## 1R-487

## REPORTS

### DATE:

2-26-07



CERTIFIED MAIL

RETURN RECEIPT NO. 7002 2410 0001 5812 9824

Mr. Ed Hansen

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

Subject:

2006 MONITOR WELL REPORT

IR487

GROUNDWATER REMEDIATION/MONITORING N-6 PIPELINE LEAK, WEST COUNTY ROAD SITE HOBBS SWD SYSTEM

SW1/4, NW 1/4, SEC. 5 & 6, T19S, R38E, LEA COUNTY, NEW MEXICO

Dear Mr. Hansen:

Rice Operating Company (ROC) takes this opportunity to submit the 2006 Monitor Well Report for the Hobbs Salt Water Disposal (SWD) System N-6 Release Site. The site is located immediately south of the intersection of Highway 62-180 and the South Loop of the Hobbs West County Road By-Pass.

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

#### **Groundwater Sampling**

Wells are sampled quarterly in accordance with NMOCD guidelines. The attached table summarizes the analytical results from groundwater samples collected from monitor wells in 2006. 2006 groundwater laboratory reports are also attached.

ARCADIS U.S., Inc.
1004 North Big Spring Street
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Midland
Texas 79701
Tel 432.687.5400
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ENVIRONMENTAL

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Date:

February 26,=2007

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Contact:

Sharon E. Hall

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Email

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Our ref:

MT000821.0001

ARCADIS

Mr. Ed Hansen
February 26, 2006

#### Free Product Removal

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 product recovery only. During 2006, PSH recovery was conducted by weekly replacement of a sorbant sock placed in the well. Product thickness and recovery information is shown in the attached table.

A biosparge well designed to maximize in-situ biodegradation and minimize volatilization of hydrocarbons was installed at the site and became operational in August 2005. Four borings were drilled on November 8 and 9, 2006 in order to evaluate hydrocarbon occurrence in the vadose zone. Based on drilling observations a second biosparge well was installed approximately 30 feet east of the original biosparge well. It is anticipated that the second biosparge well will be operational in March 2007.

#### **Biosparge Well Operation and Evaluation**

A biosparge well designed to maximize in-situ biodegradation and minimize volatilization of hydrocarbons was installed at the site and became operational in August 2005. The operation was optimized by October 2005. Preliminary evaluation indicates that the well is effective in the remediation of free-phase hydrocarbons at the site. This is evidenced by an increased average product thickness in MW-1 interpreted to be a result of the formation of biosurfactants, indicative of active bioremediation. Preliminary biochemical results also suggest groundwater chemistry indicative of bioremediation, however, additional sampling (1 to 2 additional quarters) will be necessary to evaluate the groundwater chemistry. Operation of the existing biosparge well and a second biosparge that is expected to be operational in March 2007 in conjunction with use of absorbent socks and evaluation of its effectiveness will continue in 2007.

#### Recommendations

Based on the historical analytical results, ARCADIS recommends modification of the sampling at the site. With the exception of MW-3, all of the monitoring wells have exhibited chloride concentrations below the WQCC standard of 250 mg/L and TDS concentrations below the WQCC standard of 1,000 mg/L for the last 7 consecutive quarters. Further, chloride and TDS concentrations in MW-2, MW-4, and MW-6 have

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Mr. Ed Hansen
February 26, 2006

been below WQCC standards for the last 12 consecutive quarters. MW-5 exhibited a spike in chloride and TDS concentrations in March 2004 and MW-7 exhibited a spike in concentrations in March 2003 and March 2004 above the WQCC standards. IWW exhibited a spike in concentrations in March 2004 and March 2005. The consistently low concentrations for all other sampling events suggest that these concentration spikes are anomalous and may be indicative of laboratory error. It is recommended that sampling of these wells be discontinued and the wells plugged.

The source of chloride impact was removed in 1994 and groundwater recovery to remove chlorides was initiated in 1996, yet MW-3 continues to exhibit elevated chloride and TDS concentrations. This well, unlike the others at the site, was drilled to the base of the Ogallala which is underlain by Triassic red-beds. The elevated chloride, TDS and sulfate concentrations in this well are markedly higher than the other wells at the site and are strongly indicative of naturally occurring geochemical conditions at the base of the Ogallala. Therefore, it is recommended that sampling of MW-3 be discontinued and the well plugged.

Product removal from MW-1 will continue in 2006. Operation and sampling of the biosparge wells will continue in 2007, and the effectiveness of the biosparge wells in remediation of hydrocarbons at the site evaluated.

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

Sincerely,

ARCADIS U.S., Inc.

Sharon E. Hall

Site Evaluation Department Manager

Copies

Kristin Pope, ROC (3 copies)

Sharn E. Hall

	ARC			·		FIELD	MEASUR	EMEN	FIELD MEASUREMENT/OBSERVATION LOG	907	. :
ENVIRONMENTAL	NME	NTAL		PROJECT NAME RICE Operating (	NAME: rating Con	: Company	NM=Not Measured NA= Not Applicable	4)	PROJECT NUMBER: Hobbs N-6 Leak	obs N-6 Leak	
PROJECT MANAGER: Kristin Farris Pope - Rice Operating Company	ER: Rice Ope	erating Comp	any			FIELD TECHNICIAN: Rozanne Johnson Arc Environmental	INICIAN: hnson nental		DATE: Weekly Gauge, Purge, Sock Change October 2006 - December 2006	urge, Sock Change r 2006	
WELL # /SAMPLE LOCATION	TOTAL WELL DEPTH (feet)	DEPTH TO PRODUCT (feet)	DEPTH TO WATER (feet)	HEIGHT WATER COLUMN (feet)	PSH THICKNES S (feet)	pH Before Purge / After Purge	Water Removed (gallons)		DATE SAMPLE TAKEN	Comments	
Bio Sparge	64.90	64.90	39.70	25.20	No Detect	8.86/7.53	70		10/5/2006	2' / 2" sock stained to 24" -Sock Replaced	
Bio Sparge	64.10	64.10	39.66	24.44	No Detect	8.05	0		10/9/2006	2' / 2" sock stained to 24" Sock Pulled & Not Replaced - Well Will Not Be Purged	
Bio Sparge	64.10	64.10	39.66	24.44	No Detect	8.75	0	<del></del>	10/11/2006		
Bio Sparge	64.10	64.10	39.68	24.42	No Detect	9.10	0		10/13/2006		
Bio Sparge	64.10	64.10	39.66	24.44	No Detect	8.03	0		10/16/2006	Compressor Down	
Bio Sparge	64.05	64.05	39.71	24.34	No Detect	7.82	0		10/18/2006	Compressor Down	
Bio Sparge	63.98	63.98	39.69	24.29	No Detect	9.14	0		10/20/2006	Compressor Back Up	
Bio Sparge	63.70	63.70	39.83	23.87	No Detect	9.61	0		10/26/2006	Well Depth is Starting To Change.	
Bio Sparge	63.70	63.70	39.85	23.85	No Detect	9.42	0		11/3/2006		
Bio Sparge	63.72	63.72	39.90	23.82	No Detect	9.31	0		11/9/2006		
Bio Sparge	63.75	63.75	39.92	23.83	No Detect	9.43/7.51	20		11/15/2006	Well Sampled for Q4	
Bio Sparge	63.74	63.74	39.95	23.79	No Detect	9.46	0	<u></u>	12/6/2006		
Bio Sparge											
Bio Sparge			2 - 2 - 2 - 3 - 3 - 3 - 3 - 3 - 3 - 3 -								(D) }

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	ARC					FIELD	MEASU	REMEN	FIELD MEASUREMENT/OBSERVATION LOG	TOG 907
ENVIRONMENTAL	NME	NTAL		PROJECT NAME RICE Operating (	PROJECT NAME: RICE Operating Company	pany			PROJECT NUMBER: Hobbs N-6 Leak	obs N-6 Leak
PROJECT MANAGER: Kristin Farris Pope - Rice Operating Company	ER: Rice Op	erating Com	pany			FIELD TECHNICIAN: Rozanne Johnson Arc Environmental	INICIAN: hnson mental		DATE: Weekly Gauge, Purge, Sock Change October 2006 - December 2006	urge, Sock Change r 2006
WELL # /SAMPLE LOCATION	TOTAL WELL DEPTH (feet)	DEPTH TO PRODUCT (feet)	DEPTH TO WATER (feet)	HEIGHT WATER COLUMN (feet)	PSH THICKNESS (feet)		Water Removed (gallons)		DATE SAMPLE TAKEN	Comments
Bio Sparge #2	73.32	73.32	42.55	30.77	No Detect				11/10/2006	Well Developed
Bio Sparge #2	73.32	73.32	42.59	30.73	No Detect		0		11/15/2006	Well Sampled for Q4 ~ Sock placed in well.
Bio Sparge #2	·			0.00			0		11/22/2006	Checked Sock - Sock Stained to 4" Sock Placed Back in Well.
Bio Sparge #2	73.32	73.32	42.63	30.69	No Detect		0		11/30/2006	19" Sock Stained to 7" ~ Sock Replaced
Bio Sparge #2	73.32	73.32	42.67	30.65	No Detect		0		12/6/2006	19" Sock Stained to 8" ~ Sock Replaced
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Sulfat	×	11	102	79.6	38.6	130	100	89.6	82.5	8	73.5	64.2	60.3	61.	80.7	78.	
Total Xylenes Sulfate	XXX	<0.001	<0.001	<0.001	>0.006	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Toluene Ethyl Benzene	XXX	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
	XXX	0.004 < 0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Benzene	XX	0.004	<0.001	<0.001	<0.002	0.00619 < 0.001	474 < 0.001	583 < 0.001	88.3 XXX <0.001	419 1010 <0.001	510 < 0.001	498 < 0.001	532 <0.001	494 < 0.001	<0.001	<0.001	
TDS	XX	239 XXX	465	493	485	1130			××	1010		498	532	494	528	434	
Г	$\overline{}$	239	40.7	42.5	52	487	40:8	78	88.3	419	85.3	49	41.9	44.5	38.8	43.7	
Sample Date  Cl	8/14/2002 XXX	3/14/2003	6/27/2003	9/22/2003	12/18/2003	3/15/2004	5/27/2004	9/8/2004	11/23/2004	3/29/2005	6/28/2005	12/6/2005	2/28/2006	6/5/2006	9/12/2006	11/14/2006	
Volume Purged	176.95	111.91	112.69	113.34	113.42	248.9	113.81	172.19	178.98	250	21	185	180	180	180	180	
Total Depth Well Volume	58.98	37.3	37.56	37.78	37.8	82.96	37.93	57.4	99.69	XXX	20 XXX	59.8	59.5	59.5	9.65	29.8	
Total Depth	98.25	98.18	98.24	98.2	98.23	98.23	98.22	98.2	98.2	98.2 XXX	20	98.2	98.2	98.2	98.2	98.2	
Depth to Water	40.42	40.79	40.45	40.43	40.33	41.75	40.12	41.93	39.71	39.01	68.98	9.68	28.68	40.2	92.68	19.68	
MW	<b>N</b> MI	WW.	W/	WW!	WW.	WW.	NWI	NWI N	WW.	MMI	NWI	NWI	NW!	NWI		NWI	

Sulfate	XX	XXX	109	112	88.8	37.7	108	89.4	91.4	90.2	93.6	100	69.5	107	56.3	9.92	92	91.7
Total Xylenes  Sulfate	XXX	XXX	0.004	<0.001	<0.001	>0.006	0.001929	<0.001	0.00837	0.01051	0.00101	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Toluene Ethyl Benzene	XXX	XXX	900.0	<0.001	<0.001	<0.002	0.00236	0.000482 < 0.001	0.0126	0.0239	0.00151	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	[60900.0][
Toluene	XXX	XXX	0.001	<0.001	<0.001	<0.002	<0.001	<0.001	0.00219	0.00269	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
TDS Benzene	XXX	XXX	0.003	499 < 0.001	504 < 0.001	458 < 0.002	0.00458 < 0.001	0.00448 <0.001	0.0289	0.0238	0.00169 <0.001	<0.001	<0.001	0.00325 <0.001	538 < 0.001	552 <0.001	428 < 0.001	442 [[0.000709] <0.001
TDS	XXX XXX	XX	XXX			1 !	484	481	229	XXX	444	515	217	380	Ι.		428	
<sub>디</sub>	XXX	XXX	53.2 XXX	40.8	31.9	44	39	31.9	6.07	58.1	39.1	42.4	49.5	28	29.5	38.5	31.1	33.6
ne Purged Sample Date CI	8/14/2002 XXX	12/6/2002 XXX XXX	3/14/2003	6/27/2003	9/22/2003	12/18/2003	3/15/2004	5/27/2004	9/8/2004	11/22/2004	3/29/2005	6/28/2005	9/6/2005	12/6/2005	2/28/2006	6/5/2006	9/11/2006	11/14/2006
	23.36	22.75	22.6	23.08	23.27	22.99	20.76	23.15	20.57	25.04	32	31.4	31	30	25	25	25	30
Well Volume	7.78	7.65	7.53	69.7	7.75	2.66	6.92	7.71	98.9	8.35	XXX	25 XXX	55 XXX	8.4	8.2	8	8.3	8.3
Total Depth	52.18	52.11	52.2	52.13	52.14	52.13	52.13	52.12	52.24	52.24	52.24 XXX		55	52.24	52.24	52.24	52.24	52.24
MW Depth to Water   Total Depth   Well Volume   Volur	40.2	40.34	40.61	40.29	40.26	40.39	41.53	40.3	41.69	39.4	38.73	39.12	39.21	39.3	39.56	39.97	39.44	39.47
MM	2	7	2	2	2	2	2	2	7	7	2	2	2	2	7	7	2	2

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Sulfate	XX	XXX	888	1120	1050	399	793	664	762	683	1030	2760	874	848	829	914	939	901
Total Xylenes Sulfate	XXX	XXX	0.003	0.001	0.001	>0.006	0.001646	0.000975	0.003572	0.004491	0.00422	<0.001	0.00455	<0.001	<0.001	<0.001	<0.001	<0.001
Ethyl Benzene	XXX	XXX	0.001	<0.001	<0.001	<0.002	0.000821	0.000248	0.00184	0.000775	0.00291	<0.001	0.00219	0.00312 < 0.001	0.00535 < 0.001	0.00258 < 0.001	<0.001	j[0.000413]
Toluene	XXX	XXX	0.001	0.013 < 0.001	0.008 <0.001	0.018 < 0.002	0.0354 < 0.001	0.000238	0.0152 < 0.001	0.000202	0.0805 <0.001	<0.001	<0.001	0.000572	0.00264	0.0171 [[0.000488]	0.0107 [[0.000587]	0.00697 [j[0.000417] [j[0.000413]
Benzene Toluene	XXX	XX	90.0	0.013	0.008	0.018	0.0354	0.0131	0.0152	0.0281	0.0805	0.00619 <0.001	0.00566 <0.001	0.0529	0.0315	0.0171	0.0107	
TDS	XXX	××	×	10700	10900	10512	0668	8060	8600	XX	14700	8930	7070	12100	15300	13600	13100	12600
CI		×	5850	5320	5320	5398	5140	5230	5140	3890	7300	7280	4660	7130	7270	2660	7390	6810
Sample Date	8/14/2002 XXX	12/6/2002 XXX XXX	3/14/2003 5850 XXX	6/27/2003 5320 10700	9/22/2003 5320 10900	12/18/2003 5398	3/15/2004 5140	5/27/2004 5230	9/8/2004	11/23/2004 3890 XXX	3/29/2005 7300	6/28/2005 7280	9/6/2005 4660	12/6/2005 7130	2/28/2006 7270 15300	6/5/2006 7660	9/12/2006 7390 13100	11/14/2006 6810 12600
Total Depth Well Volume Volume Purged Sample Date CI	225.18	224.76	224.38	224.93	226.02	225.69	223.73	225.71	222.73	227.19	235	39.35	40	230	230	230	225	230
Well Volume	7.65	74.92	74.79	74.97	75.34	75.23	74.57	75.23	74.27	75.73	XXX	XXX	XXX	75.8	75.6	75.4	75.6	75.7
	156.05	156.02	156.02	156.04	156.06	156.03	156.03	156.05	156.15	156.15	156.15 XXX	156.15 XXX	155.78 XXX	156.15	156.15	156.15	156.15	156.15
MW Depth to Water	40.57	40.76	10.95	40.69	40.68	40.82	41.82	40.83	41.93	39.64	38.73	39.35	39.43	39.52	39.82	40.19	39.8	39.67
MΜ	3	8	3	3	3	က	က	က	3	က	က	က	3	က	က	n	က	3

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Sulfate	××	XX	123	138	123	44.8	127	101	114	99.2	101	102	92.5	82.2	71.7	76.2	87	8 06
Total Xylenes Sulfate	XXX	XXX	<0.001	0.002	<0.001	>0.006	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Toluene Ethyl Benzene	XXX	XXX	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Toluene	XX	XXX	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
TDS Benzene	XXX XXX	XXX XXX	84.2 XXX <0.001	520 < 0.001	569 <0.001	547 <0.002	560 0.00103 <0.001	484 <0.001	492 0.00142 <0.001	55.2 XXX <0.001	424 < 0.001	519 < 0.001	523 <0.001	370 <0.001	556 <0.001	476 <0.001	588 <0.001	498 <0 001
	X X	X X	84.2 XX	62 5	65 5	64 5	124 50	49.6	49.6	55.2 XX	47 4;	44.8 5	69.7	40.4	39.7 5	59.2 4	65.7 5	93.4
Sample Date CI	8/14/2002 XXX	12/6/2002 XXX	3/14/2003	6/27/2003	9/22/2003	12/18/2003	3/15/2004	5/27/2004	9/8/2004	11/23/2004	3/29/2005	9/28/2002	9/6/2005	12/6/2005	2/28/2006	6/5/2006	9/11/2006	11/14/2006
Volume Purged Sample Date	27 74	27.42	26.89	27.43	27.5	27.38	25.27	27.42	24.94	30.13	32	40	40	30	30	30	30	30
Well Volume	9.24	9.14	8.96	9.14	9.16	9.12	8.42	9.14	8.31	10.04	XXX	XXX	XXX	9.6	9.7	9.4	8.6	8 6
Total Depth	56.65	56.66	56.63	59.95	295	29.95	29.95	56.65	56.71	56.71	56.71 XXX	61.65 XXX	61.65 XXX	56.71	56.71	56.71	56.71	56 71
Depth to Water   Total Depth   Well Volume	42.42	42.6	42.84	42.58	42.66	42.69	43.77	42.65	43.92	41.26	40.85	41.32	41.42	41.58	41.84	. 42.27	41.66	41 63
MW.	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4

Sulfate	XX	XXX	105	120	88.2	39.4	216	94	79.4	85.4	83.1	95.8	103	29	62.8	69	81.2	85
Total Xylenes Sulfate	XXX	XXX	<0.001	0.002	<0.001	>0.006	9/8000:0	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Ethyl Benzene	XXX	XXX	<0.001	<0.001	<0.001	<0.002	0.000543	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Toluene	XXX	XXX	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
TDS Benzene	xxx xxx	XXX	39 XXX  <0.001	513 < 0.001	508 < 0.001	474 <0.002	0.0107 <0.001	473 < 0.001	517 < 0.001	57.3 XXX <0.001	449 < 0.001	504 < 0.001	488 < 0.001	2 0.00044 < 0.001	504 <0.001	484 <0.001	596 <0.001	430 < 0.001
TDS	XXX	XXX	$\times$				1620			XXX		<u> </u>		442			L	
[ ]	XXX	XXX		35.4	33.7	99	762	33.7	35.4		32	38.1	8.99	29.6	27.9	37.8	33	30.2
me Purged Sample Date CI	8/14/2002 XXX	12/6/2002 XXX  XXX  XXX	3/14/2003	6/27/2003	9/22/2003	12/18/2003	3/15/2004	5/27/2004	9/8/2004	11/23/2004	3/29/2005	6/28/2005	9/6/2005	12/6/2005	2/28/2006	6/5/2006	9/11/2006	11/14/2006
Volume Purged	24.62	24.04	23.67	24.18	24.35	24.05	21.92	24.07	21.7	25.72	32	XXX	26.11	30	30	30	30	30
Well Volume	8.2	8.01	7.89	8.06	8.11	8.01	7.3	8.02	7.23	8.57	XXX	XXX	XXX	8.8	8.6	8.3	9.8	8.7
Total Depth	51.29	51.18	51.18	51.21	38.77	51.19	51.19	51.19	51.31	51.31	51.31 XXX	XXX	51.07 XXX	51.31	51.31	51.31	51.31	51.31
MW Depth to Water Total Depth Well Volume Volu	38.66	38.82	39.04	38.81	51.2	38.91	40	38.9	40.18	38.12	37.3	XXX	37.74	37.8	38.11	38.48	38.08	37.94
MM	5	5	5	5	5	5	5	5	5	5	2	5	5	5	5	5	5	5

