.001	357
43.13	52.5	6.1	20	1/16/2006	621	1980	<0.001	<0.001	<0.001	<0.001	<0.001	280
43.45	52.5	5.9	20	4/10/2006	740	1980	<0.001	<0.001	<0.001	<0.001	<0.001	345
43.94	52.5	5.6	20	7/10/2006	704	2070	<0.001	<0.001	<0.001	<0.001	<0.001	462
43.52	52.5	5.8	20	10/4/2006	494	1980	<0.001	<0.001	<0.001	<0.001	<0.001	315
43.28	52.45	6	20	2/7/2007	518	1550	<0.001	<0.001	<0.001	<0.001	<0.001	334
43.42	52.45	5.9	20	4/17/2007	511	1720	<0.001	<0.001	<0.001	<0.001	<0.001	383
42.98	52.45	6.2	20	7/25/2007	549	1670	<0.001	<0.001	<0.001	<0.001	<0.002	
43.15	52.45	6	20	10/3/2007	470	1679	<0.001	<0.001	<0.001	<0.003	<0.003	341

BD Jct. K-27-1 MW-1  
Groundwater Results

Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Laboratory and Field Results (mg/kg)							
					Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	
35.45	44	XXX	17	7/15/2005	975	2800	<0.001	<0.001	<0.001	<0.001	<0.001	624
35.28	44	XXX	17.08	9/6/2005	885	2850	<0.001	<0.001	<0.001	<0.001	<0.001	460
35.14	44	5.8	17.5	10/17/2005	1280	3390	<0.001	<0.001	<0.001	<0.001	<0.001	619
35.03	44	5.8	20	1/19/2006	679	2610	<0.001	<0.001	<0.001	<0.001	<0.001	465
35.63	44	5.4	20	4/10/2006	442	1970	<0.001	<0.001	<0.001	<0.001	<0.001	527
36.25	44	5	20	7/10/2006	430	1830	<0.001	<0.001	<0.001	<0.001	<0.001	604
35.43	44	5.6	20	10/4/2006	314	1760	<0.001	<0.001	<0.001	<0.001	<0.001	460
35.23	44.05	5.7	20	2/7/2007	378	1750	<0.001	<0.001	<0.001	<0.001	<0.001	512
35.09	44.05	5.8	20	4/17/2007	367	1820	<0.001	<0.001	<0.001	<0.001	<0.001	490
34.38	44.05	6.3	20	7/25/2007	1040	2980	<0.001	<0.001	<0.001	<0.001	ND	<0.002
34.89	44.05	6	20	10/3/2007	420	1964	<0.001	<0.001	<0.001	<0.001	<0.003	516

ROC BD Jct. K-27 MW-2  
Groundwater Results

Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Laboratory and Field Results (mg/kg)							
					CI	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	
41.44	51.15	1.6	10	10/4/2006	543	1850	<0.001	<0.001	<0.001	<0.001	<0.001	275
41.16	50.91	1.6	8	2/7/2007	576	1420	<0.001	<0.001	<0.001	<0.001	<0.001	268
41.29	50.91	1.5	6	4/17/2007	604	1670	<0.001	<0.001	<0.001	<0.001	<0.001	270
40.9	50.91	1.6	6	7/25/2007	581	2140	<0.001	<0.001	<0.001	<0.001	<0.002	ND
41.05	50.91	1.6	6	10/3/2007	600	1879	<0.001	<0.001	<0.001	<0.001	<0.003	270

**BD Jct. K-27 MW-3  
Groundwater Results**

Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Laboratory and Field Results (mg/kg)							
					Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	
43.71	52.5	1.4	6	10/4/2006	227	1480	<0.001	<0.001	<0.001	<0.001	<0.001	324
43.38	52.36	1.4	6	2/7/2007	256	1300	<0.001	<0.001	<0.001	<0.001	<0.001	327
43.51	52.36	1.4	6	4/17/2007	264	1340	<0.001	<0.001	<0.001	<0.001	<0.001	314
43.02	53.36	1.5	6	7/25/2007	274	1420	<0.001	<0.001	<0.001	<0.001	<0.002	
43.24	52.36	1.5	6	10/3/2007	308	1500	<0.001	<0.001	<0.001	<0.001	<0.003	352

**BD Jct. K-27 MW-4  
Groundwater Results**

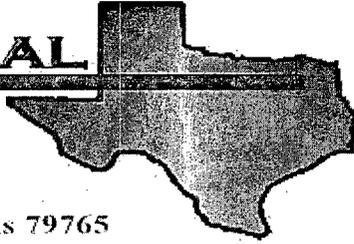
Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Laboratory and Field Results (mg/kg)							
					CI	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	
37.42	45.3	1.3	6	10/4/2006	516	2020	<0.001	<0.001	<0.001	<0.001	<0.001	540
36.94	45.15	1.3	6	2/7/2007	525	1860	<0.001	<0.001	<0.001	<0.001	<0.001	577
36.92	45.15	1.3	6	4/17/2007	526	1940	<0.001	<0.001	<0.001	<0.001	<0.001	556
36.33	45.15	1.4	6	7/25/2007	349	1930	<0.001	<0.001	<0.001	<0.001	<0.002	-
36.7	45.15	1.4	6	10/3/2007	390	1938	<0.001	<0.001	<0.001	<0.001	<0.003	- 579

**BD Jct. K-27 MW-5  
Groundwater Results**

Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Laboratory and Field Results (mg/kg)							
					Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	
31.84	39	1.1	5	10/4/2006	282	1950	<0.001	<0.001	<0.001	<0.001	<0.001	551
32.55	38.94	1	4	2/7/2007	317	1730	<0.001	<0.001	<0.001	<0.001	<0.001	677
35.09	44.05	5.8	20	4/17/2007	272	1890	<0.001	<0.001	<0.001	<0.001	<0.001	591
31.97	38.94	1.1	5	7/25/2007	208	1700	<0.001	<0.001	<0.001	<0.001	<0.002	
32.35	38.94	1.1	5	10/3/2007	260	1799	<0.001	<0.001	<0.001	<0.001	<0.003	632



**E** NVIRONMENTAL  
LAB OF



12600 West I-20 East - Odessa, Texas 79765

A Xenco Laboratories Company

## Analytical Report

**Prepared for:**

Kristin Farris-Pope  
Rice Operating Co.  
122 W. Taylor  
Hobbs, NM 88240

Project: BD Jct. K-27 & K-27-1

Project Number: None Given

Location: T21S R37E Sec27 K ~ Lea County New Mexico

Lab Order Number: 7B09006

Report Date: 02/19/07

Rice Operating Co.  
122 W. Taylor  
Hobbs NM, 88240

Project: BD Jct. K-27 & K-27-1  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
K-27 Monitor Well #1	7B09006-01	Water	02/07/07 12:10	02-08-2007 16:50
K-27 Monitor Well #2	7B09006-02	Water	02/07/07 09:15	02-08-2007 16:50
K-27 Monitor Well #3	7B09006-03	Water	02/07/07 11:40	02-08-2007 16:50
K-27 Monitor Well #4	7B09006-04	Water	02/07/07 11:00	02-08-2007 16:50
K-27 Monitor Well #5	7B09006-05	Water	02/07/07 13:05	02-08-2007 16:50
K-27-1 Monitor Well #1	7B09006-06	Water	02/07/07 10:20	02-08-2007 16:50

Rice Operating Co.  
122 W. Taylor  
Hobbs NM, 88240

Project: BD Jct. K-27 & K-27-1  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**Organics by GC**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>K-27 Monitor Well #1 (7B09006-01) Water</b>									
Benzene	ND	0.00100	mg/L	1	EB71210	02/12/07	02/13/07	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		80.6 %	80-120		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		81.8 %	80-120		"	"	"	"	
<b>K-27 Monitor Well #2 (7B09006-02) Water</b>									
Benzene	ND	0.00100	mg/L	1	EB71210	02/12/07	02/13/07	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		73.6 %	80-120		"	"	"	"	S-04
<i>Surrogate: 4-Bromofluorobenzene</i>		80.6 %	80-120		"	"	"	"	
<b>K-27 Monitor Well #3 (7B09006-03) Water</b>									
Benzene	ND	0.00100	mg/L	1	EB71210	02/12/07	02/13/07	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		80.4 %	80-120		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		81.0 %	80-120		"	"	"	"	
<b>K-27 Monitor Well #4 (7B09006-04) Water</b>									
Benzene	ND	0.00100	mg/L	1	EB71210	02/12/07	02/14/07	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		85.2 %	80-120		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		86.6 %	80-120		"	"	"	"	

Environmental Lab of Texas

*The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.*

A Xenco Laboratories Company

Rice Operating Co.  
 122 W. Taylor  
 Hobbs NM, 88240

Project: BD Jct. K-27 & K-27-1  
 Project Number: None Given  
 Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**Organics by GC**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>K-27 Monitor Well #5 (7B09006-05) Water</b>									
Benzene	ND	0.00100	mg/L	1	EB71210	02/12/07	02/14/07	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		81.6 %	80-120	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		83.8 %	80-120	"	"	"	"	"	

<b>K-27-1 Monitor Well #1 (7B09006-06) Water</b>									
Benzene	ND	0.00100	mg/L	1	EB71210	02/12/07	02/14/07	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		80.8 %	80-120	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		87.8 %	80-120	"	"	"	"	"	

