1R - 487

Annual GW Mon. REPORTS

DATE: 2004

RICE Operating Company
122 West Taylor • Hobbs, New Mexico 88240
Phone: (505)393-9174 • Fax: (505) 397-1471

CERTIFIED MAIL
RETURN RECEIPT NO. 7002 2410 0000 4940 1800

January 24, 2005

Mr. Wayne Price
New Mexico Energy, Minerals, & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 S. St. Francis Drive
Santa Fe, New Mexico 87504

RE: 2004 MONITOR WELL REPORT
GROUNDWATER REMEDIATION/MONITORING
N-6 PIPELINE LEAK, WEST COUNTY ROAD SITE
HOBBS SWD SYSTEM
SW1/4, NW ¼, SEC. 5,6, T19S, R38E, LEA COUNTY, NEW MEXICO

Mr. Price:

Rice Operating Company (ROC) takes this opportunity to submit the 2004 Monitor Well Report for the Hobbs Salt Water Disposal (SWD) System N-6 Release Site in the SW ¼ NW ¼ of Sections 5, 6, T19S, R38E, Lea County, New Mexico. This monitoring site is located just south of the intersection of Highway 62-180 and the South Loop of the Hobbs West County Road By-Pass. The monitoring wells are defined on the enclosed site map and all wells are sampled quarterly pursuant to NMOCD guidelines.

Environmental Technology Group, Inc. of Hobbs and Basin Environmental Service Technologies (Basin) of Lovington performed the 2004 quarterly sampling of the wells at this site. Environmental Lab of Texas of Odessa, Texas and Cardinal Laboratory of Hobbs conducted analytical tests for these events. In 2005, Arcadis G&M, Inc. (Arcadis) will sample the wells and Environmental Lab of Texas will continue to conduct analyses of the water samples.

ROC has actively worked toward recovering the phase-separated hydrocarbon (PSH) at the Recovery Well MW-1. A skimmer-type pump was installed in September 1999 but ROC soon discovered that the pump was not working properly and it was removed from the well. ROC sought other methods of recovery but the viscosity of the PSH makes recovery difficult. In 2004

ROC recovered the PSH using an absorbent sock placed in the well weekly. In September of 2004 Basin assumed the maintenance and weekly replacement of the socks. Weekly measurements of PSH volume and thickness are recorded.

Rice Operating Company has contracted Arcadis to devise a new recovery plan for the PSH in Recovery Well-1. Enclosed is the work plan that proposes a low-flow air sparging system. This system will be implemented in 2005.

Thank you for consideration concerning this information. Should you have any questions regarding this submission, please do not hesitate to contact me.

ROC is the service provider (operator) for the Hobbs Salt Water Disposal System and has no ownership of any portion of pipeline, well, or facility. The Hobbs SWD System is owned by a consortium of oil producers, System Partners, who provide all operating capital on a percentage ownership/usage basis. The Hobbs SWD System is in the process of abandonment.

RICE OPERATING COMPANY

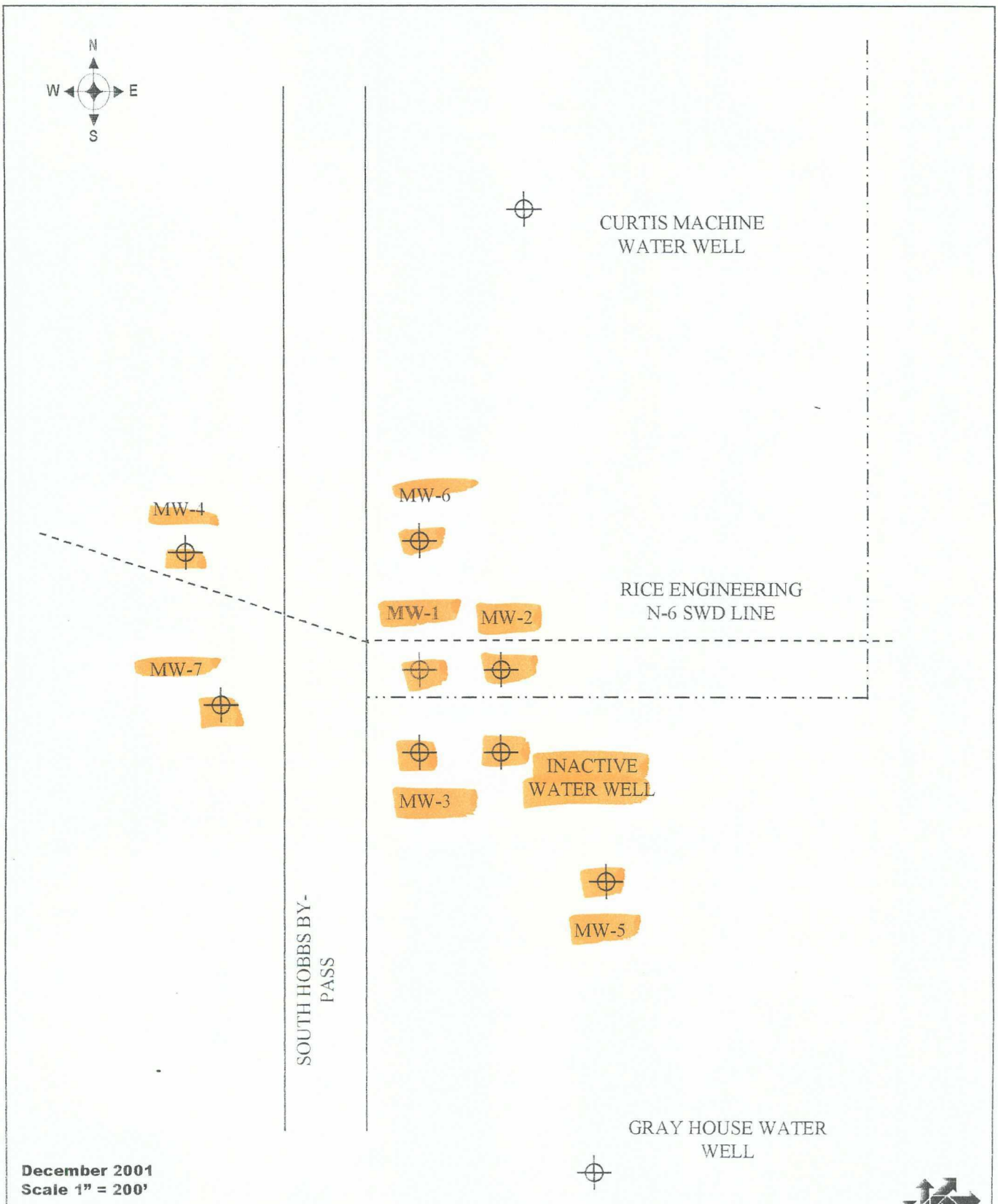
Kristin Farris Pope

Kristin Farris Pope
Project Scientist

enclosures:
Summary tables of analytical results
Product measurements
Site map
Topographic map
Work Plan
Laboratory analysis

cc: LBG, CDH, Arcadis, Rob Roy Industries, file,

Mr. Chris Williams
NMOCD, District I Office
1625 N. French Drive
Hobbs, NM 88240



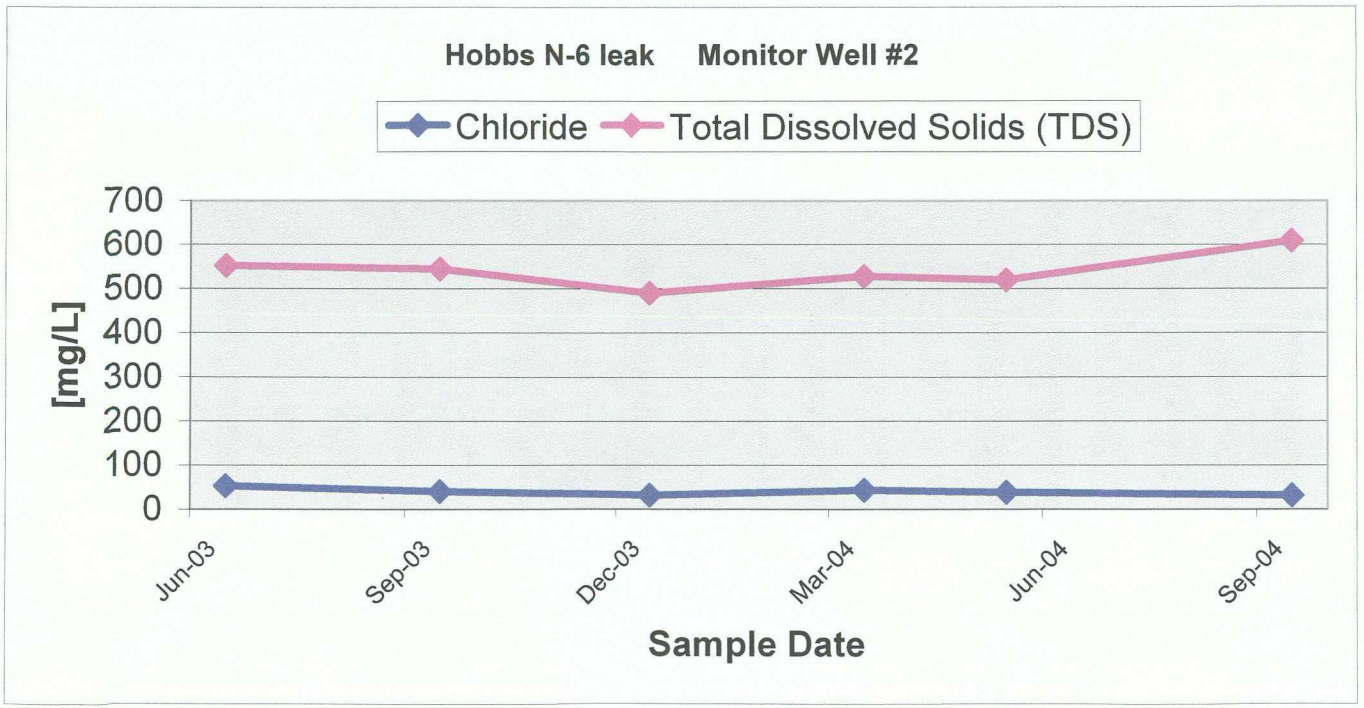
December 2001
Scale 1" = 200'

Rice Operating Company **Site Plan**	**Line N - 6** **Sec 5 & 6, T19S, R38E** **Lea Co., New Mexico**	***Safety & Environmental Solutions, Inc.***

Hobbs N-6 Leak
Sec. 5 & 6, T19S, R38E

RICE *Operating Company*
Monitor Well Data Sheet

	(ft)		(gal)			All concentrations are in mg/L						
MW #	DEPTH TO WATER	TOTAL DEPTH	WELL VOLUME	VOLUME PURGED	SAMPLE DATE	Cl^-	TDS	BENZENE	TOLUENE	ETHYL BENZENE	TOTAL XYLENES	COMMENTS
2	40.20	52.18	7.780	23.36	8/14/02	XXX	XXX	XXX	XXX	XXX	XXX	
2	40.34	52.11	7.650	22.75	12/6/02	XXX	XXX	XXX	XXX	XXX	XXX	
2	40.61	52.20	7.530	22.60	3/14/03	53.2	XXX	0.003	0.001	0.006	0.004	
2	40.29	52.13	7.69	23.08	6/27/03	40.8	499	<0.001	<0.001	<0.001	<0.001	
2	XXX	XXX	XXX	XXX	9/22/03	31.9	504	<0.001	<0.001	<0.001	<0.001	
2	40.39	52.13	7.66	22.99	12/18/03	44	458	<0.002	<0.002	<0.002	<0.006	
2	41.53	52.13	6.92	20.76	3/15/04	39	484	0.00458	<0.001	0.00236	0.001929	
2	XXX	XXX	XXX	XXX	5/27/04	31.9	481	0.000448	<0.001	0.000482	<0.001	
2	41.69	52.24	6.86	20.57	9/8/04	70.9	577	0.0289	0.00219	0.0126	0.00837	
2	39.40	52.24	8.35	25.04	11/22/04	58.1	XXX	0.0238	0.00269	0.0239	0.01051	

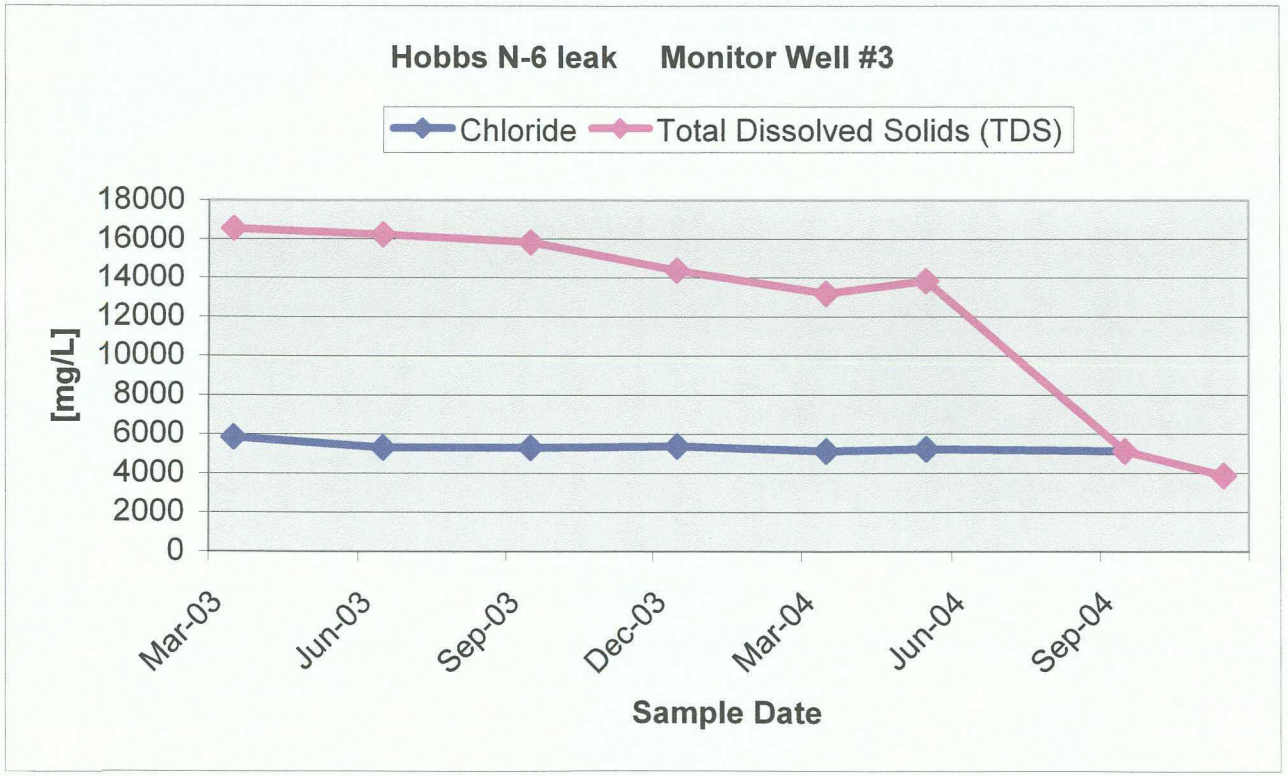


Hobbs N-6 Leak
Sec. 5 & 6, T19S, R38E

RICE *Operating Company*
Monitor Well Data Sheet

(ft) (gal) All concentrations are in mg/L

MW #	DEPTH TO WATER	TOTAL DEPTH	WELL VOLUME	VOLUME PURGED	SAMPLE DATE	Cl^-	TDS	BENZENE	TOLUENE	ETHYL BENZENE	TOTAL XYLENES	COMMENTS
3	40.57	156.05	7.650	225.18	8/14/02	XXX	XXX	XXX	XXX	XXX	XXX	
3	40.76	156.02	74.920	224.76	12/6/02	XXX	XXX	XXX	XXX	XXX	XXX	
3	10.95	156.02	74.790	224.38	3/14/03	5850	XXX	0.060	0.001	0.001	0.003	
3	40.69	156.04	74.97	224.93	6/27/03	5320	10700	0.013	<0.001	<0.001	0.001	
3	XXX	XXX	XXX	XXX	9/22/03	5320	10900	0.008	<0.001	<0.001	0.001	
3	40.82	156.03	75.23	225.69	12/18/03	5398	10512	0.018	<0.002	<0.002	<0.006	
3	41.82	156.03	74.57	223.73	3/15/04	5140	8990	0.0354	<0.001	0.000821	0.001646	
3	XXX	XXX	XXX	XXX	5/27/04	5230	8060	0.0131	0.000238	0.000248	0.000975	
3	41.93	156.15	74.27	222.73	9/8/04	5140	8600	0.0152	<0.001	0.00184	0.003572	
3	39.64	156.15	75.73	227.19	11/23/04	3890	XXX	0.0281	0.000202	0.000775	0.004491	