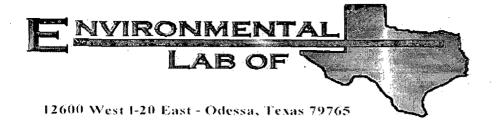
ate			9.96	97.5	88.4	36.8	94.2	86.6	82	84	81.1	103	23.4	58.2	9.79	72.2	101	95.4
Sulf	XX	×	6	6	8	က	6	8			8	<u> </u>	2	2	9	7	Ĺ	6
Total Xylenes Sulfate	XXX	XXX	<0.001	<0.001	<0.001	<0.006	<0.001	<0.001	<0.001	<0.001	<0.001	0.002845	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Ethyl Benzene	XXX	XXX	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	0.000812	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Toluene	XXX	XXX	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
TDS Benzene	XXX XXX	XXX XXX	42.5 XXX <0.001	743 < 0.001	484 < 0.001	452 < 0.002	2 0.0026 <0.001	443 < 0.001	488 < 0.001	XXX <0.001	473 < 0.001	1 < 0.001	2 < 0.001	458 < 0.001	552 <0.001	2 <0.001	2 < 0.001	464 < 0.001
TDS		×	×				692			XX		541	442	_		512	252	
ت ا	X	ž	42.5	35.4	39	44	222	31.9	53.2	76.1	8.76	122	40.4	52.7	59.2	67.2	9.79	53.9
ime Purged Sample Date CI	8/14/2002 XXX	12/6/2002 XXX	3/14/2003	6/27/2003	9/22/2003	12/18/2003	3/15/2004	5/27/2004	9/8/2004	11/23/2004	3/29/2005	6/28/2005	9/6/2005	12/6/2005	2/28/2006	6/5/2006	9/11/2006	11/14/2006
Volu	5.89	5.83	5.71	98.5	56.5	6.9	5.36	5.91	5.25	6.47	8	9.7	10.78	2	2	10	10	8
Well Volume	1.96	1.94	1.9	1.95	1.98	1.96	1.78	1.97	1.75	2.16	XXX	XXX	XXX	2.1	2.1	2	2.1	. 2.1
Total Depth	52.98	23.02	23	53.03	52.97	53	53	53.01	53.1	53.1	53.1	54.49 XXX	61.65 XXX	53.1	53.1	53.1	53.1	53.1
MW Depth to Water Total Depth Well Volume	40.7	40.87	1.14	40.81	40.79	40.93	42.02	16.04	42.16	39.62	39.14	9.68	39.61	39.75	90.04	40.53	40.05	39.88
MΜ	9	9	9	9	9	9	9	9	9	9	ဖ	9	9	9	9	9	9	9

Sulfate	XXX	XXX	XXX	122	133	110	44.4	220	105	111	96.1	96.9	6.9/	85.2	72.4	74	77.9	86.5
Total Xylenes  Sulfate	XXX	XXX	<0.001	<0.001	<0.001	>0.006	<0.001	<0.001	<0.001	<0.001	<0.001	0.0038	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.001
Ethyl Benzene	XXX	XXX	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	0.00114	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Toluene	XXX	XXX	0.001 < 0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
TDS Benzene	XXX XXX	XXX	0.001	802 < 0.001	861 < 0.001	827 <0.002	0.0131	986 <0.001	731 <0.001	<0.001	791 <0.001	783 <0.001	802 <0.001	670 < 0.001	876 <0.001	794 <0.001	710 <0.001	764 <0.001
TDS	XXX	XX	266 XXX	1		1 1	2220			XXX				029				1
ت ت	XXX	XXX	266	222	222	208	1080	213	230	188	234	216	187	201	202	225	202	223
me Purged   Sample Date   Cl	8/14/2002 XXX	12/6/2002 XXX	3/14/2003	6/27/2003	9/22/2003	12/18/2003	3/15/2004	5/27/2004	9/8/2004	11/23/2004	3/29/2005	6/28/2005	9/6/2005	12/6/2005	2/28/2006	6/5/2006	9/11/2006	11/14/2006
	3.1	2.98	2.86	3	3.05	3	2.44	3	2.36	178.98	4	3.7	3.5	4	4	10	10	7
Well Volume	1.03	0.99	96.0	1	1.01	1	0.81	1	62.0	1.19	XXX	47 XXX	47 XXX	1.2	1.1	1.1	1.1	1.2
Total Depth	7.74	47.17	47.18	47.15	47.11	47.18	47.18	47.15	47.25	47.25	47.25 XXX		47	47.25	47.25	47.25	47.25	47.25
MW Depth to Water Total Depth Well Volume Volu	40.74	40.94	41.22	40.88	40.86	41.03	42.17	41	42.34	39.82	39.33	39.6	39.86	39.93	40.27	40.63	40.17	40.01
MM	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7

MW	Depth to Water   Total Depth	Total Depth	Well Volume	Volume Purged   Sample Date		IJ	TDS	Benzene	Toluene Ethyl Benzene		Total Xylenes
Bio Sparge	40.9	2.39	16.1	25	12/6/2005	97.6	809	0.0323	0.0209	0.107	0.0825
Bio Sparge	43.33	2.59	14.5	45	3/1/2006	105	912	0.44	0.0357	0.168	0.1195
Bio Sparge	41.08	2.39	16	. 20	6/5/2006	171	858	0.544	0.0125	1.142	0.03479
Bio Sparge	39.9	2.29	16.8	0.2	9/12/2006	142	1010	1.15	0.0283	0.207	0.04044
Bio Sparge	39.92	63.75	15.5	20	11/15/2006	283	1450	1.06	0.0298	0.159	0.0772

в	4	5	2	9
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<u>الكرا</u>				

	Depth to Water	Total Depth	Well Volume	Vell Volume   Volume Purged   Sample Date   Cl	Sample Date	$\Box$	TDS	TDS Benzene Toluene Eth	enzene Toluene E	Tiù:	thyl Benzene
sparge # 2	42.59	73.32	20	09	11/15/2006 81.8 522 0.0373 0.00314	81.8	522	0.0373	0.00314		0.0404



#### Analytical Report

#### **Prepared for:**

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

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

Lab Order Number: 6C02020

Report Date: 03/15/06

Project Number: Hobbs N-6 Leak
Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

Reported:
03/15/06 11:07

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix .	Date Sampled	Date Received
Monitor Well #2	6C02020-01	Water	02/28/06 11:30	03/02/06 16:16
Monitor Well #3	6C02020-02	Water	02/28/06 19:00	03/02/06 16:16
Monitor Well #4	6C02020-03	Water	02/28/06 10:05	03/02/06 16:16
Monitor Well #5	6C02020-04	Water	02/28/06 15:10	03/02/06 16:16
Monitor Well #6	6C02020-05	Water	02/28/06 17:35	03/02/06 16:16
Monitor Well #7	6C02020-06	Water	02/28/06 09:00	03/02/06 16:16
IWW	6C02020-07	Water	02/28/06 13:45	03/02/06 16:16
Bio Sparge Well	6C02020-08	Water	03/01/06 10:40	03/02/06 16:16

Project: Hobbs N-6 Leak

Project Number: None Given
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Reported: 03/15/06 11:07

#### Organics by GC Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dili	DatL	Dron	A me1 3	Mathed	NT.
Monitor Well #2 (6C02020-01) Water	Nosun		Omts	Dilution	Batch	Prepared	Analyzed	Method	Note
Benzene	ND	0.00100	mg/L	1	EC60703	03/07/06	03/08/06	EPA 8021B	····, ····
Toluene	ND	0.00100	"		"	"	U3/ U4/ UU	н	
Ethylbenzene	ND	0.00100		u	"	"	н		
Xylene (p/m)	ND	0.00100	**	11		н		н	
Xylene (o)	ND	0.00100	и	**		и	н	44	
Surrogate: a,a,a-Trifluorotoluene		85.0 %	80-	120	. "	"	n	ıı .	
Surrogate: 4-Bromofluorobenzene		102 %		120	"	"	,,	и	
Monitor Well #3 (6C02020-02) Water									
Benzene	0.0315	0.00100	mg/L	1	EC60703	03/07/06	03/08/06	EPA 8021B	
Toluene	0.00264	0.00100	н	11	н	•	#	u	
Ethylbenzene	0.00535	0.00100	u	n		н	н		
Xylene (p/m)	ND	0.00100		"	**	•	**	11	
Xylene (o)	ND	0.00100	н	"	11	"	н	**	
Surrogate: a,a,a-Trifluorotoluene		90.0 %	80-	120	"	"	"		
Surrogate: 4-Bromofluorobenzene		104 %	80-	120	"	"	"	"	•
Monitor Well #4 (6C02020-03) Water					-				
Benzene	ND	0.00100	mg/L	l	EC60703	03/07/06	03/08/06	EPA 8021B	
Toluene	ND	0.00100	n	**	"	n	u	11	
Ethylbenzene	ND	0.00100		"	"	**	"	10	
Xylene (p/m)	ND	0.00100	10	11	H	**	n n	IF	
Xylene (o)	ND	0.00100		"	н	"	н	11	
Surrogate: a,a,a-Trifluorotoluene		81.0 %	80-	120	"	,,	"	"	
Surrogate: 4-Bromofluorobenzene		84.0 %	80-	120	"	"	"	"	
Monitor Well #5 (6C02020-04) Water									
Benzene	ND	0.00100	mg/L	1	EC60703	03/07/06	03/08/06	EPA 8021B	-
Toluene	ND	0.00100	"	10	**	u	14	н	
Ethylbenzene	ND	0.00100	"	n	•	"	ij	11	
Xylene (p/m)	ND	0.00100	п	**	**	"	· ·	11	
Xylene (o)	ND	0.00100	"	"	**	9	4	11	
Surrogate: a,a,a-Trifluorotoluene		87.8 %	80-	120	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		82.5 %	80-	120	"	"	"	"	

Project Number: Hobbs N-6 Leak
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Project Manager: Kristin Farris-Pope

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Reported:
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#### Organics by GC Environmental Lab of Texas

Anglista	Dagiili	Reporting	. Timir-	<b></b>					
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Monitor Well #6 (6C02020-05) Water								-	
Benzene	ND	0.00100	mg/L	1	EC60703	03/07/06	03/08/06	EPA 8021B	
Toluene	ND	0.00100	"	"	11	"	**	11	•
Ethylbenzene	ND	0.00100	н	"	11	11	**	и	
Xylene (p/m)	ND	0.00100	"	**	н	**	**	"	
Xylene (o)	ŊD	0.00100	19		н		н	п	
Surrogate: a,a,a-Trifluorotoluene	, , , , , , , , , , , , , , , , , , ,	83.5 %	80-1	20	"	"	n	. "	
Surrogate: 4-Bromofluorobenzene		92.0 %	80-1	20	"	n	"	"	
Monitor Well #7 (6C02020-06) Water									
Benzene	ND	0.00100	mg/L	1	EC60703	03/07/06	03/08/06	EPA 8021B	
Toluene	ND	0.00100	11	"	n	• "	"	"	
Ethylbenzene	ND	0.00100	D	н	"	n	"	32	•
Xylene (p/m)	ND	0.00100	**	•	**	n	**	и.	
Xylene (o)	ND	0.00100	"	"	"	н	н	"	
Surrogate: a,a,a-Trifluorotoluene		100 %	80-1	20	"	"	"	n	
Surrogate: 4-Bromofluorobenzene		108 %	80-1	20	n .	,	ø		
IWW (6C02020-07) Water									
Benzene	ND	0.00100	mg/L	1	EC60703	03/07/06	03/08/06	EPA 8021B	
Toluene	ND	0.00100	11	n	и	4	н	п	
Ethylbenzene	ND	0.00100	**	1+	"	11	"	н	
Xylene (p/m)	ND	0.00100	"	н	"	н	н	"	
Xylene (o)	ND	0.00100	11	"	"	н	н	11	
Surrogate: a,a,a-Trifluorotoluene		81.8%	80-1	120	n	"	"	"	
Surrogate: 4-Bromofluorobenzene		82.5 %	80-1	120	. "	"	"	и	
Bio Sparge Well (6C02020-08) Water									-
Benzene	0,440	0.0100	mg/L	10	EC60703	03/07/06	03/08/06	EPA 8021B	
Toluene	0.0357	0.0100		"	н	11	H	n .	
Ethylbenzene	0.168	0.0100	n		#	11	U	H	
Xylene (p/m)	0.0753	0.0100	н		11	11	н	11	
Xylene (o)	0.0442	0.0100	"	"		н	W 1	н	
Surrogate: a,a,a-Trifluorotoluene		102 %	80-1	20	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.0 %	80-1	120	"	n	"	"	

Project: Hobbs N-6 Leak
Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

Reported:
03/15/06 11:07

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note:
Monitor Well #2 (6C02020-01) Water						<u>.</u>			
Total Alkalinity	194	2.00	mg/L	1	EC60905	03/09/06	03/09/06	EPA 310.1M	
Chloride	29.5	5.00	"	10	EC60320	03/03/06	03/07/06	EPA 300.0	
Total Dissolved Solids	538	5.00	11	1	EC60607	03/03/06	03/06/06	EPA 160.1	
Sulfate	56.3	5.00	11	10	EC60320	03/03/06	03/07/06	EPA 300.0	
Total Organic Carbon	0.996	0.500	*	1	EC60806	03/08/06	03/08/06	EPA 415.1	
Monitor Well #3 (6C02020-02) Water									
Total Alkalinity	386	2.00	mg/L	1	EC60905	03/09/06	03/09/06	EPA 310.1M	
Chloride	7270	100	"	200	EC60320	03/03/06	03/07/06	EPA 300.0	
Total Dissolved Solids	15300	5.00		1	EC60607	03/03/06	03/06/06	EPA 160.1	
Sulfate	829	100	н	200	EC60320	03/03/06	03/07/06	EPA 300.0	
Total Organic Carbon	1.68	0.500	"	l	EC60806	03/08/06	03/08/06	EPA 415.1	
Monitor Well #4 (6C02020-03) Water									
Total Alkalinity	207	2.00	mg/L	1	EC60905	03/09/06	03/09/06	EPA 310.1M	
Chloride	39.7	5.00	н.	10	EC60320	03/03/06	03/07/06	EPA 300.0	
Total Dissolved Solids	556	5.00	**	1	EC60607	03/03/06	03/06/06	EPA 160.1	
Sulfate	71.7	5.00		10	EC60320	03/03/06	03/07/06	EPA 300.0	
Total Organic Carbon	1.38	0.500	н	1	EC60806	03/08/06	03/08/06	EPA 415.1	
Monitor Well #5 (6C02020-04) Water									
Total Alkalinity	219	2.00	mg/L	1	EC60905	03/09/06	03/09/06	EPA 310.1M	
Chloride	27.9	5.00	**	10	EC60320	03/03/06	03/07/06	EPA 300.0	
Total Dissolved Solids	504	- 5.00	**	1	EC60607	03/03/06	03/06/06	EPA 160.1	
Sulfate	62.8	5.00	,	10	EC60320	03/03/06	03/07/06	EPA 300.0	
Total Organic Carbon	1.16	0.500		1	EC60806	03/08/06	03/08/06	EPA 415.1	
Monitor Well #6 (6C02020-05) Water									
Total Alkalinity	198	2.00	mg/L	1	EC60905	03/09/06	03/09/06	EPA 310.1M	
Chloride	59.2	5.00	"	10	EC60320	03/03/06	03/07/06	EPA 300.0	
Total Dissolved Solids	552	5.00	ь	1	EC60607	03/03/06	03/06/06	EPA 160.1	
Sulfate	67.6	5.00	41	. 10	EC60320	03/03/06	03/07/06	EPA 300.0	
Total Organic Carbon	1.53	0.500	"	1	EC60806	03/08/06	03/08/06	EPA 415.1	

Project Number: Hobbs N-6 Leak
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Reported:

Reported: 03/15/06 11:07

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

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
Monitor Well #7 (6C02020-06) Water									
Total Alkalinity	231	2.00	mg/L	1	EC60905	03/09/06	03/09/06	EPA 310.1M	
Chloride	202	5.00	n	10	EC60320	03/03/06	03/07/06	EPA 300.0	
Total Dissolved Solids	876	5.00		1	EC60607	03/03/06	03/06/06	EPA 160.1	
Sulfate	72.4	5.00	н	10	EC60320	03/03/06	03/07/06	EPA 300.0	
Total Organic Carbon	1.50	0.500	"	1	EC60806	03/08/06	03/08/06	EPA 415.1	
IWW (6C02020-07) Water									
Total Alkalinity	230	2.00	mg/L	1	EC60905	03/09/06	03/09/06	EPA 310.1M	
Chloride	41.9	5.00	11	10	EC60320	03/03/06	03/07/06	EPA 300.0	
Total Dissolved Solids	532	5.00		1	EC60607	03/03/06	03/06/06	EPA 160.1	
Sulfate	60.3	5.00	n	10	EC60320	03/03/06	03/07/06	EPA 300.0	
Total Organic Carbon	0.967	0.500	"	1	EC60806	03/08/06	03/08/06	EPA 415.1	
Bio Sparge Well (6C02020-08) Water									***
Total Alkalinity	508	2.00	mg/L	1 ·	EC60905	03/09/06	03/09/06	EPA 310.1M	
Chloride	105	5.00	11	10	EC60320	03/03/06	03/07/06	EPA 300.0	
Total Dissolved Solids	912	5.00	11	1.	EC60607	03/03/06	03/06/06	EPA 160.1	
Sulfate	39.2	5.00	"	10	EC60320	03/03/06	03/07/06	EPA 300.0	
Total Organic Carbon	4.59	0.500	14	1	EC60806	03/08/06	03/08/06	EPA 415.1	

Project: Hobbs N-6 Leak

Project Number: None Given
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#### Total Metals by EPA / Standard Methods Environmental Lab of Texas

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
Monitor Well #2 (6C02020-01) Water									
Calcium	72.7	0.100	mg/L	10	EC60711	03/07/06	03/07/06	EPA 6010B	
Magnesium	15.2	0.0100	11	*1	10	"	и	**	
Potassium	3.71	0.0500	н	1	U	**	U	U	
Sodium	37.2	0.100	н	10	н	н		n	
Iron	0.125	0.00200	"	1	EC60807	03/06/06	03/08/06		
Monitor Well #3 (6C02020-02) Water				•					
Calcium	790	2.00	mg/L	200	EC60711	03/07/06	03/07/06	EPA 6010B	•
Magnesium	204	0.0500	11	50	n	н		u	
Potassium	78.5	2.50	10	н	**	u	u	II.	
Sodium	4820	10.0	11	1000	**	n	и	и	
Iron .	1.74	0.00200	**	1	EC60807	03/06/06	03/08/06		
Monitor Well #4 (6C02020-03) Water								_	
Calcium	45.6	0.100	mg/L	10	EC60711	03/07/06	03/07/06	EPA 6010B	
Magnesium	13.8	0.0100	н	"	n	II.	11		
Potassium	3.67	0.0500	*1	1	11	и	16	н	
Sodium	46.1	0.100	11	10	"	н,	11	n	
Iron	1.29	0.00200		1	EC60807	03/06/06	03/08/06	n	
Monitor Well #5 (6C02020-04) Water									
Calcium	75.2	0.100	mg/L	10	EC60711	03/07/06	03/07/06	EPA 6010B	
Magnesium	14.6	0.0100	10		n	н	n	**	
Potassium	3.78	0.0500	10	1	п	**	н	u.	
Sodium	45.0	0.100	*	10	"	я	*1	n	
Iron	0.0513	0.00200		1	EC60807	03/06/06	03/08/06	*	
Monitor Well #6 (6C02020-05) Water									
Calcium	83.0	0.100	mg/L	10	EC60711	03/07/06	03/07/06	EPA 6010B	
Magnesium	16.4	0.0100	11	**	н	н		я	
Potassium	3.85	0.0500		1	н	и	Ħ	10	
Sodium	41.2	0.100	н	10	*	O		10	
Iron	0.426	0.00200	,,	1	EC60807	03/06/06	03/08/06	**	