Rice Operating Co.  
122 W. Taylor  
Hobbs NM, 88240

Project: BD Jct. K-27 & K-27-1  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**General Chemistry Parameters by EPA / Standard Methods**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>K-27 Monitor Well #1 (7B09006-01) Water</b>									
Total Alkalinity	270	2.00	mg/L	1	EB71213	02/10/07	02/10/07	EPA 310.1M	
Chloride	518	10.0	"	20	EB71202	02/12/07	02/13/07	EPA 300.0	
Total Dissolved Solids	1550	10.0	"	1	EB71003	02/09/07	02/10/07	EPA 160.1	
Sulfate	334	10.0	"	20	EB71202	02/12/07	02/13/07	EPA 300.0	
<b>K-27 Monitor Well #2 (7B09006-02) Water</b>									
Total Alkalinity	336	2.00	mg/L	1	EB71213	02/10/07	02/10/07	EPA 310.1M	
Chloride	576	12.5	"	25	EB71202	02/12/07	02/13/07	EPA 300.0	
Total Dissolved Solids	1420	10.0	"	1	EB71003	02/09/07	02/10/07	EPA 160.1	
Sulfate	268	12.5	"	25	EB71202	02/12/07	02/13/07	EPA 300.0	
<b>K-27 Monitor Well #3 (7B09006-03) Water</b>									
Total Alkalinity	380	2.00	mg/L	1	EB71213	02/10/07	02/10/07	EPA 310.1M	
Chloride	256	10.0	"	20	EB71202	02/12/07	02/13/07	EPA 300.0	
Total Dissolved Solids	1300	10.0	"	1	EB71003	02/09/07	02/10/07	EPA 160.1	
Sulfate	327	10.0	"	20	EB71202	02/12/07	02/13/07	EPA 300.0	
<b>K-27 Monitor Well #4 (7B09006-04) Water</b>									
Total Alkalinity	364	2.00	mg/L	1	EB71213	02/10/07	02/10/07	EPA 310.1M	
Chloride	525	12.5	"	25	EB71202	02/12/07	02/13/07	EPA 300.0	
Total Dissolved Solids	1860	10.0	"	1	EB71003	02/09/07	02/10/07	EPA 160.1	
Sulfate	577	12.5	"	25	EB71202	02/12/07	02/13/07	EPA 300.0	
<b>K-27 Monitor Well #5 (7B09006-05) Water</b>									
Total Alkalinity	428	2.00	mg/L	1	EB71213	02/10/07	02/10/07	EPA 310.1M	
Chloride	317	12.5	"	25	EB71202	02/12/07	02/13/07	EPA 300.0	
Total Dissolved Solids	1730	10.0	"	1	EB71003	02/09/07	02/10/07	EPA 160.1	
Sulfate	677	12.5	"	25	EB71202	02/12/07	02/13/07	EPA 300.0	
<b>K-27-1 Monitor Well #1 (7B09006-06) Water</b>									
Total Alkalinity	346	2.00	mg/L	1	EB71213	02/10/07	02/10/07	EPA 310.1M	
Chloride	378	5.00	"	10	EB71202	02/12/07	02/13/07	EPA 300.0	
Total Dissolved Solids	1750	10.0	"	1	EB71003	02/09/07	02/10/07	EPA 160.1	
Sulfate	512	5.00	"	10	EB71202	02/12/07	02/13/07	EPA 300.0	

Environmental Lab of Texas

A Xenco Laboratories Company

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Rice Operating Co.  
122 W. Taylor  
Hobbs NM, 88240

Project: BD Jct. K-27 & K-27-1  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**Total Metals by EPA / Standard Methods**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>K-27 Monitor Well #1 (7B09006-01) Water</b>									
Calcium	175	4.05	mg/L	50	EB70903	02/09/07	02/09/07	EPA 6010B	
Magnesium	88.6	1.80	"	"	"	"	"	"	
Potassium	9.78	0.600	"	10	"	"	"	"	
Sodium	256	2.15	"	50	"	"	"	"	
<b>K-27 Monitor Well #2 (7B09006-02) Water</b>									
Calcium	184	4.05	mg/L	50	EB70903	02/09/07	02/09/07	EPA 6010B	
Magnesium	82.0	1.80	"	"	"	"	"	"	
Potassium	9.22	0.600	"	10	"	"	"	"	
Sodium	253	2.15	"	50	"	"	"	"	
<b>K-27 Monitor Well #3 (7B09006-03) Water</b>									
Calcium	120	4.05	mg/L	50	EB70903	02/09/07	02/09/07	EPA 6010B	
Magnesium	46.2	0.360	"	10	"	"	"	"	
Potassium	7.53	0.600	"	"	"	"	"	"	
Sodium	206	2.15	"	50	"	"	"	"	
<b>K-27 Monitor Well #4 (7B09006-04) Water</b>									
Calcium	191	4.05	mg/L	50	EB70903	02/09/07	02/09/07	EPA 6010B	
Magnesium	80.1	1.80	"	"	"	"	"	"	
Potassium	9.98	0.600	"	10	"	"	"	"	
Sodium	364	2.15	"	50	"	"	"	"	
<b>K-27 Monitor Well #5 (7B09006-05) Water</b>									
Calcium	106	4.05	mg/L	50	EB70903	02/09/07	02/09/07	EPA 6010B	
Magnesium	50.8	0.360	"	10	"	"	"	"	
Potassium	8.22	0.600	"	"	"	"	"	"	
Sodium	402	10.8	"	250	"	"	"	"	
<b>K-27-1 Monitor Well #1 (7B09006-06) Water</b>									
Calcium	153	4.05	mg/L	50	EB70903	02/09/07	02/09/07	EPA 6010B	
Magnesium	65.5	1.80	"	"	"	"	"	"	
Potassium	8.50	0.600	"	10	"	"	"	"	
Sodium	265	10.8	"	250	"	"	"	"	

Environmental Lab of Texas

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Rice Operating Co.  
122 W. Taylor  
Hobbs NM, 88240

Project: BD Jct. K-27 & K-27-1  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**Organics by GC - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch EB71210 - EPA 5030C (GC)**

**Blank (EB71210-BLK1)**

Prepared: 02/12/07 Analyzed: 02/13/07

Benzene	ND	0.00100	mg/L							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00100	"							
Xylene (o)	ND	0.00100	"							
Surrogate: a,a,a-Trifluorotoluene	42.1		ug/l	50.0		84.2	80-120			
Surrogate: 4-Bromofluorobenzene	44.1		"	50.0		88.2	80-120			

**LCS (EB71210-BS1)**

Prepared: 02/12/07 Analyzed: 02/13/07

Benzene	0.0473	0.00100	mg/L	0.0500		94.6	80-120			
Toluene	0.0462	0.00100	"	0.0500		92.4	80-120			
Ethylbenzene	0.0424	0.00100	"	0.0500		84.8	80-120			
Xylene (p/m)	0.0971	0.00100	"	0.100		97.1	80-120			
Xylene (o)	0.0411	0.00100	"	0.0500		82.2	80-120			
Surrogate: a,a,a-Trifluorotoluene	42.9		ug/l	50.0		85.8	80-120			
Surrogate: 4-Bromofluorobenzene	45.4		"	50.0		90.8	80-120			

**Calibration Check (EB71210-CCV1)**

Prepared: 02/12/07 Analyzed: 02/14/07

Benzene	54.3		ug/l	50.0		109	80-120			
Toluene	51.1		"	50.0		102	80-120			
Ethylbenzene	48.1		"	50.0		96.2	80-120			
Xylene (p/m)	93.3		"	100		93.3	80-120			
Xylene (o)	40.3		"	50.0		80.6	80-120			
Surrogate: a,a,a-Trifluorotoluene	50.2		"	50.0		100	80-120			
Surrogate: 4-Bromofluorobenzene	44.3		"	50.0		88.6	80-120			

**Matrix Spike (EB71210-MS1)**

Source: 7B09003-01

Prepared: 02/12/07 Analyzed: 02/14/07

Benzene	0.0448	0.00100	mg/L	0.0500	ND	89.6	80-120			
Toluene	0.0427	0.00100	"	0.0500	ND	85.4	80-120			
Ethylbenzene	0.0409	0.00100	"	0.0500	ND	81.8	80-120			
Xylene (p/m)	0.0831	0.00100	"	0.100	ND	83.1	80-120			
Xylene (o)	0.0406	0.00100	"	0.0500	ND	81.2	80-120			
Surrogate: a,a,a-Trifluorotoluene	42.5		ug/l	50.0		85.0	80-120			
Surrogate: 4-Bromofluorobenzene	41.2		"	50.0		82.4	80-120			

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 122 W. Taylor  
 Hobbs NM, 88240

Project: BD Jct. K-27 & K-27-1  
 Project Number: None Given  
 Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**Organics by GC - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch EB71210 - EPA 5030C (GC)**

**Matrix Spike Dup (EB71210-MSD1)**

Source: 7B09003-01

Prepared: 02/12/07 Analyzed: 02/14/07

Benzene	0.0439	0.00100	mg/L	0.0500	ND	87.8	80-120	2.03	20	
Toluene	0.0420	0.00100	"	0.0500	ND	84.0	80-120	1.65	20	
Ethylbenzene	0.0417	0.00100	"	0.0500	ND	83.4	80-120	1.94	20	
Xylene (p/m)	0.0817	0.00100	"	0.100	ND	81.7	80-120	1.70	20	
Xylene (o)	0.0400	0.00100	"	0.0500	ND	80.0	80-120	1.49	20	
Surrogate: a,a,a-Trifluorotoluene	41.0		ug/l	50.0		82.0	80-120			
Surrogate: 4-Bromofluorobenzene	40.3		"	50.0		80.6	80-120			

Rice Operating Co.  
122 W. Taylor  
Hobbs NM, 88240

Project: BD Jct. K-27 & K-27-1  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**General Chemistry Parameters by EPA / Standard Methods - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch EB71003 - Filtration Preparation**

**Blank (EB71003-BLK1)** Prepared: 02/09/07 Analyzed: 02/10/07

Total Dissolved Solids	ND	10.0	mg/L							
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**Duplicate (EB71003-DUP1)** Source: 7B09002-01 Prepared: 02/09/07 Analyzed: 02/10/07

Total Dissolved Solids	852	10.0	mg/L		908			6.36	20	
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**Duplicate (EB71003-DUP2)** Source: 7B09006-02 Prepared: 02/09/07 Analyzed: 02/10/07