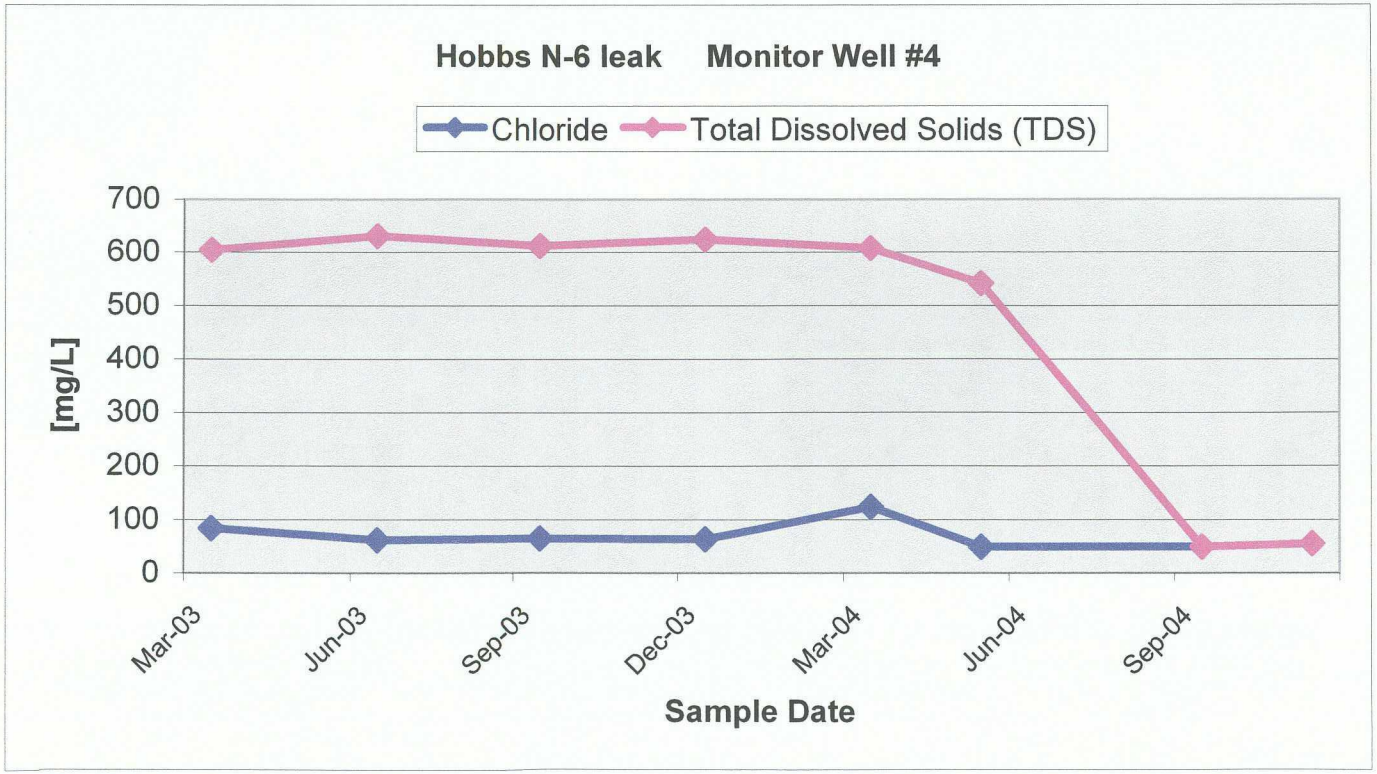


Hobbs N-6 Leak
Sec. 5 & 6, T19S, R38E

RICE *Operating Company*
Monitor Well Data Sheet

(ft) (gal) All concentrations are in mg/L

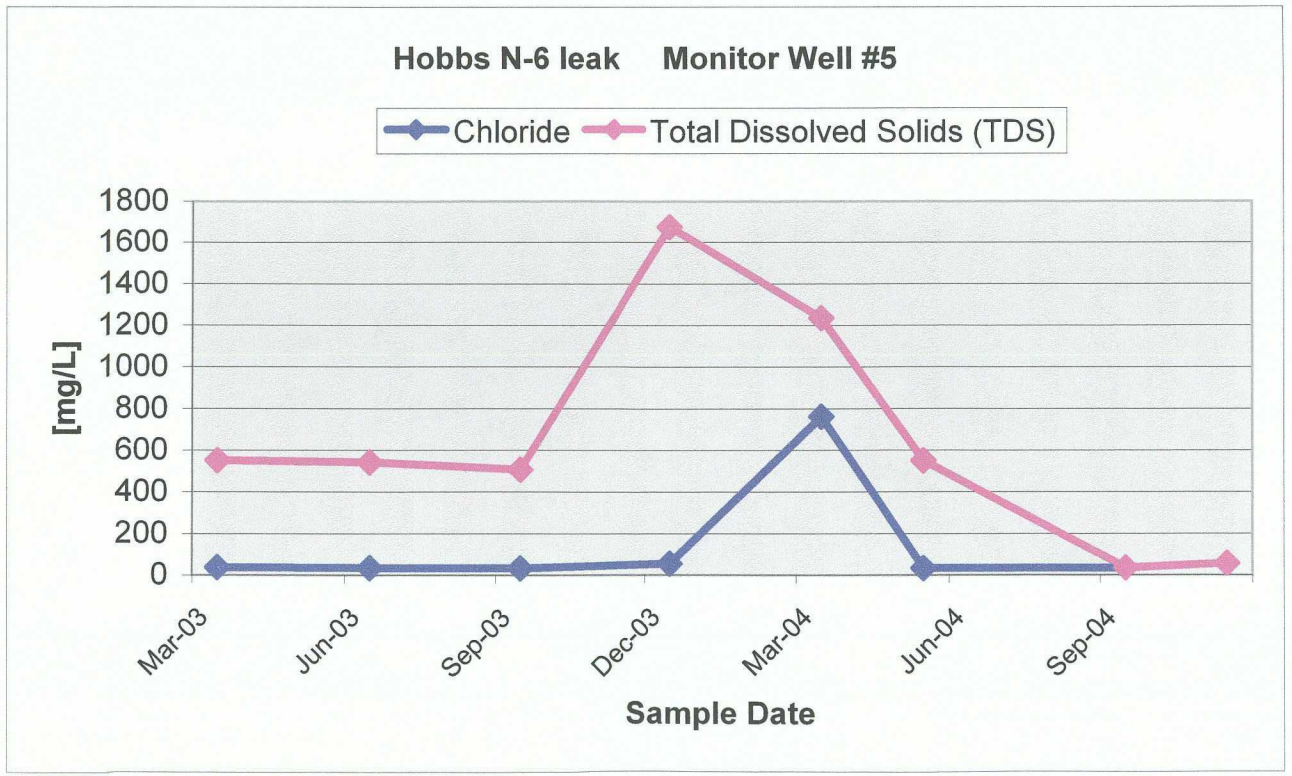
MW #	DEPTH TO WATER	TOTAL DEPTH	WELL VOLUME	VOLUME PURGED	SAMPLE DATE	Cl^-	TDS	BENZENE	TOLUENE	ETHYL BENZENE	TOTAL XYLENES	COMMENTS
4	42.42	56.65	9.240	27.74	8/14/02	XXX	XXX	XXX	XXX	XXX	XXX	
4	42.60	56.66	9.140	27.42	12/6/02	XXX	XXX	XXX	XXX	XXX	XXX	
4	42.84	56.63	8.960	26.89	3/14/03	84.2	XXX	<0.001	<0.001	<0.001	<0.001	
4	42.58	56.65	9.14	27.43	6/27/03	62	520	<0.001	<0.001	<0.001	0.002	
4	XXX	XXX	XXX	XXX	9/22/03	65	569	<0.001	<0.001	<0.001	<0.001	
4	42.69	56.67	9.12	27.38	12/18/03	64	547	<0.002	<0.002	<0.002	<0.006	
4	43.77	56.67	8.42	25.27	3/15/04	124	560	0.00103	<0.001	<0.001	<0.001	
4	XXX	XXX	XXX	XXX	5/27/04	49.6	484	<0.001	<0.001	<0.001	<0.001	
4	43.92	56.71	8.31	24.94	9/8/04	49.6	492	0.00142	<0.001	<0.001	<0.001	
4	41.26	56.71	10.04	30.13	11/23/04	55.2	XXX	<0.001	<0.001	<0.001	<0.001	



Hobbs N-6 Leak
Sec. 5 & 6, T19S, R38E

RICE *Operating Company*
Monitor Well Data Sheet

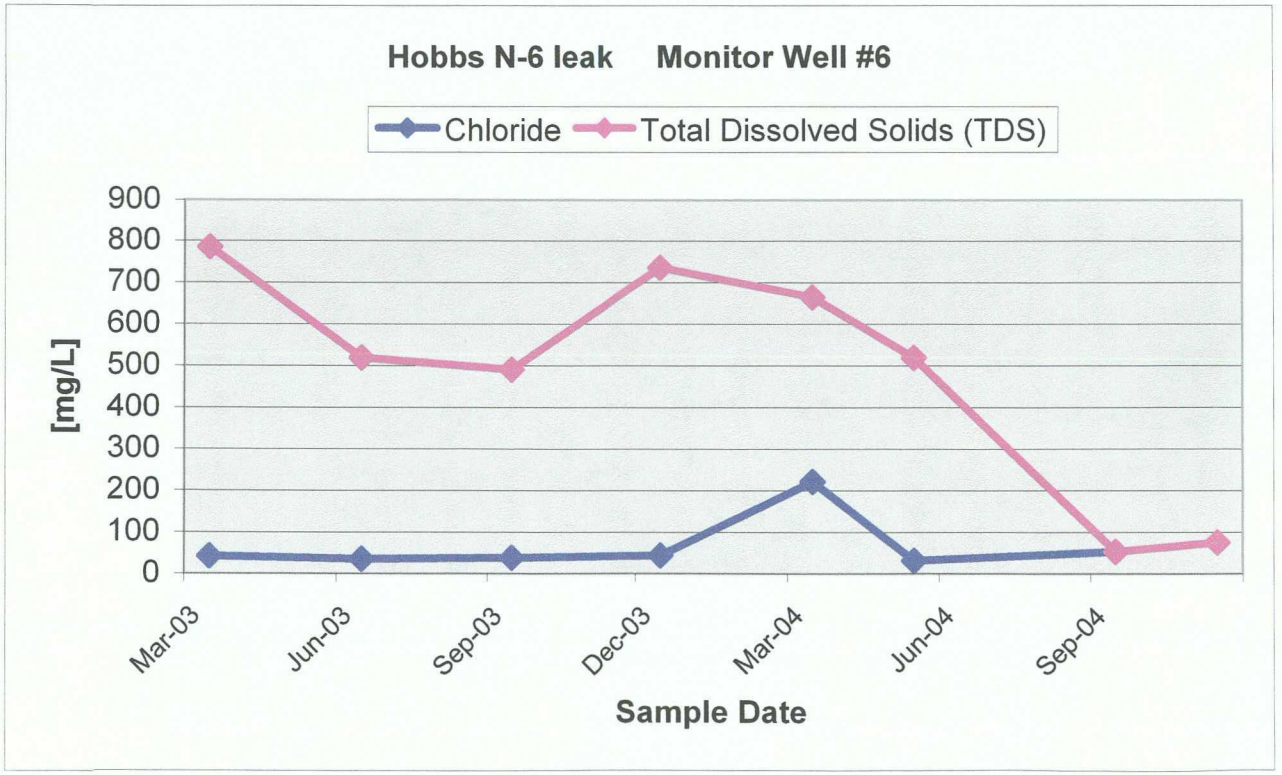
	(ft)		(gal)			All concentrations are in mg/L						
MW #	DEPTH TO WATER	TOTAL DEPTH	WELL VOLUME	VOLUME PURGED	SAMPLE DATE	Cl^-	TDS	BENZENE	TOLUENE	ETHYL BENZENE	TOTAL XYLENES	COMMENTS
5	38.66	51.29	8.200	24.62	08/14/02	XXX	XXX	XXX	XXX	XXX	XXX	
5	38.82	51.18	8.010	24.04	12/06/02	XXX	XXX	XXX	XXX	XXX	XXX	
5	39.04	51.18	7.890	23.67	03/14/03	39	XXX	<0.001	<0.001	<0.001	<0.001	
5	38.81	51.21	8.06	24.18	06/27/03	35.4	513	<0.001	<0.001	<0.001	0.002	
5	XXX	XXX	XXX	XXX	09/22/03	33.7	508	<0.001	<0.001	<0.001	<0.001	
5	38.91	51.19	8.01	24.05	12/18/03	56	474	<0.002	<0.002	<0.002	<0.006	
5	40.00	51.19	7.30	21.92	03/15/04	762	1620	0.0107	<0.001	0.000543	0.000876	
5	XXX	XXX	XXX	XXX	05/27/04	33.7	473	<0.001	<0.001	<0.001	<0.001	
5	40.18	51.31	7.23	21.70	09/08/04	35.4	517	<0.001	<0.001	<0.001	<0.001	
5	38.12	51.31	8.57	25.72	11/23/04	57.3	XXX	<0.001	<0.001	<0.001	<0.001	



Hobbs N-6 Leak
Sec. 5 & 6, T19S, R38E

RICE *Operating Company*
Monitor Well Data Sheet

	(ft)		(gal)			All concentrations are in mg/L						
MW #	DEPTH TO WATER	TOTAL DEPTH	WELL VOLUME	VOLUME PURGED	SAMPLE DATE	Cl^-	TDS	BENZENE	TOLUENE	ETHYL BENZENE	TOTAL XYLENES	COMMENTS
6	40.70	52.98	1.960	5.89	08/14/02	XXX	XXX	XXX	XXX	XXX	XXX	
6	40.87	53.02	1.940	5.83	12/06/02	XXX	XXX	XXX	XXX	XXX	XXX	
6	41.10	53.00	1.900	5.71	03/14/03	42.5	XXX	<0.001	<0.001	<0.001	<0.001	
6	40.81	53.03	1.95	5.86	06/27/03	35.4	743	<0.001	<0.001	<0.001	<0.001	
6	XXX	XXX	XXX	XXX	09/22/03	39	484	<0.001	<0.001	<0.001	<0.001	
6	40.93	53.00	1.96	5.90	12/18/03	44	452	<0.002	<0.002	<0.002	<0.006	
6	42.02	53.00	1.78	5.36	03/15/04	222	692	0.0026	<0.001	<0.001	<0.001	
6	XXX	XXX	XXX	XXX	05/27/04	31.9	443	<0.001	<0.001	<0.001	<0.001	
6	42.16	53.10	1.75	5.25	09/08/04	53.2	488	<0.001	<0.001	<0.001	<0.001	
6	39.62	53.10	2.16	6.47	11/23/04	76.1	XXX	<0.001	<0.001	<0.001	<0.001	

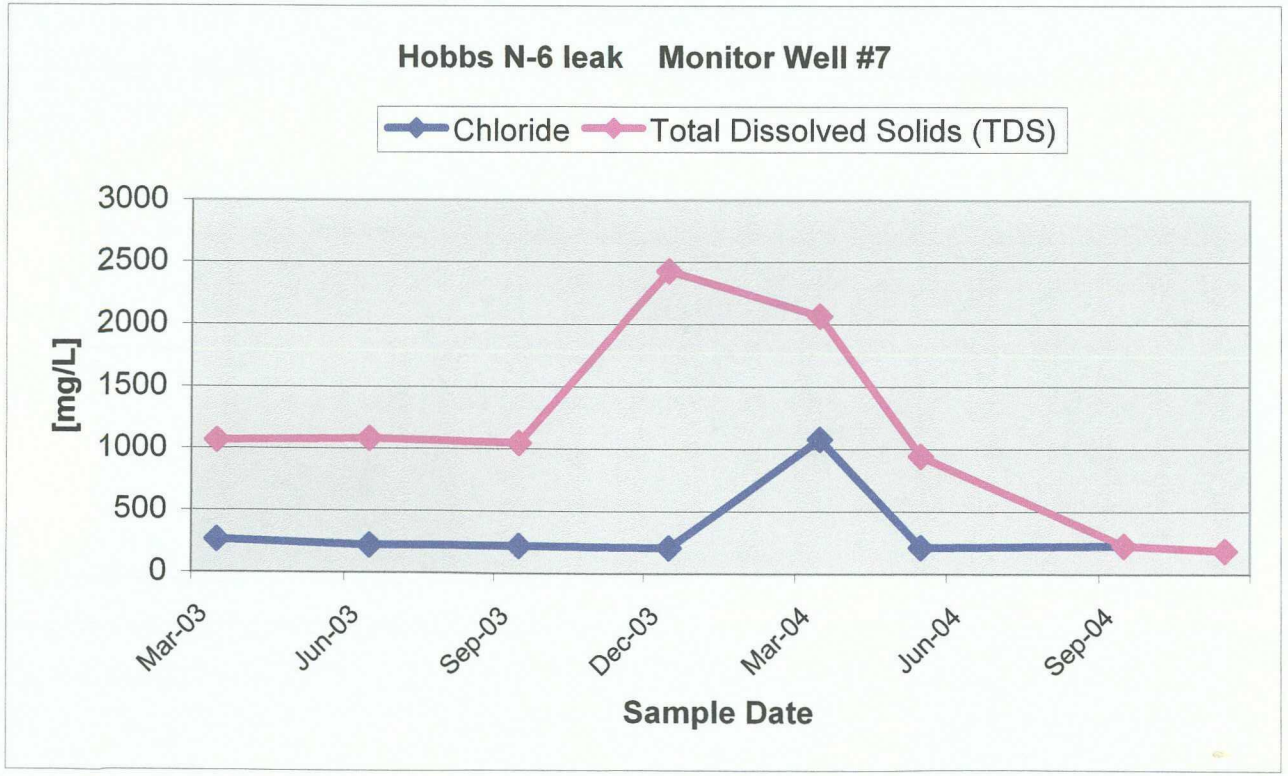


Hobbs N-6 Leak
Sec. 5 & 6, T19S, R38E

RICE *Operating Company*
Monitor Well Data Sheet

(ft) (gal) All concentrations are in mg/L

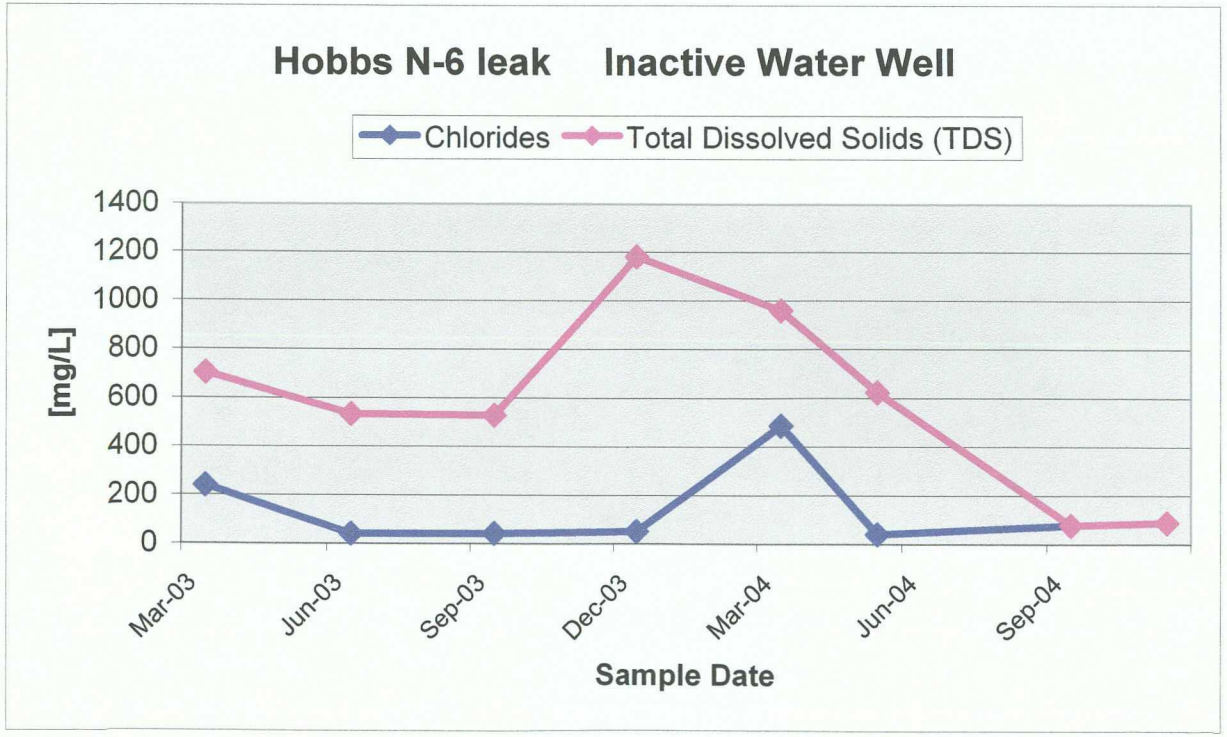
MW #	DEPTH TO WATER	TOTAL DEPTH	WELL VOLUME	VOLUME PURGED	SAMPLE DATE	Cl^-	TDS	BENZENE	TOLUENE	ETHYL BENZENE	TOTAL XYLENES	COMMENTS
7	40.74	47.20	1.030	3.10	08/14/02	XXX	XXX	XXX	XXX	XXX	XXX	
7	40.94	47.17	0.990	2.98	12/06/02	XXX	XXX	XXX	XXX	XXX	XXX	
7	41.22	47.18	0.950	2.86	03/14/03	266	XXX	0.001	<0.001	<0.001	<0.001	
7	40.88	47.15	1.00	3.00	06/27/03	222	802	<0.001	<0.001	<0.001	<0.001	
7	XXX	XXX	XXX	XXX	09/22/03	222	861	<0.001	<0.001	<0.001	<0.001	
7	41.03	47.18	1.00	3.00	12/18/03	208	827	<0.002	<0.002	<0.002	<0.006	
7	42.17	47.18	0.81	2.44	03/15/04	1080	2220	0.0131	<0.001	<0.001	<0.001	
7	XXX	XXX	XXX	XXX	05/27/04	213	986	<0.001	<0.001	<0.001	<0.001	
7	42.34	47.25	0.79	2.36	09/08/04	230	731	<0.001	<0.001	<0.001	<0.001	
7	39.82	47.25	1.19	178.98	11/23/04	188	XXX	<0.001	<0.001	<0.001	<0.001	



Hobbs N-6 Leak
Sec. 5 & 6, T19S, R38E

RICE *Operating Company*
Monitor Well Data Sheet

	(ft)		(gal)			All concentrations are in mg/L						
MW #	DEPTH TO WATER	TOTAL DEPTH	WELL VOLUME	VOLUME PURGED	SAMPLE DATE	Cl^-	TDS	BENZENE	TOLUENE	ETHYL BENZENE	TOTAL XYLENES	COMMENTS
IWW	40.42	98.25	58.980	176.95	08/14/02	XXX	XXX	XXX	XXX	XXX	XXX	
IWW	40.79	98.18	37.300	111.91	03/14/03	239	XXX	0.004	<0.001	<0.001	<0.001	
IWW	40.45	98.24	37.56	112.69	06/27/03	40.7	465	<0.001	<0.001	<0.001	<0.001	
IWW	XXX	XXX	XXX	XXX	09/22/03	42.5	493	<0.001	<0.001	<0.001	<0.001	
IWW	40.33	98.23	37.80	113.42	12/18/03	52	485	<0.002	<0.002	<0.002	<0.006	
IWW	41.75	98.23	82.96	248.90	03/15/04	487	1130	0.00619	<0.001	<0.001	<0.001	
IWW	XXX	XXX	XXX	XXX	05/27/04	40.8	474	<0.001	<0.001	<0.001	<0.001	
IWW	41.93	98.20	57.40	172.19	09/08/04	78	583	<0.001	<0.001	<0.001	<0.001	
IWW	39.71	98.20	59.66	178.98	11/23/04	88.3	XXX	<0.001	<0.001	<0.001	<0.001	



BASIN ENVIRONMENTAL

FIELD MEASUREMENT/OBSERVATION LOG

PROJECT NAME: Rice Operating Company

PROJECT NUMBER: Hobbs N-6 Leak (PO# 641)

LEAK NUMBER:

PROJECT MANAGER: Kristin Farris Pope - Rice Operating Company

FIELD TECHNICIAN: Rozanne Johnson - Basin Environmental

DATE: Weekly Gauge Starting September 2, 2004

WELL # /SAMPLE LOCATION	TOTAL WELL DEPTH (feet)	DEPTH TO PRODUCT (feet)	DEPTH TO WATER (feet)	HEIGHT WATER COLUMN (feet)	PSH THICKNESS (feet)	WELL FACTOR 2"=.16 4"=.65 6"=1.5	PSH Removed (gallons)	Water Removed (gallons)	TOTAL PURGED (gal)	Temp (°C)	pH	Cond. (µs)	DATE/TIME SAMPLE TAKEN	Comments
MW-1		43.68	44.21		0.53		2.0	1.5	3.5				9/2/04 - 8.45	3.5' Sock Stained to 2.5' Sock Replaced
MW-1		43.75	43.94		0.19		0.8	1.2	2.0				9/9/04 - 11:55	3.5' Sock Stained to 1.1' Sock Replaced
MW-1		43.70	44.06		0.36		0.7	0.5	1.2				9/16/04 - 9:20	3.5' Sock Stained to 1.5' Sock Replaced
MW-1		43.78	43.85		0.07		1.0	1.5	2.5				9/23/04 - 18:30	3.5' Sock Stained to 1.3' Sock Replaced
MW-1		43.48	43.51		0.03		0.5	1.5	2.0				9/30/04 - 14:55	3.5' Sock Stained to 1.1' Sock Replaced
MW-1		42.40	42.54		0.14		0.8	0.5	1.3				10/8/04 - 8:55	3.5' Sock Stained to 2.3' Sock Replaced / Well level has changed due to rainfall.
MW-1		41.93	42.56		0.63		1.0	1.0	2.0				10/14/04 - 13:40	3.5' Sock Stained to 2.0' Sock Replaced / Well level has changed due to rainfall.
MW-1		41.65	41.77		0.12		0.9	1.1	2.0				10/21/04 - 15:30	3.5' Sock Stained to 1.2' Sock Replaced
MW-1		41.54	41.56		0.02		1.2	1.8	3.0				10/28//04 - 13:25	3.5' Sock Stained to 11.5" Sock Replaced
MW-1		41.50	41.51		0.01		1.0	1.5	2.5				11/04/04 - 14:02	4' Sock Stained to 12" Sock Replaced
MW-1		41.42	41.43		0.01		0.2	0.8	1.0				11/11/04 - 13:50	4' Sock Stained to 11" Sock Replaced
MW-1		41.40	41.41		0.01		1.3	0.7	1.0				11/17/04 - 13:11	4' Sock Stained to 10.5" Sock Replaced
MW-1		41.36	41.37		0.01		0.4	0.6	1.0				11/24/04 -15:50	4' Sock Stained to 10.5" Sock Replaced / Well Level Changed due to Recent Rainfall
MW-1														
MW-1														
MW-1														

BASIN ENVIRONMENTAL

FIELD MEASUREMENT/OBSERVATION LOG

PROJECT NAME: Rice Operating Company

PROJECT NUMBER: Hobbs N-6 Leak (PO# 641)

LEAK NUMBER:

PROJECT MANAGER: Kristin Farris Pope - Rice Operating Company

FIELD TECHNICIAN: Rozanne Johnson - Basin Environmental

DATE: Weekly Gauge Starting September 2, 2004

WELL # /SAMPLE LOCATION	TOTAL WELL DEPTH (feet)	DEPTH TO PRODUCT (feet)	DEPTH TO WATER (feet)	HEIGHT WATER COLUMN (feet)	PSH THICKNESS (feet)	WELL FACTOR 2"=.16 4"=.65 6"=1.5	PSH Removed (gallons)	Water Removed (gallons)	TOTAL PURGED (gal)	Temp (°C)	pH	Cond. (µs)	DATE/TIME SAMPLE TAKEN	Comments
MW-1		42.40	42.54		0.14		0.8	0.5	1.3				10/8/04 - 8:55	3.5' Sock Stained to 2.3' Sock Replaced / Well level has changed due to rainfall.
MW-1		41.93	42.56		0.63		1.0	1.0	2.0				10/14/04 - 13:40	3.5' Sock Stained to 2.0' Sock Replaced / Well level has changed due to rainfall.
MW-1		41.65	41.77		0.12		0.9	1.1	2.0				10/21/04 - 15:30	3.5' Sock Stained to 1.2' Sock Replaced
MW-1		41.54	41.56		0.02		1.2	1.8	3.0				10/28//04 - 13:25	3.5' Sock Stained to 11.5" Sock Replaced
MW-1		41.50	41.51		0.01		1.0	1.5	2.5				11/04/04 - 14:02	4' Sock Stained to 12" Sock Replaced
MW-1		41.42	41.43		0.01		0.2	0.8	1.0				11/11/04 - 13:50	4' Sock Stained to 11" Sock Replaced
MW-1		41.40	41.41		0.01		1.3	0.7	1.0				11/17/04 - 13:11	4' Sock Stained to 10.5" Sock Replaced
MW-1		41.36	41.37		0.01		0.4	0.6	1.0				11/24/04 -15:50	4' Sock Stained to 10.5" Sock Replaced / Well Level Changed due to Recent Rainfall
MW-1		41.07	41.07		0.00		0.0	0.0	0.0				12/01/04 - 13:09	4' Sock Stained to 9.0" Sock Replaced / Light Skim Not Measureable
MW-1		40.83	40.83		0.00		0.0	0.0	0.0				12/09/04 - 16:45	4' Sock Stained to 10.0" Sock Replaced / Light Skim Not Measureable
MW-1		40.72	40.72		0.00		0.0	0.0	0.0				12/15/04 - 16:33	4' Sock Stained to 6.0" Sock Replaced / Light Skim Not Measureable
MW-1		PSH RECOVERY NOT DONE DUE TO EXTREME WEATHER												
MW-1		40.61	40.63		0.02		2.0	2.0	4.0				12/30/04 - 8:00	4' Sock Stained to 1" Sock Replaced

ARCADIS G&M, Inc.
1004 N. Big Spring Street
Suite 300
Midland Texas 79701
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Ms. Carolyn Haynes
Rice Operating Company
122 West Taylor
Hobbs, New Mexico 88240

Subject:
Remedial Action Work Plan
West County Road Site, Jct. N-6 Hobbs SWD System
Hobbs, Lea County, New Mexico

ENVIRONMENTAL

Dear Ms. Haynes:

Date:
26 March 2003

Contact:
Sharon Hall

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432-687-5400

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In accordance with the West County Road Work Authorization letter of October 31, 2003, ARCADIS G&M, Inc. (ARCADIS) has reviewed the data history of the site, evaluated site conditions and prepared a Remedial Action Work Plan for the West County Road Site, JCT. N-6 Hobbs SWD System (Site) for Rice Operating Company (Rice Operating).

Introduction and Site Background

The site is directly underlain by sediments of the Pliocene Ogallala Formation which in turn are underlain by Triassic red beds. In 1994, a leak was discovered in a buried SWD pipeline. An assessment program was completed and a free product recovery program initiated. The free product has historically been collected from Monitor Well 1, initially in 1996 in conjunction with groundwater recovery and then beginning in 2000 with just product recovery. The total volume of oil recovered by 2002 was 766 gallons. The highest yearly oil recovery rate was 289 gallons in 2000, with a consistent declining trend in the volume of oil recovered since to 22 gallons in 2002.

The release event also discharged brine into the subsurface as well. An electromagnetic survey was conducted in 1995 to delineate the brine, and subsequent geochemical data has validated the results of that survey. An evaluation of the groundwater by looking at the milligrams per liter (mg/L) ratio of sodium to calcium (Na/Ca) and chloride to sulfate (Cl/SO_4) aids in understanding the history of the analyzed groundwater. Brine associated with oil production is typically high in chloride and sodium and relatively low in calcium and sulfate. However, the absolute concentration of calcium and sulfate in the brine can still be significantly higher than the native groundwater. Sulfate is also important in that it is biologically active and can be consumed by sulfate-reducing bacteria in the presence of hydrocarbons of the type in crude oil.

The Na/Ca evaluation is as follows:

- A relatively high ratio that is consistent – MW-3
  - This illustrates impact with brine that has not attenuated, it is likely that there is brine in the vadose zone acting as a continuous source;
- A moderate high ratio that shows a steep decline – IWW
  - This indicates an initial brine via groundwater transport only and is being flushed by the native groundwater flow;
- A moderate ratio that is consistent – MW-7.
  - This well is on the periphery of the brine source area and is seeing some continued leaching from the source area vadose zone; and
- A low ratio that is consistent – MW-2, MW-4, MW-5, MW-6
  - These wells are representative of native groundwater; MW-4 and MW-6 are upgradient, MW-5 is cross gradient and MW-2 is far downgradient of the release.

The Cl/SO_4 evaluation is as follows:

- A high ratio with a slight decline – MW-3
  - This is distinctive of brine, possibly with some degradation of the sulfate in the groundwater and the vadose zone source area.
- A moderate ratio with a steep decline – IWW
  - This indicates some initial brine impact via a groundwater pathway alone, subsequent lowering is primarily due to flushing with native groundwater and possibly some sulfate degradation.
- A moderate ratio with a slight decline – MW-4
  - This indicates minor brine impact and subsequent flushing with native groundwater.
- A low ratio with a slight increase – MW-7
  - This indicates that there may be some brine impact from vadose zone leaching in the source area.
- A low ratio that is consistent – MW-2, MW-5, MW-6
  - This is representative of native groundwater, in which sulfate is more dominant.

A further evaluation of the benzene, toluene, ethylbenzene and xylene (BTEX) data indicates that the dominant impact of crude oil is in MW-1. Only low and sporadic hits of benzene are seen in any of the other wells, including those that do show some impact from brine (MW-4, MW-7 and IWW).

The current condition under which free-phase crude oil is still collecting is in MW-1, but at an ever decreasing rate which calls for an alternative approach for remediation. The use of a low-flow biosparge system to stimulate aerobic degradation and the

release of biosurfactants should serve to accelerate the removal of the residual portions of the crude oil release.

Remedial Action Pilot Plan

The recommended Remedial Action Plan consists of a low-flow air sparging system designed to maximize in situ biodegradation and minimize volatilization of hydrocarbons. Operated in this fashion, it is more appropriately termed a biosparge system. The primary intent of low-flow air sparge systems is to quickly remediate hydrocarbon-affected groundwater and soils by injecting air into the groundwater column at a relatively low-flow rate. The sparging pressure will be governed by the depth and condition of the sparge point. This injection causes aeration of the groundwater stimulating naturally occurring aerobic bacteria to utilize the impacting hydrocarbons as an energy and carbon source and cause their numbers to multiply. Aerobic processes offer the greatest potential energy yield to bacteria making them the most effective, from a biochemical standpoint, for destruction of hydrocarbons.

The injection of air also causes a localizedrise in the water table at the well resulting in some degree of groundwater circulation. At the point of water table upwelling, aerated water spreads away from the well bore with a return flow of water beneath the water table. This circulation enhances the distribution of aerated groundwater generated in the well. Aeration will also take place as groundwater in transmissive layers flows through the biosparge well bore. In common with the increased biotic mass and activity is the production of quantities of biosurfactants. The biosurfactants are useful in freeing adsorbed hydrocarbons from soil particles and further accelerating the biodegradation rate of the hydrocarbons.

The biosparge well will have a screen that extends into the saturated and vadose zone, with 30 feet of screen in the saturated interval and 20 feet in the vadose zone above the water table. A significant portion of the injected air breaks the surface of the groundwater in the well bore (and beyond the well bore) and moves outward into the soil column adjacent to the screened interval in the well bore. The aerobic biostimulation processes that occur in the vadose zone soil column are the same as those stimulated in the saturated zone for the treatment of dissolved-phase hydrocarbons. Eventually some portion of the injected air is released into the atmosphere but at a point where the hydrocarbon mass has been converted to carbon dioxide.

The pilot system will consist of a single new air biosparge well located among several monitoring points. It is anticipated that the single biosparge well will be effective in the hydrocarbon remediation. However, additional wells may be installed and/or existing wells utilized to complete the hydrocarbon remediation process.

Pilot Well Installation

The initial evaluation of the low-flow biosparge program for the Site focused on the use of MW-1 as the biosparge well because it is the well from which free product is being recovered. However, although there is no log available to ARCADIS for MW-1 there is a verbal description of the construction of the well. The bore hole was completed to 65 feet, but the casing and screen only go to 55 feet below the surface, leaving a 10 foot "rat hole". Given the agitation that takes place in the bore of a low-flow biosparge well and the fact that the 10 feet of uncased bore hole is not in competent bed rock, the use of MW-1 as a biosparge well is not recommended. Serious fouling of the well screens and adjacent formation could occur. It is recommended that a properly constructed low-flow biosparge well be installed upgradient of MW-1.

The remediation biosparge well will be drilled and installed approximately 20 feet upgradient of MW-1. During drilling, drill cuttings should be observed and monitored for hydrocarbons. If appropriate, discrete soil samples should be collected by split spoon or coring. Soil samples should be preserved and some samples may be submitted for laboratory analysis.

The biosparge well will be drilled to a depth of approximately 70 feet below ground level (bgl) and completed using four-inch threaded schedule 40 PVC casing and 0.010 mill-slotted schedule 40 PVC screen. With the depth to water approximately 40 bgl, 30 feet of screen will be placed below the water table and 20 feet of screen will be placed above the water table extending to within 20 feet of the ground surface. Swabbing, bailing and purging of approximately 1,000 gallons of groundwater will develop the well upon installation. Groundwater sampling will occur after the well development and will be coincident with the base line groundwater sampling for the existing monitoring wells included in the low-flow biosparge remediation system.

System Routine Operation and Maintenance

The biosparge well will be drilled and completed as previously discussed at a location approximately 20 feet north-northwest (upgradient) of monitoring well MW-1. A wellhead airflow manifold will be constructed to control flow rates and injection pressures. An electrical drop will be necessary for the compressor.

At a minimum, weekly observations of the air compressor operational status, recording of manifold pressures, temperatures and flow control adjustments will be necessary. Rice Operating field personnel will check the system at least weekly and report pertinent pressure, temperature and flow rate data to ARCADIS personnel.

ARCADIS will evaluate the system operation and maintenance needs. Rice Operating personnel will make routine manual modifications of the system. Field maintenance/repair of the system will be the responsibility of Rice Operating field personnel. Based upon experience with previous biosparge systems, ARCADIS believes that maintenance will be minimal.

System Evaluation

Monitoring groundwater and soil parameters in the biosparge well and existing surrounding monitoring wells will enable the evaluation of the system's effectiveness. The sampling plan has been designed with two key issues in mind. The first is the actual areal distribution of the sampling points around the biosparge well, and the second is the parameters to be analyzed from those points.

The selection of wells for monitoring has been made in order to determine the radial effect of sparging in both groundwater and soils. That is, the effect of sparging should be observable at successively further distances from the sparge well over time and greater effect is anticipated in the vadose zone than the saturated zone. Therefore, the existing monitoring wells which are located at varying distances and directions from the proposed biosparge well will be used to determine the actual time and distances over which the effects of sparging can be observed both in the soils and groundwater. This information will be used to evaluate the effectiveness of the remedial method.

The sampling plan will monitor the impact of the biosparge system in two media:

- The groundwater in the saturated zone
    - Using MW-1, MW-3, and MW-6 for complete analysis and MW-2 and IWW for field analysis.; and
- Soil gas in the vadose zone
    - Using MW-1, MW-2, MW-3, MW-4, MW-5, and MW-7.
    - After start-up and the establishment of baseline operating conditions (in approximately six months) the number of wells sampled for soil gas will be reduced. It could be anticipated after that time, MW-1, MW-2 and MW-3 will be sampled.

The parameters that will be monitored will provide information on the dynamics of the following systems:

- VOCs in both groundwater and the vadose zone. There will be some initial transference of VOCs from the saturated to the vadose zone, followed by attenuation by biodegradation. The effect of the remediation program on the soils can also be inferred from the VOC data;

- Parameters indicative of biological activity such as ORP, pH, carbon dioxide in both groundwater and soil gas, other trace gases such as methane, and inorganic constituents such as iron, sulfate, and alkalinity; and
- Parameters that provide background information on the groundwater system such as TDS and chloride.

In aggregate, these parameters allow for the assessment of the total dynamic impact of the biosparge system on the VOCs and the impact of Site biogeochemistry and physical setting on final full-scale design.

Groundwater Measurements

Groundwater samples will be collected using low-flow sampling techniques. Following the schedule outlined in Table 1, the following field parameters will be measured in the groundwater using a multi-meter and flow-through cell:

- Temperature;
- Dissolved oxygen;
- Redox potential;
- pH;
- Specific conductance;
- Ferrous iron concentration (field test kit); and
- Hydrogen sulfide concentration (field test kit).

As shown in Table 1, upon stabilization of the groundwater field parameters, samples for laboratory analysis will be collected for the concentration determination of the following analytical parameters:

- BTEX;
- Total alkalinity;
- Total dissolved solids;
- Total iron;
- Dissolved iron;
- Sulfate;
- Chloride;
- Total organic carbon; and
- Permanent gases in groundwater (nitrogen, carbon dioxide, oxygen, and methane).

Groundwater field and laboratory analytical parameters will be collected from MW-1, MW-3 and MW-6. Groundwater field parameters will be collected from MW-2 and IWW. Biogeochemical parameters [Total iron, dissolved iron, sulfate, chloride, total organic carbon, and permanent gases in groundwater (nitrogen, carbon dioxide,

oxygen, and methane]) will be collected from the biosparge well on an as needed basis.

Soil Gas Measurements

Vapor phase monitoring will be conducted using a photo-ionization detector (PID) for field measurements of volatile organic compounds in well bores. Soil gas for laboratory analysis will be collected using either a Tedlar bag or Summa Canister for the laboratory determination of BTEX by one of the EPA Methods TO-13/14/14A/MAAPH or similar approved method and permanent gases by either EPA Methods 3C or ASTM Methods 1945 or 1946 or similar approved method.

For the first six months of system operation, the following wells will be used to measure soil gas (vapor phase):

- IWW;
- MW-1;
- MW-2;
- MW-3;
- MW-4;
- MW-5;
- MW-6; and
- MW-7.

Phase Separated Hydrocarbon Recovery

As mentioned in the Inroduction and Site Background section, previous investigations yielded documentation, measurement and recovery of phase-separated hydrocarbons (PSH) in MW-1. The PSH recovery was conducted on a monthly basis. PSH recovery activities will continue as warranted based on field observation. However, it is anticipated that PSH will accumulate in greater quantities in MW-1 with the biosparge remediation effort. Therefore, PSH recovery schedules may be modified upon accumulation evaluation.

Pilot System Operation and Monitoring Schedule

Remediation System Initiation

The remediation system equipment can be installed after the completion of the biosparge well and the electrical line to the well site. Installation and testing of the system equipment is anticipated to require four days including the baseline monitoring.

The anticipated remediation pilot period will be approximately 90 days. The actual remediation duration will be dependent upon the uniformity of system operational uptime, field and laboratory results from the monitoring wells and the interpretation of the effectiveness of the system during this time period.

Remediation System Monitoring

The anticipated schedule for sampling the biosparging remediation system and existing wells is shown below. Modifications to the schedule will be revised based on sampling results:

Table 1 Sampling Schedule

	Baseline	Week 2	30 Days	60 Days	90 Days
Groundwater					
Field Parameters	X	X	X	X	X
Analytical Parameters	X				X
Vapor Phase					
Field Parameters	X	X	X	X	X
Analytical Parameters	X		X	X	X
Physical Parameters					
Water Level	X	X	X	X	X
Injection Well Data	X	X	X	X	X
PSH Recovery	X		X	X	X

Field parameters are vital in the remediation process. The parameters provide key indications of current groundwater and soil conditions associated with the remediation effort. Therefore, the sampling schedule may be modified pending field parameter evaluation.

Remediation System Equipment

Figure 1 is a generalized construction diagram of a biosparge wellhead. A 3/4-inch solid PVC drop pipe with a sparge point at its end will be used to conduct the compressed air into the well beneath the groundwater surface.

Figure 2 shows a total system design including an air compressor, ball valve, moisture knock-out, oil filter, pressure regulator, needle control valve, flow meter and pressure gauge.

Figure 3 illustrates a typical well design for a low-flow biosparge remediation system. The sparge point should be positioned near the bottom of the well and the sparge point should be approximately twelve inches in length.

Table 2 is a cost estimate for the total installation of the Low Flow Bio-Sparge system.

The equipment list necessary for the Remedial Action Pilot System is as follows:

- Biosparge well;
- Electrical drop, 230 volt 1 phase (a variable of the compressor motor);
- Air compressor, single stage stationary, 15-20 SCFM @ 90-135 psi;
- Small shed for the compressor (optional);
- Drop tube,3/4-inch;
- Biosparge point, 1 foot of ¾-inch ID or similar PVC with 1/16 to 1/8-inch holes;
- Compressor to the biosparge well piping;
- Instrument gauges
    - Pressure 100 psi to 25 psi ranges (several)
    - Temperature on the compressor reservoir tank on the air delivery line downstream of the pressure controller;
- One flow meter with a max flow rate of 25 SCFM;
- Flow control needle valve; and
- Adapted pressure control wellhead.