Project: Hobbs N-6 Leak

Project Number: None Given
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#### Total Metals by EPA / Standard Methods Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Monitor Well #7 (6C02020-06) Water									
Calcium	41.6	0.100	mg/L	10	EC60711	03/07/06	03/07/06	EPA 6010B	
Magnesium	16.1	0.0100	11	u·	"	11	и	IF.	
Potassium	3.78	0.500		**	**	11	11	и	
Sodium	137	0.100	*	. 41	"	b	II.	n	
Iron	2.37	0.00200	"	I	EC60807	03/06/06	03/08/06	"	
IWW (6C02020-07) Water									
Calcium	24.1	0.100	mg/L ,	. 10	EC60711	03/07/06	03/07/06	EPA 6010B	
Magnesium	6.90	0.0100	"	. 11	н	"	U	"	
Potassium	5.35	0.0500	n	1	н	n	"	н	
Sodium	114	0.500	"	50	"	u	n	u	
Iron	0.150	0.00200	H	I	EC60807	03/06/06	03/08/06		
Bio Sparge Well (6C02020-08) Water									
Calcium	7.98	0.100	mg/L	10	EC60711	03/07/06	03/07/06	EPA 6010B	
Magnesium	17.3	0.0100	"	11		н	н	"	
Potassium	26.3	0.500	"	"	41	н	-19	19	
Sodium	243	0.500	11	50	"	a	н	**	
Iron	12.5	0.0200	#	10	EC60807	03/06/06	03/08/06	н	

Project: Hobbs N-6 Leak

Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**Reported:** 03/15/06 11:07

#### Dissolved Metals by EPA / Standard Methods Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Monitor Well #2 (6C02020-01) Water				Dilution	Daten	- Trepared	Analyzed	Wichiod	Notes
Iron	ND	0.00200	mg/L	. 1	EC60810	03/08/06	03/08/06	EPA 6010B	
Monitor Well #3 (6C02020-02) Water									
Iron	0.136	0.00200	mg/L	1	EC60810	03/08/06	03/08/06	EPA 6010B	
Monitor Well #4 (6C02020-03) Water									
Iron	0.00820	0.00200	mg/L	, 1	EC60810	03/08/06	03/08/06	EPA 6010B	
Monitor Well #5 (6C02020-04) Water							_		
Iron	ND	0.00200	mg/L	I	EC60810	03/08/06	03/08/06	EPA 6010B	
Monitor Well #6 (6C02020-05) Water			_					_	
Iron .	ND	0.00200	mg/L	1	EC60810	03/08/06	03/08/06	EPA 6010B	
Monitor Well #7 (6C02020-06) Water									
Iron	ND	0.00200	mg/L	1	EC60810	03/08/06	03/08/06	EPA 6010B	
IWW (6C02020-07) Water				•	_				
Iron	0.00860	0.00200	mg/L	1	EC60810	03/08/06	03/08/06	EPA 6010B	
Bio Sparge Well (6C02020-08) Water									
Iron	0.0628	0.00200	mg/L	1	EC60810	03/08/06	03/08/06	EPA 6010B	

Project: Hobbs N-6 Leak

Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**Reported:** 03/15/06 11:07

#### 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
	Result	Liiiii	Omis	Level	Kesuit	70KEC	Limits	- KFD	Limit	Notes
Batch EC60703 - EPA 5030C (GC)		<u> </u>						-		
Blank (EC60703-BLK1)				Prepared &	Analyzed	03/07/06				
Benzene	ND	0.00100	mg/L							
Toluene ,	ND	0.00100								
Ethylbenzene	ND	0.00100	۳ .							
Xylene (p/m)	ND	0.00100	"							
Xylene (o)	ND	0.00100	*1						,	
Surrogate: a,a,a-Trifluorotoluene	34.3		ug/l	40.0		85.8	80-120			
Surrogate: 4-Bromofluorobenzene	35.2		"	40.0		88.0	80-120			
LCS (EC60703-BS1)				Prepared &	Analyzed	: 03/07/06				
Benzene	0.0448	0.00100	mg/L	0.0500		89.6	80-120			
Toluene	0.0498	0.00100	n	0.0500		99.6	80-120			
Ethylbenzene	0.0566	0.00100	**	0.0500		113	80-120		,	
Xylene (p/m)	0.119	0.00100	н	0.100		119	80-120			
Xylene (a)	0.0580	0.00100	"	0.0500		116	80-120			
Surrogate: a,a,a-Trifluorotoluene	34.7		ug/l	40.0		86.8	80-120			
Surrogate: 4-Bromofluorobenzene	38.5		"	40.0		96.2	80-120			
Calibration Check (EC60703-CCV1)				Prepared: 0	3/07/06 A	.nalyzed: 03	3/08/06			
Benzene	. 42.4		ug/l	50.0		84.8	80-120			
Toluene	47.1		**	50.0		94.2	80-120			
Ethylbenzene	55.5		"	50.0		111	80-120			
Xylene (p/m)	115			100		115	80-120			
Xylene (o)	57.3		ü	50.0		115	80-120			
Surrogate: a,a,a-Trifluorotoluene	37.6		"	40.0		94.0	80-120			
Surrogate: 4-Bromofluorobenzene	41.6		"	40.0		104	80-120			
Matrix Spike (EC60703-MS1)	Sou	ırce: 6C02018-	01	Prepared: (	)3/07/06 A	.nalyzed: 03	3/08/06			
Benzene	0.0402	0.00100	mg/L	0.0500	ND	80.4	80-120			
Toluene	0.0432	0.00100	11	0.0500	ND	86.4	80-120			
Ethylbenzene	0.0494	0.00100	n	0.0500	ND	98.8	80-120			
Xylene (p/m)	0.103	0.00100	п	0.100	ND	103	80-120			
Xylene (o)	0.0505	0.00100	10	0.0500	ND	101	80-120			
Surrogate: a,a,a-Trifluorotoluene	33.8		ug/l	40.0		84.5	80-120			
Surrogate: 4-Bromofluorobenzene	40.7		"	40.0		102	80-120			

Project: Hobbs N-6 Leak

Project Number: None Given

Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**Reported:** 03/15/06 11:07

#### 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 EC60703 - EPA 5030C (GC)										
Matrix Spike Dup (EC60703-MSD1)	Sou	rce: 6C02018-	01 -	Prepared: 0	3/07/06 A	nalyzed: 03	/08/06			
Benzene	0.0432	0.00100	mg/L	0.0500	ND	86.4	80-120	7.19	20	
Toluene	0.0483	0.00100	н	0.0500	ND	96.6	80-120	11.1	20	
Ethylbenzene	0.0558	0.00100	"	0.0500	ИĎ	112	80-120	12.5	20	
Xylene (p/m)	0.117	0.00100	**	0.100	ND	117	80-120	12.7	20	
Xylene (o)	0.0579	0.00100		0.0500	ND	116	80-120	13.8	20	
Surrogate: a,a,a-Trifluorotoluene	34.0		ug/l	40.0		85.0	80-120			
Surrogate: 4-Bromofluorobenzene	44.1		"	40.0		110	80-120			

Project: Hobbs N-6 Leak

Project Number: None Given

Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**Reported:** 03/15/06 11:07

#### 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 EC60320 - General Preparation (V	· · · · · · · · · · · · · · · · · · ·			20101		7,4120				110103
Blank (EC60320-BLK1)	vercueni)			Prepared: 0	13/03/06 A	nalvzed: 03	U07/06		· <del></del> -	
Chloride	ND	0.500	mg/L	, repared. c	)3/03/00 A	naryzcu. 02	707700			
Sulfate	ND	0.500	"		•					
LCS (EC60320-BS1)				Prepared: 0	)3/03/06 A	nalyzed: 03	3/07/06			
Sulfate	8.49		mg/L	10,0		84.9	80-120			
Chloride	8.77		"	10.0		87.7	80-120			
Calibration Check (EC60320-CCV1)				Prepared: 0	03/03/06 A	nalyzed: 03	3/07/06			
Chloride	9.37		mg/L	10.0		93.7	80-120			
Sulfate	9.44		н	10.0		94.4	80-120			
Duplicate (EC60320-DUP1)	Sou	rce: 6C02021-	03	Prepared: (	03/03/06 A	nalyzed: 03	3/07/06			
Chloride	27.1	5.00	mg/L		26.8			1.11	20	
Sulfate	124	5.00	н		123			0.810	20	
Batch EC60607 - General Preparation (V	WetChem)				_					
Blank (EC60607-BLK1)	•			Prepared: 0	03/03/06 A	nalyzed: 03	3/06/06			
Total Dissolved Solids	, ND	5.00	mg/L							
Duplicate (EC60607-DUP1)	Sou	rce: 6C02020-	01	Prepared: (	)3/03/06 A	nalyzed: 03	3/06/06			
Total Dissolved Solids	524	5.00	mg/L		538			2.64	5	
Duplicate (EC60607-DUP2)	Sou	rce: 6C02021-	03	Prepared: (	03/03/06 A	nalyzed: 03	3/06/06			
Total Dissolved Solids	570	5.00	mg/L		562			1.41	5,	

Project: Hobbs N-6 Leak

Project Number: None Given

Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**Reported:** 03/15/06 11:07

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

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EC60806 - General Preparation (V	VetChem)									
Blank (EC60806-BLK1)				Prepared & Analyzed: 03/08/06						
Total Organic Carbon	ND	0.500	mg/L	,						
LCS (EC60806-BS1)				Prepared &	Analyzed:	03/08/06				
Total Organic Carbon	8.01	0.500	mg/L	10.0		80.1	80-120			
Calibration Check (EC60806-CCV1)	Prepared & Ana		Analyzed:	03/08/06						
Total Organic Carbon	9.45		mg/L	10.0		94.5	80-120			
Duplicate (EC60806-DUP1)	Sour	ce: 6B17004-	02	Prepared & Analyzed: 03/08/06						
Total Organic Carbon	65.8	0.500	mg/L		65,4			0.610	20	
rotal organic carbon	05.0	0,500								
Batch EC60905 - General Preparation (\)		0,500								
				Prepared &	z Analyzed:	03/09/06				
Batch EC60905 - General Preparation (\) Blank (EC60905-BLK1)		2.00	mg/L	Prepared &	····	03/09/06				
Batch EC60905 - General Preparation (VBlank (EC60905-BLK1) Total Alkalinity	VetChem)				····					
Batch EC60905 - General Preparation (V Blank (EC60905-BLK1) Total Alkalinity LCS (EC60905-BS1)	VetChem)				Analyzed:		85-115			
Batch EC60905 - General Preparation (\	ND 216	2.00	mg/L	Prepared &	Analyzed:	03/09/06	85-115			
Batch EC60905 - General Preparation (Value Blank (EC60905-BLK1) Total Alkalinity LCS (EC60905-BS1) Bicarbonate Alkalinity Duplicate (EC60905-DUP1)	ND 216	2.00	mg/L	Prepared &	z Analyzed:	03/09/06	85-115	0.514	20	
Batch EC60905 - General Preparation (VBlank (EC60905-BLK1) Total Alkalinity LCS (EC60905-BS1) Bicarbonate Alkalinity	WetChem)  ND  216  Sour	2.00 2.00 ce: 6C02020-	mg/L mg/L	Prepared & 200 Prepared &	2 Analyzed: 2 Analyzed: 2 Analyzed:	03/09/06 108 03/09/06	85-115	0.514	20	

Project: Hobbs N-6 Leak

Project Number: None Given

Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

Reported: 03/15/06 11:07

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

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EC60711 - 6010B/No Digestion										
Blank (EC60711-BLK1)				Prepared &	Ł Analyzed:	03/07/06				
Calcium	ND	0.0100	mg/L							
Magnesium	ND	0.00100	"							
Potassium	ND	0.0500	**							
Sodium	ND	0.0100	"							
Calibration Check (EC60711-CCV1)				Prepared &	ż Analyzed:	03/07/06				
Calcium	2.04		mg/L	2.00		102	85-115		· · · · · · · · · · · · · · · · · · ·	
Magnesium	2.09		**	2.00		104	85-115			
Potassium	1.90		н	2.00		95.0	85-115			
Sodium	1.85		10	2.00		. 92.5	85-115			
Duplicate (EC60711-DUP1)	Sou	rce: 6C02020-	01	Prepared & Analyzed: 03/07/06						
Calcium	73.7	0.100	mg/L		72.7			1.37	. 20	
Magnesium	15.8	0.0100	"		15.2			3.87	20	
Potassium	3.61	0.0500	"		3.71			2.73	20	
Sodium	37.6	0.100	11		37.2			1.07	20	
Batch EC60807 - EPA 3005A										
Blank (EC60807-BLK1)				Prepared: (	03/06/06 A	nalyzed: 03	/08/06			
Iron	ND	0.00200	mg/L					,		
LCS (EC60807-BS1)				Prepared:	03/06/06 A	nalyzed: 03	3/08/06			
Iron	0.213	0.00200	mg/L	0.200		106	85-115			
LCS Dup (EC60807-BSD1)				Prepared:	03/06/06 A	nalyzed: 03	3/08/06			
lron	0.217	0.00200	mg/L	0.200		108	85-115	1.86	20	

Rice Operating Co.Project:Hobbs N-6 LeakFax: (505) 397-1471122 W. TaylorProject Number:None GivenReported:Hobbs NM, 88240Project Manager:Kristin Farris-Pope03/15/06 11:07

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

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EC60807 - EPA 3005A										
Calibration Check (EC60807-CCV1)				Prepared: (	03/06/06 A	nalyzed: 03	/08/06			
Iron	1.08		mg/L	1,00		108	90-110			
Matrix Spike (EC60807-MS1)	Sou	rce: 6C02020-	-01	Prepared: (	03/06/06 A	nalyzed: 03	/08/06			
Iron	0.254	0.00200	mg/L	0.200	0.125	64.5	75-125			PS
Post Spike (EC60807-PS1)	Sou	rce: 6C02020	-01	Prepared: (	03/06/06 A	nalyzed: 03	/08/06			
Iron	0.376	0.00200	mg/L	. 0.200	0.125	126	85-115			PS-

Rice Operating Co.Project:Hobbs N-6 LeakFax: (505) 397-1471122 W. TaylorProject Number:None GivenReported:Hobbs NM, 88240Project Manager:Kristin Farris-Pope03/15/06 11:07

#### Dissolved Metals by EPA / Standard Methods - Quality Control Environmental Lab of Texas

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EC60810 - EPA 3005A										
Blank (EC60810-BLK1)	•			Prepared &	Analyzed:	03/08/06				
lron	ND	0.00200	mg/L							
LCS (EC60810-BS1)				Prepared &	Analyzed:	03/08/06				
Iron	0.224	0.00200	mg/L	0.200		112	85-115			
LCS Dup (EC60810-BSD1)				Prepared &	Analyzed:	03/08/06				
Iron	0.228	0.00200	mg/L	0.200		114	85-115	1.77	20	
Calibration Check (EC60810-CCV1)				Prepared &	Analyzed:	03/08/06				
Iron	1.09		mg/L	1.00		109	90-110		-	-
Matrix Spike (EC60810-MS1)	Source: 6C02020-01			Prepared &	Prepared & Analyzed: 03/08/06					
Iron	0.236	0.00200	mg/L	0.200	ND	118	75-125			
Matrix Spike Dup (EC60810-MSD1)	Source: 6C02020-01		Prepared &	Prepared & Analyzed: 03/08/06						
Iron	0.238	0.00200	mg/L	0.200	ND	119	75-125	0.844	20	

Rice Operating Co.Project.Hobbs N-6 LeakFax: (505) 397-1471122 W. TaylorProject Number:None GivenReported:Hobbs NM, 88240Project Manager:Kristin Farris-Pope03/15/06 11:07

#### **Notes and Definitions**

PS-1 Matix spike recoveries were outside method and/or historical control limits due to matrix interference. Interference was confirmed by similar results from a post matrix spike. DET Analyte DETECTED ND Analyte NOT DETECTED at or above the reporting limit NR Not Reported Sample results reported on a dry weight basis dry RPD Relative Percent Difference LCS Laboratory Control Spike MS Matrix Spike Duplicate Dup

	Kaland KJulis		
Report Approved By:	Racanchi	Date:	3/15/2006

Raland K. Tuttle, Lab Manager Celey D. Keene, Lab Director, Org. Tech Director Peggy Allen, QA Officer

Jeanne Mc Murrey, Inorg. Tech Director LaTasha Cornish, Chemist Sandra Sanchez, Lab Tech.

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

# Environmental Lab of Texas

Odessa, Texas 79765 12600 West 1-20 East

Phone: 432-563-1800

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Fax: 432-563-1713

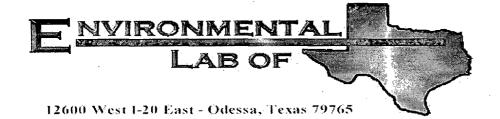
not frozen (olubario2-a19) TAT KRUS Total Organic Carbon z × × noti beviossiC × Total Iron × ( Custody Seals: Containers (Cooler  $\overline{\times}$  $\tilde{\times}$  $\overline{\times}$ × ×  $\overline{\times}$ × × sbilos bavlossiO letoT M.A.O.I Temperature Upon Receipt: ЮЯ Sample Containers Intact? Laboratory Comments: Lea County ×  $\overline{\times}$ × Project Name: Hobbs N-6 Leak × BTEX 8021B/5030 Labels on container? Netals: As Ag Ba Cd.Ct Pb Hg Se TOTAL SAR / ESP / CEC Project Loc: Project #: PO #: × Julions (CI, 504, CO3, HCO3) × × × Cations (Ca. Mg, Na. K)  $\overline{\times}$ 1605 Time Time 9001 2001 M2108 1.815 Hq. Other (specify): PLEASE Email RESULTS TO: kpriceswd@valornet.com & mfranks@riceswd.com 3670-80 lios eBpnjs Date Date × × × × Water Other (Specify) 34QH reti.l 1 (t) eneM H<sub>2</sub>SO<sub>4</sub>(1) 4D ml glass vice Fax No: (505) 397-1471 HOEN HCI (2) 40 ml glass vials N N a 2 N memoral CONH × × × Х × × 4 ব Vo. of Containars 4 10:40 10:05 15:10 17:35 13:45 11:30 19:00 9:00 Time Sampled kpriceswd@valornet.com Received by ELOT 2/28/2006 2/28/2006 2/28/2006 2/28/2006 2/28/2006 2/28/2006 2/28/2006 3/1/2006 Received by Date Sampled Sampler Signature: Rozanne Johnson (505) 631-9310 (GOS Time Time city/state/Zip: Hobbs, New Mexico 88240 Company Name RICE Operating Company Email: rozanne@valomet.com 3/2/00 company Address: 122 W. Taylor Street Project Manager: Kristin Farris Pope FIELD CODE Telephone No: (505) 393-9174 -02 Monitor Well #3 Monitor Well #5 Manitor Well #6 Bio Sparge Well Monitor Well #2 Monitor Well #4 Manitor Well #7 WWI La-603 -08. Special Instructions:  $\beta$ 70 AB # (lab use only) 7

X ×

TAT brebnet2

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

Client: Rice Operating Co.		
Date/Time: 03-02-04 C 1605	•	
Order#: 6002020		•
Initials: JMM		
Sample Receipt (	Checklist	
Temperature of container/cooler?	(es ) No   -1.0 "FrozenC	
Shipping container/cooler in good condition?	(Yes) No	
Custody Seals intact on shipping container/cooler?	(Pes) 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?	(ES) No	
Chain of custody agrees with sample label(s)	(Ses) No	
Container labels legible and intact?	(Yes) No	
Sample Matrix and procerties same as on chain of custody?	(Pes) No	
Samples in procer container/bottle?	(Yes) No !	
Samples properly preserved?	(es) No 14-	•
Sample bottles intact?	(ES) No I	•
Preservations documented on Chain of Custody?	l (es) No	
Containers documented on Chain of Custody?	(TES) No	
Sufficient sample amount for indicated test?	(Ves) No	
All samples received within sufficient hold time?	(Yes) No	
VOC samples have zero headspace?	(Yes) No   Not Applicable	
Other observations:  * Dissolved Fe. filtered and acidifical in lab  * Total Fe acidificationals.		
		<i>j</i>
Variance Docum		•
Contact Person: Date/Time:	Contacted by: _	
Regarding:		
Corrective Action Taken:		
Corrective Action Taken.		
· · · · · · · · · · · · · · · · · · ·		