Total Dissolved Solids	1550	10.0	mg/L		1420			8.75	20	
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**Batch EB71202 - General Preparation (WetChem)**

**Blank (EB71202-BLK2)** Prepared: 02/12/07 Analyzed: 02/13/07

Chloride	ND	0.500	mg/L							
Sulfate	ND	0.500	"							

**LCS (EB71202-BS1)** Prepared: 02/12/07 Analyzed: 02/13/07

Sulfate	11.1	0.500	mg/L	10.0		111	80-120			
Chloride	10.5	0.500	"	10.0		105	80-120			

**Calibration Check (EB71202-CCV1)** Prepared: 02/12/07 Analyzed: 02/13/07

Chloride	10.3		mg/L	10.0		103	80-120			
Sulfate	10.1		"	10.0		101	80-120			

**Duplicate (EB71202-DUP1)** Source: 7B09002-01RE1 Prepared: 02/12/07 Analyzed: 02/13/07

Sulfate	20.3	10.0	mg/L		21.0			3.39	20	
Chloride	33.3	10.0	"		36.8			9.99	20	

**Duplicate (EB71202-DUP2)** Source: 7B09006-02 Prepared: 02/12/07 Analyzed: 02/13/07

Chloride	566	12.5	mg/L		576			1.75	20	
Sulfate	265	12.5	"		268			1.13	20	

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Rice Operating Co.  
 122 W. Taylor  
 Hobbs NM, 88240

Project: BD Jct. K-27 & K-27-1  
 Project Number: None Given  
 Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**Total Metals by EPA / Standard Methods - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch EB70903 - 6010B/No Digestion**

**Blank (EB70903-BLK1)**

Prepared & Analyzed: 02/09/07

Calcium	ND	0.0810	mg/L							
Magnesium	ND	0.0360	"							
Potassium	ND	0.0600	"							
Sodium	ND	0.0430	"							

**Calibration Check (EB70903-CCV1)**

Prepared & Analyzed: 02/09/07

Calcium	2.10		mg/L	2.00		105	85-115			
Magnesium	2.17		"	2.00		108	85-115			
Potassium	1.73		"	2.00		86.5	85-115			
Sodium	1.78		"	2.00		89.0	85-115			

**Duplicate (EB70903-DUP1)**

Source: 7B09002-01

Prepared & Analyzed: 02/09/07

Calcium	139	4.05	mg/L		137			1.45	20	
Magnesium	25.4	0.360	"		26.3			3.48	20	
Potassium	2.51	0.600	"		2.58			2.75	20	
Sodium	108	2.15	"		110			1.83	20	

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Rice Operating Co.  
122 W. Taylor  
Hobbs NM, 88240

Project: BD Jct. K-27 & K-27-1  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

### Notes and Definitions

S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

LCS Laboratory Control Spike

MS Matrix Spike

Dup Duplicate

Report Approved By:



Date: 2/19/2007

Brent Barron, Laboratory Director/Corp. Technical Director  
Celey D. Keene, Org. Tech Director  
Raland K. Tuttle, Laboratory Consultant

James Mathis, QA/QC Officer  
Jeanne Mc Murrey, Inorg. Tech Director

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If you have received this material in error, please notify us immediately at 432-563-1800.

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Page 11 of 11



## Environmental Lab of Texas

### Variance/ Corrective Action Report- Sample Log-In

Client: RIVE OP.  
 Date/ Time: 2/8/07 4:50  
 Lab ID #: 1369006  
 Initials: UK

### Sample Receipt Checklist

				Client Initials
#1 Temperature of container/ cooler?	Yes	No	2.5 °C	
#2 Shipping container in good condition?	<del>Yes</del>	No		
#3 Custody Seals intact on shipping container/ cooler?	<del>Yes</del>	No	Not Present	
#4 Custody Seals intact on sample bottles/ container?	<del>Yes</del>	No	Not Present	
#5 Chain of Custody present?	<del>Yes</del>	No		
#6 Sample instructions complete of Chain of Custody?	<del>Yes</del>	No		
#7 Chain of Custody signed when relinquished/ received?	<del>Yes</del>	No		
#8 Chain of Custody agrees with sample label(s)?	<del>Yes</del>	No	ID written on Cont./ Lid	
#9 Container label(s) legible and intact?	<del>Yes</del>	No	Not Applicable	
#10 Sample matrix/ properties agree with Chain of Custody?	<del>Yes</del>	No		
#11 Containers supplied by ELOT?	<del>Yes</del>	No		
#12 Samples in proper container/ bottle?	<del>Yes</del>	No	See Below	
#13 Samples properly preserved?	<del>Yes</del>	No	See Below	
#14 Sample bottles intact?	<del>Yes</del>	No		
#15 Preservations documented on Chain of Custody?	<del>Yes</del>	No		
#16 Containers documented on Chain of Custody?	<del>Yes</del>	No		
#17 Sufficient sample amount for indicated test(s)?	<del>Yes</del>	No	See Below	
#18 All samples received within sufficient hold time?	<del>Yes</del>	No	See Below	
#19 Subcontract of sample(s)?	Yes	No	<del>Not Applicable</del>	
#20 VOC samples have zero headspace?	<del>Yes</del>	No	Not Applicable	

### Variance Documentation

Contact: \_\_\_\_\_ Contacted by: \_\_\_\_\_ Date/ Time: \_\_\_\_\_  
 Regarding: \_\_\_\_\_

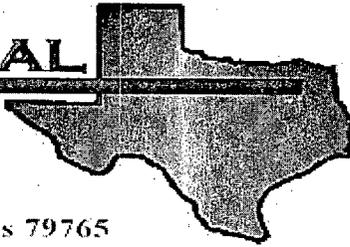
Corrective Action Taken:

\_\_\_\_\_

\_\_\_\_\_

- Check all that Apply:
- See attached e-mail/ fax
  - Client understands and would like to proceed with analysis
  - Cooling process had begun shortly after sampling event

**E** NVIRONMENTAL  
LAB OF



12600 West I-20 East - Odessa, Texas 79765

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## Analytical Report

**Prepared for:**

Kristin Farris-Pope

Rice Operating Co.

122 W. Taylor

Hobbs, NM 88240

Project: BD Jct. K-27 & K-27-1

Project Number: None Given

Location: T21S R37E Sec27 K ~ Lea County New Mexico

Lab Order Number: 7D18018

Report Date: 05/07/07

Rice Operating Co.  
122 W. Taylor  
Hobbs NM, 88240

Project: BD Jct. K-27 & K-27-1  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
K-27 Monitor Well # 1	7D18018-01	Water	04/17/07 11:00	04-18-2007 14:55
K-27 Monitor Well # 2	7D18018-02	Water	04/17/07 10:00	04-18-2007 14:55
K-27 Monitor Well # 3	7D18018-03	Water	04/17/07 13:35	04-18-2007 14:55
K-27 Monitor Well # 4	7D18018-04	Water	04/17/07 11:45	04-18-2007 14:55
K-27 Monitor Well # 5	7D18018-05	Water	04/17/07 14:20	04-18-2007 14:55
K-27-1 Monitor Well # 1	7D18018-06	Water	04/17/07 12:45	04-18-2007 14:55

Rice Operating Co.  
122 W. Taylor  
Hobbs NM, 88240

Project: BD Jct. K-27 & K-27-1  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**Organics by GC**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>K-27 Monitor Well # 1 (7D18018-01) Water</b>									
Benzene	ND	0.00100	mg/L	1	ED71904	04/19/07	04/20/07	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		116 %	80-120		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		102 %	80-120		"	"	"	"	
<b>K-27 Monitor Well # 2 (7D18018-02) Water</b>									
Benzene	ND	0.00100	mg/L	1	ED71904	04/19/07	04/20/07	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		116 %	80-120		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		102 %	80-120		"	"	"	"	
<b>K-27 Monitor Well # 3 (7D18018-03) Water</b>									
Benzene	ND	0.00100	mg/L	1	ED72007	04/20/07	04/24/07	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		125 %	80-120		"	"	"	"	S-04
<i>Surrogate: 4-Bromofluorobenzene</i>		116 %	80-120		"	"	"	"	
<b>K-27 Monitor Well # 4 (7D18018-04) Water</b>									
Benzene	ND	0.00100	mg/L	1	ED72007	04/20/07	04/24/07	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		123 %	80-120		"	"	"	"	S-04
<i>Surrogate: 4-Bromofluorobenzene</i>		112 %	80-120		"	"	"	"	

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Rice Operating Co.  
 122 W. Taylor  
 Hobbs NM, 88240

Project: BD Jct. K-27 & K-27-1  
 Project Number: None Given  
 Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**Organics by GC**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>K-27 Monitor Well # 5 (7D18018-05) Water</b>									
Benzene	ND	0.00100	mg/L	1	ED72007	04/20/07	04/24/07	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		113 %	80-120	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		113 %	80-120	"	"	"	"	"	
<b>K-27-1 Monitor Well # 1 (7D18018-06) Water</b>									
Benzene	ND	0.00100	mg/L	1	ED72007	04/20/07	04/24/07	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		122 %	80-120	"	"	"	"	"	S-04
<i>Surrogate: 4-Bromofluorobenzene</i>		113 %	80-120	"	"	"	"	"	