ARCADIS anticipates the total biosparge remediation system cost to be approximately $10,000.

If you have any questions or comments regarding this remedial work plan or the project in general, please do not hesitate to contact us.

Very truly yours,

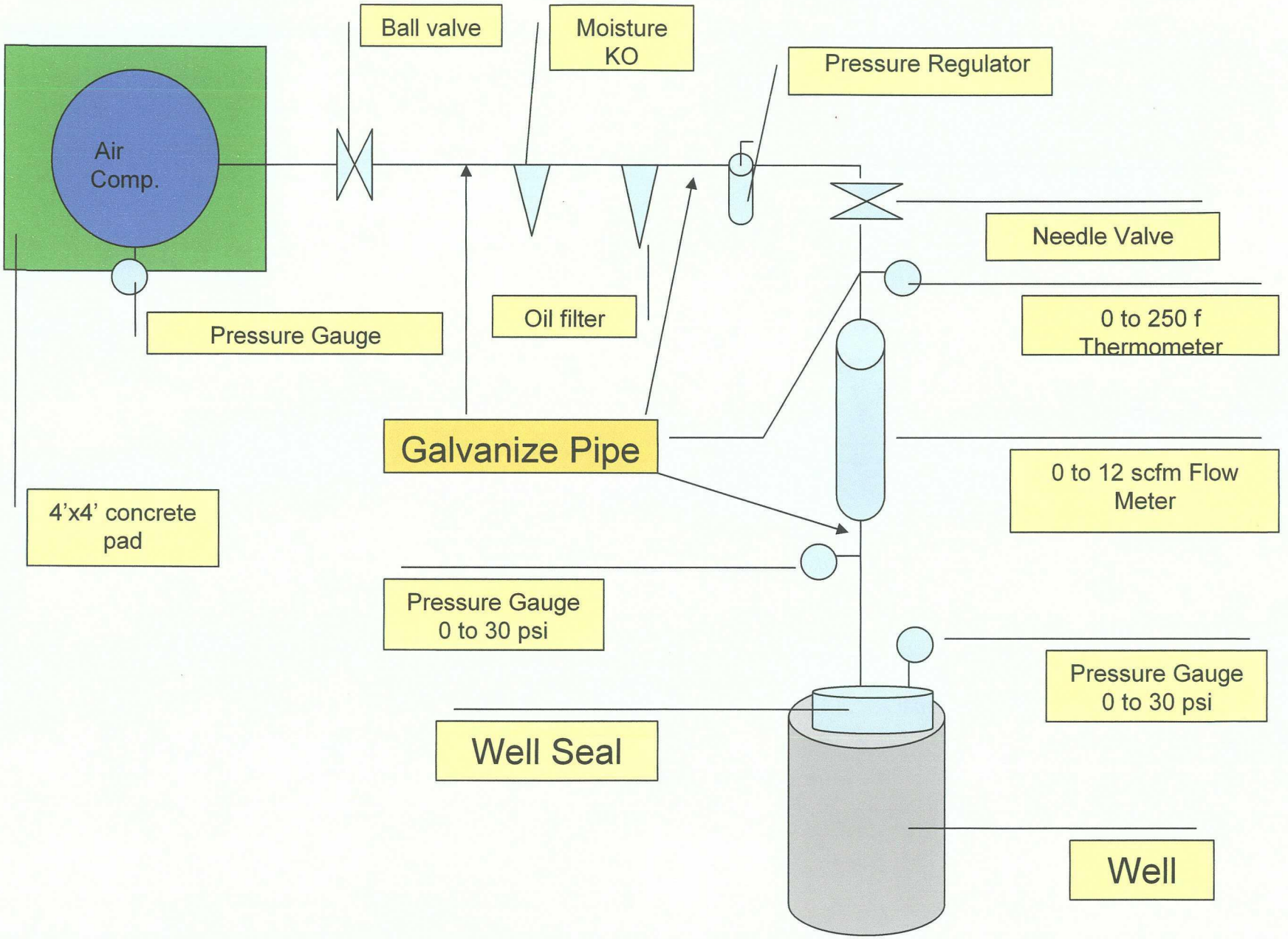
ACADIS G&M, Inc.

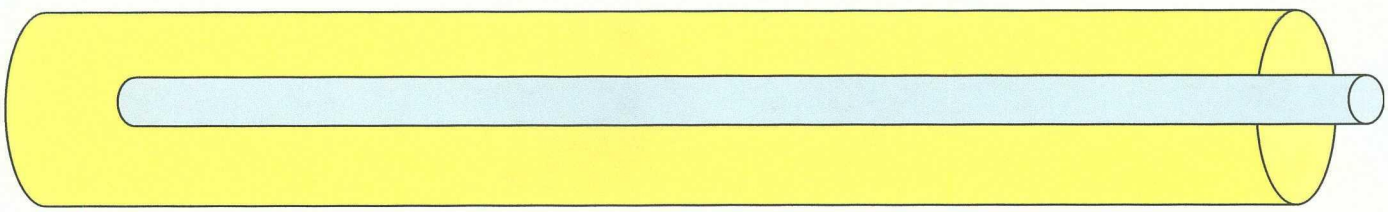
Luke Markham

Task Manager

Sharon Hall
Project Manager

David Vance
Project Advisor


Ball valve
Moisture KO
Pressure Regulator
Air Comp.
Needle Valve
Pressure Gauge
Oil filter
0 to 250 f Thermometer
Galvanize Pipe
0 to 12 scfm Flow Meter
4'x4' concrete pad
Pressure Gauge 0 to 30 psi
Pressure Gauge 0 to 30 psi
Well Seal
Well



ENVIRONMENTAL LAB OF

12600 West I-20 East - Odessa, Texas 79765

Analytical Report

Prepared for:

Kristin Farris

Rice Operating Co.

122 W. Taylor

Hobbs, NM 88240

Project: N-6

Project Number: RI 2407

Location: Hobbs

Lab Order Number: 4C16003

Report Date: 03/19/04

Rice Operating Co.	Project: N-6	Fax: (505) 397-1471
122 W. Taylor	Project Number: RI 2407	**Reported:**
Hobbs NM, 88240	Project Manager: Kristin Farris	03/19/04 15:59

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-2	4C16003-01	Water	03/15/04 11:00	03/16/04 07:45
MW-3	4C16003-02	Water	03/15/04 12:00	03/16/04 07:45
MW-4	4C16003-03	Water	03/15/04 13:00	03/16/04 07:45
MW-5	4C16003-04	Water	03/15/04 14:00	03/16/04 07:45
MW-6	4C16003-05	Water	03/15/04 15:00	03/16/04 07:45
MW-7	4C16003-06	Water	03/15/04 16:00	03/16/04 07:45
IWW	4C16003-07	Water	03/15/04 17:00	03/16/04 07:45

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Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-2 (4C16003-01)									
Benzene	**0.00458**	0.00100	mg/L	1	EC41907	03/18/04	03/18/04	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	**0.00236**	0.00100	"	"	"	"	"	"	
Xylene (p/m)	**0.00136**	0.00100	"	"	"	"	"	"	
Xylene (o)	J [0.000569]	0.00100	"	"	"	"	"	"	J
Surrogate: a,a,a-Trifluorotoluene		*149 %*	*80-120*		"	"	"	"	*S-04*
Surrogate: 4-Bromofluorobenzene		*82.5 %*	*80-120*		"	"	"	"	
MW-3 (4C16003-02)									
Benzene	**0.0354**	0.00100	mg/L	1	EC41907	03/18/04	03/18/04	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	J [0.000821]	0.00100	"	"	"	"	"	"	J
Xylene (p/m)	J [0.000606]	0.00100	"	"	"	"	"	"	J
Xylene (o)	**0.00104**	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*112 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*88.5 %*	*80-120*		"	"	"	"	
MW-4 (4C16003-03)									
Benzene	**0.00103**	0.00100	mg/L	1	EC41907	03/18/04	03/18/04	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*120 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*81.0 %*	*80-120*		"	"	"	"	
MW-5 (4C16003-04)									
Benzene	**0.0107**	0.00100	mg/L	1	EC41907	03/18/04	03/18/04	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	J [0.000543]	0.00100	"	"	"	"	"	"	J
Xylene (p/m)	J [0.000876]	0.00100	"	"	"	"	"	"	J
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*91.5 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*81.5 %*	*80-120*		"	"	"	"	

Quality Assurance Review

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

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Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-6 (4C16003-05)									
Benzene	**0.00260**	0.00100	mg/L	1	EC41907	03/18/04	03/18/04	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*110 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*80.5 %*	*80-120*		"	"	"	"	
MW-7 (4C16003-06)									
Benzene	**0.0131**	0.00100	mg/L	1	EC41907	03/18/04	03/18/04	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*108 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*85.0 %*	*80-120*		"	"	"	"	
IWW (4C16003-07)									
Benzene	**0.00619**	0.00100	mg/L	1	EC41907	03/18/04	03/18/04	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*111 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*85.5 %*	*80-120*		"	"	"	"	

Quality Assurance Review

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General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-2 (4C16003-01)									
Carbonate Alkalinity	ND	0.100	mg/L	1	EC41817	03/17/04	03/17/04	EPA 310.2M	
Bicarbonate Alkalinity	**212**	2.00	"	"	"	"	"	"	
Hydroxide Alkalinity	ND	0.100	"	"	"	"	"	"	
Chloride	**39.0**	5.00	"	"	EC41819	03/17/04	03/17/04	SW 846 9253	
Total Dissolved Solids	**484**	5.00	"	"	EC41831	03/18/04	03/18/04	EPA 160.1	
Sulfate	**108**	1.00	"	2	EC41813	03/17/04	03/17/04	EPA 375.4	
MW-3 (4C16003-02)									
Carbonate Alkalinity	ND	0.100	mg/L	1	EC41817	03/17/04	03/17/04	EPA 310.2M	
Bicarbonate Alkalinity	**352**	2.00	"	"	"	"	"	"	
Hydroxide Alkalinity	ND	0.100	"	"	"	"	"	"	
Chloride	**5140**	5.00	"	"	EC41819	03/17/04	03/17/04	SW 846 9253	
Total Dissolved Solids	**8990**	5.00	"	"	EC41831	03/18/04	03/18/04	EPA 160.1	
Sulfate	**793**	5.00	"	10	EC41813	03/17/04	03/17/04	EPA 375.4	
MW-4 (4C16003-03)									
Carbonate Alkalinity	ND	0.100	mg/L	1	EC41817	03/17/04	03/17/04	EPA 310.2M	
Bicarbonate Alkalinity	**212**	2.00	"	"	"	"	"	"	
Hydroxide Alkalinity	ND	0.100	"	"	"	"	"	"	
Chloride	**124**	5.00	"	"	EC41819	03/17/04	03/17/04	SW 846 9253	
Total Dissolved Solids	**560**	5.00	"	"	EC41831	03/18/04	03/18/04	EPA 160.1	
Sulfate	**127**	1.00	"	2	EC41813	03/17/04	03/17/04	EPA 375.4	
MW-5 (4C16003-04)									
Carbonate Alkalinity	ND	0.100	mg/L	1	EC41817	03/17/04	03/17/04	EPA 310.2M	
Bicarbonate Alkalinity	**250**	2.00	"	"	"	"	"	"	
Hydroxide Alkalinity	ND	0.100	"	"	"	"	"	"	
Chloride	**762**	5.00	"	"	EC41819	03/17/04	03/17/04	SW 846 9253	
Total Dissolved Solids	**1620**	5.00	"	"	EC41831	03/18/04	03/18/04	EPA 160.1	
Sulfate	**216**	2.50	"	5	EC41813	03/17/04	03/17/04	EPA 375.4	
MW-6 (4C16003-05)									
Carbonate Alkalinity	ND	0.100	mg/L	1	EC41817	03/17/04	03/17/04	EPA 310.2M	
Bicarbonate Alkalinity	**216**	2.00	"	"	"	"	"	"	
Hydroxide Alkalinity	ND	0.100	"	"	"	"	"	"	
Chloride	**222**	5.00	"	"	EC41819	03/17/04	03/17/04	SW 846 9253	
Total Dissolved Solids	**692**	5.00	"	"	EC41831	03/18/04	03/18/04	EPA 160.1	
Sulfate	**94.2**	1.00	"	2	EC41813	03/17/04	03/17/04	EPA 375.4	

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.

Quality Assurance Review

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Rice Operating Co.	Project: N-6	Fax: (505) 397-1471
122 W. Taylor	Project Number: RI 2407	**Reported:**
Hobbs NM, 88240	Project Manager: Kristin Farris	03/19/04 15:59

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-7 (4C16003-06)									
Carbonate Alkalinity	ND	0.100	mg/L	1	EC41817	03/17/04	03/17/04	EPA 310.2M	
Bicarbonate Alkalinity	**256**	2.00	"	"	"	"	"	"	
Hydroxide Alkalinity	ND	0.100	"	"	"	"	"	"	
Chloride	**1080**	5.00	"	"	EC41819	03/17/04	03/17/04	SW 846 9253	
Total Dissolved Solids	**2220**	5.00	"	"	EC41831	03/18/04	03/18/04	EPA 160.1	
Sulfate	**220**	2.50	"	5	EC41813	03/17/04	03/17/04	EPA 375.4	
IWW (4C16003-07)									
Carbonate Alkalinity	ND	0.100	mg/L	1	EC41817	03/17/04	03/17/04	EPA 310.2M	
Bicarbonate Alkalinity	**266**	2.00	"	"	"	"	"	"	
Hydroxide Alkalinity	ND	0.100	"	"	"	"	"	"	
Chloride	**487**	5.00	"	"	EC41819	03/17/04	03/17/04	SW 846 9253	
Total Dissolved Solids	**1130**	5.00	"	"	EC41831	03/18/04	03/18/04	EPA 160.1	
Sulfate	**130**	1.00	"	2	EC41813	03/17/04	03/17/04	EPA 375.4	

Quality Assurance Review

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Rice Operating Co.	Project: N-6	Fax: (505) 397-1471
122 W. Taylor	Project Number: RI 2407	**Reported:**
Hobbs NM, 88240	Project Manager: Kristin Farris	03/19/04 15:59

Total Metals by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-2 (4C16003-01)									
Calcium	**91.1**	0.100	mg/L	10	EC41905	03/16/04	03/19/04	EPA 6010B	
Magnesium	**16.8**	0.0100	"	"	"	"	"	"	
Potassium	**3.75**	0.0500	"	1	"	"	03/19/04	"	
Sodium	**48.4**	0.100	"	10	"	"	03/19/04	"	
MW-3 (4C16003-02)									
Calcium	**301**	1.00	mg/L	100	EC41905	03/16/04	03/19/04	EPA 6010B	
Magnesium	**100**	0.0100	"	10	"	"	03/19/04	"	
Potassium	**100**	0.500	"	"	"	"	"	"	
Sodium	**2360**	10.0	"	1000	"	"	03/19/04	"	
MW-4 (4C16003-03)									
Calcium	**81.6**	0.100	mg/L	10	EC41905	03/16/04	03/19/04	EPA 6010B	
Magnesium	**16.2**	0.0100	"	"	"	"	"	"	
Potassium	**5.43**	0.0500	"	1	"	"	03/19/04	"	
Sodium	**109**	0.100	"	10	"	"	03/19/04	"	
MW-5 (4C16003-04)									
Calcium	**139**	1.00	mg/L	100	EC41905	03/16/04	03/19/04	EPA 6010B	
Magnesium	**33.0**	0.0100	"	10	"	"	03/19/04	"	
Potassium	**9.59**	0.500	"	"	"	"	"	"	
Sodium	**443**	1.00	"	100	"	"	03/19/04	"	
MW-6 (4C16003-05)									
Calcium	**93.2**	0.100	mg/L	10	EC41905	03/16/04	03/19/04	EPA 6010B	
Magnesium	**19.8**	0.0100	"	"	"	"	"	"	
Potassium	**7.28**	0.0500	"	1	"	"	03/19/04	"	
Sodium	**129**	1.00	"	100	"	"	03/19/04	"	
MW-7 (4C16003-06)									
Calcium	**136**	1.00	mg/L	100	EC41905	03/16/04	03/19/04	EPA 6010B	
Magnesium	**36.9**	0.0100	"	10	"	"	03/19/04	"	
Potassium	**14.3**	0.500	"	"	"	"	"	"	
Sodium	**599**	1.00	"	100	"	"	03/19/04	"	

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Quality Assurance Review

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Rice Operating Co.	Project: N-6	Fax: (505) 397-1471
122 W. Taylor	Project Number: RI 2407	**Reported:**
Hobbs NM, 88240	Project Manager: Kristin Farris	03/19/04 15:59

Total Metals by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
IWW (4C16003-07)									
Calcium	**84.5**	0.100	mg/L	10	EC41905	03/16/04	03/19/04	EPA 6010B	
Magnesium	**20.7**	0.0100	"	"	"	"	"	"	
Potassium	**54.0**	0.500	"	"	"	"	"	"	
Sodium	**299**	1.00	"	100	"	"	03/19/04	"	

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Quality Assurance Review

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

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
Batch EC41907 - EPA 5030C (GC)										
Blank (EC41907-BLK1)				Prepared & Analyzed: 03/18/04						
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	*23.5*		*ug/l*	*20.0*		*118*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*16.0*		"	*20.0*		*80.0*	*80-120*			
LCS (EC41907-BS1)				Prepared & Analyzed: 03/18/04						
Benzene	84.1		ug/l	100		84.1	80-120			
Toluene	86.6		"	100		86.6	80-120			
Ethylbenzene	88.7		"	100		88.7	80-120			
Xylene (p/m)	183		"	200		91.5	80-120			
Xylene (o)	94.1		"	100		94.1	80-120			
Surrogate: a,a,a-Trifluorotoluene	*20.8*		"	*20.0*		*104*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*21.5*		"	*20.0*		*108*	*80-120*			
Calibration Check (EC41907-CCV1)				Prepared & Analyzed: 03/18/04						
Benzene	88.0		ug/l	100		88.0	80-120			
Toluene	91.6		"	100		91.6	80-120			
Ethylbenzene	94.5		"	100		94.5	80-120			
Xylene (p/m)	197		"	200		98.5	80-120			
Xylene (o)	95.1		"	100		95.1	80-120			
Surrogate: a,a,a-Trifluorotoluene	*20.3*		"	*20.0*		*102*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*20.2*		"	*20.0*		*101*	*80-120*			
Duplicate (EC41907-DUP1)		**Source: 4C16003-01**		Prepared & Analyzed: 03/18/04						
Benzene	0.00433	0.00100	mg/L		0.00458			5.61	20	
Toluene	ND	0.00100	"		ND				20	
Ethylbenzene	0.00230	0.00100	"		0.00236			2.58	20	
Xylene (p/m)	0.00121	0.00100	"		0.00136			11.7	20	
Xylene (o)	J [0.000565]	0.00100	"		0.000569			0.705	20	J
Surrogate: a,a,a-Trifluorotoluene	*31.8*		*ug/l*	*20.0*		*159*	*80-120*			*S-04*
Surrogate: 4-Bromofluorobenzene	*16.6*		"	*20.0*		*83.0*	*80-120*			

Environmental Lab of Texas

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Quality Assurance Review

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

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
Batch EC41907 - EPA 5030C (GC)										
Matrix Spike (EC41907-MS1)	**Source: 4C16003-03**			Prepared & Analyzed: 03/18/04						
Benzene	86.6		ug/l	100	1.03	85.6	80-120			
Toluene	86.8		"	100	ND	86.8	80-120			
Ethylbenzene	85.6		"	100	ND	85.6	80-120			
Xylene (p/m)	180		"	200	ND	90.0	80-120			
Xylene (o)	90.6		"	100	ND	90.6	80-120			
Surrogate: a,a,a-Trifluorotoluene	*19.3*		"	*20.0*		*96.5*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*16.2*		"	*20.0*		*81.0*	*80-120*			