# Analytical Report

## Prepared for:

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

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

Lab Order Number: 6F06018

Report Date: 06/16/06

Project: Hobbs N-6 Leak

Project Number: None Given

Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

## ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Monitor Well #2	6F06018-01	Water	06/05/06 14:20	06/06/06 15:40
Monitor Well #3	6F06018-02	Water	06/05/06 15:00	06/06/06 15:40
Monitor Well #4	6F06018-03	Water	06/05/06 10:50	06/06/06 15:40
Monitor Well #5	6F06018-04	Water	06/05/06 09:15	06/06/06 15:40
Monitor Well #6	6F06018-05	Water	06/05/06 16:00	06/06/06 15:40
Monitor Well #7	6F06018-06	Water	06/05/06 13:00	06/06/06 15:40
IWW	6F06018-07	Water	06/05/06 11:20	06/06/06 15:40
Bio Sparge Well	6F06018-08	Water	06/05/06 17:30	06/06/06 15:40

Project: Hobbs N-6 Leak

Project Number: None Given

Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
Monitor Well #2 (6F06018-01) Water	·-			Bildion			ruaryzed	Wellod	Noic
Benzene	ND	0.00100	mg/L	1	EF60716	06/07/06	06/09/06	EPA 8021B	
Toluene .	ND	0.00100	"	#	"	H*	u	н	
Ethylbenzene	ND	0.00100	10	u	н	н	19	"	
Xylene (p/m)	ND	0.00100	н	#	n	**	н	n .	
Xylene (o)	ND	0.00100	. " .	11	9	*	н	**	
Surrogate: a,a,a-Trifluorotoluene		82.5 %	80-	120	"	"	'n	"	
Surrogate: 4-Bromofluorobenzene		82.5 %	80-	120	"	"	n	, ,	
Monitor Well #3 (6F06018-02) Water									
Benzene	0.0171	0.00100	mg/L	1	EF60716	06/07/06	06/09/06	EPA 8021B	
Toluene	J [0.000488]	0.00100		н	ıı	"	н	u u	
Ethylbenzene	0.00258	0.00100	**	11	н	n	**		
Xylene (p/m)	ND	0.00100	H	11	**	**		11	
Xylene (o)	ND	0.00100	"	H	**	и	н	"	
Surrogate: a,a,a-Trifluorotoluene		89.2 %	80-	120	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.5 %	80-	120	"	**	"	"	
Monitor Well #4 (6F06018-03) Water									
Benzene	ND	0.00100	mg/L	1	EF60716	06/07/06	06/09/06	EPA 8021B	
Toluene	ND	0.00100	**		я	**	n		
Ethylbenzene	ND	0.00100	u	н		19	10	н	
Xylene (p/m)	ND	0.00100	H	"	n	11	н	н	
Xylene (o)	ND	0.00100	,,	11		**	"	11	
Surrogate: a,a,a-Trifluorotoluene		88.8 %	80-	120	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		80.5 %	80-	120	"	"	n	"	
Monitor Well #5 (6F06018-04) Water									
Benzene	ND	. 0.00100	mg/L	1	EF60716	06/07/06	06/09/06	EPA 8021B	
Toluene	ND	0.00100	**	"	н	н	"	H	
Ethylbenzene	ND	0.00100	•	"	**	11	**	"	
Xylene (p/m)	ND	0.00100	**		H	11	n.	и	
Xylene (o)	ND	0.00100		#	"	н		н	
Surrogate: a,a,a-Trifluorotoluene		94.2 %	80-	120	"	"	, ,	"	
Surrogate: 4-Bromofluorobenzene	•	91.0 %	80-	120	"	"	"	,,	

Project: Hobbs N-6 Leak

Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

## Organics by GC Environmental Lab of Texas

	ъ .	Reporting	** .						
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
Monitor Well #6 (6F06018-05) Water	<u> </u>								
Benzene	ND	0.00100	mg/L	1	EF60716	06/07/06	06/09/06	EPA 8021B	
Toluene .	ND	0.00100	"	и	н	н	"	и	
Ethylbenzene	ND	0.00100	"	"	n	. 0	"	11	
Xylene (p/m)	ND ·	0.00100	**	. 0	19	11	"	II	
Xylene (o)	ND	0.00100		н	n .	н	"	ti .	
Surrogate: a,a,a-Trifluorotoluene		85.5 %	80-	120	"	. "	"	"	
Surrogate: 4-Bromofluorobenzene		93.5 %	80-	120	"	"	"	"	
Monitor Well #7 (6F06018-06) Water				· .					
Benzene	ND	0.00100	mg/L	1	EF60716	06/07/06	06/09/06	EPA 8021B	
Toluene	ND	0.00100	ıı .	**	tt	U	U	19	
Ethylbenzene	ND	0.00100	"	n	n .	"	"	и	
Xylene (p/m)	ND	0.00100	"	11	n	n	Ħ	10	
Xylene (o)	ND	0.00100	"	н	*	н	и	н	
Surrogate: a,a,a-Trifluorotoluene		97.0 %	80-	120	n	"	"	"	
Surrogate: 4-Bromofluorobenzene		92.5 %	80-	120	n	"	"	"	
IWW (6F06018-07) Water								٠	
Benzene	ND	0.00100	mg/L	1	EF60716	06/07/06	06/09/06	EPA 8021B	
Toluene	ND	0.00100	*	**	н	n		н	
Ethylbenzene	ND	0.00100	**	u	17	10	**	n	
Xylene (p/m)	ND	0.00100	, 11	"	n.	11	u u	, н	
Xylene (o)	ND	0.00100	**	11	*1	"	"	11	
Surrogate: a,a,a-Trifluorotoluene		86.2 %	80-	120	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.8 %	80-	120	"	"	"	"	
Bio Sparge Well (6F06018-08) Water									
Benzene	0.544	0.00500	mg/L	5	EF60716	06/07/06	06/09/06	EPA 8021B	
Toluene	0.0125	0.00500	н	,		,	u	"	
Ethylbenzene	0.142	0.00500	**	*1	и	*1	**	n	
Xylene (p/m)	0.0276	0.00500	**	•	11	**	н	n	
Xylene (o)	0.00719	0.00500	11		IF.	11	п	"	
Surrogate: a,a,a-Trifluorotoluene		98.0 %	80-	120	n	"	"	"	
Surrogate: 4-Bromofluorobenzene		100 %	80-	120	"	и,	"	"	

Project: Hobbs N-6 Leak

Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
Monitor Well #2 (6F06018-01) Water				Dilution	Daten	riepareu	Anaryzeu	ivietilou	NOR
Total Alkalinity	207	2.00	mg/L	1	EF60916	06/09/06	06/09/06	EPA 310.1M	<del> </del>
Chloride	38.5	5.00	"	10	EF60811	06/08/06	06/08/06	EPA 300.0	
Total Dissolved Solids	552	5.00		. 1	EF60810	06/07/06	06/07/06	EPA 160.1	
Sulfate	76.6	5.00		10	EF60811	06/08/06	06/08/06	EPA 300.0	
Total Organic Carbon	ND	0.500	и	1	EF61302	06/12/06	06/12/06	EPA 415.1	
Monitor Well #3 (6F06018-02) Water									
Total Alkalinity	420	2.00	mg/L	1	EF60916	06/09/06	06/09/06	EPA 310.1M	
Chloride	7660	100	н	200	EF60811	06/08/06	06/08/06	EPA 300.0	
Total Dissolved Solids	13600	5.00	"	- 1	EF60810	06/07/06	06/07/06	EPA 160.1	
Sulfate	914	. 100	н	200	EF60811	06/08/06	06/08/06	EPA 300.0	
Total Organic Carbon	1.26	0.500	"	1	EF61302	06/12/06	06/12/06	EPA 415.1	
Monitor Well #4 (6F06018-03) Water									
Total Alkalinity	214	2.00	mg/L	1	EF60916	06/09/06	06/09/06	EPA 310.1M	
Chloride	59.2	5.00	"	10	EF60811	06/08/06	06/08/06	EPA 300.0	
Total Dissolved Solids	476	5.00		1	EF60810	06/07/06	06/07/06	EPA 160.1	
Sulfate	76.2	5.00	**	10	EF60811	06/08/06	06/08/06	EPA 300.0	
Total Organic Carbon	0.707	0.500	и	i	EF61302	06/12/06	06/12/06	EPA 415.1	
Monitor Well #5 (6F06018-04) Water									. <u> </u>
Total Alkalinity	238	2.00	mg/L	1	EF60916	06/09/06	06/09/06	EPA 310.1M	
Chloride	37.8	5.00		10	EF60811	06/08/06	06/08/06	EPA 300.0	
Total Dissolved Solids	484	5.00	"	1	EF60810	06/07/06	06/07/06	EPA 160.1	
Sulfate	69.0	5.00	н	10	EF60811	06/08/06	06/08/06	EPA 300.0	
Total Organic Carbon	ND	0.500	u	1	EF61302	06/12/06	06/12/06	EPA 415.1	
Monitor Well #6 (6F06018-05) Water									
Total Alkalinity	202	2.00	mg/L	1	EF60916	06/09/06	06/09/06	EPA 310.1M	
Chloride	67.2	5.00	н	10	EF60811	06/08/06	06/08/06	EPA 300.0	
Total Dissolved Solids	512	5.00		1	EF60810	06/07/06	06/07/06	EPA 160.1	
Sulfate	72.2	5.00	"	10	EF60811	06/08/06	06/08/06	EPA 300.0	
Total Organic Carbon	0.581	0.500	**	i	EF61302	06/12/06	06/12/06	EPA 415.1	•

Project: Hobbs N-6 Leak

Project Number: None Given

Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Monitor Well #7 (6F06018-06) Water									
Total Alkalinity	242	2.00	mg/L	. 1	EF60916	06/09/06	06/09/06	EPA 310.1M	
Chloride	225	5.00	**	10 -	EF60811	06/08/06	06/08/06	EPA 300.0	
Total Dissolved Solids	794	5.00		1	EF60810	06/07/06	06/07/06	EPA 160.1	
Sulfate	74.0	5.00		10	EF60811	06/08/06	06/08/06	EPA 300.0	
Total Organic Carbon	ND	0.500	н	1	EF61302	06/12/06	06/12/06	EPA 415.1	
IWW (6F06018-07) Water									
Total Alkalinity	256	2.00	mg/L	1	EF60916	06/09/06	06/09/06	EPA 310.1M	
Chloride	44.5	5.00		10	EF60811	06/08/06	06/08/06	EPA 300.0	
Total Dissolved Solids	494	5.00	**	1	EF60810	06/07/06	06/07/06	EPA 160.1	
Sulfate	61.1	5.00	"	10	EF60811	06/08/06	06/08/06	EPA 300.0	
Total Organic Carbon	ND	0.500	н	1	EF61302	06/12/06	06/12/06	EPA 415.1	
Bio Sparge Well (6F06018-08) Water									
Total Alkalinity	450	2.00	mg/L	1	EF60916	06/09/06	06/09/06	EPA 310.1M	
Chloride	171	5.00	11	10	EF60811	06/08/06	06/08/06	EPA 300.0	
Total Dissolved Solids	858	5.00	**	1	EF60810	06/07/06	06/07/06	EPA 160.1	
Sulfate	45.0	5.00	**	10	EF60811	06/08/06	06/08/06	EPA 300.0	
Total Organic Carbon	1.49	0.500	**	1	EF61302	06/12/06	06/12/06	EPA 415.1	

Project: Hobbs N-6 Leak

Project Number: None Given

Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Monitor Well #2 (6F06018-01) Water						· · · · · · · · · · · · · · · · · · ·	,	<del></del>	
Calcium	91.6	0.100	mg/L	10	EF60804	06/08/06	06/08/06	EPA 6010B	
Magnesium	16.6	0.0100	#		"	•	"	и	
Potassium	2.26	0.500	н	**	**		н	n	
Sodium	27.9	0.100	**	19	. н	H	**	н	•
Iron	0.00960	0.00200	u	1	EF60904	06/07/06	06/09/06	11	•
Monitor Well #3 (6F06018-02) Water									
Calcium	795	1.00	mg/L	001	EF60804	06/08/06	06/08/06	EPA 6010B	
Magnesium	206	0.100	и .	**	**	41	н	n	
Potassium	61.9	5.00	п	**	н	11	"	11	
Sodium	3730	5.00	я	500			11	. 0	
Iron	1.74	0.00200	,	1	EF60904	06/07/06	06/09/06	N	
Monitor Well #4 (6F06018-03) Water									
Calcium	80.6	0.100	mg/L	10	EF60804	06/08/06	06/08/06	EPA 6010B	
Magnesium	14.6	0.0100		# .	11		ji	н	
Potassium	2.18	0.500	**	10	н	u	н	11	
Sodium	50.6	0.100	н	n	11	и	11	**	
Iron	0.00500	0.00200	H .	1	EF60904	06/07/06	06/09/06	D	
Monitor Well #5 (6F06018-04) Water						_			
Calcium	84.6	0.100	mg/L	10	EF60804	06/08/06	06/08/06	EPA 6010B	
Magnesium	14.6	0.0100			n	11	н	н	
Potassium	2.12	0.500	11	ij	**	14	и	н	
Sodium	36.6	0.100	n	н	11-	н	10	"	
Iron	ND .	0.00200	**	1	EF60904	06/07/06	06/09/06	n	
Monitor Well #6 (6F06018-05) Water									
Calcium	109	0.100	mg/L	10	EF60804	06/08/06	06/08/06	EPA 6010B	
Magnesium	18.2	0.0100	11	"	и	19	4	н	
Potassium	2.13	0.500	н	н.	н	11	11	"	
Sodium	32.3	0.100	**	"		"	н	п	
Iron	ND	0.00200	10	1	EF60904	06/07/06	06/09/06	•	

Project: Hobbs N-6 Leak

Project Number: None Given Project Manager: Kristin Farris-Pope Fax: (505) 397-1471

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Monitor Well #7 (6F06018-06) Water									
Calcium	101	0.100	mg/L	10	EF60804	06/08/06	06/08/06	EPA 6010B	
Magnesium	18.4	0.0100	**		n	н	n	н	
Potassium	3.31	0.500	Ħ	u	n	**	**	n	
Sodium	112	0.500	"	50	**	11	10	n	ι
Iron	0.00400	0.00200	Ħ	1	EF60904	06/07/06	06/09/06	n	
IWW (6F06018-07) Water									
Calcium	38.5	0.100	mg/L	10	EF60804	06/08/06 .	06/08/06	EPA 6010B	
Magnesium	7.13	0.0100	e	n	*	0	н	R	
Potassium	2.90	0.500	n	н	"	п	**	н	
Sodium	95,4	0.500	*	50	19	*1	**	"	
Iron	0.758	0.00200	*1	1	EF60904	06/07/06	06/09/06	и	
Bio Sparge Well (6F06018-08) Water									
Calcium	39.7	0.100	mg/L	10	EF60804	06/08/06	06/08/06	EPA 6010B	
Magnesium	23.2	0.0100	"	"	*	н	"	н	
Potassium	26.3	0.500	*	**	**	**	н	u	
Sodium	195	0.500	**	50	**	п	n	в	
Iron	0.516	0.00200		1	EF60904	06/07/06	06/09/06	н	

Project: Hobbs N-6 Leak

Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

## Dissolved Metals by EPA / Standard Methods Environmental Lab of Texas

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Monitor Well #2 (6F06018-01) Water	····								
Iron	0.00920	0.00200	mg/L	1	EF60905	06/09/06	06/09/06	EPA 6010B	
Monitor Well #3 (6F06018-02) Water									
Iron	0.100	0.00200	mg/L	1	EF60905	06/09/06	06/09/06	EPA 6010B	
Monitor Well #4 (6F06018-03) Water									
Iron .	ND	0.00200	mg/L	1	EF60905	06/09/06	06/09/06	EPA 6010B	
Monitor Well #5 (6F06018-04) Water									
Iron	ND	0.00200	mg/L	1	EF60905	06/09/06	06/09/06	EPA 6010B	
Monitor Well #6 (6F06018-05) Water									
Iron	ND	0.00200	mg/L	1	EF60905	06/09/06	06/09/06	EPA 6010B	
Monitor Well #7 (6F06018-06) Water			,						
Iron	ND	0.00200	mg/L	1	EF60905	06/09/06	06/09/06	EPA 6010B	
IWW (6F06018-07) Water								,	
Iron	0.0239	0.00200	mg/L	1	EF60905	06/09/06	06/09/06	EPA 6010B	
Bio Sparge Well (6F06018-08) Water									
Iron	0.0170	0,00200	mg/L	1	EF60905	06/09/06	06/09/06	EPA 6010B	

Project: Hobbs N-6 Leak

Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
	700011	2,			- Troban	701020	Dimits	- IG D		
Batch EF60716 - EPA 5030C (GC)	<del> </del>			Process de O	(10710C A	11-00	100106			····
Blank (EF60716-BLK1)	ND	0.00100		Prepared: 0	0/07/06 A	naiyzea: 06	/09/06			
Benzene Toluene	ND ND	0.00100	mg/L							
Ethylbenzene	ND ND	0.00100								
Xylene (p/m)	ND ND	0.00100	**							
Xylene (p/m) Xylene (o)	ND ND	0.00100	,,							
		0.00100		10.0			20.100			
Surrogate: a,a,a-Trifluorotoluene	34.4		ug/l "	40.0		86.0	80-120			
Surrogate: 4-Bromofluorobenzene	33.3		"	40.0		83.2	80-120			
LCS (EF60716-BS1)				Prepared: 0	6/07/06 A	nalyzed: 06	/08/06			
Benzene	0.0428	0.00100	mg/L	0.0500		85.6	80-120			
Toluene	0.0446	0.00100	"	0.0500		89.2	80-120			
Ethylbenzene	0.0420	0.00100	1	0.0500		84.0	80-120			
Xylene (p/m)	0.0893	0.00100	"	0.100		89.3	80-120			
Xylene (o)	0.0490	0.00100	"	0.0500		98.0	80-120			
Surrogate: a,a,a-Trifluorotoluene	32.8		ug/l	40.0		82.0	80-120			
Surrogate: 4-Bromofluorobenzene	38.5		"	40.0		96.2	80-120			
Calibration Check (EF60716-CCV1)				Prepared: 0	6/07/06 A	nalyzed: 06	/09/06			
Benzene	48.5		ug/l	50.0		97.0	80-120			
Toluene Toluene	50.0			50.0		100	80-120			
Ethylbenzene	52.4		н	50.0		105	80-120			
Xylene (p/m)	98.3		*1	100		98.3	80-120			
Xylene (o)	51.1			50.0		102	80-120			
Surrogate: a,a,a-Trifluorotoluene	41.0		"	40.0		102	80-120			
Surrogate: 4-Bromofluorobenzene	32.7		"	40.0		81.8	80-120			
Matrix Spike (EF60716-MS1)	Sou	ırce: 6F01010-	01	Prepared: 0	6/07/06 A	nalyzed: 06	/09/06			
Benzene	0,0479	0.00100	mg/L	0.0500	ND	95.8	80-120			
Toluene	0.0469	0.00100		0.0500	ND	93.8	80-120			
Ethylbenzene	0.0446	0.00100	н	0.0500	ND	89.2	80-120			
Xylene (p/m)	0.0979	0.00100	*1	0.100	ND	97.9	80-120			
Xylene (o)	0.0519	0.00100		0.0500	ND	104	80-120			
Surrogate: a,a,a-Trifluorotoluene	33.8		ug/l	40.0		84.5	80-120			

Surrogate: 4-Bromofluorobenzene

Project: Hobbs N-6 Leak

Project Number: None Given

Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

## Organics by GC - Quality Control

## **Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EF60716 - EPA 5030C (GC)										
Matrix Spike Dup (EF60716-MSD1)	Sour	ce: 6F01010-	01	Prepared: 0	06/07/06 A	nalyzed: 06	/09/06		-	
Benzene	0.0519	0.00100	mg/L	0.0500	ND	104	80-120	8.21	20	
Toluene	0.0510	0.00100	н .	0.0500	ND	102	80-120	8.38	20	
Ethylbenzene	0.0480	0.00100	**	0.0500	ND	96.0	80-120	7.34	20	
Xylene (p/m)	0.107	0.00100		0.100	ND	107	80-120	8.88	20	
Xylene (o)	0.0565	0.00100	+	0.0500	ND	113	80-120	8.29	20	
Surrogate: a,a,a-Trifluorotoluene	40.8		ug/l	40.0		102	80-120			

110

80-120

Project: Hobbs N-6 Leak

Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

Analysis	n	Reporting	TT. Sec	Spike	Source	0/DEC	%REC	DDD	RPD	XI .
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EF60810 - Filtration Preparation										
Blank (EF60810-BLK1)				Prepared &	Analyzed:	06/07/06				
Total Dissolved Solids	ND	5.00	mg/L							
Duplicate (EF60810-DUP1)	Source	ce: 6F06018-	01	Prepared &	Analyzed:	06/07/06				
Total Dissolved Solids	542	5.00	mg/L		552			1.83	5	
Batch EF60811 - General Preparation (V	VetChem)									
Blank (EF60811-BLK1)	<u> </u>			Prepared &	z Analyzed:	06/08/06				
Sulfate	ND	0.500	mg/L							
Chloride	ND	0.500	".							
LCS (EF60811-BS1)				Prepared &	Analyzed:	06/08/06				
Chloride	9.87	0.500	mg/L	10.0		98.7	80-120			
Sulfate	8.09	0.500	"	10.0		80.9	80-120		•	
Calibration Check (EF60811-CCV1)				Prepared &	Analyzed:	06/08/06				
Chloride	10.1		mg/L	10.0		101	80-120			
Sulfate	9.04		н	10.0		90.4	80-120			
Duplicate (EF60811-DUP1)	Sour	ce: 6F06018-	01	Prepared &	Analyzed:	06/08/06				
Sulfate	76.2	5.00	mg/L		76.6			0.524	20	
Chloride	38.5	5.00	n		38.5			0.00	20	
Duplicate (EF60811-DUP2)	Source	ce: 6F08002-	01	Prepared &	. Analyzed:	06/08/06				
Sulfate	278	50.0	mg/L		282			1.43	20	
Chloride	2030	50.0	"		2150			5.74	20	

Rice Operating Co.