Rice Operating Co.  
122 W. Taylor  
Hobbs NM, 88240

Project: BD Jct. K-27 & K-27-1  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**General Chemistry Parameters by EPA / Standard Methods**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>K-27 Monitor Well # 1 (7D18018-01) Water</b>									
Total Alkalinity	296	2.00	mg/L	1	ED71913	04/19/07	04/19/07	EPA 310.1M	
Chloride	511	5.00	"	10	ED72411	04/24/07	04/27/07	EPA 300.0	
Total Dissolved Solids	1720	10.0	"	1	ED71911	04/19/07	04/20/07	EPA 160.1	
Sulfate	383	5.00	"	10	ED72411	04/24/07	04/27/07	EPA 300.0	
<b>K-27 Monitor Well # 2 (7D18018-02) Water</b>									
Total Alkalinity	304	2.00	mg/L	1	ED71913	04/19/07	04/19/07	EPA 310.1M	
Chloride	604	12.5	"	25	ED72411	04/24/07	04/27/07	EPA 300.0	
Total Dissolved Solids	1670	10.0	"	1	ED71911	04/19/07	04/20/07	EPA 160.1	
Sulfate	270	12.5	"	25	ED72411	04/24/07	04/27/07	EPA 300.0	
<b>K-27 Monitor Well # 3 (7D18018-03) Water</b>									
Total Alkalinity	364	2.00	mg/L	1	ED71913	04/19/07	04/19/07	EPA 310.1M	
Chloride	264	10.0	"	20	ED72411	04/24/07	04/27/07	EPA 300.0	
Total Dissolved Solids	1340	10.0	"	1	ED71911	04/19/07	04/20/07	EPA 160.1	
Sulfate	314	10.0	"	20	ED72411	04/24/07	04/27/07	EPA 300.0	
<b>K-27 Monitor Well # 4 (7D18018-04) Water</b>									
Total Alkalinity	370	2.00	mg/L	1	ED71913	04/19/07	04/19/07	EPA 310.1M	
Chloride	526	12.5	"	25	ED72411	04/24/07	04/27/07	EPA 300.0	
Total Dissolved Solids	1940	10.0	"	1	ED71911	04/19/07	04/20/07	EPA 160.1	
Sulfate	556	12.5	"	25	ED72411	04/24/07	04/27/07	EPA 300.0	
<b>K-27 Monitor Well # 5 (7D18018-05) Water</b>									
Total Alkalinity	488	2.00	mg/L	1	ED71913	04/19/07	04/19/07	EPA 310.1M	
Chloride	272	12.5	"	25	ED72411	04/24/07	04/27/07	EPA 300.0	
Total Dissolved Solids	1890	10.0	"	1	ED71911	04/19/07	04/20/07	EPA 160.1	
Sulfate	591	12.5	"	25	ED72411	04/24/07	04/27/07	EPA 300.0	
<b>K-27-1 Monitor Well # 1 (7D18018-06) Water</b>									
Total Alkalinity	384	2.00	mg/L	1	ED71913	04/19/07	04/19/07	EPA 310.1M	
Chloride	367	12.5	"	25	ED72411	04/24/07	04/27/07	EPA 300.0	
Total Dissolved Solids	1820	10.0	"	1	ED71911	04/19/07	04/20/07	EPA 160.1	
Sulfate	490	12.5	"	25	ED72411	04/24/07	04/27/07	EPA 300.0	

Environmental Lab of Texas

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A Xenco Laboratories Company

Rice Operating Co.  
 122 W. Taylor  
 Hobbs NM, 88240

Project: BD Jct. K-27 & K-27-1  
 Project Number: None Given  
 Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**Total Metals by EPA / Standard Methods  
 Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>K-27 Monitor Well # 1 (7D18018-01) Water</b>									
Calcium	155	4.05	mg/L	50	ED72703	04/27/07	04/27/07	EPA 6010B	
Magnesium	106	1.80	"	"	"	"	"	"	
Potassium	10.6	0.600	"	10	"	"	"	"	
Sodium	373	4.30	"	100	"	"	"	"	
<b>K-27 Monitor Well # 2 (7D18018-02) Water</b>									
Calcium	157	4.05	mg/L	50	ED72703	04/27/07	04/27/07	EPA 6010B	
Magnesium	107	1.80	"	"	"	"	"	"	
Potassium	10.6	0.600	"	10	"	"	"	"	
Sodium	347	4.30	"	100	"	"	"	"	
<b>K-27 Monitor Well # 3 (7D18018-03) Water</b>									
Calcium	132	4.05	mg/L	50	ED72703	04/27/07	04/27/07	EPA 6010B	
Magnesium	70.0	1.80	"	"	"	"	"	"	
Potassium	8.65	0.600	"	10	"	"	"	"	
Sodium	257	4.30	"	100	"	"	"	"	
<b>K-27 Monitor Well # 4 (7D18018-04) Water</b>									
Calcium	204	4.05	mg/L	50	ED72703	04/27/07	04/27/07	EPA 6010B	
Magnesium	75.9	1.80	"	"	"	"	"	"	
Potassium	11.6	0.600	"	10	"	"	"	"	
Sodium	465	4.30	"	100	"	"	"	"	
<b>K-27 Monitor Well # 5 (7D18018-05) Water</b>									
Calcium	108	4.05	mg/L	50	ED72703	04/27/07	04/27/07	EPA 6010B	
Magnesium	56.7	1.80	"	"	"	"	"	"	
Potassium	8.60	0.600	"	10	"	"	"	"	
Sodium	505	4.30	"	100	"	"	"	"	
<b>K-27-1 Monitor Well # 1 (7D18018-06) Water</b>									
Calcium	163	4.05	mg/L	50	ED72703	04/27/07	04/27/07	EPA 6010B	
Magnesium	67.6	1.80	"	"	"	"	"	"	
Potassium	9.94	0.600	"	10	"	"	"	"	
Sodium	332	4.30	"	100	"	"	"	"	

Environmental Lab of Texas

A Xenco Laboratories Company

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Rice Operating Co.  
122 W. Taylor  
Hobbs NM, 88240

Project: BD Jct. K-27 & K-27-1  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**Organics by GC - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch ED71904 - EPA 5030C (GC)**

**Blank (ED71904-BLK1)**

Prepared: 04/19/07 Analyzed: 04/20/07

Benzene	ND	0.00100	mg/L							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00100	"							
Xylene (o)	ND	0.00100	"							
Surrogate: a,a,a-Trifluorotoluene	53.3		ug/l	50.0		107	80-120			
Surrogate: 4-Bromofluorobenzene	46.6		"	50.0		93.2	80-120			

**LCS (ED71904-BS1)**

Prepared: 04/19/07 Analyzed: 04/20/07

Benzene	0.0535	0.00100	mg/L	0.0500		107	80-120			
Toluene	0.0536	0.00100	"	0.0500		107	80-120			
Ethylbenzene	0.0564	0.00100	"	0.0500		113	80-120			
Xylene (p/m)	0.104	0.00100	"	0.100		104	80-120			
Xylene (o)	0.0575	0.00100	"	0.0500		115	80-120			
Surrogate: a,a,a-Trifluorotoluene	55.0		ug/l	50.0		110	80-120			
Surrogate: 4-Bromofluorobenzene	52.2		"	50.0		104	80-120			

**Calibration Check (ED71904-CCV1)**

Prepared: 04/19/07 Analyzed: 04/20/07

Benzene	59.7		ug/l	50.0		119	80-120			
Toluene	58.1		"	50.0		116	80-120			
Ethylbenzene	59.8		"	50.0		120	80-120			
Xylene (p/m)	109		"	100		109	80-120			
Xylene (o)	58.6		"	50.0		117	80-120			
Surrogate: a,a,a-Trifluorotoluene	56.8		"	50.0		114	80-120			
Surrogate: 4-Bromofluorobenzene	54.3		"	50.0		109	80-120			

**Matrix Spike (ED71904-MS1)**

Source: 7D17009-07

Prepared: 04/19/07 Analyzed: 04/23/07

Benzene	0.0540	0.00100	mg/L	0.0500	ND	108	80-120			
Toluene	0.0546	0.00100	"	0.0500	ND	109	80-120			
Ethylbenzene	0.0597	0.00100	"	0.0500	ND	119	80-120			
Xylene (p/m)	0.108	0.00100	"	0.100	ND	108	80-120			
Xylene (o)	0.0594	0.00100	"	0.0500	ND	119	80-120			
Surrogate: a,a,a-Trifluorotoluene	53.4		ug/l	50.0		107	80-120			
Surrogate: 4-Bromofluorobenzene	54.4		"	50.0		109	80-120			

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122 W. Taylor  
Hobbs NM, 88240

Project: BD Jct. K-27 & K-27-1  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**Organics by GC - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch ED71904 - EPA 5030C (GC)**

**Matrix Spike Dup (ED71904-MSD1)**

Source: 7D17009-07

Prepared: 04/19/07 Analyzed: 04/23/07

Benzene	0.0531	0.00100	mg/L	0.0500	ND	106	80-120	1.87	20	
Toluene	0.0540	0.00100	"	0.0500	ND	108	80-120	0.922	20	
Ethylbenzene	0.0576	0.00100	"	0.0500	ND	115	80-120	3.42	20	
Xylene (p/m)	0.107	0.00100	"	0.100	ND	107	80-120	0.930	20	
Xylene (o)	0.0584	0.00100	"	0.0500	ND	117	80-120	1.69	20	
Surrogate: a,a,a-Trifluorotoluene	52.9		ug/l	50.0		106	80-120			
Surrogate: 4-Bromofluorobenzene	53.8		"	50.0		108	80-120			

**Batch ED72007 - EPA 5030C (GC)**

**Blank (ED72007-BLK1)**

Prepared: 04/20/07 Analyzed: 04/24/07

Benzene	ND	0.00100	mg/L							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00100	"							
Xylene (o)	ND	0.00100	"							
Surrogate: a,a,a-Trifluorotoluene	57.6		ug/l	50.0		115	80-120			
Surrogate: 4-Bromofluorobenzene	57.5		"	50.0		115	80-120			

**LCS (ED72007-BS1)**

Prepared: 04/20/07 Analyzed: 04/24/07

Benzene	0.0528	0.00100	mg/L	0.0500		106	80-120			
Toluene	0.0551	0.00100	"	0.0500		110	80-120			
Ethylbenzene	0.0567	0.00100	"	0.0500		113	80-120			
Xylene (p/m)	0.107	0.00100	"	0.100		107	80-120			
Xylene (o)	0.0574	0.00100	"	0.0500		115	80-120			
Surrogate: a,a,a-Trifluorotoluene	56.7		ug/l	50.0		113	80-120			
Surrogate: 4-Bromofluorobenzene	55.1		"	50.0		110	80-120			