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Quality Assurance Review

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

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
Batch EC41813 - General Preparation (WetChem)										
Blank (EC41813-BLK1)				Prepared & Analyzed: 03/17/04						
Sulfate	ND	0.500	mg/L							
Calibration Check (EC41813-CCV1)				Prepared & Analyzed: 03/17/04						
Sulfate	49.1		mg/L	50.0		98.2	80-120			
Duplicate (EC41813-DUP1)	**Source: 4C16001-02**			Prepared & Analyzed: 03/17/04						
Sulfate	254	2.50	mg/L		248			2.39	20	
Batch EC41817 - General Preparation (WetChem)										
Blank (EC41817-BLK1)				Prepared & Analyzed: 03/17/04						
Carbonate Alkalinity	ND	0.100	mg/L							
Bicarbonate Alkalinity	ND	2.00	"							
Hydroxide Alkalinity	ND	0.100	"							
Duplicate (EC41817-DUP1)	**Source: 4C16001-02**			Prepared & Analyzed: 03/17/04						
Carbonate Alkalinity	0.00	0.100	mg/L		0.00				20	
Bicarbonate Alkalinity	198	2.00	"		196			1.02	20	
Hydroxide Alkalinity	0.00	0.100	"		0.00				20	
Reference (EC41817-SRM1)				Prepared & Analyzed: 03/17/04						
Carbonate Alkalinity	0.0496		mg/L	0.0500		99.2	80-120			
Batch EC41819 - General Preparation (WetChem)										
Blank (EC41819-BLK1)				Prepared & Analyzed: 03/17/04						
Chloride	ND	5.00	mg/L							

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
Batch EC41819 - General Preparation (WetChem)										
Matrix Spike (EC41819-MS1)	**Source: 4C16001-02**			Prepared & Analyzed: 03/17/04						
Chloride	363		mg/L	250	115	99.2	80-120			
Matrix Spike Dup (EC41819-MSD1)	**Source: 4C16001-02**			Prepared & Analyzed: 03/17/04						
Chloride	359		mg/L	250	115	97.6	80-120	1.11	20	
Reference (EC41819-SRM1)				Prepared & Analyzed: 03/17/04						
Chloride	4960		mg/L	5000		99.2	80-120			
Batch EC41831 - General Preparation (WetChem)										
Blank (EC41831-BLK1)				Prepared & Analyzed: 03/18/04						
Total Dissolved Solids	ND	5.00	mg/L							
Duplicate (EC41831-DUP1)	**Source: 4C16002-01**			Prepared & Analyzed: 03/18/04						
Total Dissolved Solids	793	5.00	mg/L		780			1.65	20	

Rice Operating Co.	Project: N-6	Fax: (505) 397-1471
122 W. Taylor	Project Number: RI 2407	**Reported:**
Hobbs NM, 88240	Project Manager: Kristin Farris	03/19/04 15:59

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
Batch EC41905 - General Preparation (Metals)										
Blank (EC41905-BLK1)				Prepared: 03/16/04 Analyzed: 03/19/04						
Calcium	ND	0.0100	mg/L							
Magnesium	ND	0.00100	"							
Potassium	ND	0.0500	"							
Sodium	ND	0.0100	"							
Calibration Check (EC41905-CCV1)				Prepared: 03/16/04 Analyzed: 03/19/04						
Calcium	1.93		mg/L	2.00		96.5	85-115			
Magnesium	1.98		"	2.00		99.0	85-115			
Potassium	1.73		"	2.00		86.5	85-115			
Sodium	1.78		"	2.00		89.0	85-115			
Duplicate (EC41905-DUP1)	**Source: 4C12015-01**			Prepared: 03/16/04 Analyzed: 03/19/04						
Calcium	159	1.00	mg/L		158			0.631	20	
Magnesium	83.8	0.0100	"		83.6			0.239	20	
Potassium	12.9	0.500	"		12.8			0.778	20	
Sodium	202	1.00	"		198			2.00	20	

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Quality Assurance Review

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
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

Environmental Lab of Texas, Inc.

BILL ROC

12600 West I-20 East
Odessa, Texas 79763
Phone: 915-563-1800
Fax: 915-563-1713

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Kristin Farris
Company Name: RICE Operating
Company Address: 122 W. Taylor
City/State/Zip: Hobbs, NM 88240
Telephone No: (505) 393-9174
Fax No: (505) 397-1471
Sampler Signature:

Project Name: N-6
Project #: RI 2407
Project Loc: Hobbs
PO #: 641

LC16003

LAB # (lab use only)	FIELD CODE	Date Sampled	Time Sampled	No. of Containers	Preservative: Ice	HNO_3	HCl	NaOH	H_2SO_4	None	Other (Specify)	Matrix: Water	Sludge	Soil	Other (specify):	Analyze For: TCLP: TOTAL: CLORIDES / SAR / EC	TPH 418.1	TPH TX 1005/1006	TPH 8015M GRO/DRO	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030	Anions/Cations								RUSH TAT (Pre-Scheduled)	Standard TAT
-01	mw-2	3-15-04	11:00	1								/				/								/									
	mw-2	3-15-04	11:00	2	/		/					/											/										
-02	mw-3	3-15-04	12:00	1								/				/								/									
	mw-3	3-15-04	12:00	2	/		/					/											/										
-03	mw-4	3-15-04	1:00	1								/				/								/									
	mw-4	3-15-04	1:00	2	/		/					/											/										
-04	mw-5	3-15-04	2:00	1								/				/								/									
	mw-5	3-15-04	2:00	2	/		/					/											/										
-05	mw-6	3-15-04	3:00	1								/				/								/									
	mw-6	3-15-04	3:00	2	/		/					/											/										

Special Instructions:
Email enviro@leaco.net results

Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
	3/16/04	7:45		3/16/04	0745

Sample Containers Intact? Y N
Temperature Upon Receipt:
Laboratory Comments:
Ice 2°C

CHAIN-OF-CUSTODY

www.analysysinc.com

AnalySys Inc.
3512 Montopolis Drive, Austin, TX 78744 Ph: (512) 385-5886 Fax: (512) 385-7411
2209 N. Padre Island Dr., Ste K, Corpus Christi, TX 78408 Ph: (361) 289-6394 Fax: (361) 289-0835

Send Reports To:
Company Name: Environmental Technology Group Inc.
Address: 2540 W. Morland
City: Hobbs State: N.M. Zip: 88240
ATTN:
Phone: (505) 397-4882 Fax: (505) 397-4701
Project Name/PO#: N-6 RI 2407 Sampler: Cody Fisher

Bill To (if different):
Company Name:
Address:
City: State: Zip:
ATTN:
Phone: Fax:

Samples/projects intended for TCEQ-TRRP completion require special handling, QC requirements and pricing. To Be successfully completed such projects should be identified and discussed prior to receipt and **MUST BE IDENTIFIED** on this Chain-of Custody under "special instructions".

4016003

	Client Sample No. Description/Identification	Date Sampled	Time Sampled	No. of Containers Shipped	Grab	Composite	Lab I.D. # (Lab Only)	Ice	HNO3	HCL	ZnAc/NaOH	H2SO4 Glass	None	Other (Specify)	Water	Wastewater	Waste	Soil	Other (Specify)	TDS	BTEX8021B	Anions/cations	RUSH TAT - Pre-Scheduled	Standard TAT
-04	mw-7	3-15-04	4:00	1											/					/		/		
	mw-7	3-15-04	4:00	2				/		/					/						/			
-07	Iww	3-15-04	5:00	1											/					/		/		
	Iww	3-15-04	5:00	2				/		/					/						/			

Special Instructions (such as special QC requirements, lists, methods, etc...)

(1)Unless specifically requested otherwise on this Chain-of-custody and/or attached documentation, all analyses will be conducted using ASI's method of choice and all data will be reported to ASI's normal reporting limits (MDL/PQL). For GC/MS volatiles and extractables, *unless specific analytical parameter lists are specified on this chain-of-custody or attached to this chain of custody,* ASI will default to Priority Pollutants or ASI's HSL list at ASI's option. Specific compound lists must be supplied for all GC procedures.

Sample Relinquished By: Name	Affiliation	Date	Time	Sample Received By: Name	Affiliation	Date	Time
Cody Fisher	ETGI	3-15-04					
[illegible]	[illegible]	3/15/04	7:45	Rel. [illegible]	ELOT	3/16/04	0745

Temperature upon receipt (Consistent with [illegible]): YES / NO 2°C

Tendering of above described samples to AnalySys, Inc. for analytical testing constitutes agreement by buyer/sampler to AnalySys, Inc.'s standard terms.

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

Client: Rice Operating Co.

Date/Time: 03-16-04 @ 0745

Order #: 4C16003

Initials: JMM

Sample Receipt Checklist

Temperature of container/cooler?	(Yes)	No	2 C
Shipping container/cooler in good condition?	(Yes)	No	
Custody Seals intact on shipping container/cooler?	Yes	No	(Not present)
Custody Seals intact on sample bottles?	Yes	No	(Not present)
Chain of custody present?	(Yes)	No	
Sample Instructions complete on Chain of Custody?	(Yes)	No	
Chain of Custody signed when relinquished and received?	(Yes)	No	
Chain of custody agrees with sample label(s)	(Yes)	No	
Container labels legible and intact?	(Yes)	No	
Sample Matrix and properties same as on chain of custody?	(Yes)	No	
Samples in proper container/bottle?	(Yes)	No	
Samples properly preserved?	(Yes)	No	
Sample bottles intact?	(Yes)	No	
Preservations documented on Chain of Custody?	(Yes)	No	
Containers documented on Chain of Custody?	(Yes)	No	
Sufficient sample amount for indicated test?	(Yes)	No	
All samples received within sufficient hold time?	(Yes)	No	
VOC samples have zero headspace?	(Yes)	No	Not Applicable

Other observations:

_____

_____

_____

Variance Documentation:

Contact Person: - _____ Date/Time: _____ Contacted by: _____

Regarding:

_____

_____

_____

Corrective Action Taken:

_____

_____

_____

_____

_____

_____

_____

_____

ENVIRONMENTAL LAB OF

12600 West I-20 East - Odessa, Texas 79765

Analytical Report

Prepared for:

Kristin Farris

Rice Operating Co.

122 W. Taylor

Hobbs, NM 88240

Project: N-6 Leak

Project Number: None Given

Location: Hobbs

Lab Order Number: 4E29008

Report Date: 06/04/04

Rice Operating Co.	Project: N-6 Leak	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	**Reported:**
Hobbs NM, 88240	Project Manager: Kristin Farris	06/04/04 17:04

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
IWW	4E29008-01	Water	05/27/04 17:00	05/28/04 17:00

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Rice Operating Co.	Project: N-6 Leak	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	**Reported:**
Hobbs NM, 88240	Project Manager: Kristin Farris	06/04/04 17:04

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
IWW (4E29008-01) Water									
Benzene	ND	0.00100	mg/L	1	EF40313	06/02/04	06/02/04	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*102 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*82.0 %*	*80-120*		"	"	"	"	

Quality Assurance Review

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Rice Operating Co.	Project: N-6 Leak	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	**Reported:**
Hobbs NM, 88240	Project Manager: Kristin Farris	06/04/04 17:04

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
IWW (4E29008-01) Water									
Carbonate Alkalinity	ND	0.100	mg/L	1	EF40408	05/29/04	05/29/04	EPA 310.2M	
Bicarbonate Alkalinity	**259**	2.00	"	"	"	"	"	"	
Hydroxide Alkalinity	ND	0.100	"	"	"	"	"	"	
Chloride	**40.8**	5.00	"	"	EF40407	06/03/04	06/03/04	EPA 325.3M	
Total Dissolved Solids	**474**	5.00	"	"	EF40310	06/01/04	06/02/04	EPA 160.1	
Sulfate	**100**	1.00	"	2	EF40418	06/04/04	06/04/04	EPA 375.4	

Quality Assurance Review

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Rice Operating Co.	Project: N-6 Leak	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	**Reported:**
Hobbs NM, 88240	Project Manager: Kristin Farris	06/04/04 17:04

Total Metals by EPA / Standard Methods
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
IWW (4E29008-01) Water									
Calcium	**62.1**	0.100	mg/L	10	EF40420	06/02/04	06/04/04	EPA 6010B	
Magnesium	**20.6**	0.0100	"	"	"	"	"	"	
Potassium	**9.69**	0.0500	"	1	"	"	06/04/04	"	
Sodium	**146**	1.00	"	100	"	"	06/04/04	"	

Quality Assurance Review

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

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
Batch EF40313 - EPA 5030C (GC)										
Blank (EF40313-BLK1)				Prepared & Analyzed: 06/02/04						
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	*22.6*		*ug/l*	*20.0*		*113*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*18.7*		*"*	*20.0*		*93.5*	*80-120*			
LCS (EF40313-BS1)				Prepared & Analyzed: 06/02/04						
Benzene	87.9		ug/l	100		87.9	80-120			
Toluene	94.6		"	100		94.6	80-120			
Ethylbenzene	91.2		"	100		91.2	80-120			
Xylene (p/m)	196		"	200		98.0	80-120			
Xylene (o)	94.9		"	100		94.9	80-120			
Surrogate: a,a,a-Trifluorotoluene	*21.2*		*"*	*20.0*		*106*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*22.0*		*"*	*20.0*		*110*	*80-120*			
Calibration Check (EF40313-CCV1)				Prepared & Analyzed: 06/02/04						
Benzene	83.3		ug/l	100		83.3	80-120			
Toluene	92.4		"	100		92.4	80-120			
Ethylbenzene	92.3		"	100		92.3	80-120			
Xylene (p/m)	196		"	200		98.0	80-120			
Xylene (o)	92.0		"	100		92.0	80-120			
Surrogate: a,a,a-Trifluorotoluene	*17.6*		*"*	*20.0*		*88.0*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*20.7*		*"*	*20.0*		*104*	*80-120*			
Matrix Spike (EF40313-MS1)		**Source: 4E29001-01**		Prepared & Analyzed: 06/02/04						
Benzene	92.3		ug/l	100	ND	92.3	80-120			
Toluene	103		"	100	ND	103	80-120			
Ethylbenzene	99.5		"	100	ND	99.5	80-120			
Xylene (p/m)	214		"	200	ND	107	80-120			
Xylene (o)	102		"	100	ND	102	80-120			
Surrogate: a,a,a-Trifluorotoluene	*22.2*		*"*	*20.0*		*111*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*23.0*		*"*	*20.0*		*115*	*80-120*			

Rice Operating Co.	Project: N-6 Leak	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	**Reported:**
Hobbs NM, 88240	Project Manager: Kristin Farris	06/04/04 17:04

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
Batch EF40313 - EPA 5030C (GC)										
Matrix Spike Dup (EF40313-MSD1)	**Source: 4E29001-01**			Prepared & Analyzed: 06/02/04						
Benzene	83.2		ug/l	100	ND	83.2	80-120	10.4	20	
Toluene	92.2		"	100	ND	92.2	80-120	11.1	20	
Ethylbenzene	89.4		"	100	ND	89.4	80-120	10.7	20	
Xylene (p/m)	192		"	200	ND	96.0	80-120	10.8	20	
Xylene (o)	92.6		"	100	ND	92.6	80-120	9.66	20	
Surrogate: a,a,a-Trifluorotoluene	*20.5*		"	*20.0*		*102*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*22.8*		"	*20.0*		*114*	*80-120*			

Quality Assurance Review

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Rice Operating Co.	Project: N-6 Leak	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	**Reported:**
Hobbs NM, 88240	Project Manager: Kristin Farris	06/04/04 17:04

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
Batch EF40310 - Filtration Preparation										
Blank (EF40310-BLK1)				Prepared: 06/01/04 Analyzed: 06/02/04						
Total Dissolved Solids	ND	5.00	mg/L							
Duplicate (EF40310-DUP1)		**Source: 4E29001-01**		Prepared: 06/01/04 Analyzed: 06/02/04						
Total Dissolved Solids	831	5.00	mg/L		830			0.120	20	
Batch EF40407 - General Preparation (WetChem)										
Blank (EF40407-BLK1)				Prepared & Analyzed: 06/03/04						
Chloride	ND	5.00	mg/L							
Matrix Spike (EF40407-MS1)		**Source: 4E29001-01**		Prepared & Analyzed: 06/03/04						
Chloride	709	5.00	mg/L	500	213	99.2	80-120			
Matrix Spike Dup (EF40407-MSD1)		**Source: 4E29001-01**		Prepared & Analyzed: 06/03/04						
Chloride	700	5.00	mg/L	500	213	97.4	80-120	1.28	20	
Reference (EF40407-SRM1)				Prepared & Analyzed: 06/03/04						
Chloride	4960		mg/L	5000		99.2	80-120			
Batch EF40408 - General Preparation (WetChem)										
Blank (EF40408-BLK1)				Prepared & Analyzed: 05/29/04						
Carbonate Alkalinity	ND	0.100	mg/L							
Bicarbonate Alkalinity	ND	2.00	"							
Hydroxide Alkalinity	ND	0.100	"							

Quality Assurance Review

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

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
Batch EF40408 - General Preparation (WetChem)										
Duplicate (EF40408-DUP1)		**Source: 4E29001-01**		Prepared & Analyzed: 05/29/04						
Carbonate Alkalinity	0.00	0.100	mg/L		0.00				20	
Bicarbonate Alkalinity	214	2.00	"		214			0.00	20	
Hydroxide Alkalinity	0.00	0.100	"		0.00				20	
Reference (EF40408-SRM1)				Prepared & Analyzed: 05/29/04						
Carbonate Alkalinity	0.0496		mg/L	0.0500		99.2	80-120			
Batch EF40418 - General Preparation (WetChem)										
Blank (EF40418-BLK1)				Prepared & Analyzed: 06/04/04						
Sulfate	ND	0.500	mg/L							
Calibration Check (EF40418-CCV1)				Prepared & Analyzed: 06/04/04						
Sulfate	49.2		mg/L	50.0		98.4	80-120			
Duplicate (EF40418-DUP1)		**Source: 4E29001-01**		Prepared & Analyzed: 06/04/04						
Sulfate	140	1.00	mg/L		138			1.44	20	

Rice Operating Co.	Project: N-6 Leak	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	**Reported:**
Hobbs NM, 88240	Project Manager: Kristin Farris	06/04/04 17:04

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
Batch EF40420 - General Preparation (Metals)										
Blank (EF40420-BLK1)				Prepared: 06/02/04 Analyzed: 06/04/04						
Calcium	ND	0.0100	mg/L							
Magnesium	ND	0.00100	"							
Potassium	ND	0.0500	"							
Sodium	ND	0.0100	"							
Calibration Check (EF40420-CCV1)				Prepared: 06/02/04 Analyzed: 06/04/04						
Calcium	2.00		mg/L	2.00		100	85-115			
Magnesium	2.27		"	2.00		114	85-115			
Potassium	1.82		"	2.00		91.0	85-115			
Sodium	1.86		"	2.00		93.0	85-115			
Duplicate (EF40420-DUP1)	**Source: 4E29006-01**			Prepared: 06/02/04 Analyzed: 06/04/04						
Calcium	69.2	0.0100	mg/L		58.9			16.1	20	
Magnesium	47.0	0.00100	"		43.0			8.89	20	
Potassium	7.56	0.0500	"		7.95			5.03	20	
Sodium	126	0.0100	"		145			14.0	20	

Quality Assurance Review

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Notes and Definitions

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

Environmental Lab of Texas, Inc.

12600 West I-20 East
Odessa, Texas 79763
Phone: 915-563-1800
Fax: 915-563-1713

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: KRISTIN FARRIS
Company Name: RICE OPERATING
Company Address: 122 W. TAYLOR
City/State/Zip: Hobbs, NM 88240
Telephone No: 505-393-9174 Fax No: 505-397-1471
Sampler Signature: SAMPLE WAS Pulled By Cody Fisher dropped off w/other SAMPLES, But NO COC WAS made out. Roy R. RASCON 6-1-04 COC Fill out By Roy R. RASCON

Project Name: N-6 LEAK
Project #:
Project Loc: Hobbs
PO #: 641

LAB # (lab use only) 4E2908	FIELD CODE	Date Sampled	Time Sampled	No. of Containers	Preservative: Ice	HNO3	HCl 40ml glass rec 6/2/04	NaOH	H2SO4	None 500ml HDPE rec 6/2/04	Other (Specify)	Matrix: Water	Sludge	Soil	Other (specify):	Analyze For: TCLP: TOTAL: TDS / CL / SAR / EC	TPH 418.1	TPH TX 1005/1006	TPH 8015M GRO/DRO	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030	Cations	Anions						RUSH TAT (Pre-Schedule)	Standard TAT
-01	I WW	5-27-04	5:00	2	✓		2			2		✓				✓							✓	✓	✓								

Special Instructions:
E MAIL to ENVIRO @ leaco.NET

Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT: Samples rec.	Date	Time
C Hargrave	6/1/04	19:20	Jessica morning	06 2804	1700

Sample Containers Intact? Y N
Temperature Upon Receipt: 22.5° C
Laboratory Comments:

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

Client: Rice Operating Co.