Project: Hobbs N-6 Leak

Fax: (505) 397-1471

122 W. Taylor Hobbs NM, 88240 Project Number: None Given

Project Manager: Kristin Farris-Pope

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EF60811 - General Preparation	on (WetChem)					·····			· · · · · · ·	
Matrix Spike (EF60811-MS1)	Sour	ce: 6F06018-	01	Prepared &	Analyzed:	06/08/06				
Chloride	132	5.00	mg/L	100	38.5	93.5	80-120			· · · · · · · · · · · · · · · · · · ·
Sulfate	142	5.00	н	. 100	76.6	65,4	75-125			QS-
Matrix Spike (EF60811-MS2)	Sour	ce: 6F08002-	01	Prepared &	Analyzed:	06/08/06				•
Sulfate	923	50.0	mg/L	1000	282	64.1	75-125			QS-
Chloride	3330	50.0	н	1000	2150	118	80-120			
Blank (EF60916 - General Preparation Blank (EF60916-BLK1)	on (WetChem)			Prepared &	Analyzed:	06/09/06				
Total Alkalinity	ND	2.00	mg/L	Trepared a	- Tildry Zed.	00/05/00				
LCS (EF60916-BS1)				Prepared &	Analyzed:	06/09/06				
Bicarbonate Alkalinity	214	2.00	mg/L	200		107	85-115			
Duplicate (EF60916-DUP1)	Sour	ce: 6F06018-	01	Prepared &	Analyzed:	06/09/06				
Total Alkalinity	206	2.00	mg/L		207			0.484	20	
Reference (EF60916-SRM1)			5	Prepared &	Analyzed:	06/09/06				
Total Alkalinity	96.0		mg/L	100		96.0	90-110			
Batch EF61302 - General Preparation	on (WetChem)									
Blank (EF61302-BLK1)				Prepared &	Analyzed:	06/12/06				
Total Organic Carbon	ND	0.500	mg/L							

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

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EF61302 - General Preparation (W	/etChem)					····				
LCS (EF61302-BS1)				Prepared &	: Analyzed:	06/12/06				
Total Organic Carbon	8.23	0.500	mg/L	10.0		82.3	80-120			
LCS Dup (EF61302-BSD1)	•			Prepared &	Analyzed:	06/12/06				
Total Organic Carbon	8.23	0.500	mg/L	10.0		82.3	80-120	0.00	20	
Calibration Check (EF61302-CCV1)				Prepared &	: Analyzed:	06/12/06				
Total Organic Carbon	9.62		mg/L	10.0		96.2	80-120			
Duplicate (EF61302-DUP1)	Sou	rce: 6F06018-	01	Prepared &	: Analyzed:	06/12/06				
Total Organic Carbon	0.572	0.500	mg/L		0.468			20.0	20	

Project: Hobbs N-6 Leak

Project Number: None Given

Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EF60804 - 6010B/No Digestion										
Blank (EF60804-BLK1)				Prepared &	Analyzed:	06/08/06				
Calcium	ND	0.0100	mg/L							
Magnesium	ND	0.00100	"							
Potassium	ND	0.0500								
Sodium	ND	0.0100								
Calibration Check (EF60804-CCV1)				Prepared &	k Analyzed:	06/08/06				
Calcium	2.12		mg/L	2.00		106	85-115		,	
Magnesium	2.10		11	2.00		105	85-115			
Potassium	1.95		н	2.00		97.5	85-115			
Sodium	2.02		**	2.00		101	85-115			
Duplicate (EF60804-DUP1)	Sou	rce: 6F01010-	01	Prepared &	Analyzed:	06/08/06				
Calcium	102	0.100	mg/L		100			1.98	20	
Magnesium	10.5	0.0100	·		9.85			6.39	20	
Potassium	3.96	0.500	u		4.06			2.49	20	
Sodium	27.4	0.100	u		30.6			11.0	20	
Batch EF60904 - EPA 3005A										
Blank (EF60904-BLK1)				Prepared: (	06/07/06 A	nalyzed: 06	5/09/06			
ron	ND	0.00200	mg/L							
LCS (EF60904-BS1)				Prepared: (	06/07/06 A	nalyzed: 06	5/09/06			
ron	0.202	0.00200	mg/L	0.200		101	85-115			
LCS Dup (EF60904-BSD1)				Prepared: (	06/07/06 A	nalyzed: 06	5/09/06			
ron	0.206	0.00200	mg/L	0.200		103	85-115	1.96	20	

Rice Operating Co. 122 W. Taylor Project: Hobbs N-6 Leak

Fax: (505) 397-1471

Hobbs NM, 88240

Project Number: None Given
Project Manager: Kristin Farris-Pope

## Total Metals by EPA / Standard Methods - Quality Control

Environm	ental	Lab	of '	Texas

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EF60904 - EPA 3005A										
Calibration Check (EF60904-CCV1)				Prepared:	06/07/06 A	nalyzed: 06	5/09/06			
lron	1.01		mg/L	1.00		101	90-110			
Matrix Spike (EF60904-MS1)	Sour	rce: 6F06018-	01	Prepared:	06/07/06 A	nalyzed: 06	5/09/06		•	
lron	0.249	0.00200	mg/L	0.200	0.00960	120	75-125			
Matrix Spike Dup (EF60904-MSD1)	Sour	rce: 6F06018-	01	Prepared:	06/07/06 A	nalyzed: 06	5/09/06			
Iron	0.250	0.00200	mg/L	0.200	0.00960	120	75-125	0.401	20	~~~

Rice Operating Co. 122 W. Taylor

Project:

Project: Hobbs N-6 Leak

Fax: (505) 397-1471

Hobbs NM, 88240

Project Number: None Given

Project Manager: Kristin Farris-Pope

## Dissolved Metals by EPA / Standard Methods - Quality Control Environmental Lab of Texas

	n			g . 1 .			0/DEO		n nn	
	-	orting		Spike	Source		%REC		RPD	
 Result		Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
				Prepared &	& Analyzed:	06/09/06				
 ND	0.0	00200	mg/L							
				Prepared &	ż Analyzed:	06/09/06				
 0.204	0.0	00200	mg/L	0.200		102	85-115			
				Prepared &	z Analyzed:	06/09/06				
0.203	0.0	00200	mg/L	0.200		102	85-115	0.491	20	
				Prepared &	k Analyzed:	06/09/06				
1.02			mg/L	1,00		102	90-110			
So	urce: 6F	06018-	01	Prepared &	k Analyzed:	06/09/06				
 0,208	0.0	00200	mg/L	0.200	0.00920	99.4	75-125			
So	urce: 6F	06018-	01	Prepared &	Prepared & Analyzed: 06/09/06					
0.204	0.0	00200	mg/L	0.200	0.00920	97.4	75-125	1.94	20	
 So	urce: 6F	06018-	01	Prepared &	k Analyzed:	06/09/06			1.94	1.94 20

Rice Operating Co.

Project: Hobbs N-6 Leak
Project Number: None Given
Hobbs NM, 88240
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

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#### **Notes and Definitions**

QS-1 The spike recovery value is outside Laboratory historical or method prescribed QC limits. 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 Duplicate Dup

	Kaland KJulis		
Report Approved By:		Date:	6/16/2006

Raland K. Tuttle, Lab Manager Celey D. Keene, Lab Director, Org. Tech Director Peggy Allen, QA Officer Jeanne Mc Murrey, Inorg. Tech Director LaTasha Cornish, Chemist Sandra Sanchez, Lab Tech.

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

# Environmental Lab of Texas

Odessa, Texas 79765

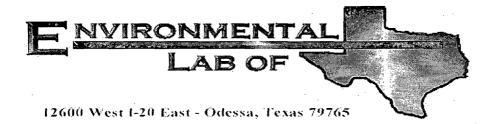
CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Phone: 432-563-1800 Fax: 432-563-1713

TAT brebnet2 (SUSH TAT (Pre-Schedule) otal Organic Carbon × × Dissolved Iron (Lab Filtered) × not leto? ×  $\overline{\times}$ × × × × × × otal Dissolved Solids M.A.O. Custody Seals Containers SCI emperature Upon Receipt Sample, Containers, Intact? Laboratory Comments: Lea County Project Name: Hobbs N-6 Leak BTEX 8021B/5030 × × × Labels on container? Aetals: As Ag Ba Cd Cr Pb Hg Se TCLP SAR / ESP / CEC TOTAL Project Loc: # Od Project #: × rujons (Cl. SO4, CO3, HCO3) cations (Ca, Mg, Na, K) 5.40 Time Time BOT METOS 1,814 HP Other (specify): (1) 250 ml HDP PLEASE Email RESULTS TO: kpriceswd@valornet.com & mfranks@riceswd.com lios Sludge Date Avaier None (1) 250ml HDPE None (1) 1 Liter HDPE ⁵OS<sup>z</sup>H Fax No: (505) 397-1471 HOEN മ ល B KO HCI (5) 40 ml glass vials ιO LC. TU: HNO3 - (1) 250 mt HDPE × œ ထ ø Φ Φ No. of Containers œ  $\infty$ 00 14:20 15:00 10:50 16:00 13:00 11:20 17:30 9:15 Time Sampled Project Manager: Kristin Farris Pope kpriceswd@valornet.com Received by ELOT: 6/5/2006 6/5/2006 6/5/2006 6/5/2006 6/5/2006 6/5/2006 6/5/2006 6/5/2006 Received by: Date Sampled Sampler Signature: Rozanne Johnson (505) 631-9310 Time ine city/State/Zip: Hobbs, New Mexico 88240 Company Name RICE Operating Company Email: rozanne@valornet.com Company Address: 122 W. Taylor Street FIELD CODE Telephone No: (505) 393-9174 Monitor Well # 2 Monitor Well # 3 Monitor Well # 5 Monitor Well #6 Monitor Well # 4 Monitor Well # 7 Bio Sparge Well <u></u>%≪ Special Instructions AB # (lab use only)

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

Chent Ruce Do				
11/11/200				
Date/Time: lefte(01e 340				
Order #: 60001				
airiaia ClC				
nitials:	•		•	
Sample Receipt	t Checkli	st		
emperature of container/cooler?	Yes	No l	(5 C)	
Shipping containe:/cooler in good condition?	XE3	No		
Custody Seals intact on shipping container/cooler?	(25)	No	Not present	
Custody Seals intact on sample bottles?	YES	No	Not present	
Chain of custody present?	255	No	100 present	
Sample Instructions complete on Chain of Custody?	200	No		
Chain of Custody signed when relinquished and received?		No		
Chain of custody agrees with sample label(s)	(ES)	No		
Container labels legible and intact?	(Zes.	No		
Sample Matrix and properties same as on chain of custody?	(Fes.)	No		
Samples in proper container/bottle?		No		
Samples properly preserved?		No		
Sample bottles intact?		No		
Preservations documented on Chain of Custody?		No		
Containers occumented on Chain of Custody?	1	No		
Sufficient sample amount for indicated test?		No		
All samples received within sufficient hold time?				
VOC samples have zero headspace?	VES VES	No	Not Applicable	
Other observations:				
Variance Docu	mentatio	on:		
Contact Person: - Date/Time:			Contacted by:	
Regarding:				
Corrective Action Taken:				
Confective Across Laxen.				
	·- · · · · · · · · · · · · · · · · · ·			
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			· ·	· <del></del>
				·



## Analytical Report

## **Prepared for:**

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

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

Location: T19S-R38E- Sect5&6- Unit E/H, Lea County, NM

Lab Order Number: 6I13002

Report Date: 10/03/06

Project: Hobbs N-6 Leak

Project Number: None Given

Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

## ANALYTICAL REPORT FOR SAMPLES

Sample 1D	Laboratory ID	Matrix	Date Sampled	Date Received
Monitor Well #2	6[13002-01	Water	09/11/06 15:15	09-13-2006 07:50
Monitor Well #3	6113002-02	Water	09/12/06 12:55	09-13-2006 07:50
Monitor Well #4	6113002-03	Water	09/1·1/06 11:50	09-13-2006 07:50
Monitor Well #5	6113002-04	Water .	09/11/06 14:05	09-13-2006 07:50
Monitor Well #6	6113002-05	Water	09/11/06 12:45	09-13-2006 07:50
Monitor Well #7	6113002-06	Water	09/11/06 10:45	09-13-2006 07:50
IWW	6113002-07	Water	09/12/06 10:50	09-13-2006 07:50
Bio Sparge Well	6I13002-08	Water	09/12/06 08:10	09-13-2006 07:50

Project Number: Hobbs N-6 Leak
Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

## Organics by GC Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
Monitor Well #2 (6113002-01) Water									
Benzene	ND	0.00100	mg/L	1	EI61318	09/13/06	09/14/06	EPA 8021B	
Toluene	ND	0.00100	*	19	0	"	н	9	
Ethylbenzene	ND	0.00100	•		н	н	н	n	
Xylene (p/m)	ND	0.00100	40	**	"	**	u	11	
Xylene (o)	ND	0.00100	**	11	"	11	**		
Surrogate: a,a,a-Trifluorotoluene		104 %	80-	120	"	,,	"	"	
Surrogate: 4-Bromofluorobenzene		81.2 %	80	120	"	, ,,	"	"	
Monitor Well #3 (6I13002-02) Water									
Benzene	0.0107	0.00100	mg/L	1	E161318	09/13/06	09/14/06	EPA 8021B	
Toluene	J [0.000587]	0.00100		н	"	и .	41	"	
Ethylbenzene	ND	0.00100	**			"	**	н	
Xylene (p/m)	ND	0.00100	10	11	11	11	"		
Xylene (o)	ND	0.00100	n	**	11	**	#	H	
Surrogate: a,a,a-Trifluorotoluene		106 %	80-	120	"	"	. "	"	
Surrogate: 4-Bromofluorobenzene		89.5 %	80-	120′	"	"	n	n	
Monitor Well #4 (6113002-03) Water									
Benzene	ND	0.00100	mg/L	1	E161318	09/13/06	09/14/06	EPA:8021B	
Toluene	ND	0.00100		"	**	**	**	u	
Ethylbenzene	ND	0.00100	11	**	н	u	н	н	
Xylene (p/m)	ND	0.00100	. "	"	"	"	"	v.	
Xylene (o)	ND	0.00100	*1	11	n	4	"	н	
Surrogate: a,a,a-Trifluorotoluene		105 %	80-	120	"	n-	"	n	
Surrogate: 4-Bromofluorobenzene		85.8 %	80-	120	"	"	"	"	
Monitor Well #5 (6I13002-04) Water									
Benzene	ND	0.00100	mg/L	1	EI61318	09/13/06	09/15/06	EPA 8021B	
Toluene	ND	0.00100	**	u	"	н	"	10	
Ethylbenzene	ND	0.00100	**	**	н	11	11		٠
Xylene (p/m)	ND	0.00100	**		*	H	•	H	٠
Xylene (o)	ND	0.00100		н	н	Ħ	**	**	
Surrogate: a,a,a-Trifluorotoluene		101 %	80-	120	. "	. 11	,,	n .	
Surrogate: 4-Bromofluorobenzene		82.5 %	80-	120	n	"	"	"	

Project: Hobbs N-6 Leak

Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

# Organics by GC Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Datah	Dronovad	Amaluma 3	Mathad	NT. 4
Monitor Well #6 (6113002-05) Water	Nosun		Omis	Dilution	Batch	Prepared	Analyzed	Method	Not
								·	
Benzene	ND	0.00100	mg/L	1	EI61318	09/13/06	09/15/06	EPA 8021B	
Toluene	ND	0.00100	n	"	и .	n	"		
Ethylbenzene	ND	0.00100	н	"	"	n	"		
Xylene (p/m)	ND	0.00100	**	n	n	"	19		
Xylene (o)	ND	0.00100			н				
Surrogate: a,a,a-Trifluorotoluene		104 %	80-	120	."	"	"	"	
Surrogate: 4-Bromofluorobenzene		83.8 %	80-	120	"	"	"	n	
Monitor Well #7 (6113002-06) Water									
Benzene	ND	0.00100	mg/L	l	E161318	09/13/06	09/15/06	EPA 8021B	
Toluene	ND	0.00100	"		11	H	п		
Ethylbenzene	ND	0.00100	**	"	"	u	u .	"	
Xylene (p/m)	ND	0.00100	u <sup>1</sup>	**		v	11	н	
Xylene (o)	ND	0.00100		"	o	11	ч	n	
Surrogate: a,a,a-Trifluorotoluene		100 %	80-	120	"	"	"	"	<del></del> -
Surrogate: 4-Bromofluorobenzene		85.0 %	80-	120	"	"	"	"	
IWW (6113002-07) Water	•								
Benzene	ND	0.00100	mg/L	1	EI61318	09/13/06	09/15/06	EPA 8021B	
Toluene	ND	0.00100	**	n	n	п	. "	· ·	
Ethylbenzene	ND	0.00100	•	M	n	10	H	**	
Xylene (p/m)	ND	0.00100	**	н	н	,,	"	**	
Xylene (o)	ND	0.00100		19	и	19	19	н	
Surrogate: a,a,a-Trifluorotoluene		99.5 %	80-	120	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		89.8 %	80-	120	n	"	"	,,	
Bio Sparge Well (6113002-08) Water			·						
Benzene	1.15	0.00500	mg/L	5	E161318	09/13/06	09/15/06	EPA 8021B	
Toluene	0.0283	0.00500	я	н	п	"	"	11	*
Ethylbenzene	0,207	0.00500	**	и	**	"	n n	"	
Xylene (p/m)	0.0312	0.00500	11	н	н	*	"		
Xylene (o)	0.00924	0.00500	ıı	. "	#1	u	*	**	
Surrogate: a,a,a-Trifluorotoluene		111%	80-	120	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		89.5 %	80-	120	"	"	, ,,	"	