Environmental Lab of Texas

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Rice Operating Co.  
122 W. Taylor  
Hobbs NM, 88240

Project: BD Jct. K-27 & K-27-1  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**Organics by GC - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch ED72007 - EPA 5030C (GC)**

**Calibration Check (ED72007-CCV1)**

Prepared: 04/20/07 Analyzed: 04/24/07

Benzene	54.8		ug/l	50.0		110	80-120			
Toluene	55.1		"	50.0		110	80-120			
Ethylbenzene	56.5		"	50.0		113	80-120			
Xylene (p/m)	106		"	100		106	80-120			
Xylene (o)	57.1		"	50.0		114	80-120			
Surrogate: a,a,a-Trifluorotoluene	56.9		"	50.0		114	80-120			
Surrogate: 4-Bromofluorobenzene	53.1		"	50.0		106	80-120			

**Matrix Spike (ED72007-MS1)**

Source: 7D18018-03

Prepared: 04/20/07 Analyzed: 04/24/07

Benzene	0.0552	0.00100	mg/L	0.0500	ND	110	80-120			
Toluene	0.0573	0.00100	"	0.0500	ND	115	80-120			
Ethylbenzene	0.0565	0.00100	"	0.0500	ND	113	80-120			
Xylene (p/m)	0.109	0.00100	"	0.100	ND	109	80-120			
Xylene (o)	0.0598	0.00100	"	0.0500	ND	120	80-120			
Surrogate: a,a,a-Trifluorotoluene	58.3		ug/l	50.0		117	80-120			
Surrogate: 4-Bromofluorobenzene	57.6		"	50.0		115	80-120			

**Matrix Spike Dup (ED72007-MSD1)**

Source: 7D18018-03

Prepared: 04/20/07 Analyzed: 04/24/07

Benzene	0.0549	0.00100	mg/L	0.0500	ND	110	80-120	0.00	20	
Toluene	0.0575	0.00100	"	0.0500	ND	115	80-120	0.00	20	
Ethylbenzene	0.0593	0.00100	"	0.0500	ND	119	80-120	5.17	20	
Xylene (p/m)	0.111	0.00100	"	0.100	ND	111	80-120	1.82	20	
Xylene (o)	0.0611	0.00100	"	0.0500	ND	122	80-120	1.65	20	QM-07
Surrogate: a,a,a-Trifluorotoluene	60.0		ug/l	50.0		120	80-120			
Surrogate: 4-Bromofluorobenzene	58.8		"	50.0		118	80-120			

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Rice Operating Co.  
 122 W. Taylor  
 Hobbs NM, 88240

Project: BD Jct. K-27 & K-27-1  
 Project Number: None Given  
 Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**General Chemistry Parameters by EPA / Standard Methods - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch ED71911 - Filtration Preparation**

<b>Blank (ED71911-BLK1)</b>				Prepared: 04/19/07 Analyzed: 04/20/07						
Total Dissolved Solids	ND	10.0	mg/L							

<b>Duplicate (ED71911-DUP1)</b>				Source: 7D18006-01 Prepared: 04/19/07 Analyzed: 04/20/07						
Total Dissolved Solids	614	10.0	mg/L		674			9.32	20	

<b>Duplicate (ED71911-DUP2)</b>				Source: 7D18015-03 Prepared: 04/19/07 Analyzed: 04/20/07						
Total Dissolved Solids	1660	10.0	mg/L		1820			9.20	20	

**Batch ED71913 - General Preparation (WetChem)**

<b>Blank (ED71913-BLK1)</b>				Prepared & Analyzed: 04/19/07						
Total Alkalinity	ND	2.00	mg/L							

<b>LCS (ED71913-BS1)</b>				Prepared & Analyzed: 04/19/07						
Bicarbonate Alkalinity	176	2.00	mg/L	200		88.0	85-115			

<b>Duplicate (ED71913-DUP1)</b>				Source: 7D18017-01 Prepared & Analyzed: 04/19/07						
Total Alkalinity	226	2.00	mg/L		232			2.62	20	

<b>Reference (ED71913-SRM1)</b>				Prepared & Analyzed: 04/19/07						
Total Alkalinity	246		mg/L	250		98.4	90-110			

**Batch ED72411 - General Preparation (WetChem)**

<b>Blank (ED72411-BLK1)</b>				Prepared: 04/24/07 Analyzed: 04/27/07						
Sulfate	ND	0.500	mg/L							
Chloride	ND	0.500	"							

Rice Operating Co.  
122 W. Taylor  
Hobbs NM, 88240

Project: BD Jct. K-27 & K-27-1  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**General Chemistry Parameters by EPA / Standard Methods - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch ED72411 - General Preparation (WetChem)**

**Blank (ED72411-BLK2)**

Prepared: 04/24/07 Analyzed: 04/27/07

Chloride	ND	0.500	mg/L							
Sulfate	ND	0.500	"							

**LCS (ED72411-BS1)**

Prepared & Analyzed: 04/24/07

Chloride	9.02	0.500	mg/L	10.0		90.2	80-120			
Sulfate	9.66	0.500	"	10.0		96.6	80-120			

**Calibration Check (ED72411-CCV1)**

Prepared: 04/24/07 Analyzed: 04/27/07

Sulfate	11.0		mg/L	10.0		110	80-120			
Chloride	8.05		"	10.0		80.5	80-120			

**Duplicate (ED72411-DUP1)**

Source: 7D23008-01

Prepared & Analyzed: 04/24/07

Chloride	187	5.00	mg/L		187			0.00	20	
Sulfate	74.3	5.00	"		74.0			0.405	20	

**Duplicate (ED72411-DUP2)**

Source: 7D18018-06

Prepared: 04/24/07 Analyzed: 04/27/07

Sulfate	492	12.5	mg/L		490			0.407	20	
Chloride	361	12.5	"		367			1.65	20	

**Matrix Spike (ED72411-MS1)**

Source: 7D23008-01

Prepared: 04/24/07 Analyzed: 04/27/07

Sulfate	166	5.00	mg/L	100	74.0	92.0	80-120			
Chloride	291	5.00	"	100	187	104	80-120			

**Matrix Spike (ED72411-MS2)**

Source: 7D18018-06

Prepared: 04/24/07 Analyzed: 04/27/07

Chloride	631	12.5	mg/L	250	367	106	80-120			
Sulfate	774	12.5	"	250	490	114	80-120			

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 122 W. Taylor  
 Hobbs NM, 88240

Project: BD Jct. K-27 & K-27-1  
 Project Number: None Given  
 Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**Total Metals by EPA / Standard Methods - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch ED72703 - 6010B/No Digestion**

**Blank (ED72703-BLK1)**

Prepared & Analyzed: 04/27/07

Calcium	ND	0.0810	mg/L							
Magnesium	ND	0.0360	"							
Potassium	ND	0.0600	"							
Sodium	ND	0.0430	"							

**Calibration Check (ED72703-CCV1)**

Prepared & Analyzed: 04/27/07

Calcium	1.90		mg/L	2.00		95.0	85-115			
Magnesium	2.07		"	2.00		104	85-115			
Potassium	1.98		"	2.00		99.0	85-115			
Sodium	2.29		"	2.00		114	85-115			

**Duplicate (ED72703-DUP1)**

Source: 7D18014-01

Prepared & Analyzed: 04/27/07

Calcium	140	4.05	mg/L		133			5.13	20	
Magnesium	76.4	1.80	"		76.8			0.522	20	
Potassium	15.7	0.600	"		15.6			0.639	20	
Sodium	350	4.30	"		358			2.26	20	

Rice Operating Co.  
122 W. Taylor  
Hobbs NM, 88240

Project: BD Jct. K-27 & K-27-1  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

### Notes and Definitions

S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

LCS Laboratory Control Spike

MS Matrix Spike

Dup Duplicate

Report Approved By:



Date:

5/7/2007

Brent Barron, Laboratory Director/Corp. Technical Director  
Celey D. Keene, Org. Tech Director  
Raland K. Tuttle, Laboratory Consultant

James Mathis, QA/QC Officer  
Jeanne Mc Murrey, Inorg. Tech Director

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If you have received this material in error, please notify us immediately at 432-563-1800.