Date/Time: 05-29-04 @ 1030

Order #:

Initials: JMM

Sample Receipt Checklist

Temperature of container/cooler?	Yes	No	C
Shipping container/cooler in good condition?	(Yes)	No	
Custody Seals intact on shipping container/cooler?	Yes	No	(Not present)
Custody Seals intact on sample bottles?	Yes	No	(Not present)
Chain of custody present?	Yes	(No)	*
Sample Instructions complete on Chain of Custody?	(Yes)	No	
Chain of Custody signed when relinquished and received?	Yes	(No)	*
Chain of custody agrees with sample label(s)	Yes	(No)	*
Container labels legible and intact?	(Yes)	No	
Sample Matrix and properties same as on chain of custody?	(Yes)	No	
Samples in proper container/bottle?	(Yes)	No	
Samples properly preserved?	Yes	No	should be 4°C ± 2°C
Sample bottles intact?	(Yes)	No	
Preservations documented on Chain of Custody?	(Yes)	No	
Containers documented on Chain of Custody?	(Yes)	No	
Sufficient sample amount for indicated test?	(Yes)	No	
All samples received within sufficient hold time?	(Yes)	No	
VOC samples have zero headspace?	(Yes)	No	Not Applicable

Other observations: * missing COC

Variance Documentation:

Contact Person: - Carolyn Haynes Date/Time: 05-28-04 @ 1700 Contacted by: Jeanne McMurrey

Regarding:

missing COC

Corrective Action Taken:

will bring COC (JMM 6/1/04) Tues 6/1/4

COC + BTEX rec. 6/2/4 @ 0800 BTEX @ 0.5°C

ENVIRONMENTAL LAB OF

12600 West I-20 East - Odessa, Texas 79765

Analytical Report

Prepared for:

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

Project: N-6 Leak
Project Number: None Given
Location: Hobbs

Lab Order Number: 4E29008

Report Date: 06/04/04

Rice Operating Co.	Project: N-6 Leak	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	**Reported:**
Hobbs NM, 88240	Project Manager: Kristin Farris	06/04/04 17:04

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
IWW	4E29008-01	Water	05/27/04 17:00	05/28/04 17:00

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Rice Operating Co.	Project: N-6 Leak	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	**Reported:**
Hobbs NM, 88240	Project Manager: Kristin Farris	06/04/04 17:04

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
IWW (4E29008-01) Water									
Benzene	ND	0.00100	mg/L	1	EF40313	06/02/04	06/02/04	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*102 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*82.0 %*	*80-120*		"	"	"	"	

Quality Assurance Review

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Rice Operating Co.	Project: N-6 Leak	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	**Reported:**
Hobbs NM, 88240	Project Manager: Kristin Farris	06/04/04 17:04

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
IWW (4E29008-01) Water									
Carbonate Alkalinity	ND	0.100	mg/L	1	EF40408	05/29/04	05/29/04	EPA 310.2M	
Bicarbonate Alkalinity	**259**	2.00	"	"	"	"	"	"	
Hydroxide Alkalinity	ND	0.100	"	"	"	"	"	"	
Chloride	**40.8**	5.00	"	"	EF40407	06/03/04	06/03/04	EPA 325.3M	
Total Dissolved Solids	**474**	5.00	"	"	EF40310	06/01/04	06/02/04	EPA 160.1	
Sulfate	**100**	1.00	"	2	EF40418	06/04/04	06/04/04	EPA 375.4	

Quality Assurance Review

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Rice Operating Co.	Project: N-6 Leak	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	**Reported:**
Hobbs NM, 88240	Project Manager: Kristin Farris	06/04/04 17:04

Total Metals by EPA / Standard Methods
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
IWW (4E29008-01) Water									
Calcium	**62.1**	0.100	mg/L	10	EF40420	06/02/04	06/04/04	EPA 6010B	
Magnesium	**20.6**	0.0100	"	"	"	"	"	"	
Potassium	**9.69**	0.0500	"	1	"	"	06/04/04	"	
Sodium	**146**	1.00	"	100	"	"	06/04/04	"	

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.

Quality Assurance Review

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

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
Batch EF40313 - EPA 5030C (GC)										
Blank (EF40313-BLK1)				Prepared & Analyzed: 06/02/04						
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	*22.6*		*ug/l*	*20.0*		*113*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*18.7*		"	*20.0*		*93.5*	*80-120*			
LCS (EF40313-BS1)				Prepared & Analyzed: 06/02/04						
Benzene	87.9		ug/l	100		87.9	80-120			
Toluene	94.6		"	100		94.6	80-120			
Ethylbenzene	91.2		"	100		91.2	80-120			
Xylene (p/m)	196		"	200		98.0	80-120			
Xylene (o)	94.9		"	100		94.9	80-120			
Surrogate: a,a,a-Trifluorotoluene	*21.2*		"	*20.0*		*106*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*22.0*		"	*20.0*		*110*	*80-120*			
Calibration Check (EF40313-CCV1)				Prepared & Analyzed: 06/02/04						
Benzene	83.3		ug/l	100		83.3	80-120			
Toluene	92.4		"	100		92.4	80-120			
Ethylbenzene	92.3		"	100		92.3	80-120			
Xylene (p/m)	196		"	200		98.0	80-120			
Xylene (o)	92.0		"	100		92.0	80-120			
Surrogate: a,a,a-Trifluorotoluene	*17.6*		"	*20.0*		*88.0*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*20.7*		"	*20.0*		*104*	*80-120*			
Matrix Spike (EF40313-MS1)	**Source: 4E29001-01**			Prepared & Analyzed: 06/02/04						
Benzene	92.3		ug/l	100	ND	92.3	80-120			
Toluene	103		"	100	ND	103	80-120			
Ethylbenzene	99.5		"	100	ND	99.5	80-120			
Xylene (p/m)	214		"	200	ND	107	80-120			
Xylene (o)	102		"	100	ND	102	80-120			
Surrogate: a,a,a-Trifluorotoluene	*22.2*		"	*20.0*		*111*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*23.0*		"	*20.0*		*115*	*80-120*			

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
Batch EF40313 - EPA 5030C (GC)										
Matrix Spike Dup (EF40313-MSD1)	**Source: 4E29001-01**		Prepared & Analyzed: 06/02/04							
Benzene	83.2		ug/l	100	ND	83.2	80-120	10.4	20	
Toluene	92.2		"	100	ND	92.2	80-120	11.1	20	
Ethylbenzene	89.4		"	100	ND	89.4	80-120	10.7	20	
Xylene (p/m)	192		"	200	ND	96.0	80-120	10.8	20	
Xylene (o)	92.6		"	100	ND	92.6	80-120	9.66	20	
Surrogate: a,a,a-Trifluorotoluene	*20.5*		*"*	*20.0*		*102*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*22.8*		*"*	*20.0*		*114*	*80-120*			

Rice Operating Co.	Project: N-6 Leak	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	**Reported:**
Hobbs NM, 88240	Project Manager: Kristin Farris	06/04/04 17:04

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
Batch EF40310 - Filtration Preparation										
Blank (EF40310-BLK1)				Prepared: 06/01/04 Analyzed: 06/02/04						
Total Dissolved Solids	ND	5.00	mg/L							
Duplicate (EF40310-DUP1)		**Source: 4E29001-01**		Prepared: 06/01/04 Analyzed: 06/02/04						
Total Dissolved Solids	831	5.00	mg/L		830			0.120	20	
Batch EF40407 - General Preparation (WetChem)										
Blank (EF40407-BLK1)				Prepared & Analyzed: 06/03/04						
Chloride	ND	5.00	mg/L							
Matrix Spike (EF40407-MS1)		**Source: 4E29001-01**		Prepared & Analyzed: 06/03/04						
Chloride	709	5.00	mg/L	500	213	99.2	80-120			
Matrix Spike Dup (EF40407-MSD1)		**Source: 4E29001-01**		Prepared & Analyzed: 06/03/04						
Chloride	700	5.00	mg/L	500	213	97.4	80-120	1.28	20	
Reference (EF40407-SRM1)				Prepared & Analyzed: 06/03/04						
Chloride	4960		mg/L	5000		99.2	80-120			
Batch EF40408 - General Preparation (WetChem)										
Blank (EF40408-BLK1)				Prepared & Analyzed: 05/29/04						
Carbonate Alkalinity	ND	0.100	mg/L							
Bicarbonate Alkalinity	ND	2.00	"							
Hydroxide Alkalinity	ND	0.100	"							

Quality Assurance Review

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Rice Operating Co.	Project: N-6 Leak	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	**Reported:**
Hobbs NM, 88240	Project Manager: Kristin Farris	06/04/04 17:04

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
Batch EF40408 - General Preparation (WetChem)										
Duplicate (EF40408-DUP1)		**Source: 4E29001-01**		Prepared & Analyzed: 05/29/04						
Carbonate Alkalinity	0.00	0.100	mg/L		0.00				20	
Bicarbonate Alkalinity	214	2.00	"		214			0.00	20	
Hydroxide Alkalinity	0.00	0.100	"		0.00				20	
Reference (EF40408-SRM1)				Prepared & Analyzed: 05/29/04						
Carbonate Alkalinity	0.0496		mg/L	0.0500		99.2	80-120			
Batch EF40418 - General Preparation (WetChem)										
Blank (EF40418-BLK1)				Prepared & Analyzed: 06/04/04						
Sulfate	ND	0.500	mg/L							
Calibration Check (EF40418-CCV1)				Prepared & Analyzed: 06/04/04						
Sulfate	49.2		mg/L	50.0		98.4	80-120			
Duplicate (EF40418-DUP1)		**Source: 4E29001-01**		Prepared & Analyzed: 06/04/04						
Sulfate	140	1.00	mg/L		138			1.44	20	

Quality Assurance Review

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Rice Operating Co.	Project: N-6 Leak	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	**Reported:**
Hobbs NM, 88240	Project Manager: Kristin Farris	06/04/04 17:04

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
Batch EF40420 - General Preparation (Metals)										
Blank (EF40420-BLK1)				Prepared: 06/02/04 Analyzed: 06/04/04						
Calcium	ND	0.0100	mg/L							
Magnesium	ND	0.00100	"							
Potassium	ND	0.0500	"							
Sodium	ND	0.0100	"							
Calibration Check (EF40420-CCV1)				Prepared: 06/02/04 Analyzed: 06/04/04						
Calcium	2.00		mg/L	2.00		100	85-115			
Magnesium	2.27		"	2.00		114	85-115			
Potassium	1.82		"	2.00		91.0	85-115			
Sodium	1.86		"	2.00		93.0	85-115			
Duplicate (EF40420-DUP1)	**Source: 4E29006-01**			Prepared: 06/02/04 Analyzed: 06/04/04						
Calcium	69.2	0.0100	mg/L		58.9			16.1	20	
Magnesium	47.0	0.00100	"		43.0			8.89	20	
Potassium	7.56	0.0500	"		7.95			5.03	20	
Sodium	126	0.0100	"		145			14.0	20	

Quality Assurance Review

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Notes and Definitions

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

Environmental Lab of Texas, Inc.

12600 West I-20 East
Odessa, Texas 79763
Phone: 915-563-1800
Fax: 915-563-1713

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: KRISTIN FARRIS
Company Name: RICE OPERATING
Company Address: 122 W. TAYLOR
City/State/Zip: Hobbs, NM 88240
Telephone No: 505-393-9174 Fax No: 505-397-1471

Project Name: N-6 LEAK
Project #:
Project Loc: Hobbs
PO #: 641

Sampler Signature: SAMPLE WAS Pulled By Cody Fisher dropped off w/other SAMPLES, But NO COC WAS made out. Roy R. RASCON 6-1-04
COC Bill out By Roy R. RASCON

LAB # (lab use only) 4E29008	FIELD CODE	Date Sampled	Time Sampled	No. of Containers	Preservative: Ice	HNO3	HCl 40ml glass rec 6/2/04	NaOH	H2SO4	None 500ml HDPE rec 6/2/04	Other (Specify)	Matrix: Water	Sludge	Soil	Other (specify):	Analyze For: TCLP: TOTAL: (TDS) Cl / SAR / EC	TPH 418.1	TPH TX 1005/1006	TPH 8015M GRO/DRO	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030	Cations	Anions					RUSH TAT (Pre-Schedule)	Standard TAT
-01	I WW	5-27-04	5:00	2	✓		2			2		✓				✓							✓	✓	✓						

Special Instructions:
E MAIl to ENVIRO @ Leaco. Net

Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
[signature]	6/1/04	19:20	[signature]	06 2004	1700

Sample Containers Intact? Y N
Temperature Upon Receipt:
Laboratory Comments:
22.5° C

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

Client: Rice Operating Co.

Date/Time: 05-29-04 @ 1030

Order #:

Initials: JMM

Sample Receipt Checklist

Temperature of container/cooler?	Yes	No	C
Shipping container/cooler in good condition?	(Yes)	No	
Custody Seals intact on shipping container/cooler?	Yes	No	(Not present)
Custody Seals intact on sample bottles?	Yes	No	(Not present)
Chain of custody present?	Yes	(No)	*
Sample Instructions complete on Chain of Custody?	(Yes)	No	
Chain of Custody signed when relinquished and received?	Yes	(No)	*
Chain of custody agrees with sample label(s)	Yes	(No)	*
Container labels legible and intact?	(Yes)	No	
Sample Matrix and properties same as on chain of custody?	(Yes)	No	
Samples in proper container/bottle?	(Yes)	No	
Samples properly preserved?	Yes	No	should be 4°C ± 2°C
Sample bottles intact?	(Yes)	No	
Preservations documented on Chain of Custody?	(Yes)	No	
Containers documented on Chain of Custody?	(Yes)	No	
Sufficient sample amount for indicated test?	(Yes)	No	
All samples received within sufficient hold time?	(Yes)	No	
VOC samples have zero headspace?	(Yes)	No	Not Applicable

Other observations: * missing COC

Variance Documentation:

Contact Person: - Carolyn Haynes Date/Time: 05-28-04 @ 1700 Contacted by: Jeanne McMurrey

Regarding:

missing COC

Corrective Action Taken:

will bring COC (emailed) Tues 6/1/4

COC + BTEX rec. 6/2/4 @ 0800 BTEX @ 0.5°C

ENVIRONMENTAL LAB OF

12600 West I-20 East - Odessa, Texas 79765

Analytical Report

Prepared for:

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

Project: N-6 Leak
Project Number: None Given
Location: Hobbs

Lab Order Number: 4I10006

Report Date: 09/17/04

Rice Operating Co.	Project: N-6 Leak	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	**Reported:**
Hobbs NM, 88240	Project Manager: Kristin Pope	09/17/04 10:53

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-2	4I10006-01	Water	09/08/04 13:45	09/09/04 19:20
MW-3	4I10006-02	Water	09/08/04 16:40	09/09/04 19:20
MW-4	4I10006-03	Water	09/08/04 18:10	09/09/04 19:20
MW-5	4I10006-04	Water	09/08/04 15:40	09/09/04 19:20
MW-6	4I10006-05	Water	09/08/04 17:30	09/09/04 19:20
MW-7	4I10006-06	Water	09/08/04 18:40	09/09/04 19:20
IWW	4I10006-07	Water	09/08/04 14:45	09/09/04 19:20

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Organics by GC
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-2 (4I10006-01) Water									
Benzene	**0.0289**	0.00100	mg/L	1	EI41604	09/14/04	09/14/04	EPA 8021B	
Toluene	**0.00219**	0.00100	"	"	"	"	"	"	
Ethylbenzene	**0.0126**	0.00100	"	"	"	"	"	"	
Xylene (p/m)	**0.00602**	0.00100	"	"	"	"	"	"	
Xylene (o)	**0.00235**	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*296 %*	*80-120*		"	"	"	"	*S-04*
Surrogate: 4-Bromofluorobenzene		*81.0 %*	*80-120*		"	"	"	"	
MW-3 (4I10006-02) Water									
Benzene	**0.0152**	0.00100	mg/L	1	EI41604	09/14/04	09/14/04	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	**0.00184**	0.00100	"	"	"	"	"	"	
Xylene (p/m)	**J [0.000592]**	0.00100	"	"	"	"	"	"	J
Xylene (o)	**0.00298**	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*103 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*81.0 %*	*80-120*		"	"	"	"	
MW-4 (4I10006-03) Water									
Benzene	**0.00142**	0.00100	mg/L	1	EI41604	09/14/04	09/14/04	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*106 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*91.5 %*	*80-120*		"	"	"	"	
MW-5 (4I10006-04) Water									
Benzene	ND	0.00100	mg/L	1	EI41604	09/14/04	09/14/04	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*116 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*93.0 %*	*80-120*		"	"	"	"	

Rice Operating Co.	Project: N-6 Leak	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	**Reported:**
Hobbs NM, 88240	Project Manager: Kristin Pope	09/17/04 10:53

Organics by GC
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-6 (4I10006-05) Water									
Benzene	ND	0.00100	mg/L	1	EI41604	09/14/04	09/14/04	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*118 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*82.0 %*	*80-120*		"	"	"	"	
MW-7 (4I10006-06) Water									
Benzene	ND	0.00100	mg/L	1	EI41604	09/14/04	09/14/04	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*116 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*83.0 %*	*80-120*		"	"	"	"	
IWW (4I10006-07) Water									
Benzene	ND	0.00100	mg/L	1	EI41604	09/14/04	09/14/04	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*108 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*92.0 %*	*80-120*		"	"	"	"	

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Rice Operating Co.	Project: N-6 Leak	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	**Reported:**
Hobbs NM, 88240	Project Manager: Kristin Pope	09/19/04 12:30

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-2 (4I10006-01) Water									
Carbonate Alkalinity	ND	0.100	mg/L	1	EI41703	09/10/04	09/10/04	EPA 310.2M	
Bicarbonate Alkalinity	**238**	2.00	"	"	"	"	"	"	
Hydroxide Alkalinity	ND	0.100	"	"	"	"	"	"	
Chloride	**70.9**	5.00	"	"	EI41614	09/12/04	09/12/04	EPA 325.3M	
Total Dissolved Solids	**577**	5.00	"	"	EI41702	09/13/04	09/13/04	EPA 160.1	
Sulfate	**91.4**	1.00	"	2	EI41312	09/10/04	09/10/04	EPA 375.4	
MW-3 (4I10006-02) Water									
Carbonate Alkalinity	ND	0.100	mg/L	1	EI41703	09/10/04	09/10/04	EPA 310.2M	
Bicarbonate Alkalinity	**344**	2.00	"	"	"	"	"	"	
Hydroxide Alkalinity	ND	0.100	"	"	"	"	"	"	
Chloride	**5140**	5.00	"	"	EI41614	09/12/04	09/12/04	EPA 325.3M	
Total Dissolved Solids	**8600**	20.0	"	4	EI41702	09/13/04	09/13/04	EPA 160.1	
Sulfate	**762**	5.00	"	10	EI41312	09/10/04	09/10/04	EPA 375.4	
MW-4 (4I10006-03) Water									
Carbonate Alkalinity	ND	0.100	mg/L	1	EI41703	09/10/04	09/10/04	EPA 310.2M	
Bicarbonate Alkalinity	**202**	2.00	"	"	"	"	"	"	
Hydroxide Alkalinity	ND	0.100	"	"	"	"	"	"	
Chloride	**49.6**	5.00	"	"	EI41614	09/12/04	09/12/04	EPA 325.3M	
Total Dissolved Solids	**492**	5.00	"	"	EI41702	09/13/04	09/13/04	EPA 160.1	
Sulfate	**114**	1.00	"	2	EI41312	09/10/04	09/10/04	EPA 375.4	
MW-5 (4I10006-04) Water									
Carbonate Alkalinity	ND	0.100	mg/L	1	EI41703	09/10/04	09/10/04	EPA 310.2M	
Bicarbonate Alkalinity	**230**	2.00	"	"	"	"	"	"	
Hydroxide Alkalinity	ND	0.100	"	"	"	"	"	"	
Chloride	**35.4**	5.00	"	"	EI41614	09/12/04	09/12/04	EPA 325.3M	
Total Dissolved Solids	**517**	5.00	"	"	EI41702	09/13/04	09/13/04	EPA 160.1	
Sulfate	**79.4**	1.00	"	2	EI41312	09/10/04	09/10/04	EPA 375.4	

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Rice Operating Co.	Project: N-6 Leak	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	**Reported:**
Hobbs NM, 88240	Project Manager: Kristin Pope	09/19/04 12:30