Project: Hobbs N-6 Leak

Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Monitor Well #2 (6113002-01) Water							- Timiyzou	Wictiod	. 110103
Total Alkalinity	216	2,00	mg/L	1	E161412	09/14/06	09/14/06	EPA 310.1M	
Chloride	31.1	5.00	"	10	EI61313	09/13/06	09/13/06	EPA 300.0	
Total Dissolved Solids	428	10.0	**	1	EI61502	09/13/06	09/14/06	EPA 160.1	
Sulfate	92.0	5.00	**	10	EI61313	09/13/06	09/13/06	EPA 300.0	
Total Organic Carbon	0.655	0.500	"	1	EI62510	09/21/06	09/21/06	EPA 415.1	
Monitor Well #3 (6113002-02) Water									
Total Alkalinity	428	2.00	mg/L	1	EI61412	09/14/06	09/14/06	EPA 310.1M	
Chloride	7390	100		200	EI61313	09/13/06	09/13/06	EPA 300.0	
Total Dissolved Solids	13100	10.0	**	1	EI61502	09/13/06	09/15/06	EPA 160.1	
Sulfate	939	100		200 .	EI61313	09/13/06	09/13/06	EPA 300.0	
Total Organic Carbon	0.704	0.500	н	1	EI62510	09/21/06	09/21/06	EPA 415.1	
Monitor Well #4 (6113002-03) Water									
Total Alkalinity	220	2.00	mg/L	1	E161412	09/14/06	09/14/06	EPA 310.1M	
Chloride	65.7	5.00	**	10	EI61313	09/13/06	09/13/06	EPA 300.0	
Total Dissolved Solids	588	10.0	"	1	EI61502	09/13/06	09/14/06	EPA 160.1	
Sulfate	87.0	5.00	•	10	EI61313	09/13/06	09/13/06	EPA 300.0	
Total Organic Carbon	ND	0.500	ú	1	EI62510	09/21/06	09/21/06	EPA 415.1	
Monitor Well #5 (6113002-04) Water									
Total Alkalinity	246	2.00	mg/L	1	EI61412	09/14/06	09/14/06	EPA 310.1M	
Chloride	39.0	5.00	•	10	E161313	09/13/06	09/13/06	EPA 300.0	
Total Dissolved Solids	596	10.0	**	1	EI61502	09/13/06	09/14/06	EPA 160.1	
Sulfate	81.2	5.00	н	10	EI61313	09/13/06	09/13/06	EPA 300.0	
Total Organic Carbon	0.576	0.500	•	· 1	EI62510	09/21/06	09/21/06	EPA 415.1	
Monitor Well #6 (6113002-05) Water					-				
Total Alkalinity	218	2.00	mg/L	1	EI61412	09/14/06	09/14/06	EPA 310.1M	
Chloride	67.6	5.00	"	10	EI61313	09/13/06	09/13/06	EPA 300.0	
Total Dissolved Solids	552	10.0	"	1	E161502	09/13/06	09/14/06	EPA 160.1	
Sulfate	101	5.00	II.	10	EI61313	09/13/06	09/13/06	EPA 300.0	
Total Organic Carbon	ND	0.500	**	1	E162510	09/21/06	09/21/06	EPA 415.1	

Project: Hobbs N-6 Leak

Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Monitor Well #7 (6113002-06) Water									
Total Alkalinity	256	2.00	mg/L	1	EI61412	09/14/06	09/14/06	EPA 310.1M	
Chloride	202	5.00	"	10	E161313	09/13/06	09/13/06	EPA 300.0	
Total Dissolved Solids	710	10.0	10	1	E161502	09/13/06	09/14/06	EPA 160.1	
Sulfate	77.9	5.00	**	10	EI61313	09/13/06	09/13/06	EPA 300.0	
Total Organic Carbon	ND	0.500	10	1	EI62510	09/21/06	09/21/06	EPA 415.1	
IWW (6113002-07) Water							· 		
Total Alkalinity	268	2.00	mg/L	1	EI61412	09/14/06	09/14/06	EPA 310.1M	
Chloride	38.8	5.00	ø	10	E161313	09/13/06	09/13/06	EPA 300.0	
Total Dissolved Solids	528	10.0	11	1	EI61502	09/13/06	09/14/06	EPA 160.1	
Sulfate	80.7	5.00	"	10	E161313	09/13/06	09/13/06	EPA 300.0	
Total Organic Carbon	0.725	0.500	19	1	El62510	09/21/06	09/21/06	EPA 415.1	
Bio Sparge Well (6113002-08) Water									
Total Alkalinity	652	2.00	mg/L	1	EI61412	09/14/06	09/14/06	EPA 310.1M	
Chloride	142	10.0	н	20	EI61313	09/13/06	09/13/06	EPA 300.0	
Total Dissolved Solids	. 1010	10.0		. 1	EI61502	09/13/06	09/14/06	EPA 160.1	
Sulfate	33.2	10.0	11	20	EI61313	09/13/06	09/13/06	EPA 300.0	
Total Organic Carbon	1.84	0.500	· n	1	EI62510	09/21/06	09/21/06	EPA 415.1	

Project: Hobbs N-6 Leak

Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Monitor Well #2 (6113002-01) Water							-		
Calcium	76.1	0.810	mg/L	10	EI61402	09/14/06	09/14/06	EPA 6010B	
Magnesium	14.0	0.360-	н	. "	**	11	и	**	
Potassium	2.28	0.600			**	n	n	и	
Sodium	35.0	0.430		**	н	н	"	*1	
Iron ·	0.0253	0.0170	,,	1	EI61803	09/18/06	09/18/06	ч	
Monitor Well #3 (6I13002-02) Water									
Calcium	745	20.2	mg/L	250	EI61402	09/14/06	09/14/06	EPA 6010B	
Magnesium	180	1.80	"	50	. н	"	н	11	
Potassium	63.2	3.00	0	н	Ħ	,,	**	н	
Sodium	3890	21.5	**	500	н	Ħ	н	n	
Iron	1.45	0.0170	**	1	EI61803	09/18/06	09/18/06	н	
Monitor Well #4 (6113002-03) Water									
Calcium	75.8	0.810	mg/L	10	EI61402	09/14/06	09/14/06	EPA 6010B	
Magnesium	13.9	0.360	11	"	w	n	н	10	
Potassium	2.68	0.600	н	41	u.	u	n	**	
Sodium	57.7	0.430	11		"		11	11	
Iron	0.0332	0.0170	n	1	EI61803	09/18/06	09/18/06	н	
Monitor Well #5 (6113002-04) Water									
Calcium	74.7	0.810	mg/L	10	EI61402	09/14/06	09/14/06	EPA 6010B	
Magnesium	13.8	0.360	11	10	"	ii	u	11	
Potassium	2.34	0.600	н	, и	"	**	"	н	
Sodium	52.0	0.430	. "		н	н .	19	**	
Iron	ND	0.0170		1	E161803	09/18/06	09/18/06	*1	
Monitor Well #6 (6113002-05) Water				_					,
Calcium	86.8	0.810	mg/L	10	E161402	09/14/06	09/14/06	EPA 6010B	
Magnesium	16.0	0.360	10	10	**	•		**	
Potassium	2.16	0.600	•	"	"	н	Ħ	н .	
Sodium	39.7	0.430	"	"	н	"	n	*	
Iron	ND	0.0170	"	1	El61803	09/18/06	09/18/06	u u	

Project: Hobbs N-6 Leak

Project Number: None Given

Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Monitor Well #7 (6I13002-06) Water									
Calcium	95.6	0.810	mg/L	10	EI61402	09/14/06	09/14/06	EPA 6010B	
Magnesium	15.8	0.360	"		"	•	11	n	
Potassium	3.24	0.600	"	"	"	u	"	"	
Sodium	105	0.430	"	11		**	ıı	"	
Iron	ND	0.0170	н	1	EI61803	09/18/06	09/18/06	и	
IWW (6113002-07) Water									
Calcium	35,5	0.810	mg/L	10	EI61402	09/14/06	09/14/06	EPA 6010B	
Magnesium	7.12	0.360	11		"	u	*	P	
Potassium	3.15	0.600	н	"		"	41	п	
Sodium	112	0.430	"	"		11	**	11	
Iron	0.175	0.0170	и	1	E161803	09/18/06	09/18/06	и	
Bio Sparge Well (6113002-08) Water									
Calcium	56.9	0.810	mg/L	10	EI61402	09/14/06	09/14/06	EPA 6010B	
Magnesium	34.1	0.360	11	. "	**	н	0	и	
Potassium	38.6	0.600			0	п	"	н	
Sodium	246	2,15	"	50	**	н		u	
Iron	0.351	0.0170		1	EI61803	09/18/06	09/18/06	**	

Project: Hobbs N-6 Leak

Project Number: None Given

Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

## Dissolved Metals by EPA / Standard Methods Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Monitor Well #2 (6113002-01) Water									
Iron	ND	0.0170	mg/L	1	EI61804	09/18/06	09/18/06	EPA 6010B	
Monitor Well #3 (6113002-02) Water									
Iron	0.367	0.0170	mg/L	1	EI61804	09/18/06	09/18/06	EPA 6010B	
Monitor Well #4 (6113002-03) Water									
Iron	ND	0.0170	mg/L	1	EI61804	09/18/06	09/18/06	EPA 6010B	
Monitor Well #5 (6113002-04) Water									
Iron	ND	0.0170	mg/L	1	EI61804	09/18/06	09/18/06	EPA 6010B	
Monitor Well #6 (6113002-05) Water									
Iron	ND	0.0170	mg/L	1	EI61804	09/18/06	09/18/06	EPA 6010B	
Monitor Well #7 (6I13002-06) Water									
Iron	ND	0.0170	mg/L	1	EI61804	09/18/06	09/18/06	EPA 6010B	
IWW (6I13002-07) Water									
Iron	ND	0.0170	mg/L	1	EI61804	09/18/06	09/18/06	EPA 6010B	
Bio Sparge Well (6113002-08) Water									
Iron	0.0184	0.0170	mg/L	1	EI61804	09/18/06	09/18/06	EPA 6010B	

Rice Operating Co. 122 W. Taylor

Hobbs NM, 88240

Project: Hobbs N-6 Leak

Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
	Result	Limit	Units	Devel	Result	76KEC	Limits	Kru	Limit	Notes
Batch E161318 - EPA 5030C (GC)							· · · - · · · · · · · · · · · · · · · ·	·		
Blank (E161318-BLK1)				Prepared: 0	9/13/06 A	nalyzed: 09	/15/06			
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	19							
Surrogate: a,a,a-Trifluorotoluene	39.4		ug/l	40.0		98.5	80-120			
Surrogate: 4-Bromofluorobenzene	32.5		"	40.0		81.2	80-120			
LCS (E161318-BS1)				Prepared: 0	9/13/06 A	nalyzed: 09	0/14/06			
Benzene	0.0559	0.00100	mg/L	0.0500		112	80-120		· · · · · · · · · · · · · · · · · · ·	
Toluene	0.0461	0.00100	11	0.0500		92.2	80-120			
Ethylbenzenė	0.0435	0.00100		0.0500		87.0	80-120			
Xylene (p/m)	0.0992	0.00100	"	0.100		99.2	80-120			
Xylene (o)	0.0509	0.00100	41	0.0500		102	80-120			
Surrogate: a,a,a-Trifluorotoluene	41.8		ug/I	40.0		104	80-120			
Surrogate: 4-Bromofluorobenzene	40.6		"	40.0		102	80-120			
Calibration Check (EI61318-CCV1)				Prepared: 0	9/13/06 A	nalyzed: 09	9/14/06			
Benzene	0.0490		mg/L	0.0500	<del></del>	98.0	80-120	-		
Toluene	0.0438		**	0.0500		87.6	80-120			
Ethylbenzene	0.0442			0.0500		88.4	80-120			
Xylene (p/m)	0.0890			0.100		89.0	80-120			
Xylene (o)	0.0437		н	0.0500		87.4	80-120			
Surrogate: a,a,a-Trifluorotoluene	39.8		ug/l	40.0	<del>,,,</del>	99.5	80-120			
Surrogate: 4-Bromofluorobenzene	33.5		"	40.0		83.8	80-120			
Matrix Spike (EI61318-MS1)	Sou	ırce: 6113001-0	01	Prepared: 0	9/13/06 A	nalyzed: 09	0/15/06			
Benzene	0.0544	0.00100	mg/L	0.0500	ND	109	80-120			
Toluene	0.0466	0.00100	n	0.0500	ND	93.2	80-120			
Ethylbenzene	0.0476	0.00100		0.0500	ND	95.2	80-120			
Xylene (p/m)	0.101	0.00100	*1	0.100	ND	101	80-120			
Xylene (o)	0.0509	0.00100		0.0500	ND	102	80-120			
Surrogate: a,a,a-Trifluorotoluene	38.4		ug/l	40.0		96.0	80-120			
Surrogate: 4-Bromofluorobenzene	38.7		"	40.0		96.8	80-120			

Rice Operating Co.

122 W. Taylor

Hobbs NM, 88240

Project: Hobbs N-6 Leak

Project Number: None Given

Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

## Organics by GC - Quality Control

## **Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EI61318 - EPA 5030C (GC)										
Matrix Spike Dup (E161318-MSD1)	Sou	rce: 6113001-0	)1	Prepared: 0	)9/13/06 A	nalyzed: 09	7/15/06	. —		
Benzene	0,0551	0,00100	mg/L	0.0500	ND	110	80-120	0.913	20	· · · · · · · · · · · · · · · · · · ·
Toluene	0.0451	0.00100	"	0.0500	ND	90.2	80-120	3.27	20	
Ethylbenzene	0.0452	0.00100		0.0500	ND	90.4	80-120	5.17	20	
Xylene (p/m)	0.0940	0.00100	" '	0.100	ND	94.0	80-120	7.18	20	
Xylene (o)	0.0492	0.00100		0.0500	ND	98.4	80-120	3.59	20	
Surrogate: a,a,a-Trifluorotoluene	38.2		ug/l	40.0		95.5	80-120			
Surrogate: 4-Bromofluorobenzene	39.5		"	40.0		98.8	80-120			

Rice Operating Co.

Project: Hobbs N-6 Leak

Fax: (505) 397-1471

122 W. Taylor Hobbs NM, 88240 Project Number: None Given
Project Manager: Kristin Farris-Pope

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch E161313 - General Preparation (V	VetChem)					· 			:	
Blank (EI61313-BLK1)				Prepared &	Analyzed:	09/13/06				
Sulfate	ND	0.500	mg/L							
Chloride	ND	0.500	**							
LCS (E161313-BS1)				Prepared &	Analyzed:	09/13/06		_		
Sulfate	10.8	0.500	mg/L	10.0		108	80-120			
Chloride	10.5	0.500	н	10.0		105	80-120			
Calibration Check (EI61313-CCV1)				Prepared &	Analyzed:	09/13/06				
Sulfate	10.3		mg/L	10.0		103	80-120			
Chloride	10.1		P	10.0		101	80-120			
Duplicate (E161313-DUP1)	Source	ce: 6111006-0	1	Prepared &	Analyzed:	09/13/06				
Chloride	107	5.00	mg/L		108			0.930	20	
ulfate	120	5.00	P		121			0.830	20	
Duplicate (EI61313-DUP2)	Source	ce: 6I13003-0	7	Prepared &	Analyzed:	09/13/06				
Chloride	72.3	5.00	mg/L		74.1			2.46	20	
Sulfate	73.3	5.00	11		72.7			0.822	20	
Matrix Spike (EI61313-MS1)	Source	ce: 6I11006-0	1	Prepared &	. Analyzed:	09/13/06				
Chloride	208	5.00	mg/L	100	108	100	80-120			
Sulfate	219	5.00	**	100	121	98.0	80-120			
Matrix Spike (EI61313-MS2)	Sour	e: 6I13003-0	7	Prepared &	Analyzed:	09/13/06				
Chloride	181	5.00	mg/L	100	74.1	107	80-120			
Sulfate	180	, 5.00	"	100	72.7	107	80-120			

Rice Operating Co. 122 W. Taylor Project: Hobbs N-6 Leak

Fax: (505) 397-1471

Project Number: None Given

Hobbs NM, 88240

Project Manager: Kristin Farris-Pope

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EI61412 - General Preparatio	on (WetChem)								•	
Blank (EI61412-BLK1)				Prepared &	Analyzed:	09/14/06		٠	•	
Total Alkalinity	ND	2.00	mg/L							
LCS (EI61412-BS1)				Prepared &	Analyzed:	09/14/06				
Total Alkalinity	190	2.00	mg/L	200		95.0	85-115			
Duplicate (EI61412-DUP1)	Sour	ce: 6111006-0	)1	Prepared &	Analyzed:	09/14/06				
Total Alkalinity	192	2.00	mg/L		194			1.04	20	-,
Reference (EI61412-SRM1)				Prepared &	Analyzed:	09/14/06				
Total Alkalinity	244		mg/L	250		97.6	90-110			
Batch EI61502 - Filtration Preparat	ion									
Blank (EI61502-BLK1)				Prepared: (	)9/13/06 A	nalyzed: 09	/14/06			
Total Dissolved Solids	ND	10.0	mg/L							
Duplicate (EI61502-DUP1)	Sour	ce: 6I13001-0	)1	Prepared: (	09/13/06 A	nalyzed: 09	/14/06			
Total Dissolved Solids	808	10.0	mg/L		788			2.51	5	
Duplicate (EI61502-DUP2)	Sour	ce: 6113003-0	)2	Prepared: (	09/13/06 A	nalyzed: 09	/15/06			
Total Dissolved Solids	918	10.0	mg/L		940			2.37	5	
Batch EI62510 - General Preparatio	on (WetChem)									
Blank (EI62510-BLK1)				Prepared &	. Analyzed:	09/21/06				
Total Organic Carbon	ND	0,500	mg/L					-		

Rice Operating Co.

Project: Hobbs N-6 Leak

Fax: (505) 397-1471

122 W. Taylor

Project Number: None Given

Hobbs NM, 88240

Project Manager: Kristin Farris-Pope

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch El 62510 - General Preparation (V	VetChem)									
LCS (EI62510-BS1)				Prepared &	Analyzed:	09/21/06				
Total Organic Carbon	8.56	0.500	mg/L	10.0		85.6	80-120			
Calibration Check (EI62510-CCV1)				Prepared &	Analyzed:	09/21/06				
Total Organic Carbon	9.34		mg/L	10.0		93.4	80-120			
Duplicate (EI62510-DUP1)	Sou	rce: 6113002-0	)6	Prepared &	Analyzed:	09/21/06				
Total Organic Carbon	0.466	0.500	mg/L		0.440			5.74	20	

Rice Operating Co. 122 W. Taylor

Hobbs NM, 88240

Project: Hobbs N-6 Leak

Project Number: None Given

Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

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

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Ųnits	Ļevel	Result	%REC	Limits	RPD	Limit	Notes
Batch El61402 - 6010B/No Digestion				· ·						
Blank (E161402-BLK1)				Prepared &	Analyzed:	09/14/06			,	
Calcium	ND	0.0810	mg/L		, , , , , , , , , , , , , , , , , , , ,					
Magnesium	ND	0.0360	**							
Potassium	ND	0.0600	**							
Sodium	ND	0.0430	"							
Calibration Check (EI61402-CCV1)				Prepared &	: Analyzed:	09/14/06				
Calcium	2.18		mg/L	2.00		109	85-115			
Magnesium	2.18		**	2.00		109	85-115			
Potassium	1.84		**	2.00		92.0	85-115			
Sodium	1.91		H	2.00		95.5	85-115			
Duplicate (EI61402-DUP1)	Sour	ce: 6111006-0	)1	Prepared &	Analyzed:	09/14/06				
Calcium	51.8	0.810	mg/L	· · · · · · · · · · · · · · · · · · ·	51.8			0.00	20	
Magnesium	29.0	0.360	"		29.0			0.00	20	
Potassium	5.34	0.600	11		5.64			5.46	20	
Sodium	72.1	0.430	н		75.0			3.94	20	
Batch EI61803 - EPA 3005A										
Blank (EI61803-BLK1)				Prepared &	: Analyzed:	09/18/06				
ron	ND	0.0170	mg/L		<del></del>					
LCS (EI61803-BS1)				Prepared &	: Analyzed:	09/18/06				
ron	0.201	0.0170	mg/L	0.200		100	85-115			
LCS Dup (EI61803-BSD1)				Prepared &	: Analyzed:	09/18/06				
Iron	0.203	0.0170	mg/L	0.200		102	85-115	0.990	20	

Rice Operating Co.