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Page 12 of 12



# Environmental Lab of Texas

## Variance/ Corrective Action Report- Sample Log-In

Client: Rice  
 Date/ Time: 4-18-07 2:55  
 Lab ID #: 7018018  
 Initials: AL

### Sample Receipt Checklist

Client Initials

Temperature of container/ cooler?	<u>Yes</u>	No	-1.0	°C
Shipping container in good condition?	<u>Yes</u>	No		
Custody Seals intact on shipping container/ cooler?	<u>Yes</u>	No	Not Present	
Custody Seals intact on sample bottles/ container?	<u>Yes</u>	No	Not Present	
Chain of Custody present?	<u>Yes</u>	No		
Sample instructions complete of Chain of Custody?	<u>Yes</u>	No		
Chain of Custody signed when relinquished/ received?	<u>Yes</u>	No		
Chain of Custody agrees with sample label(s)?	<u>Yes</u>	No	ID written on Cont / Lid	
Container label(s) legible and intact?	<u>Yes</u>	No	Not Applicable	
0 Sample matrix/ properties agree with Chain of Custody?	<u>Yes</u>	No		
1 Containers supplied by ELOT?	<u>Yes</u>	No		
2 Samples in proper container/ bottle?	<u>Yes</u>	No	See Below	
3 Samples properly preserved?	<u>Yes</u>	No	See Below	
4 Sample bottles intact?	<u>Yes</u>	No		
5 Preservations documented on Chain of Custody?	<u>Yes</u>	No		
6 Containers documented on Chain of Custody?	<u>Yes</u>	No		
7 Sufficient sample amount for indicated test(s)?	<u>Yes</u>	No	See Below	
8 All samples received within sufficient hold time?	<u>Yes</u>	No	See Below	
9 Subcontract of sample(s)?	<u>Yes</u>	No	<u>Not Applicable</u>	
0 VOC samples have zero headspace?	<u>Yes</u>	No	Not Applicable	

### Variance Documentation

Contact: \_\_\_\_\_ Contacted by: \_\_\_\_\_ Date/ Time: \_\_\_\_\_

Regarding: \_\_\_\_\_

Corrective Action Taken: \_\_\_\_\_

- Check all that Apply:
- See attached e-mail/ fax
  - Client understands and would like to proceed with analysis
  - Cooling process had begun shortly after sampling event



# ARDINAL LABORATORIES

PHONE (325) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR  
RICE OPERATING COMPANY  
ATTN: KRISTIN FARRIS-POPE  
122 W. TAYLOR STREET  
HOBBS, NM 88240  
FAX TO: (575) 397-1471

Receiving Date: 10/05/07  
Reporting Date: 10/12/07  
Project Number: NOT GIVEN  
Project Name: BD JUNCTION K-27 and K-27-1  
Project Location: T21S R37E SEC27 K-LEA COUNTY, NM

Sampling Date: 10/03/07  
Sample Type: WATER  
Sample Condition: COOL & INTACT  
Sample Received By: SB  
Analyzed By: HM/KS

LAB NUMBER SAMPLE ID	Na (mg/L)	Ca (mg/L)	Mg (mg/L)	K (mg/L)	Conductivity ( $\mu$ S/cm)	T-Alkalinity (mgCaCO <sub>3</sub> /L)
ANALYSIS DATE:	10/12/07	10/11/07	10/11/07	10/12/07	10/10/07	10/10/07
H13453-1 K-27 MONITOR WELL 1	264	166	77.4	7.15	2,590	300
H13453-2 K-27 MONITOR WELL 2	324	181	67.8	7.40	2,840	320
H13453-3 K-27 MONITOR WELL 3	302	136	35.5	7.70	2,190	352
H13453-4 K-27 MONITOR WELL 4	371	165	62.9	7.58	2,760	336
H13453-5 K-27 MONITOR WELL 5	441	106	56.5	6.53	2,650	440
H13453-6 K-27-1 MONITOR WELL 1	366	170	62.9	7.70	2,830	360
Quality Control	NR	50.6	51.6	1.87	9,760	NR
True Value QC	NR	50.0	50.0	2.00	10,000	NR
% Recovery	NR	101	103	93.6	97.6	NR
Relative Percent Difference	NR	< 0.1	1.6	5.7	0.1	NR

METHODS:	SM3500-Ca-D	3500-Mg E	8049	120.1	310.1
----------	-------------	-----------	------	-------	-------

LAB NUMBER SAMPLE ID	Cl <sup>-</sup> (mg/L)	SO <sub>4</sub> (mg/L)	CO <sub>3</sub> (mg/L)	HCO <sub>3</sub> (mg/L)	pH (s.u.)	TDS (mg/L)
ANALYSIS DATE:	10/11/07	10/11/07	10/10/07	10/10/07	10/10/07	10/09/07
H13453-1 K-27 MONITOR WELL 1	470	341	0	366	7.29	1,679
H13453-2 K-27 MONITOR WELL 2	600	270	0	390	7.20	1,879
H13453-3 K-27 MONITOR WELL 3	308	352	0	429	7.28	1,500
H13453-4 K-27 MONITOR WELL 4	390	579	0	410	7.25	1,938
H13453-5 K-27 MONITOR WELL 5	260	632	0	537	7.36	1,799
H13453-6 K-27-1 MONITOR WELL 1	420	516	0	439	7.25	1,964
Quality Control	500	54.0	NR	1000	7.00	NR
True Value QC	500	50.0	NR	1000	7.00	NR
% Recovery	100	108	NR	100	100	NR
Relative Percent Difference	< 0.1	16.8	NR	< 0.1	0.1	NR

METHODS:	SM4500-Cl-B	375.4	310.1	310.1	150.1	160.1
----------	-------------	-------	-------	-------	-------	-------

*Kristin Pope*  
Chemist

10/12/07  
Date

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise.



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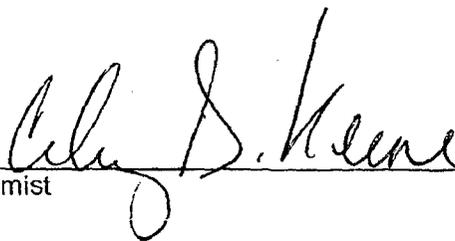
ANALYTICAL RESULTS FOR  
RICE OPERATING COMPANY  
ATTN: KRISTIN FARRIS-POPE  
122 WEST TAYLOR  
HOBBS, NM 88240  
FAX TO: (505) 397-1471

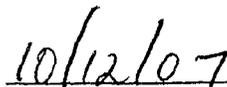
Receiving Date: 10/05/07  
Reporting Date: 10/10/07  
Project Number: NOT GIVEN  
Project Name: BD JUNCTION K-27 AND K-27-1  
Project Location: T21S R37E SEC27 K - LEA COUNTY, NM

Sampling Date: 10/03/07  
Sample Type: WATER  
Sample Condition: COOL & INTACT  
Sample Received By: SB  
Analyzed By: CK

LAB NUMBER	SAMPLE ID	BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL BENZENE (mg/L)	TOTAL XYLENES (mg/L)
	ANALYSIS DATE	10/06/07	10/06/07	10/06/07	10/06/07
H13453-1	K-27 MONITOR WELL #1	<0.001	<0.001	<0.001	<0.003
H13453-2	K-27 MONITOR WELL #2	<0.001	<0.001	<0.001	<0.003
H13453-3	K-27 MONITOR WELL #3	<0.001	<0.001	<0.001	<0.003
H13453-4	K-27 MONITOR WELL #4	<0.001	<0.001	<0.001	<0.003
H13453-5	K-27 MONITOR WELL #5	<0.001	<0.001	<0.001	<0.003
H13453-6	K-27-1 MONITOR WELL #1	<0.001	<0.001	<0.001	<0.003
	Quality Control	0.114	0.106	0.106	0.108
	True Value QC	0.100	0.100	0.100	0.300
	% Recovery	114	106.0	106.0	108.0
	Relative Percent Difference	9.3	11.6	12.1	12.7

METHOD: EPA SW-846 8021B

  
\_\_\_\_\_  
Chemist

  
\_\_\_\_\_  
Date

H13453b Rice

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101 East Marand - Hobbs, New Mexico 88240  
 Tel (505) 393-2326  
 Fax (505) 393-2476

# Cardinal Laboratories, Inc.

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # \_\_\_\_\_

Company Name: RICE Operating Company  
 Project Manager: Kristin Farris-Pope, Project Scientist  
 Address: (Street, City, Zip) 122 W Taylor Street ~ Hobbs, New Mexico 88240  
 Phone #: (505) 393-9174  
 Fax #: (505) 397-1471

Company Name: RICE Operating Company  
 Address: (Street, City, Zip) 122 W Taylor Street ~ Hobbs, New Mexico 88240  
 Phone #: (505) 393-9174  
 Fax #: (505) 397-1471

Project Location: T21S R37E Sec27 K ~ Lea County New Mexico  
 Project Name: BD Junction K-27 and K-27-1  
 Sampler Signature: Rozanne Johnson (505) 631-9310  
 rozanne@valomet.com

LAB # (LAB USE ONLY)	FIELD CODE	(G)rab or (C)omp	# CONTAINERS	MATRIX				PRESERVATIVE METHOD				DATE (2007)	TIME
				WATER	SOIL	AIR	SLUDGE	HCL (2.40ml VOA)	HNO <sub>3</sub>	NaHSO <sub>4</sub>	H <sub>2</sub> SO <sub>4</sub>		
H13453-1	K-27 Monitor Well 1	G	3	X				2	1	1	10-3	9:35	
	K-27 Monitor Well 2	G	3	X				2	1	1	10-3	8:40	
	K-27 Monitor Well 3	G	3	X				2	1	1	10-3	12:30	
	K-27 Monitor Well 4	G	3	X				2	1	1	10-3	10:20	
	K-27 Monitor Well 5	G	3	X				2	1	1	10-3	3:45	
	K-27-1 Monitor Well 1	G	3	X				2	1	1	10-3	11:40	

Released by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Rozanne Johnson  
 Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Received by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Received By: (Laboratory Staff) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

REMARKS:	Phone Results	Fax Results	Yes	No	Additional Fax Number:
MTBE 8021B/602			X		
BTEX 8021B/602			X		
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)			X		
Anions (Cl, SO <sub>4</sub> , CO <sub>3</sub> , HCO <sub>3</sub> )			X		
Total Dissolved Solids			X		
Chlorides			X		
Turn Around Time ~ 24 Hours					

Delivered By: (Circle One) \_\_\_\_\_  
 UPS - Bus - Other: \_\_\_\_\_  
 Sample Condition: Cool  Yes  No  
 Intact  Yes  No  
 CHECKED BY: \_\_\_\_\_ (Initials) \_\_\_\_\_

REMARKS: \_\_\_\_\_  
 Email Results to: kpope@riceswd.com  
 weinheimer@riceswd.com  
 rozanne@valomet.com

# **Analytical Report 286633**

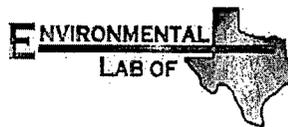
**for**

**Rice Operating Co.**

**Project Manager: Kristin Pope**

**BD Junction K-27 and K-27-1**

**13-AUG-07**



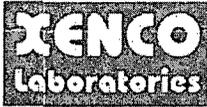
**12600 West I-20 East Odessa, Texas 79765**