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-6 (4I10006-05) Water									
Carbonate Alkalinity	ND	0.100	mg/L	1	EI41703	09/10/04	09/10/04	EPA 310.2M	
Bicarbonate Alkalinity	**228**	2.00	"	"	"	"	"	"	
Hydroxide Alkalinity	ND	0.100	"	"	"	"	"	"	
Chloride	**53.2**	5.00	"	"	EI41614	09/12/04	09/12/04	EPA 325.3M	
Total Dissolved Solids	**488**	5.00	"	"	EI41702	09/13/04	09/13/04	EPA 160.1	
Sulfate	**85.0**	1.00	"	2	EI41312	09/10/04	09/10/04	EPA 375.4	
MW-7 (4I10006-06) Water									
Carbonate Alkalinity	ND	0.100	mg/L	1	EI41703	09/10/04	09/10/04	EPA 310.2M	
Bicarbonate Alkalinity	**232**	2.00	"	"	"	"	"	"	
Hydroxide Alkalinity	ND	0.100	"	"	"	"	"	"	
Chloride	**230**	5.00	"	"	EI41614	09/12/04	09/12/04	EPA 325.3M	
Total Dissolved Solids	**731**	5.00	"	"	EI41702	09/13/04	09/13/04	EPA 160.1	
Sulfate	**111**	1.00	"	2	EI41312	09/10/04	09/10/04	EPA 375.4	
IWW (4I10006-07) Water									
Carbonate Alkalinity	ND	0.100	mg/L	1	EI41703	09/10/04	09/10/04	EPA 310.2M	
Bicarbonate Alkalinity	**260**	2.00	"	"	"	"	"	"	
Hydroxide Alkalinity	ND	0.100	"	"	"	"	"	"	
Chloride	**78.0**	5.00	"	"	EI41614	09/12/04	09/12/04	EPA 325.3M	
Total Dissolved Solids	**583**	5.00	"	"	EI41702	09/13/04	09/13/04	EPA 160.1	
Sulfate	**89.6**	1.00	"	2	EI41312	09/10/04	09/10/04	EPA 375.4	

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Rice Operating Co.	Project: N-6 Leak	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	**Reported:**
Hobbs NM, 88240	Project Manager: Kristin Pope	09/17/04 10:53

Total Metals by EPA / Standard Methods
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-2 (4I10006-01) Water									
Calcium	**91.9**	0.100	mg/L	10	EI41506	09/15/04	09/15/04	EPA 6010B	
Magnesium	**17.3**	0.0100	"	"	"	"	"	"	
Potassium	**4.13**	0.0500	"	1	"	"	"	"	
Sodium	**62.7**	0.100	"	10	"	"	"	"	
MW-3 (4I10006-02) Water									
Calcium	**307**	1.00	mg/L	100	EI41506	09/15/04	09/15/04	EPA 6010B	
Magnesium	**110**	0.100	"	"	"	"	"	"	
Potassium	**62.9**	5.00	"	"	"	"	"	"	
Sodium	**2860**	10.0	"	1000	"	"	"	"	
MW-4 (4I10006-03) Water									
Calcium	**78.7**	0.100	mg/L	10	EI41506	09/15/04	09/15/04	EPA 6010B	
Magnesium	**14.4**	0.0100	"	"	"	"	"	"	
Potassium	**3.76**	0.0500	"	1	"	"	"	"	
Sodium	**53.2**	0.100	"	10	"	"	"	"	
MW-5 (4I10006-04) Water									
Calcium	**82.7**	0.100	mg/L	10	EI41506	09/15/04	09/15/04	EPA 6010B	
Magnesium	**16.6**	0.0100	"	"	"	"	"	"	
Potassium	**3.51**	0.0500	"	1	"	"	"	"	
Sodium	**44.8**	0.100	"	10	"	"	"	"	
MW-6 (4I10006-05) Water									
Calcium	**88.8**	0.100	mg/L	10	EI41506	09/15/04	09/15/04	EPA 6010B	
Magnesium	**16.2**	0.0100	"	"	"	"	"	"	
Potassium	**3.70**	0.0500	"	1	"	"	"	"	
Sodium	**38.1**	0.100	"	10	"	"	"	"	

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Rice Operating Co.	Project: N-6 Leak	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	**Reported:**
Hobbs NM, 88240	Project Manager: Kristin Pope	09/17/04 10:53

Total Metals by EPA / Standard Methods
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-7 (4I10006-06) Water									
Calcium	**94.5**	0.100	mg/L	10	EI41506	09/15/04	09/15/04	EPA 6010B	
Magnesium	**16.6**	0.0100	"	"	"	"	"	"	
Potassium	**7.00**	0.0500	"	1	"	"	"	"	
Sodium	**126**	1.00	"	100	"	"	"	"	
IWW (4I10006-07) Water									
Calcium	**58.1**	0.100	mg/L	10	EI41506	09/15/04	09/15/04	EPA 6010B	
Magnesium	**12.6**	0.0100	"	"	"	"	"	"	
Potassium	**6.41**	0.0500	"	1	"	"	"	"	
Sodium	**111**	0.100	"	10	"	"	"	"	

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

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
Batch EI41604 - EPA 5030C (GC)										
Blank (EI41604-BLK1)				Prepared & Analyzed: 09/14/04						
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	*20.0*		*ug/l*	*20.0*		*100*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*17.4*		"	*20.0*		*87.0*	*80-120*			
LCS (EI41604-BS1)				Prepared & Analyzed: 09/14/04						
Benzene	95.7		ug/l	100		95.7	80-120			
Toluene	110		"	100		110	80-120			
Ethylbenzene	108		"	100		108	80-120			
Xylene (p/m)	228		"	200		114	80-120			
Xylene (o)	103		"	100		103	80-120			
Surrogate: a,a,a-Trifluorotoluene	*21.5*		"	*20.0*		*108*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*23.5*		"	*20.0*		*118*	*80-120*			
LCS Dup (EI41604-BSD1)				Prepared & Analyzed: 09/14/04						
Benzene	92.0		ug/l	100		92.0	80-120	3.94	20	
Toluene	104		"	100		104	80-120	5.61	20	
Ethylbenzene	103		"	100		103	80-120	4.74	20	
Xylene (p/m)	215		"	200		108	80-120	5.41	20	
Xylene (o)	99.5		"	100		99.5	80-120	3.46	20	
Surrogate: a,a,a-Trifluorotoluene	*20.6*		"	*20.0*		*103*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*21.2*		"	*20.0*		*106*	*80-120*			
Calibration Check (EI41604-CCV1)				Prepared & Analyzed: 09/14/04						
Benzene	82.8		ug/l	100		82.8	80-120			
Toluene	94.0		"	100		94.0	80-120			
Ethylbenzene	91.4		"	100		91.4	80-120			
Xylene (p/m)	196		"	200		98.0	80-120			
Xylene (o)	89.9		"	100		89.9	80-120			
Surrogate: a,a,a-Trifluorotoluene	*18.1*		"	*20.0*		*90.5*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*17.1*		"	*20.0*		*85.5*	*80-120*			

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
Batch EI41604 - EPA 5030C (GC)										
Matrix Spike (EI41604-MS1)	**Source: 4I10005-02**			Prepared: 09/14/04 Analyzed: 09/16/04						
Benzene	81.1		ug/l	100	ND	81.1	80-120			
Toluene	83.7		"	100	ND	83.7	80-120			
Ethylbenzene	81.6		"	100	ND	81.6	80-120			
Xylene (p/m)	174		"	200	ND	87.0	80-120			
Xylene (o)	80.6		"	100	ND	80.6	80-120			
Surrogate: a,a,a-Trifluorotoluene	*17.0*		"	*20.0*		*85.0*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*16.5*		"	*20.0*		*82.5*	*80-120*			

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
Batch EI41312 - General Preparation (WetChem)										
Blank (EI41312-BLK1)				Prepared & Analyzed: 09/10/04						
Sulfate	ND	0.500	mg/L							
Calibration Check (EI41312-CCV1)				Prepared & Analyzed: 09/10/04						
Sulfate	48.9		mg/L	50.0		97.8	80-120			
Duplicate (EI41312-DUP1)	**Source: 4I03010-01**			Prepared & Analyzed: 09/10/04						
Sulfate	76.4	0.500	mg/L		74.6			2.38	20	
Batch EI41614 - General Preparation (WetChem)										
Blank (EI41614-BLK1)				Prepared & Analyzed: 09/12/04						
Chloride	ND	5.00	mg/L							
Matrix Spike (EI41614-MS1)	**Source: 4I10006-01**			Prepared & Analyzed: 09/12/04						
Chloride	567	5.00	mg/L	500	70.9	99.2	90-110			
Matrix Spike Dup (EI41614-MSD1)	**Source: 4I10006-01**			Prepared & Analyzed: 09/12/04						
Chloride	576	5.00	mg/L	500	70.9	101	90-110	1.57	20	
Reference (EI41614-SRM1)				Prepared & Analyzed: 09/12/04						
Chloride	4960		mg/L	5000		99.2	80-120			
Batch EI41702 - Filtration Preparation										
Blank (EI41702-BLK1)				Prepared & Analyzed: 09/13/04						
Total Dissolved Solids	ND	5.00	mg/L							

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
Batch EI41702 - Filtration Preparation										
Duplicate (EI41702-DUP1)		**Source: 4I10005-02**		Prepared & Analyzed: 09/13/04						
Total Dissolved Solids	797	5.00	mg/L		937			16.1	20	
Batch EI41703 - General Preparation (WetChem)										
Blank (EI41703-BLK1)				Prepared & Analyzed: 09/10/04						
Total Alkalinity	ND	2.00	mg/L							
Carbonate Alkalinity	ND	0.100	"							
Bicarbonate Alkalinity	ND	2.00	"							
Hydroxide Alkalinity	ND	0.100	"							
Duplicate (EI41703-DUP1)		**Source: 4I10005-01**		Prepared & Analyzed: 09/10/04						
Total Alkalinity	0.00	2.00	mg/L		0.00				20	
Carbonate Alkalinity	0.00	0.100	"		0.00				20	
Bicarbonate Alkalinity	212	2.00	"		213			0.471	20	
Hydroxide Alkalinity	0.00	0.100	"		0.00				20	
Reference (EI41703-SRM1)				Prepared & Analyzed: 09/10/04						
Carbonate Alkalinity	0.0501	0.100	mg/L	0.0500		100	80-120			

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
Batch EI41506 - General Preparation (Metals)										
Blank (EI41506-BLK1)				Prepared & Analyzed: 09/15/04						
Calcium	ND	0.0100	mg/L							
Magnesium	ND	0.00100	"							
Potassium	ND	0.0500	"							
Sodium	ND	0.0100	"							
Blank (EI41506-BLK2)				Prepared & Analyzed: 09/15/04						
Calcium	ND	0.0100	mg/L							
Magnesium	ND	0.00100	"							
Potassium	ND	0.0500	"							
Sodium	ND	0.0100	"							
Calibration Check (EI41506-CCV1)				Prepared & Analyzed: 09/15/04						
Calcium	2.03		mg/L	2.00		102	85-115			
Magnesium	2.04		"	2.00		102	85-115			
Potassium	1.75		"	2.00		87.5	85-115			
Sodium	1.79		"	2.00		89.5	85-115			
Calibration Check (EI41506-CCV2)				Prepared & Analyzed: 09/15/04						
Calcium	1.93		mg/L	2.00		96.5	85-115			
Magnesium	2.02		"	2.00		101	85-115			
Potassium	1.76		"	2.00		88.0	85-115			
Sodium	1.77		"	2.00		88.5	85-115			
Duplicate (EI41506-DUP1)	**Source: 4I03009-01**			Prepared & Analyzed: 09/15/04						
Calcium	281	1.00	mg/L		280			0.357	20	
Magnesium	110	0.100	"		111			0.905	20	
Potassium	8.18	0.500	"		8.31			1.58	20	
Sodium	359	1.00	"		365			1.66	20	

Rice Operating Co.	Project: N-6 Leak	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	**Reported:**
Hobbs NM, 88240	Project Manager: Kristin Pope	09/17/04 10:53

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
Batch EI41506 - General Preparation (Metals)										
Duplicate (EI41506-DUP2)	**Source: 4I10015-01**		Prepared & Analyzed: 09/15/04							
Calcium	20.2	0.100	mg/L		20.2			0.00	20	
Magnesium	28.4	0.0100	"		28.6			0.702	20	
Potassium	16.4	0.500	"		16.6			1.21	20	
Sodium	103	0.100	"		103			0.00	20	

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Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
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: Raland K Tuttle Date: 9-18-04

Raland K. Tuttle, Lab Manager
Celey D. Keene, Lab Director, Org. Tech Director
Peggy Allen, QA Officer
Jeanne Mc Murrey, Inorg. Tech Director
James L. Hawkins, Chemist/Geologist
Sandra Biezugbe, Lab Tech.

Environmental Lab of Texas I, Ltd.

12600 West I-20 East
Odessa, Texas 79763

Phone: 915-563-1800
Fax: 915-563-1713

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Kristin Farris Pope

Company Name: RICE Operating

Company Address: 122 W. Taylor St.

City/State/Zip: Hobbs, NM 88240

Telephone No: (505) 393-9174

Fax No: (505) 397-1471

Sampler Signature:

Project Name: N-6 leak

Project #:

Project Loc: Hobbs

PO #: 641

LAB # (lab use only) 4I10006	FIELD CODE	Date Sampled	Time Sampled	No. of Containers	Preservative: Ice	HNO$_3$	HCl 40ml glass	NaOH	H$_2$SO$_4$	None L HDPE	Other (Specify)	Matrix: Water	Sludge	Soil	Other (specify):	Analyze For: TPH: 418.1 8015M 1005 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, CO3, HCO3)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 (TOTAL: X)	RCI	N.O.R.M.	Total Gamma	TDS	RUSH TAT (Pre-Schedule)	Standard TAT
	~~MW-1~~ No Sample																												
-01	MW-2	9-8-04	13:45	3	X		2/X			1		3					X	X					X				X		
-02	MW-3	9-8-04	16:40	3	X		2/X			1		3					X	X					X				X		
-03	MW-4	9-8-04	18:10	3	X		2/X			1		3					X	X					X				X		
-04	MW-5	9-8-04	15:40	3	X		2/X			1		3					X	X					X				X		
-05	MW-6	9-8-04	17:30	3	X		2/X			1		3					X	X					X				X		
-06	MW-7	9-8-04	18:40	3	X		2/X			1		3					X	X					X				X		
-07	IWW	9-8-04	14:45	3	X		2/X			1		3					X	X					X				X		

Special Instructions: Please email analysis to Kristin enviro@leaco.net

Relinquished by:	Date	Time	Received by:	Date	Time
R Johnson	9/9/04	10:50	[signature]	9/9	15:45
Relinquished by: [signature]	9/9	1920	Received by ELOT: [signature]	9-09-04	1920

Sample Containers Intact? Y N

Temperature Upon Receipt:

Laboratory Comments: Rec 4.0°C

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

Client: Rice Operating Co.

Date/Time: 09-10-04 @ 0900

Order #: 4I10006

Initials: JMM

Sample Receipt Checklist

Temperature of container/cooler?	(Yes)	No	4.0 C
Shipping container/cooler in good condition?	(Yes)	No	
Custody Seals intact on shipping container/cooler?	Yes	No	(Not present)
Custody Seals intact on sample bottles?	Yes	No	(Not present)
Chain of custody present?	(Yes)	No	
Sample Instructions complete on Chain of Custody?	(Yes)	No	
Chain of Custody signed when relinquished and received?	(Yes)	No	
Chain of custody agrees with sample label(s)	(Yes)	No	
Container labels legible and intact?	(Yes)	No	
Sample Matrix and properties same as on chain of custody?	(Yes)	No	
Samples in proper container/bottle?	(Yes)	No	
Samples properly preserved?	(Yes)	No	
Sample bottles intact?	(Yes)	No	
Preservations documented on Chain of Custody?	(Yes)	No	
Containers documented on Chain of Custody?	(Yes)	No	
Sufficient sample amount for indicated test?	(Yes)	No	
All samples received within sufficient hold time?	(Yes)	No	
VOC samples have zero headspace?	(Yes)	No	Not Applicable

Other observations:

_____

_____

_____

Variance Documentation:

Contact Person: - _____ Date/Time: _____ Contacted by: _____

Regarding:

_____

_____

_____

Corrective Action Taken:

_____

_____

_____

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_____

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_____

ENVIRONMENTAL LAB OF

12600 West I-20 East - Odessa, Texas 79765

Analytical Report

Prepared for:

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

Project: N-6 Leak
Project Number: None Given
Location: Hobbs

Lab Order Number: 4K30004

Report Date: 12/08/04

Rice Operating Co.	Project: N-6 Leak	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	**Reported:**
Hobbs NM, 88240	Project Manager: Kristin Pope	12/08/04 17:21

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-2	4K30004-01	Water	11/22/04 13:00	11/30/04 10:35
MW-3	4K30004-02	Water	11/23/04 09:45	11/30/04 10:35
MW-4	4K30004-03	Water	11/22/04 16:00	11/30/04 10:35
MW-5	4K30004-04	Water	11/22/04 11:00	11/30/04 10:35
MW-6	4K30004-05	Water	11/22/04 10:00	11/30/04 10:35
MW-7	4K30004-06	Water	11/22/04 15:15	11/30/04 10:35
IWW	4K30004-07	Water	11/22/04 14:00	11/30/04 10:35

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Rice Operating Co.	Project: N-6 Leak	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	**Reported:**
Hobbs NM, 88240	Project Manager: Kristin Pope	12/08/04 17:21

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-2 (4K30004-01) Water									
Benzene	**0.0238**	0.00100	mg/L	1	EL40601	12/02/04	12/02/04	EPA 8021B	
Toluene	**0.00269**	0.00100	"	"	"	"	"	"	
Ethylbenzene	**0.0239**	0.00100	"	"	"	"	"	"	
Xylene (p/m)	**0.00852**	0.00100	"	"	"	"	"	"	
Xylene (o)	**0.00199**	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*224 %*	*80-120*		"	"	"	"	*S-04*
Surrogate: 4-Bromofluorobenzene		*119 %*	*80-120*		"	"	"	"	
MW-3 (4K30004-02) Water									
Benzene	**0.0281**	0.00100	mg/L	1	EL40601	12/02/04	12/02/04	EPA 8021B	
Toluene	**J [0.000202]**	0.00100	"	"	"	"	"	"	J
Ethylbenzene	**J [0.000775]**	0.00100	"	"	"	"	"	"	J
Xylene (p/m)	**J [0.000841]**	0.00100	"	"	"	"	"	"	J
Xylene (o)	**0.00365**	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*91.0 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*102 %*	*80-120*		"	"	"	"	
MW-4 (4K30004-03) Water									
Benzene	ND	0.00100	mg/L	1	EL40601	12/02/04	12/02/04	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*112 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*99.0 %*	*80-120*		"	"	"	"	
MW-5 (4K30004-04) Water									
Benzene	ND	0.00100	mg/L	1	EL40601	12/02/04	12/02/04	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*110 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*89.5 %*	*80-120*		"	"	"	"	

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Rice Operating Co.	Project: N-6 Leak	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	**Reported:**
Hobbs NM, 88240	Project Manager: Kristin Pope	12/08/04 17:21

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-6 (4K30004-05) Water									
Benzene	ND	0.00100	mg/L	1	EL40601	12/02/04	12/02/04	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*116 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*106 %*	*80-120*		"	"	"	"	
MW-7 (4K30004-06) Water									
Benzene	ND	0.00100	mg/L	1	EL40601	12/02/04	12/02/04	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*118 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*110 %*	*80-120*		"	"	"	"	
IWW (4K30004-07) Water									
Benzene	ND	0.00100	mg/L	1	EL40601	12/02/04	12/02/04	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*113 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*104 %*	*80-120*		"	"	"	"	

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Rice Operating Co.	Project: N-6 Leak	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	**Reported:**
Hobbs NM, 88240	Project Manager: Kristin Pope	12/08/04 17:21

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-2 (4K30004-01) Water									
Total Alkalinity	**208**	2.00	mg/L	1	EL40313	12/03/04	12/03/04	EPA 310.2M	
MW-3 (4K30004-02) Water									
Total Alkalinity	**340**	2.00	mg/L	1	EL40313	12/03/04	12/03/04	EPA 310.2M	
MW-4 (4K30004-03) Water									
Total Alkalinity	**196**	2.00	mg/L	1	EL40313	12/03/04	12/03/04	EPA 310.2M	
MW-5 (4K30004-04) Water									
Total Alkalinity	**210**	2.00	mg/L	1	EL40313	12/03/04	12/03/04	EPA 310.2M	
MW-6 (4K30004-05) Water									
Total Alkalinity	**211**	2.00	mg/L	1	EL40313	12/03/04	12/03/04	EPA 310.2M	
MW-7 (4K30004-06) Water									
Total Alkalinity	**228**	2.00	mg/L	1	EL40313	12/03/04	12/03/04	EPA 310.2M	
IWW (4K30004-07) Water									
Total Alkalinity	**258**	2.00	mg/L	1	EL40313	12/03/04	12/03/04	EPA 310.2M	

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Rice Operating Co.	Project: N-6 Leak	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	**Reported:**
Hobbs NM, 88240	Project Manager: Kristin Pope	12/10/04 11:51