Project: Hobbs N-6 Leak

Project Number: None Given

Hobbs NM, 88240

Project Manager: Kristin Farris-Pope

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

		Reporting		Spike	Source	WB56	%REC	222	RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EI61803 - EPA 3005A							•		,	
Calibration Check (EI61803-CCV1)				Prepared &	Analyzed:	09/18/06				
Iron	1.05		mg/L	1.00		105	90-110			_
Matrix Spike (EI61803-MS1)	Sour	ce: 6I13002-0	)1	Prepared &	Analyzed:	09/18/06				
Iron	0.202	0.0170	mg/L	0.200	0.0253	88.4	75-125			
Matrix Spike Dup (EI61803-MSD1)	Sour	ce: 6I13002-0	)1	Prepared &	Analyzed:	09/18/06				
Iron	0.200	0.0170	mg/L	0.200	0.0253	87.4	75-125	0.995	20	

Project: Hobbs N-6 Leak

Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

### Dissolved 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
	Result	Limit	Oillis	Ecver	ixesuit	/ordec	Linus	KID.		140168
Batch EI61804 - 6010B/No Digestion										
Blank (E161804-BLK1)				Prepared &	Analyzed	09/18/06				
Iron	ND	0.0170	mg/L							
LCS (E161804-BS1)				Prepared &	Analyzed	09/18/06				
Iron	0.202	0.0170	mg/L	0.200		101	85-115		,	
LCS Dup (EI61804-BSD1)				Prepared &	Analyzed	09/18/06				
Iron	0,205	0,0170	mg/L	0.200		102	85-115	1.47	20	
Calibration Check (E161804-CCV1)				Prepared &	. Analyzed	09/18/06				
Iron	1.08		mg/L	1.00		108	90-110			· · · · · · · · · · · · · · · · · · ·
Matrix Spike (EI61804-MS1)	Sou	rce: 6113002-0	01	Prepared &	. Analyzed	09/18/06				
Iron	0.217	0.0170	mg/L	0.200	ND	108	75-125		,	
Matrix Spike Dup (EI61804-MSD1)	Sou	rce: 6I13002-0	01	Prepared &	. Analyzed	09/18/06				
Iron	0.215	0.0170	mg/L	0.200	ND	108	75-125	0.926	20	

Rice Operating Co.
122 W. Taylor
Project Number: None Given
Hobbs NM, 88240
Project Manager: Kristin Farris-Pope

### 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 LCS Laboratory Control Spike MS Matrix Spike Duplicate Dup

	Kaland KJulus		
Report Approved By:	Kacan C 100	Date:	10/3/2006

Raland K. Tuttle, Lab Manager Celey D. Keene, Lab Director, Org. Tech Director Peggy Allen, QA Officer

Jeanne Mc Murrey, Inorg. Tech Director LaTasha Cornish, Chemist Sandra Sanchez, Lab Tech.

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# Environmental Lab of Texas

12600 West I-20 East Odessa, Texas 79765

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Phone: 432-563-1800 Fax: 432-563-1713

(a)ubadas-arq) TAT H2UR Project Loc: T19S-R38E-Sec 5&6-Unit E/H-Lea County, NM Total Organic Carbon Dissolved Iron (Lab Filtered) × × × ×  $\overline{\times}$ non leto? ် ပ Custody Seals Sontainers / Cooler Temperature Upon Receipt∵2...C.C × × ×  $\overline{\times}$ abilos beviosaiO lato M.A.O.I 102 Sample Containers Intact? Laboratory Comments: Project Name: Hobbs N-6 Leak BTEX 80218/5030 × Labels on container? selitelovime5 Netals: As Ag Ba Cd Cr Pb Hg Se JOE. SAR / ESP / CEC TOTAL #04 Project #: rujous (Cl. 504, CD3, HCD3)  $\overline{\times}$  $\tilde{\times}$ ations (Ca, Mg, Na, K) 8015M 1005 1006 1,814 HY 5:07 Other (specify): (1) 250 ml HDP lios 20/13/00 PLEASE Email RESULTS TO: kpope@riceswd.com & mfranks@riceswd.com rozanne@valornet.com Date appril AJ STELL × HDPE (1) SEOM! HDPE HONG (1) 1 Liter HDPE OS H Fax No: (505) 397-1471 HORN HCI (2) 40 ml člase viala 5 2 ιΩ S 2 ťΩ 5 HNO3- (1) 250 m HDPE  $\overline{\times}$ No. of Containers ಙ φ ထ ω œ œ ∞ ထ 15:15 14:05 12:45 10:45 12:55 11:50 10:50 8:10 Time Sampled Project Manager: Kristin Fairris Pope kpope@riceswd.com eceived by ELC 9/11/2006 9/11/2006 9/12/2006 9/12/2006 9/12/2006 9/11/2006 9/11/2006 9/11/2008 Received by: Date Sampled Sampler Signature: Rozanne Johnson (505) 631-9310 10250 5,00 T me city/state/zip: Hobbs, New Mexico 88240 company Name RICE Operating Company Email: rozanne@valornet.com Company Address: 122 W. Taylor Street 3/13/00 2018/16 FIELD CODE Telephone No: (505) 393-9174 Monitor Well # 5 Monitor Well #6 Monitor Well # 2 Monitor Well #3 Monitor Well #4 Monitor Well #7 Bio Sparge Well WW Special Instructions: AB # (lab use only Relinquished by: Rozanne Joh

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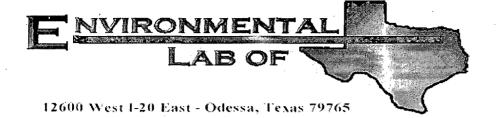
TAT brishnet2

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## Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Fift OD-		•		
Date/ Time: 9/13/00 11:50				
Lab ID#: (3/8007				
Initials:				
initials.				
Sample Receipt	Checklist			
#1 Temperature of container/ cooler?	Yes	No	Clien C	t Initiais
#2 Shipping container in good condition?	Yes	No	7.0	
#3 Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present	
#4 Custody Seals intact on sample bottles/ container?	Yes	No	Not Present	
#5 Chain of Custody present?	Yes	No	1351 100311	
#6 Sample instructions complete of Chain of Custody?	yes .	No		
#7 Chain of Custody signed when relinquished/ received?	/ <del>e</del> s	No		
#8 Chain of Custody agrees with sample label(s)?	Yes	No	ID written on Cont./ Lid	
#9 Container label(s) legible and intact?	Yes	No	Not Applicable	
#10 Sample matrix/ properties agree with Chain of Custody?	Yes	No		
#11 Containers supplied by ELOT?	//es	No		
#12 Samples in proper container/ bottle?	Yes	No	See Below	<del></del>
#13 Samples properly preserved?	Y@s	No	See Below	
#14 Sample bottles intact?	Yes	No		
‡15 Preservations documented on Chain of Custody?	/Yes	No		
#16 Containers documented on Chain of Custody?	y es	No		
#17 Sufficient sample amount for indicated test(s)?	V2s	No	See Below	
#18 All samples received within sufficient hold time?	V/BS	No	See Below	
f19 VOC samples have zero headspace?	Yes	No	Not Applicable	
Variance Docun	nentation			
Contacted by:			Date/ Time:	
Johnada Sy.	<del></del>	<del>-</del>	Dates Time.	
Regarding:	÷			
forrective Action Taken:				
	i			
		· · · · · · · · · · · · · · · · · · ·		
		<del></del>		
heck all that Apply: See attached e-mail/ fax				
heck all that Apply:  See attached e-mail/ fax  Client understands and would	i lika ta nrad	طانيد اعمم	analysis	
Cooling process had begun s				
	morny and	Sauthing	GVGIIL .	



# Analytical Report

### **Prepared for:**

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

Project: Hobbs N-6 Leak

Project Number: None Given

Location: T19S R38E Sec.5 & 6 E/H- Lea County, NM

Lab Order Number: 6K15017

Report Date: 12/01/06

Project: Hobbs N-6 Leak

Project Number: None Given

Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Biosparge Well #1	6K15017-01	Water	11/15/06 13:55	11-15-2006 16:00
Biosparge Well #2	6K15017-02	Water	11/15/06 12:50	11-15-2006 16:00

Project: Hobbs N-6 Leak

Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

# Organics by GC Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Biosparge Well #1 (6K15017-01) Water		-							
Benzene	1.06	0.00500	mg/L	5	EK61614	11/16/06	11/20/06	EPA 8021B	
Toluene	0.0298	0.00500	н	19	H	н	н	н	
Ethylbenzene	0.159	0.00500			н		н	**	
Xylene (p/m)	0.0475	0.00500	"	*	н	"	"	**	
Xylene (o)	0.0297	0.00500	**	н	п	•			
Surrogate: a,a,a-Trifluorotoluene		132 %	80-12	0 .	"	"	"	"	S-04
Surrogate: 4-Bromofluorobenzene		90.8 %	80-12	20	"	"	"	"	
Biosparge Well #2 (6K15017-02) Water									
Benzene	0.0373	0.00100	mg/L	1	EK61614	11/16/06	11/17/06	EPA 8021B	
Toluene	0.00314	0.00100		n		*	u	n	
Ethylbenzene	0.0404	0.00100	H	11	n	"	**		
Xylene (p/m)	0.0543	0.00100	n	**	u	n	.**		
Xylene (o)	0.0451	0.00100	u	11	**	N	11	п	
Surrogate: a,a,a-Trifluorotoluene		164 %	80-12	20	"	"	"	"	S-04
Surrogate: 4-Bromofluorobenzene		134 %	80-12	20	"	"	"	"	S-04

Project: Hobbs N-6 Leak

Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Biosparge Well #1 (6K15017-01) Water									
Total Alkalinity	848	2.00	mg/L	1	EK61605	11/17/06	11/17/06	EPA 310.1M	
Chloride	283	12.5	"	25	EK61507	11/15/06	11/15/06	EPA 300.0	
Total Dissolved Solids	1450	10.0	**	1	EK61611	11/15/06	11/16/06	EPA 160.1	
Sulfate	28.6	12.5	11	25	EK61507	11/15/06	11/15/06	EPA 300.0	
Total Organic Carbon	3.44	0.500	11	1	EK61709	11/17/06	11/17/06	EPA 415.1	
Biosparge Well #2 (6K15017-02) Water									
Total Alkalinity	202	2.00	mg/L	1	EK61605	- 11/17/06	11/17/06	EPA 310.1M	
Chloride	81.8	5.00		10	EK61507	11/15/06	11/15/06	EPA 300.0	
Total Dissolved Solids	522	10.0	n	1	EK61611	11/15/06	11/16/06	EPA 160.1	
Sulfate	107	5.00		10	EK61507	11/15/06	11/15/06	EPA 300.0	
Total Organic Carbon	0.698	0.500	. "	1	EK61709	11/17/06	11/17/06	EPA 415.1	

Rice Operating Co.

Hobbs NM, 88240

122 W. Taylor

Project: Hobbs N-6 Leak

Project Number: None Given

Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Biosparge Well #1 (6K15017-01) Water									
Calcium	37.8	4.05	mg/L	50	EK61703	11/17/06	11/17/06	EPA 6010B	
Magnesium	28.1	0.360	п	10	"	н		**	
Potassium	44.6	0.600	**	н	н	"	н	**	
Sodium	514	2.15	u	50	н	ч	п	**	
Iron	0.286	0.0170	"	1	EK61705	11/17/06	11/17/06	n	
Biosparge Well #2 (6K15017-02) Water									
Calcium	70.0	0.810	mg/L	10	EK61703	11/17/06	11/17/06	EPA 6010B	
Magnesium	17.0	0.360	*1	н		н	н	н .	
Potassium	9.15	0.600	n	н	**	. н	н	11	
Sodium	59.0	0.430	10		"	. H		11	
Iron	J [0.00340]	0.0170	н	. 1	EK61705	11/17/06	11/17/06	19	J

Rice Operating Co.

Project: Hobbs N-6 Leak

Fax: (505) 397-1471

122 W. Taylor Hobbs NM, 88240 Project Number: None Given
Project Manager: Kristin Farris-Pope

Dissolved Metals by EPA / Standard Methods
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Biosparge Well #1 (6K15017-01) Water									
Iron	0.177	0.0170	mg/L	1	EK61706	11/17/06	11/17/06	EPA 6010B	

Biosparge Well #2 (6K15017-02) Water

Iron ND 0.0170 mg/L 1 EK61706 11/17/06 EPA 6010B

Project: Hobbs N-6 Leak

Project Number: None Given

Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Analyte	Result	Link	Onits	Level	Kesuit	76KEC	Limits	KFD		Notes
Batch EK61614 - EPA 5030C (GC)									_	
Blank (EK61614-BLK1)				Prepared: 1	1/16/06 Ai	nalyzed: 11	/17/06			
Benzene	ND	0.00100	mg/L							,
Toluene	ND	0.00100							ė	,
Ethylbenzene	ND	0.00100	"	*						
Xylene (p/m)	ND	0.00100	•							
Xylene (o)	ND	0.00100	"							
Surrogate: a,a,a-Trifluorotoluene	47.8		ug/l	40.0		120	80-120		**	
Surrogate: 4-Bromofluorobenzene	40.5		"	40.0		101	80-120		,	
LCS (EK61614-BS1)				Prepared: 1	1/16/06 Aı	nalyzed: 11	/17/06			
Benzene	0.0594	0.00100	mg/L	0.0500		119	80-120			-
Toluene	0.0562	0.00100	31	0.0500		112	80-120			
Ethylbenzene	0.0458	0.00100	"	0.0500		91.6	80-120			
Xylene (p/m)	0.0949	0.00100	"	0.100		94.9	80-120			
Xylene (o)	0.0499	0.00100	н	0.0500		99.8	80-120			
Surrogate: a,a,a-Trifluorotoluene	46.1		ug/l	40.0		115	80-120			
Surrogate: 4-Bromofluorobenzene	44.2		n	40.0		. 110	80-120			
Calibration Check (EK61614-CCV1)	•			Prepared: 1	1/16/06 Aı	nalyzed: 11	/20/06			
Benzene	54.7		ug/l	50.0		109	80-120			
Toluene	48.5		"	50.0		97.0	80-120			
Ethylbenzene	42.1		н	50.0		84.2	80-120			
Xylene (p/m)	83.0		**	100		83.0	80-120			
Xylene (o)	43.3		"	50.0		86.6	80-120			
Surrogate: a,a,a-Trifluorotoluene	41.4		"	40.0		104	80-120			
Surrogate: 4-Bromofluorobenzene	37.0		"	40.0		92.5	80-120			
Matrix Spike (EK61614-MS1)	Sou	ırce: 6K13007-	-01	Prepared: 1	1/16/06 Aı	nalyzed: 11	/17/06			
Benzene	0.0551	0.00100	mg/L	0.0500		110	80-120			
Toluene	0.0498	0.00100	"	0.0500		99.6	80-120			
Ethylbenzene	0.0401	0.00100	*	0.0500		80.2	80-120			
Xylene (p/m)	0.0844	0.00100	"	0.100		84.4	80-120			
Xylene (o)	0.0442	0.00100	**	0.0500		88.4	80-120			
Surrogate: a,a,a-Trifluorotoluene	41.1		ug/l	40.0		103	80-120			
Surrogate: 4-Bromofluorobenzene	42.4		"	40.0		106	80-120			

Project: Hobbs N-6 Leak

Fax: (505) 397-1471

Project Number: None Given Project Manager: Kristin Farris-Pope

## 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 EK61614 - EPA 5030C (GC)										
Matrix Spike Dup (EK61614-MSD1)	Sou	rce: 6K13007-	-01	Prepared:	11/16/06 A	nalyzed: 11	/17/06			
Benzene	0.0580	0.00100	mg/L	0.0500		116	80-120	5.31	20	
Toluene	0.0550	0.00100	"	0.0500		110	80-120	9.92	20	
Ethylbenzene	0.0421	0.00100	"	0.0500		84.2	80-120	4.87	20	
Xylene (p/m)	0.0909	0.00100	**	0.100		90.9	80-120	7.42	20	
Xylene (o)	0.0455	0.00100	*1	0.0500		91.0	80-120	2.90	20	
Surrogate: a,a,a-Trifluorotoluene	46.3		ug/l	40.0		116	80-120			
Surrogate: 4-Bromofluorobenzene	42.0		"	40.0		105	80-120			

Rice Operating Co.

Project: Hobbs N-6 Leak

Fax: (505) 397-1471

122 W. Taylor Hobbs NM, 88240 Project Number: None Given
Project Manager: Kristin Farris-Pope

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

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	<b>D</b> 1	Reporting	** **	Spike	Source	0/255	%REC	222	RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EK61507 - General Preparation (	WetChem)									
Blank (EK61507-BLK1)			•	Prepared &	Analyzed:	11/15/06				
Sulfate	0.579	0.500	mg/L							1
Chloride	ND	0.500	**							
LCS (EK61507-BS1)				Prepared &	Analyzed:	11/15/06			_	
Sulfate	10.9	0.500	mg/L	10.0		109	80-120			
Chloride	11.1	0.500		10.0		111	80-120			
Calibration Check (EK61507-CCV1)				Prepared &	Analyzed:	11/15/06				
Chloride	10.7		mg/L	10.0		107	80-120			
Sulfate	12.0		**	10.0		120	80-120			
Duplicate (EK61507-DUP1)	Sour	ce: 6K15004	-01	Prepared &	z Analyzed:	11/15/06				
Chloride	232	5.00	mg/L		234			0.858	20	
Sulfate	79.9	5.00	17	*	79.8			0.125	20	
Duplicate (EK61507-DUP2)	Soui	ce: 6K15006	-07	Prepared &	Analyzed:	11/15/06				
Sulfate	78.2	5.00	mg/L		78.1			0.128	20	
Chloride	37.9	5.00	и		43.7			14.2	20	
Matrix Spike (EK61507-MS1)	Sour	ce: 6K15004	-01	Prepared &	Analyzed:	11/15/06				
Sulfate	175	5.00	mg/L	100	79.8	95.2	80-120			
Chloride	345	5.00	19	100	234	111	80-120			
Matrix Spike (EK61507-MS2)	Sour	ce: 6K15006	-07	Prepared &	Analyzed:	11/15/06				
Chloride	142	5.00	mg/L	100	43.7	98.3	80-120			
Sulfate	175	5.00	n	100	78.1	96.9	80-120			

Project: Hobbs N-6 Leak

Project Number: None Given

Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

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

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EK61605 - General Preparation	ı (WetChem)									
Blank (EK61605-BLK1)				Prepared &	k Analyzed:	11/17/06				
Total Alkalinity	ND	2.00	mg/L							
Blank (EK61605-BLK2)				Prepared &	k Analyzed:	11/17/06				
Total Alkalinity	ND	2.00	mg/L							•
LCS (EK61605-BS1)				Prepared &	& Analyzed:	11/17/06				
Bicarbonate Alkalinity	172		mg/L	200		86.0	85-115			
LCS (EK61605-BS2)				Prepared &	& Analyzed:	11/17/06				
Bicarbonate Alkalinity	172		mg/L	200		86.0	85-115			
Hydroxide Alkalinity	0.00	0.100	"				85-115			
Duplicate (EK61605-DUP1)	Sou	rce: 6K15001	-01	Prepared & Analyzed: 11/17/06						
Total Alkalinity	238	2.00	mg/L ·		238			0.00	20	
Carbonate Alkalinity	0.00	0.100			0.00				20	
Bicarbonate Alkalinity	0.00	2.00	11		0.00				20	
Hydroxide Alkalinity	0.00	0.100			0.00				20	
Duplicate (EK61605-DUP2)	Sou	rce: 6K16005	-01	Prepared &	& Analyzed:	11/17/06				
Total Alkalinity	296	2.00	mg/L		300			1.34	20	
Carbonate Alkalinity	0.00	0.100	n		0.00				20	
Bicarbonate Alkalinity	0.00	2.00	*		300				20	
Hydroxide Alkalinity	0.00	0.100	. "		0.00				20	
Reference (EK61605-SRM1)				Prepared &	& Analyzed:	11/17/06				
Total Alkalinity	238		mg/L	250		95.2	90-110	•		
Reference (EK61605-SRM2)				Prepared &	k Analyzed:	11/17/06				

mg/L

250

238

Total Alkalinity

95.2

90-110

Rice Operating Co.