**A Xenco Laboratories Company**

**NELAC certification numbers:**

**Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675**

**Houston - Dallas - San Antonio - Austin - Tampa - Miami - Latin America**



13-AUG-07

Project Manager: **Kristin Pope**  
**Rice Operating Co.**  
122 West Taylor  
Hobbs, NM 88240

Reference: XENCO Report No: **286633**  
**BD Junction K-27 and K-27-1**  
Project Address: T21S R37E Sec27 K ~ Lea County New Mexico

**Kristin Pope:**

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 286633. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 286633 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

**Brent Barron**

Odessa Laboratory Director

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# Certificate of Analysis Summary 286633

## Rice Operating Co., Hobbs, NM



**Project Name: BD Junction K-27 and K-27-1**

**Project Id:**

**Date Received in Lab** Jul-26-07 02:15 pm

**Contact:** Kristin Pope

**Report Date:** 13-AUG-07

**Project Location:** T21S R37E Sec27 K ~ Lea County New M

**Project Manager:** Brent Barron, II

<i>Analysis Requested</i>	<i>Lab Id:</i>	286633-001	286633-002	286633-003	286633-004
	<i>Field Id:</i>	K-27 Monitor Well # 1	K-27 Monitor Well # 2	K-27 Monitor Well # 3	K-27 Monitor Well # 4
	<i>Depth:</i>				
	<i>Matrix:</i>	WATER	WATER	WATER	WATER
	<i>Sampled:</i>	Jul-25-07 09:20	Jul-25-07 08:15	Jul-25-07 12:25	Jul-25-07 10:10
<b>Alkalinity by EPA 310.1</b>	<i>Extracted:</i>				
	<i>Analyzed:</i>	Jul-27-07 14:45	Jul-27-07 14:45	Jul-27-07 14:45	Jul-27-07 14:45
	<i>Units/RL:</i>	mg/L    RL	mg/L    RL	mg/L    RL	mg/L    RL
Alkalinity, Total (as CaCO3)		1230    4.00	1330    4.00	1420    4.00	1390    4.00
<b>BTEX by EPA 8021B</b>	<i>Extracted:</i>	Jul-27-07 13:38	Jul-27-07 13:38	Jul-27-07 13:38	Jul-27-07 13:38
	<i>Analyzed:</i>	Jul-30-07 21:52	Jul-30-07 22:13	Jul-30-07 22:33	Jul-30-07 22:54
	<i>Units/RL:</i>	mg/L    RL	mg/L    RL	mg/L    RL	mg/L    RL
Benzene		ND    0.0010	ND    0.0010	ND    0.0010	ND    0.0010
Toluene		ND    0.0010	ND    0.0010	ND    0.0010	ND    0.0010
Ethylbenzene		ND    0.0010	ND    0.0010	ND    0.0010	ND    0.0010
m,p-Xylene		ND    0.0020	ND    0.0020	ND    0.0020	ND    0.0020
o-Xylene		ND    0.0010	ND    0.0010	ND    0.0010	ND    0.0010
Total Xylenes		ND	ND	ND	ND
Total BTEX		ND	ND	ND	ND
<b>Inorganic Anions by EPA 300</b>	<i>Extracted:</i>				
	<i>Analyzed:</i>	Jul-27-07 14:53	Jul-27-07 14:53	Jul-27-07 14:53	Jul-27-07 14:53
	<i>Units/RL:</i>	mg/L    RL	mg/L    RL	mg/L    RL	mg/L    RL
Chloride		549    12.5	581    12.5	274    10.0	349    12.5
<b>Metals per ICP by SW846 6010B</b>	<i>Extracted:</i>	Jul-31-07 09:16	Jul-31-07 09:16	Jul-31-07 09:16	Jul-31-07 09:16
	<i>Analyzed:</i>	Jul-31-07 14:58	Jul-31-07 14:59	Jul-31-07 15:03	Jul-31-07 15:04
	<i>Units/RL:</i>	mg/L    RL	mg/L    RL	mg/L    RL	mg/L    RL
Calcium		184    1.00	230    1.00	144    1.00	184    1.00
Magnesium		89.4    0.100	96.3    0.100	74.4    0.100	72.5    0.100
Potassium		8.43    2.00	8.64    2.00	7.65    2.00	8.55    2.00
Sodium		276    5.00	299    5.00	23.5    5.00	352    5.00
<b>Residue, Filterable (TDS) by EPA 160.1</b>	<i>Extracted:</i>				
	<i>Analyzed:</i>	Jul-26-07 16:30	Jul-26-07 16:30	Jul-26-07 16:30	Jul-26-07 16:30
	<i>Units/RL:</i>	mg/L    RL	mg/L    RL	mg/L    RL	mg/L    RL
Total dissolved solids		1670    5.00	2140    5.00	1420    5.00	1930    5.00

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 Brent Barron  
 Odessa Laboratory Director



# Certificate of Analysis Summary 286633

## Rice Operating Co., Hobbs, NM



**Project Id:**

**Date Received in Lab** Jul-26-07 02:15 pm

**Contact:** Kristin Pope

**Report Date:** 13-AUG-07

**Project Location:** T21S R37E Sec27 K ~ Lea County New M

**Project Manager:** Brent Barron, II

<i>Analysis Requested</i>	<i>Lab Id:</i>	286633-005	286633-006		
	<i>Field Id:</i>	K-27 Monitor Well # 5	K-27-1 Monitor Well # 1		
	<i>Depth:</i>				
	<i>Matrix:</i>	WATER	WATER		
	<i>Sampled:</i>	Jul-25-07 13:15	Jul-25-07 11:15		
<b>Alkalinity by EPA 310.1</b>	<i>Extracted:</i>				
	<i>Analyzed:</i>	Jul-27-07 14:45	Jul-27-07 14:45		
	<i>Units/RL:</i>	mg/L RL	mg/L RL		
Alkalinity, Total (as CaCO3)		1870 4.00	8600 4.00		
<b>BTEX by EPA 8021B</b>	<i>Extracted:</i>	Jul-27-07 13:38	Jul-27-07 13:38		
	<i>Analyzed:</i>	Jul-30-07 23:15	Jul-30-07 23:35		
	<i>Units/RL:</i>	mg/L RL	mg/L RL		
Benzene		ND 0.0010	ND 0.0010		
Toluene		ND 0.0010	ND 0.0010		
Ethylbenzene		ND 0.0010	ND 0.0010		
m,p-Xylene		ND 0.0020	ND 0.0020		
o-Xylene		ND 0.0010	ND 0.0010		
Total Xylenes		ND	ND		
Total BTEX		ND	ND		
<b>Inorganic Anions by EPA 300</b>	<i>Extracted:</i>				
	<i>Analyzed:</i>	Jul-27-07 14:53	Jul-27-07 14:53		
	<i>Units/RL:</i>	mg/L RL	mg/L RL		
Chloride		208 10.0	1040 25.0		
<b>Metals per ICP by SW846 6010B</b>	<i>Extracted:</i>	Jul-31-07 09:16	Jul-31-07 09:16		
	<i>Analyzed:</i>	Jul-31-07 15:05	Jul-31-07 15:06		
	<i>Units/RL:</i>	mg/L RL	mg/L RL		
Calcium		111 1.00	322 1.00		
Magnesium		53.4 0.100	110 0.100		
Potassium		7.40 2.00	12.7 2.00		
Sodium		408 5.00	615 5.00		
<b>Residue, Filterable (TDS) by EPA 160.1</b>	<i>Extracted:</i>				
	<i>Analyzed:</i>	Jul-26-07 16:30	Jul-26-07 16:30		
	<i>Units/RL:</i>	mg/L RL	mg/L RL		
Total dissolved solids		1700 5.00	2980 5.00		

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Brent Barron

Odessa Laboratory Director



## Flagging Criteria

- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.
- B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F RPD exceeded lab control limits.
- J The target analyte was positively identified below the MQL and above the SQL.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K Sample analyzed outside of recommended hold time.

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(210) 509-3334	(201) 509-3335
(813) 620-2000	(813) 620-2033
(305) 823-8500	(305) 823-8555



# Form 2 - Surrogate Recoveries



Project Name: BD Junction K-27 and K-27-1

Work Order #: 286633

Project ID:

Lab Batch #: 701442

Sample: 286633-001 / SMP

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
4-Bromofluorobenzene	0.0490	0.0500	98	80-120	

Lab Batch #: 701442

Sample: 286633-002 / SMP

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
4-Bromofluorobenzene	0.0461	0.0500	92	80-120	

Lab Batch #: 701442

Sample: 286633-003 / SMP

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
4-Bromofluorobenzene	0.0475	0.0500	95	80-120	

Lab Batch #: 701442

Sample: 286633-004 / SMP

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
4-Bromofluorobenzene	0.0497	0.0500	99	80-120	

Lab Batch #: 701442

Sample: 286633-005 / SMP

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
4-Bromofluorobenzene	0.0484	0.0500	97	80-120	

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B

All results are based on MDL and validated for QC purposes.



# Form 2 - Surrogate Recoveries



Project Name: BD Junction K-27 and K-27-1

Work Order #: 286633

Project ID:

Lab Batch #: 701442

Sample: 286633-006 / SMP

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.0501	0.0500	100	80-120	

Lab Batch #: 701442

Sample: 286638-004 S / MS

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.0524	0.0500	105	80-120	

Lab Batch #: 701442

Sample: 286638-004 SD / MSD

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.0532	0.0500	106	80-120	

Lab Batch #: 701442

Sample: 497682-1-BKS / BKS

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.0410	0.0500	82	80-120	

Lab Batch #: 701442

Sample: 497682-1-BLK / BLK

Batch: 1 Matrix: Water

Units: mg/L

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.0451	0.0500	90	80-120	

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B

All results are based on MDL and validated for QC purposes.