Total Metals by EPA / Standard Methods
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-2 (4K30004-01) Water									
Calcium	**81.6**	0.100	mg/L	10	EL40101	11/30/04	11/30/04	EPA 6010B	
Magnesium	**16.9**	0.0100	"	"	"	"	"	"	
Potassium	**2.92**	0.500	"	"	"	"	"	"	
Sodium	**59.7**	0.100	"	"	"	"	"	"	
MW-3 (4K30004-02) Water									
Calcium	**389**	1.00	mg/L	100	EL40101	11/30/04	11/30/04	EPA 6010B	
Magnesium	**149**	0.100	"	"	"	"	"	"	
Potassium	**67.1**	5.00	"	"	"	"	"	"	
Sodium	**2790**	10.0	"	1000	"	"	"	"	
MW-4 (4K30004-03) Water									
Calcium	**72.1**	0.100	mg/L	10	EL40101	11/30/04	11/30/04	EPA 6010B	
Magnesium	**14.2**	0.0100	"	"	"	"	"	"	
Potassium	**4.77**	0.0500	"	1	"	"	"	"	
Sodium	**64.2**	0.100	"	10	"	"	"	"	
MW-5 (4K30004-04) Water									
Calcium	**75.2**	0.100	mg/L	10	EL40101	11/30/04	11/30/04	EPA 6010B	
Magnesium	**15.0**	0.0100	"	"	"	"	"	"	
Potassium	**4.61**	0.0500	"	1	"	"	"	"	
Sodium	**50.0**	0.100	"	10	"	"	"	"	
MW-6 (4K30004-05) Water									
Calcium	**83.4**	0.100	mg/L	10	EL40101	11/30/04	11/30/04	EPA 6010B	
Magnesium	**17.2**	0.0100	"	"	"	"	"	"	
Potassium	**4.60**	0.0500	"	1	"	"	"	"	
Sodium	**38.7**	0.100	"	10	"	"	"	"	

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Rice Operating Co.	Project: N-6 Leak	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	**Reported:**
Hobbs NM, 88240	Project Manager: Kristin Pope	12/08/04 17:21

Total Metals by EPA / Standard Methods
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-7 (4K30004-06) Water									
Calcium	**89.8**	0.100	mg/L	10	EL40101	11/30/04	11/30/04	EPA 6010B	
Magnesium	**17.2**	0.0100	"	"	"	"	"	"	
Potassium	**4.88**	0.500	"	"	"	"	"	"	
Sodium	**127**	1.00	"	100	"	"	"	"	
IWW (4K30004-07) Water									
Calcium	**61.9**	0.100	mg/L	10	EL40101	11/30/04	11/30/04	EPA 6010B	
Magnesium	**12.5**	0.0100	"	"	"	"	"	"	
Potassium	**4.76**	0.500	"	"	"	"	"	"	
Sodium	**97.1**	1.00	"	100	"	"	"	"	

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Rice Operating Co.	Project: N-6 Leak	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	**Reported:**
Hobbs NM, 88240	Project Manager: Kristin Pope	12/08/04 17:21

Anions by EPA Method 300.0

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-2 (4K30004-01) Water									
Chloride	**58.1**	10.0	mg/L	20	EL40811	12/02/04	12/02/04	EPA 300.0	
Sulfate	**90.2**	10.0	"	"	EL40812	"	"	"	
MW-3 (4K30004-02) Water									
Chloride	**3890**	25.0	mg/L	50	EL40811	12/02/04	12/02/04	EPA 300.0	
Sulfate	**683**	25.0	"	"	EL40812	"	"	"	
MW-4 (4K30004-03) Water									
Chloride	**55.2**	10.0	mg/L	20	EL40811	12/02/04	12/02/04	EPA 300.0	
Sulfate	**99.2**	10.0	"	"	EL40812	"	"	"	
MW-5 (4K30004-04) Water									
Chloride	**57.3**	10.0	mg/L	20	EL40811	12/02/04	12/02/04	EPA 300.0	
Sulfate	**85.4**	10.0	"	"	EL40812	"	"	"	
MW-6 (4K30004-05) Water									
Chloride	**76.1**	10.0	mg/L	20	EL40811	12/02/04	12/02/04	EPA 300.0	
Sulfate	**84.0**	10.0	"	"	EL40812	"	"	"	
MW-7 (4K30004-06) Water									
Chloride	**188**	10.0	mg/L	20	EL40811	12/02/04	12/02/04	EPA 300.0	
Sulfate	**96.1**	10.0	"	"	EL40812	"	"	"	
IWW (4K30004-07) Water									
Chloride	**88.3**	10.0	mg/L	20	EL40811	12/02/04	12/02/04	EPA 300.0	
Sulfate	**82.5**	10.0	"	"	EL40812	"	"	"	

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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
Batch EL40601 - EPA 5030C (GC)										
Blank (EL40601-BLK1)				Prepared & Analyzed: 12/02/04						
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	*0.0223*		"	*0.0200*		*112*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.0183*		"	*0.0200*		*91.5*	*80-120*			
LCS (EL40601-BS1)				Prepared & Analyzed: 12/02/04						
Benzene	99.2		ug/l	100		99.2	80-120			
Toluene	107		"	100		107	80-120			
Ethylbenzene	107		"	100		107	80-120			
Xylene (p/m)	219		"	200		110	80-120			
Xylene (o)	116		"	100		116	80-120			
Surrogate: a,a,a-Trifluorotoluene	*0.0196*		*mg/L*	*0.0200*		*98.0*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.0199*		"	*0.0200*		*99.5*	*80-120*			
LCS Dup (EL40601-BSD1)				Prepared & Analyzed: 12/02/04						
Benzene	100		ug/l	100		100	80-120	0.803	20	
Toluene	110		"	100		110	80-120	2.76	20	
Ethylbenzene	111		"	100		111	80-120	3.67	20	
Xylene (p/m)	230		"	200		115	80-120	4.44	20	
Xylene (o)	119		"	100		119	80-120	2.55	20	
Surrogate: a,a,a-Trifluorotoluene	*0.0199*		*mg/L*	*0.0200*		*99.5*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.0202*		"	*0.0200*		*101*	*80-120*			
Calibration Check (EL40601-CCV1)				Prepared: 12/02/04 Analyzed: 12/03/04						
Benzene	98.7		ug/l	100		98.7	80-120			
Toluene	105		"	100		105	80-120			
Ethylbenzene	109		"	100		109	80-120			
Xylene (p/m)	221		"	200		110	80-120			
Xylene (o)	111		"	100		111	80-120			
Surrogate: a,a,a-Trifluorotoluene	*0.0218*		*mg/L*	*0.0200*		*109*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.0227*		"	*0.0200*		*114*	*80-120*			

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
Batch EL40601 - EPA 5030C (GC)										
Matrix Spike (EL40601-MS1)	**Source: 4K30004-03**			Prepared: 12/02/04		Analyzed: 12/03/04				
Benzene	107		ug/l	100	ND	107	80-120			
Toluene	108		"	100	ND	108	80-120			
Ethylbenzene	114		"	100	ND	114	80-120			
Xylene (p/m)	229		"	200	ND	114	80-120			
Xylene (o)	111		"	100	ND	111	80-120			
Surrogate: a,a,a-Trifluorotoluene	*0.0206*		*mg/L*	*0.0200*		*103*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.0201*		*"*	*0.0200*		*100*	*80-120*			

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
Batch EL40313 - General Preparation (WetChem)										
Blank (EL40313-BLK1)				Prepared & Analyzed: 12/03/04						
Total Alkalinity	ND	2.00	mg/L							
Duplicate (EL40313-DUP1)		**Source: 4K30004-01**		Prepared & Analyzed: 12/03/04						
Total Alkalinity	207	2.00	mg/L		208			0.482	20	
Reference (EL40313-SRM1)				Prepared & Analyzed: 12/03/04						
Carbonate Alkalinity	0.0501		mg/L	0.0500		100	80-120			

Rice Operating Co.	Project: N-6 Leak	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	**Reported:**
Hobbs NM, 88240	Project Manager: Kristin Pope	12/08/04 17:21

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
Batch EL40101 - 6010B/No Digestion										
Blank (EL40101-BLK1)				Prepared & Analyzed: 11/30/04						
Calcium	ND	0.0100	mg/L							
Magnesium	ND	0.00100	"							
Potassium	ND	0.0500	"							
Sodium	ND	0.0100	"							
Calibration Check (EL40101-CCV1)				Prepared & Analyzed: 11/30/04						
Calcium	1.87		mg/L	2.00		93.5	85-115			
Magnesium	2.08		"	2.00		104	85-115			
Potassium	1.83		"	2.00		91.5	85-115			
Sodium	1.78		"	2.00		89.0	85-115			
Duplicate (EL40101-DUP1)		**Source: 4K24009-01**		Prepared & Analyzed: 11/30/04						
Calcium	108	1.00	mg/L		122			12.2	20	
Magnesium	46.0	0.0100	"		51.6			11.5	20	
Potassium	11.1	0.500	"		13.2			17.3	20	
Sodium	222	1.00	"		235			5.69	20	

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Rice Operating Co.	Project: N-6 Leak	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	**Reported:**
Hobbs NM, 88240	Project Manager: Kristin Pope	12/08/04 17:21

Anions by EPA Method 300.0 - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EL40811 - General Preparation (WetChem)										
Blank (EL40811-BLK1)				Prepared & Analyzed: 12/02/04						
Chloride	0.00	0.500	mg/L							
Blank (EL40811-BLK2)				Prepared & Analyzed: 12/02/04						
Chloride	0.00	0.500	mg/L							
LCS (EL40811-BS1)				Prepared & Analyzed: 12/02/04						
Chloride	5.73	0.500	mg/L	5.00		115	80-120			
LCS (EL40811-BS2)				Prepared & Analyzed: 12/02/04						
Chloride	5.81	0.500	mg/L	5.00		116	80-120			
LCS Dup (EL40811-BSD1)				Prepared & Analyzed: 12/02/04						
Chloride	5.42	0.500	mg/L	5.00		108	80-120	5.56	20	
LCS Dup (EL40811-BSD2)				Prepared & Analyzed: 12/02/04						
Chloride	5.51	0.500	mg/L	5.00		110	80-120	5.30	20	
Calibration Check (EL40811-CCV1)				Prepared & Analyzed: 12/02/04						
Chloride	25.8		mg/L	25.0		103	80-120			
Calibration Check (EL40811-CCV2)				Prepared & Analyzed: 12/02/04						
Chloride	26.1		mg/L	25.0		104	80-120			
Duplicate (EL40811-DUP1)		**Source: 4K30004-03**		Prepared & Analyzed: 12/02/04						
Chloride	55.7	10.0	mg/L		55.2			0.902	20	
Duplicate (EL40811-DUP2)		**Source: 4K30006-01RE1**		Prepared & Analyzed: 12/02/04						
Chloride	446	10.0	mg/L		445			0.224	20	

Anions by EPA Method 300.0 - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EL40812 - General Preparation (WetChem)										
Blank (EL40812-BLK1)				Prepared & Analyzed: 12/02/04						
Sulfate	0.00	0.500	mg/L							
Blank (EL40812-BLK2)				Prepared & Analyzed: 12/02/04						
Sulfate	0.00	0.500	mg/L							
LCS (EL40812-BS1)				Prepared & Analyzed: 12/02/04						
Sulfate	5.28	0.500	mg/L	5.00		106	80-120			
LCS (EL40812-BS2)				Prepared & Analyzed: 12/02/04						
Sulfate	5.53	0.500	mg/L	5.00		111	80-120			
LCS Dup (EL40812-BSD1)				Prepared & Analyzed: 12/02/04						
Sulfate	5.22	0.500	mg/L	5.00		104	80-120	1.14	20	
LCS Dup (EL40812-BSD2)				Prepared & Analyzed: 12/02/04						
Sulfate	5.34	0.500	mg/L	5.00		107	80-120	3.50	20	
Calibration Check (EL40812-CCV1)				Prepared & Analyzed: 12/02/04						
Sulfate	10.1		mg/L	10.0		101	80-120			
Calibration Check (EL40812-CCV2)				Prepared & Analyzed: 12/02/04						
Sulfate	10.3		mg/L	10.0		103	80-120			
Duplicate (EL40812-DUP1)		**Source: 4K30004-03**		Prepared & Analyzed: 12/02/04						
Sulfate	101	10.0	mg/L		99.2			1.80	20	
Duplicate (EL40812-DUP2)		**Source: 4K30006-01RE1**		Prepared & Analyzed: 12/02/04						
Sulfate	123	10.0	mg/L		123			0.00	20	

Rice Operating Co.	Project: N-6 Leak	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	**Reported:**
Hobbs NM, 88240	Project Manager: Kristin Pope	12/08/04 17:21

Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
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: Raland K. Tuttle Date: 12-10-04

Raland K. Tuttle, Lab Manager
Celey D. Keene, Lab Director, Org. Tech Director
Peggy Allen, QA Officer
Jeanne Mc Murrey, Inorg. Tech Director
James L. Hawkins, Chemist/Geologist
Sandra Sanchez, Lab Tech.

Environmental Lab of Texas I, Ltd.

12600 West I-20 East
Odessa, Texas 79763

Phone: 915-563-1800
Fax: 915-563-1713

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Kristin Farris Pope
Company Name: RICE Operating
Company Address: 122 W. Taylor St.
City/State/Zip: Hobbs, NM 88240
Telephone No: (505) 393-9174
Fax No: (505) 397-1471
Sampler Signature: [signature]

Project Name: N-6 leak
Project #:
Project Loc: Hobbs
PO #: 641

Analyze For: TCLP: / TOTAL: X (BTEX)

LAB # (lab use only) 4K30004	FIELD CODE	Date Sampled 2004	Time Sampled	No. of Containers	Ice	HNO_3	HCl 40mlglass(2)	NaOH	H_2SO_4	None LHDPE	Other (Specify)	Water	Sludge	Soil	Other (specify):	TPH: 418.1 8015M 1005 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, CO3, HCO3)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030	RCI	N.O.R.M.	Total Gamma	Total Disolved Solids			RUSH TAT (Pre-Schedule)	Standard TAT
	~~MW-1 Pet~~																														
-01	MW-2	11-22-2004	13:00	3	X		X			1		3					X	X					X				X				X
-02	MW-3	11-23-2004	9:45	↓	↓		↓			1		↓					↓	↓					↓				↓				↓
-03	MW-4	11-22-2004	16:00	↓	↓		↓			1		↓					↓	↓					↓				↓				↓
-04	MW-5	↓	11:00	↓	↓		↓			1		↓					↓	↓					↓				↓				↓
-05	MW-6	↓	10:00	↓	↓		↓			1		↓					↓	↓					↓				↓				↓
-06	MW-7	↓	15:15	↓	↓		↓			1		↓					↓	↓					↓				↓				↓
-07	IWW	↓	14:00	↓	↓		↓			1		↓					↓	↓					↓				↓				↓

Special Instructions:
Please email analysis to Kristin enviro@leaco.net

Relinquished by:	Date	Time	Received by:	Date	Time
[signature]	11-~~23~~-04	10:30	Roy R. Rascon	11-30-04	10:30
Relinquished by: Roy R. Rascon	11-30-04	1035	Received by ELOT: Jeanne McMurry	11-30-04	1035

Sample Containers Intact? (Y) N
Temperature Upon Receipt:
Laboratory Comments:
0.5 °C

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

Client: Rice Operating Co.

Date/Time: 11-30-04 @ 1045

Order #: 4K30004

Initials: JMM

Sample Receipt Checklist

Temperature of container/cooler?	(Yes)	No	0.5 C
Shipping container/cooler in good condition?	(Yes)	No	
Custody Seals intact on shipping container/cooler?	Yes	No	(Not present)
Custody Seals intact on sample bottles?	Yes	No	(Not present)
Chain of custody present?	(Yes)	No	
Sample Instructions complete on Chain of Custody?	(Yes)	No	
Chain of Custody signed when relinquished and received?	(Yes)	No	
Chain of custody agrees with sample label(s)	(Yes)	No	
Container labels legible and intact?	(Yes)	No	
Sample Matrix and properties same as on chain of custody?	(Yes)	No	
Samples in proper container/bottle?	(Yes)	No	
Samples properly preserved?	(Yes)	No	
Sample bottles intact?	(Yes)	No	
Preservations documented on Chain of Custody?	(Yes)	No	
Containers documented on Chain of Custody?	(Yes)	No	
Sufficient sample amount for indicated test?	(Yes)	No	
All samples received within sufficient hold time?	Yes	(No)	TDS beyond 7-day hold time
VOC samples have zero headspace?	(Yes)	No	Not Applicable

Other observations:

Samples received beyond hold time for TDS

Variance Documentation:

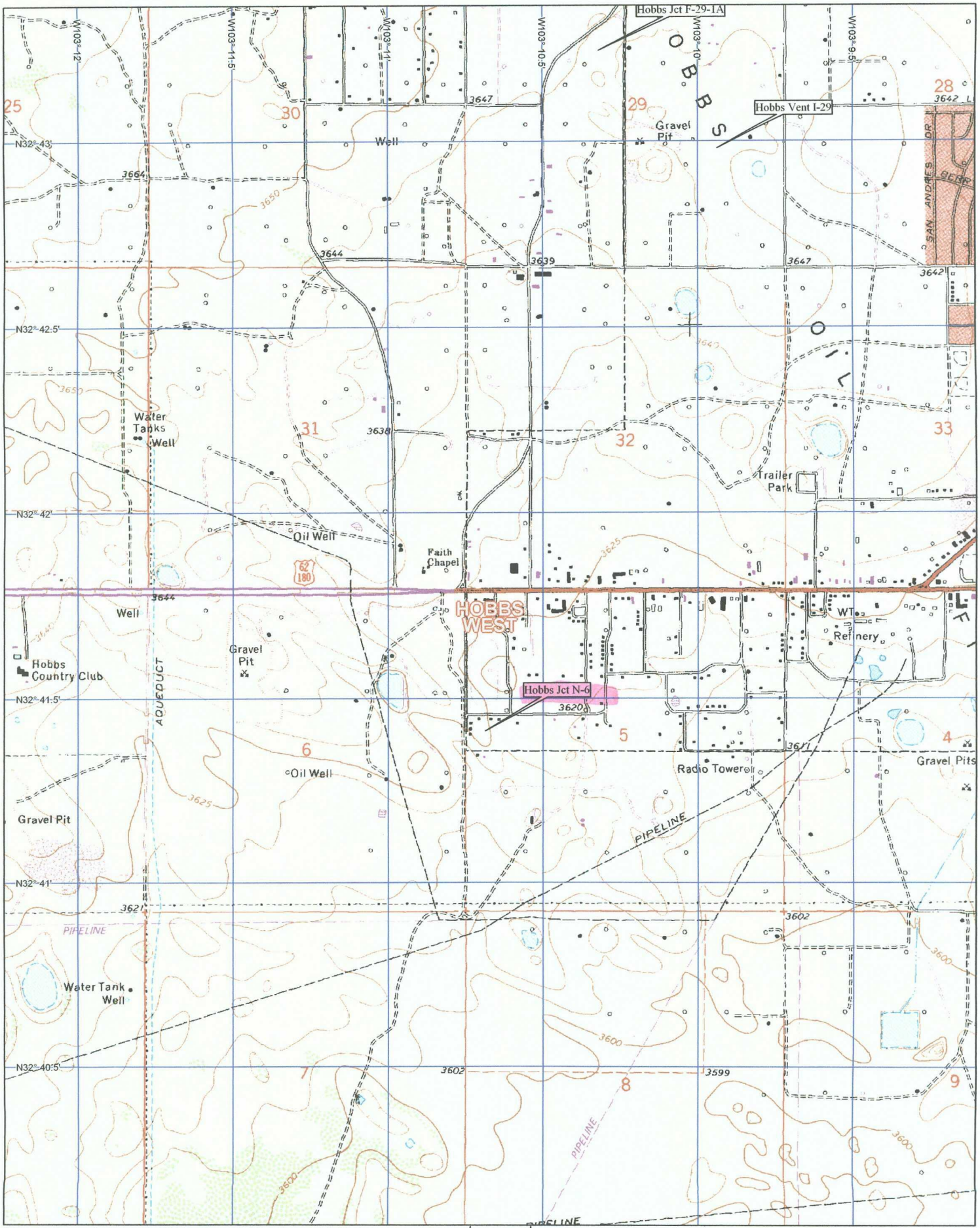
Contact Person: - Kristin F. Pope Date/Time: 11-30-04@1050 Contacted by: JeanneM+Muse

Regarding:

hold time on TDS expired

Corrective Action Taken:

Client does not want to run TDS. Continue with all other analysis



 Source Data: USGS 1000 ft Scale: 1 : 25,000 Detail: 13-0 Datum: WGS84