# Blank Spike Recovery



**Project Name: BD Junction K-27 and K-27-1**

**Work Order #: 286633**

**Project ID:**

**Lab Batch #: 701211**

**Sample: 701211-1-BKS**

**Matrix: Water**

**Date Analyzed: 07/27/2007**

**Date Prepared: 07/27/2007**

**Analyst: WRU**

**Reporting Units: mg/L**

**Batch #: 1**

BLANK /BLANK SPIKE RECOVERY STUDY						
Alkalinity by EPA 310.1  Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Alkalinity, Total (as CaCO3)	ND	400	340	85	80-120	

**Lab Batch #: 701442**

**Sample: 497682-1-BKS**

**Matrix: Water**

**Date Analyzed: 07/30/2007**

**Date Prepared: 07/27/2007**

**Analyst: CELKEE**

**Reporting Units: mg/L**

**Batch #: 1**

BLANK /BLANK SPIKE RECOVERY STUDY						
BTEX by EPA 8021B  Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Benzene	ND	0.0500	0.0457	91	70-125	
Toluene	ND	0.0500	0.0468	94	70-125	
Ethylbenzene	ND	0.0500	0.0501	100	71-129	
m,p-Xylene	ND	0.1000	0.0898	90	70-131	
o-Xylene	ND	0.0500	0.0475	95	71-133	

**Lab Batch #: 701264**

**Sample: 701264-1-BKS**

**Matrix: Water**

**Date Analyzed: 07/27/2007**

**Date Prepared: 07/27/2007**

**Analyst: IRO**

**Reporting Units: mg/L**

**Batch #: 1**

BLANK /BLANK SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300  Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	ND	10.0	9.94	99	90-110	

Blank Spike Recovery [D] = 100\*[C]/[B]  
All results are based on MDL and validated for QC purposes.



# BS / BSD Recoveries



Project Name: BD Junction K-27 and K-27-1

Work Order #: 286633

Analyst: DAT

Lab Batch ID: 701350

Sample: 497762-1-BKS

Units: mg/L

Date Prepared: 07/31/2007

Batch #: 1

Project ID:

Date Analyzed: 07/31/2007

Matrix: Water

BLANK / BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
Metals per ICP by SW846 6010B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Calcium	ND	1.00	1.02	102	1.0	1.05	105	3	75-125	25	
Magnesium	ND	1.00	1.13	113	1.0	1.12	112	1	75-125	25	
Potassium	ND	10.0	9.95	100	10.0	9.89	99	1	75-125	25	
Sodium	ND	11.0	10.8	98	11.0	10.7	97	1	75-125	25	

Relative Percent Difference RPD =  $200 * [(D-F)/(D+F)]$   
 Blank Spike Recovery [D] =  $100 * (C)/[B]$   
 Blank Spike Duplicate Recovery [G] =  $100 * (F)/[E]$   
 All results are based on MDL and Validated for QC Purposes



# Form 3 - MS Recoveries



Project Name: BD Junction K-27 and K-27-1

Work Order #: 286633

Lab Batch #: 701264

Project ID:

Date Analyzed: 07/27/2007

Date Prepared: 07/27/2007

Analyst: IRO

QC- Sample ID: 286626-003 S

Batch #: 1

Matrix: Water

Reporting Units: mg/L

## MATRIX / MATRIX SPIKE RECOVERY STUDY

Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	1040	500	1630	118	90-110	X

Matrix Spike Percent Recovery [D] =  $100 \cdot (C-A) / B$   
 Relative Percent Difference [E] =  $200 \cdot (C-A) / (C+B)$   
 All Results are based on MDL and Validated for QC Purposes



# Form 3 - MS / MSD Recoveries



Project Name: BD Junction K-27 and K-27-1

Work Order # 286633

Lab Batch ID: 701442

Date Analyzed: 07/31/2007

Reporting Units: mg/L

Project ID:

QC- Sample ID: 286638-004 S Batch #: 1 Matrix: Water

Date Prepared: 07/27/2007 Analyst: CELKEE

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	0.0309	0.0500	0.0808	100	0.0500	0.0774	93	7	70-125	25	
Toluene	0.0010	0.0500	0.0603	119	0.0500	0.0581	114	4	70-125	25	
Ethylbenzene	ND	0.0500	0.0633	127	0.0500	0.0613	123	3	71-129	25	
m,p-Xylene	0.0042	0.1000	0.1137	110	0.1000	0.1103	106	4	70-131	25	
o-Xylene	ND	0.0500	0.0609	122	0.0500	0.0591	118	3	71-133	25	

Lab Batch ID: 701350

Date Analyzed: 07/31/2007

Reporting Units: mg/L

QC- Sample ID: 286807-001 S

Date Prepared: 07/31/2007

Batch #: 1 Matrix: Water

Analyst: DAT

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Calcium	300	2.00	307	350	2.00	303	150	80	75-125	20	XF
Magnesium	9.93	2.00	12.1	109	2.00	12.0	104	5	75-125	20	
Potassium	15.1	20.0	39.1	120	20.0	38.9	119	1	75-125	20	
Sodium	4.39	22.0	28.3	109	22.0	27.5	105	4	75-125	20	

Matrix Spike Percent Recovery [D] = 100\*(C-A)/B  
Relative Percent Difference RPD = 200\*(D-G)/(D+G)

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable  
N = See Narrative, EQL = Estimated Quantitation Limit

Matrix Spike Duplicate Percent Recovery [G] = 100\*(F-A)/E



# Sample Duplicate Recovery



Project Name: BD Junction K-27 and K-27-1

Work Order #: 286633

Lab Batch #: 701211  
Date Analyzed: 07/27/2007  
QC- Sample ID: 286139-012 D  
Reporting Units: mg/L

Date Prepared: 07/27/2007  
Batch #: 1

Project ID:  
Analyst: WRU  
Matrix: Water

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Alkalinity by EPA 310.1	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Alkalinity, Total (as CaCO3)	2200	2200	0	20	

Lab Batch #: 701264  
Date Analyzed: 07/27/2007  
QC- Sample ID: 286626-003 D  
Reporting Units: mg/L

Date Prepared: 07/27/2007  
Batch #: 1

Analyst: IRO  
Matrix: Water

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Inorganic Anions by EPA 300	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Chloride	1040	1060	2	20	

Lab Batch #: 701255  
Date Analyzed: 07/26/2007  
QC- Sample ID: 286139-012 D  
Reporting Units: mg/L

Date Prepared: 07/26/2007  
Batch #: 1

Analyst: IRO  
Matrix: Water

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Residue, Filterable (TDS) by EPA 160.1	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Total dissolved solids	5020	5370	7	30	

Lab Batch #: 701255  
Date Analyzed: 07/26/2007  
QC- Sample ID: 286633-006 D  
Reporting Units: mg/L

Date Prepared: 07/26/2007  
Batch #: 1

Analyst: IRO  
Matrix: Water

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Residue, Filterable (TDS) by EPA 160.1	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Total dissolved solids	2980	3090	4	30	

Spike Relative Difference RPD  $200 * |(B-A)/(B+A)|$   
All Results are based on MDL and validated for QC purposes.



**Environmental Lab of Texas**  
Variance/ Corrective Action Report- Sample Log-In

Client: Rice  
 Date/ Time: 7-26-07 2:15  
 Lab ID #: 286633  
 Initials: al

**Sample Receipt Checklist**

			Client Initials	
#1	Temperature of container/ cooler?	<input checked="" type="checkbox"/> Yes	No	<u>LS</u> °C
#2	Shipping container in good condition?	<input checked="" type="checkbox"/> Yes	No	
#3	Custody Seals intact on shipping container/ cooler?	<input checked="" type="checkbox"/> Yes	No	Not Present
#4	Custody Seals intact on sample bottles/ container?	<input checked="" type="checkbox"/> Yes	No	Not Present
#5	Chain of Custody present?	<input checked="" type="checkbox"/> Yes	No	
#6	Sample instructions complete of Chain of Custody?	<input checked="" type="checkbox"/> Yes	No	
#7	Chain of Custody signed when relinquished/ received?	<input checked="" type="checkbox"/> Yes	No	
#8	Chain of Custody agrees with sample label(s)?	<input checked="" type="checkbox"/> Yes	No	ID written on Cont./ Lid
#9	Container label(s) legible and intact?	<input checked="" type="checkbox"/> Yes	No	Not Applicable
#10	Sample matrix/ properties agree with Chain of Custody?	<input checked="" type="checkbox"/> Yes	No	
#11	Containers supplied by ELOT?	<input checked="" type="checkbox"/> Yes	No	
#12	Samples in proper container/ bottle?	<input checked="" type="checkbox"/> Yes	No	See Below
#13	Samples properly preserved?	<input checked="" type="checkbox"/> Yes	No	See Below
#14	Sample bottles intact?	<input checked="" type="checkbox"/> Yes	No	
#15	Preservations documented on Chain of Custody?	<input checked="" type="checkbox"/> Yes	No	
#16	Containers documented on Chain of Custody?	<input checked="" type="checkbox"/> Yes	No	
#17	Sufficient sample amount for indicated test(s)?	<input checked="" type="checkbox"/> Yes	No	See Below
#18	All samples received within sufficient hold time?	<input checked="" type="checkbox"/> Yes	No	See Below
#19	Subcontract of sample(s)?	<input checked="" type="checkbox"/> Yes	No	Not Applicable
#20	VOC samples have zero headspace?	<input checked="" type="checkbox"/> Yes	No	Not Applicable

**Variance Documentation**

Contact: \_\_\_\_\_ Contacted by: \_\_\_\_\_ Date/ Time: \_\_\_\_\_

Regarding: \_\_\_\_\_

Corrective Action Taken: \_\_\_\_\_

- Check all that Apply.
- See attached e-mail/ fax
  - Client understands and would like to proceed with analysis
  - Cooling process had begun shortly after sampling event