Project: Hobbs N-6 Leak

Fax: (505) 397-1471

122 W. Taylor Hobbs NM, 88240 Project Number: None Given
Project Manager: Kristin Farris-Pope

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

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EK61611 - Filtration Preparation										***
Blank (EK61611-BLK1)				Prepared:	11/15/06 A	nalyzed: 11	/16/06			
Total Dissolved Solids	ND	10.0	mg/L						-	
Duplicate (EK61611-DUP1)	Sour	ce: 6K15001-	-01	Prepared:	11/15/06 A	nalyzed: 11	/16/06			
Total Dissolved Solids	14000	10.0	mg/L		13200			5.88	5	QR-03
Duplicate (EK61611-DUP2)	Sour	ce: 6K15005-	-03	Prepared: 1	11/15/06 A	nalyzed: 11	/16/06			÷
Total Dissolved Solids	586	10.0	mg/L		622			5.96	5	QR-03
Blank (EK61709 - General Preparation (W	/etChem)			Prepared &	z Analyzed:	11/17/06				
Total Organic Carbon	ND	0.500	mg/L	T Topurou C	27 mary 20a.					
						•				
LCS (EK61709-BS1)				Prepared &	Analyzed:	11/17/06				
LCS (EK61709-BS1) Total Organic Carbon	8.22	0.500	mg/L	Prepared &	Analyzed:	11/17/06	80-120			
	8.22	0.500	mg/L	10.0	Analyzed:	82.2	80-120			
Total Organic Carbon	8.22	0.500	mg/L	10.0		82.2	80-120	0.364	20	
Total Organic Carbon  LCS Dup (EK61709-BSD1)				10.0 Prepared &		82.2 11/17/06 82.5		0.364	20	
Total Organic Carbon  LCS Dup (EK61709-BSD1)  Total Organic Carbon				10.0 Prepared &	Analyzed:	82.2 11/17/06 82.5		0.364	20	
Total Organic Carbon  LCS Dup (EK61709-BSD1)  Total Organic Carbon  Calibration Check (EK61709-CCV1)	8.25		mg/L	10.0 Prepared & 10.0 Prepared & 10.0	Analyzed:	82.2 11/17/06 82.5 11/17/06 101	80-120	0.364	20	

Project: Hobbs N-6 Leak

Project Number: None Given

Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EK61703 - 6010B/No Digestion			-							
Blank (EK61703-BLK1)				Prepared &	k Analyzed:	11/17/06				
Calcium	ND	0.0810	mg/L							
Magnesium	ND	0.0360	"							
Potassium	ND	0.0600	**							•
Sodium	ND	0.0430	"							
Calibration Check (EK61703-CCV1)				Prepared &	2 Analyzed:	11/17/06				
Calcium	2.17		mg/L	2.00		108	85-115			
Magnesium	2.21		*	2.00		110	85-115			
Potassium	1.74		**	2.00		87.0	85-115			
Sodium	1.88		**	2.00		94.0	85-115			
Duplicate (EK61703-DUP1)	Sou	rce: 6K15001-	-01	Prepared &	& Analyzed	: 11/17/06				
Calcium	1300	40.5	mg/L		1340			3.03	20	
Magnesium	461	3,60	,,		461			0.00	20	
Potassium	55.7	0.600			53.2			4.59	20	
Sodium	2890	21.5			3100			7.01	20	
Batch EK61705 - EPA 3005A				<u></u>						
Blank (EK61705-BLK1)				Prepared &	k Analyzed	: 11/17/06				
Iron	ND	0.0170	mg/L							
LCS (EK61705-BS1)				Prepared &	k Analyzed	11/17/06				
Iron	0.229	0.0170	mg/L	0.200		114	85-115			
LCS Dup (EK61705-BSD1)				Prepared &	& Analyzed:	: 11/17/06				

0.200

0.222

0.0170

mg/L

Iron

111

85-115

3.10

20

Project: Hobbs N-6 Leak

Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

Total Metals by EPA / Standard Methods - Quality Control

### **Environmental Lab of Texas**

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EK61705 - EPA 3005A		<u></u>		_						
Calibration Check (EK61705-CCV1)				Prepared &	Analyzed:	11/17/06				
Iron	0.959		mg/L	1.00		95.9	90-110			
Matrix Spike (EK61705-MS1)	Sour	rce: 6K16008-	-01	Prepared &	Analyzed:	11/17/06				
Iron	0.982	0.0170	mg/L	0.200	0.800	91.0	75-125			
Matrix Spike Dup (EK61705-MSD1)	Sour	rce: 6K16008-	01	Prepared &	: Analyzed:	11/17/06				
Iron	0.986	0.0170	mg/L	0.200	0.800	93.0	75-125	0.407	20	

Project: Hobbs N-6 Leak

Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

### Dissolved Metals by EPA / Standard Methods - Quality Control

### **Environmental Lab of Texas**

		Reporting		Spike	Source		%REC		RPD	RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes	
Batch EK61706 - EPA 3005A	•	F-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1			_						
Blank (EK61706-BLK1)				Prepared &	: Analyzed:	11/17/06					
Iron	ND	0.0170	mg/L								
LCS (EK61706-BS1)				Prepared &	. Analyzed:	11/17/06					
Iron	0.211	0.0170	mg/L	0.200		106	85-115				
LCS Dup (EK61706-BSD1)				Prepared &	: Analyzed:	11/17/06					
Iron	0.210	0.0170	mg/L	0.200		105	85-115	0.475	20		
Calibration Check (EK61706-CCV1)				Prepared &	: Analyzed:	11/17/06					
Iron	0.972		mg/L	1.00		97.2	90-110				
Matrix Spike (EK61706-MS1)	Sou	rce: 6K15017-	-02	Prepared &	: Analyzed:	11/17/06					
Iron	0.177	0.0170	mg/L	0.200	ND	88.5	75-125				
Matrix Spike Dup (EK61706-MSD1)	Sou	rce: 6K15017-	-02	Prepared & Analyzed: 11/17/06							
ron	0.179	0.0170	mg/L	0.200	ND	89.5	75-125	1.12	20		

Rice Operating Co.

122 W. Taylor
Hobbs NM, 88240

Project Manager:
Project Manager:
Project Manager:
Rice Operating Co.
Project:
Hobbs N-6 Leak
Fax: (505) 397-1471
None Given
Froject Manager:
Kristin Farris-Pope

### **Notes and Definitions**

S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect. QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values. Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag). J В Analyte is found in the associated blank as well as in the sample (CLP B-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 Duplicate Dup

	Kaland KJul		•
Report Approved By:	Kacan C 1	Date:	12/1/2006

Raland K. Tuttle, Lab Manager Celey D. Keene, Lab Director, Org. Tech Director Peggy Allen, QA Officer

Jeanne Mc Murrey, Inorg. Tech Director LaTasha Cornish, Chemist Sandra Sanchez, Lab Tech.

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

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

# Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West J-20 East

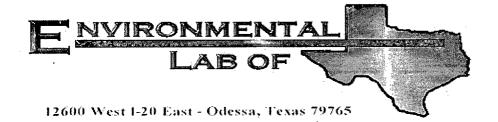
Phone: 432-563-1800

TAT brebneta × × Project Loc: T19S R38E Sec 5 & 6 E/H ~ Lea County New Mexico ☐ NPDES RUSH TAT (Pre-Schedule) 24, 46, 72 hrs ပ္ Dissolved Iron (Lab Filtered) × × Total Iron j Ç × Fotal Dissolved Solids Sample Containers Intact? × Fax: 432-583-1713 TRRP Total Organic Carbon Hobbs N-6 Leak VOCs Free of Headspace? Labels on container(s) Custody seals on container(s) Custody seals on cooler(s) Temperature Upon Receipt: BIEX 80218/5080 or BIEX 8260 × Sample Hand Delivered by Sampler/Client Rep. by Counter? UPS aboratory Comments: X Standard Metals: As Ag Ba Cd Or Pb Hg Se TOTAL: SAR / ESP / CEC Anions (Ct. SO4, Alkalinity) PO # Project Name: Project #:  $\overline{\times}$ Catione (Ca, Mg, Na, K) Report Format: 9001 XT SOOL XT :H41 111/6/610 JR:00 E B 80158 M8108 1.814 Hal 1947 Deliaga Specify Other გ 8 Date Date 390H Im 035 (1) anoN rozanne@valornet.com Mone (1) 1 Liter HDPE Odessa, Texas 79765 rozanne@valornet.com Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> HOeN (505) 397-1471 'OS<sup>z</sup>H HCI (5) 40 ml glass vials S S HMO3 (1) \$20 WI HDBE × æ æ Fotal #, of Containers benetifig blef e-mail: Fax No: 13:55 15:50 mfranks@riceswd.com Time Sampled kpope@riceswd.com Received by ELOT 11/15/2006 11/15/2006 Received by: Received by Date Sampled Ending Depth Hobbs, New Mexico 88240 4.9 -9.4 -9.4 ime RICE Operating Company Sampler Signature: Rozanne Johnson (505)631-9310 Beginning Depth Please email to: kpope@riceswd.com 122 W. Taylor Street Kristin Farris Pope 11/19/10 Date (505) 393-9174 FIELD CODE Company Address: Biosparge Well #2 Biosparge Well #1 Project Manager: Company Name Telephone No: City/State/Zip: Special Instructions Rozanne Jokinsor Relinquished by: Relinquished by (lab use only) ORDER #: AB # (lab use only)

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

lient: 410 00 -				
ate/ Time: 111500 4:00				
· · · · · · · · · · · · · · · · · · ·				
ab ID#: <u>LK15017</u>			•	
itials: (UL				
Samula Dessius	Chaaldist			
Sample Receipt	Checklist		Ölland Ind	:41 = 1 =
Temperature of container/ cooler?	Yes	No	Client Ini	liais
Shipping container in good condition?	χ€s	No	1	$\dashv$
Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present	
Custody Seals intact on sample bottles/ container?	Yes	No	Not Present	
5 Chain of Custody present?	Yes .	No		$\dashv$
Sample instructions complete of Chain of Custody?	Yes	No		
Chain of Custody signed when relinquished/ received?	Yeş	No		-
Chain of Custody agrees with sample label(s)?	⊁es	No	ID written on Cont./ Lid	7
9 Container label(s) legible and intact?	Čes	No	Not Applicable	$\neg$
10 Sample matrix/ properties agree with Chain of Custody?	Yes	No		
11 Containers supplied by ELOT?	Yes	No		$\neg \neg$
12 Samples in proper container/ bottle?	Yes	No	See Below	$\neg$
13 Samples properly preserved?	Yes	No	See Below	$\neg$
14 Sample bottles intact?	Yes	No		$\neg$
15 Preservations documented on Chain of Custody?	Yes	No		
16 Containers documented on Chain of Custody?	Yes	No		
17 Sufficient sample amount for indicated test(s)?	Yes	No	See Below	$\neg$
8 All samples received within sufficient hold time?	Yes	No	See Below	
9 Subcontract of sample(s)?	Yes	No	Not Applicable	$\neg$
20 VOC samples have zero headspace?	Yes	No	Not Applicable	
16. Jan 19.	4 . 49			
Variance Docur	nentation			
ontact: Contacted by:			Date/ Time:	
Official Dy.		-	Date/ Fille,	
egarding:				
		··		
orrective Action Taken:				
heck all that Apply:  See attached e-mail/ fax  Client understands and would	d like to proc	eed with	analysis	
T Client directorating and work	a we to hipe	AGEN MINI	anaiyoio	

Cooling process had begun shortly after sampling event



# Analytical Report

### Prepared for:

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

Project: Hobbs N-6 Leak

Project Number: None Given

Location: T19S R38E Sec.5&6 E/H- Lea County, NM

Lab Order Number: 6K15006

Report Date: 12/01/06

Project: Hobbs N-6 Leak

Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Monitor Well #2	6K15006-01	Water	11/14/06 16:45	11-15-2006 08:10
Monitor Well #3	6K15006-02	Water	11/14/06 19:05	11-15-2006 08:10
Monitor Well #4	6K15006-03	Water	11/14/06 14:50	11-15-2006 08:10
Monitor Well #5	6K15006-04	Water	11/14/06 12:40	11-15-2006 08:10
Monitor Well #6	6K15006-05	Water	11/14/06 15:40	11-15-2006 08:10
Monitor Well #7	6K15006-06	Water	11/14/06 13:35	11-15-2006 08:10
IWW	6K15006-07	Water	11/14/06 11:20	11-15-2006 08:10

Project: Hobbs N-6 Leak

Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

### Organics by GC Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
Monitor Well #2 (6K15006-01) Water									
Benzene	J [0.000709]	0.00100	mg/L	1	EK61614	11/16/06	11/17/06	EPA 8021B	
Toluene	ND	0.00100	. "	"	н	n	н	"	
Ethylbenzene	J [0.000609]	0.00100	"	**	**	11	"	и	
Xylene (p/m)	ND	0.00100		11	**	"	*	и	
Xylene (o)	ND	0.00100		н	н	U	#	U	
Surrogate: a,a,a-Trifluorotoluene		110 %	80-	120	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		83.0 %	80-	120	"	n	"	"	
Monitor Well #3 (6K15006-02) Water									
Benzene	0.00697	0.00100	mg/L	1	EK61614	11/16/06	11/20/06	EPA 8021B	
Toluene	J [0.000417]	0.00100	**	11	н	u .	n	н	
Ethylbenzene	J [0.000413]	0.00100	**	и,	n	**	n	н	
Xylene (p/m)	ND	0.00100	**	*	n	н	**	н	
Xylene (o)	ND	0.00100	. "	11	11	"	11	"	
Surrogate: a,a,a-Trifluorotoluene		98.8 %	80-	120	"	"	"	,,	
Surrogate: 4-Bromofluorobenzene		82.2 %	80-	120	"	"	,		
Monitor Well #4 (6K15006-03) Water									
Benzene	ND	0.00100	mg/L	1	EK61614	11/16/06	11/17/06	EPA 8021B	
Toluene .	ND	0.00100	19	Ħ	u	U	н	Ħ	
Ethylbenzene	ND	0.00100	н	**	"	н	**	n	
Xylene (p/m)	ND	0.00100	"	41	4	н	"	II.	
Xylene (o)	ND	0.00100	"	**	"	н	н	ii .	
Surrogate: a,a,a-Trifluorotoluene		103 %	80-	120	n	"	"	"	,
Surrogate: 4-Bromofluorobenzene		85.8 %	80-	120	n	"	"	n	
Monitor Well #5 (6K15006-04) Water	<u> </u>								
Benzene	ND	0.00100	mg/L	. 1	EK61614	11/16/06	11/17/06	EPA 8021B	
Toluene	ND	0.00100	**		н	11	н		
Ethylbenzene	ND	0.00100	10	н		11	n		
Xylene (p/m)	ND	0.00100	"	. "	N		н	н	
Xylene (o)	ND	0.00100	11	n .	*	u	н		
Surrogate: a,a,a-Trifluorotoluene		110 %	80-	120	"	"	"	. "	
Surrogate: 4-Bromofluorobenzene		84.0 %	80-	120	"	"	#	"	

Project: Hobbs N-6 Leak

Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

### Organics by GC Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Monitor Well #6 (6K15006-05) Water	,						_		
Benzene	ND	0.00100	mg/L	ì	EK61614	11/16/06	11/17/06	EPA 8021B	•
Toluene	ND	0.00100	. "	**	н	н	**	"	
Ethylbenzene	ND	0.00100	n	**	"	**	D	"	
Xylene (p/m)	ND	0.00100		**	"	**	и	i,	
Xylene (o)	ND	0.00100	n	**	**	п	"	II.	
Surrogate: a,a,a-Trifluorotoluene	······································	118%	80-1	20	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		91.5 %	80-1	20	"	"	n	"	
Monitor Well #7 (6K15006-06) Water									
Benzene	ND	0.00100	mg/L	1	EK61614	11/16/06	11/17/06	EPA 8021B	
Toluene	ND	0.00100	и	*1	**	11	н	0	
Ethylbenzene	ND	0.00100		11	19	II .		**	
Xylene (p/m)	ND	0.00100	II.		*	н	t <del>t</del>	н	
Xylene (o)	ND	0.00100	*	"	Ħ	u	11	'n	
Surrogate: a,a,a-Trifluorotoluene		117 %	80-1	20	,,	"	"	"	
Surrogate: 4-Bromofluorobenzene		90.2 %	80-1	20	"	#	"	п	4
IWW (6K15006-07) Water									
Benzene	ND	0.00100	mg/L	1	EK61614	11/16/06	11/20/06	EPA 8021B	
Toluene	ND	0.00100	**	n .	н	n	**	n	
Ethylbenzene	ND	0.00100	ıı.	н	н	u	н	11	
Xylene (p/m)	ND	0.00100	II.	н	H	11	и	п	
Xylene (o)	ND	0.00100		*	u	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		104 %	80-1	20	,,	"	"	"	
Surrogate: 4-Bromofluorobenzene		81.2 %	80-1	20	"	"	"	"	

Project: Hobbs N-6 Leak

Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

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

Analyse	Pagult	Reporting	Haita	<b>5</b>					
Analyte	Result	Limit ·	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
Monitor Well #2 (6K15006-01) Water									
Total Alkalinity	212	2.00	mg/L	1	EK61605	11/17/06	11/17/06	EPA 310.1M	
Chloride	33.6	5.00	и	10	EK61507	11/15/06	11/15/06	EPA 300.0	
Total Dissolved Solids	442	10.0		1	EK61611	11/15/06	11/16/06	EPA 160.1	
Sulfate	91.7	5.00	н	10	EK61507	11/15/06	11/15/06	EPA 300.0	
Total Organic Carbon	0.700	0.500		1	EK61709	11/17/06	11/17/06	EPA 415.1	
Monitor Well #3 (6K15006-02) Water									
Total Alkalinity	420	2.00	mg/L	1	EK61605	11/17/06	11/17/06	EPA 310.1M	
Chloride	6810	100	19	200	EK61507	11/15/06	11/15/06	EPA 300.0	
Total Dissolved Solids	12600	10.0	19	1	EK61611	11/15/06	11/16/06	EPA 160.1	
Sulfate	901	100	"	200	EK61507	11/15/06	11/15/06	EPA 300.0	
Total Organic Carbon	1.04	0.500	n	1	EK61709	11/17/06	11/17/06	EPA 415.1	
Monitor Well #4 (6K15006-03) Water									
Total Alkalinity	220	2.00	mg/L	1	EK61605	11/17/06	11/17/06	EPA 310.1M	
Chloride	93.4	5.00	11	10	EK61507	11/15/06	11/15/06	EPA 300.0	
Total Dissolved Solids	498	10.0	11	. 1	EK61611	11/15/06	11/16/06	EPA 160.1	
Sulfate	90.8	5.00	"	10	EK61507	11/15/06	11/15/06	EPA 300.0	•
Total Organic Carbon	ND	0.500	11	1	EK61709	11/17/06	11/17/06	EPA 415.1	
Monitor Well #5 (6K15006-04) Water									
Total Alkalinity	258	2.00	mg/L	1	EK61605	11/17/06	11/17/06	EPA 310.1M	
Chloride	30.2	5.00	**	10	EK61507	11/15/06	11/15/06	EPA 300.0	
Total Dissolved Solids	430	10.0	н	l	EK61611	11/15/06	11/16/06	EPA 160.1	
Sulfate	85.0	5.00	*1	10	EK61507	11/15/06	11/1:5/06	EPA 300.0	
Total Organic Carbon	ND	0.500	"	1	EK61709	11/17/06	11/17/06	EPA 415.1	
Monitor Well #6 (6K15006-05) Water									
Total Alkalinity	226	2.00	mg/L	1	EK61605	11/17/06	11/17/06	EPA 310.1M	•
Chloride	53.9	5.00	н	10	EK61507	11/15/06	11/15/06	EPA 300.0	
Total Dissolved Solids	464	10.0	**	1	EK61611	11/15/06	11/16/06	EPA 160.1	
Sulfate	95.4	5.00	*1	10	EK61507	11/15/06	11/15/06	EPA 300.0	
Total Organic Carbon	ND	0.500	"	1	EK61709	11/17/06	11/17/06	EPA 415.1	

Project: Hobbs N-6 Leak

Project Number: None Given

Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Monitor Well #7 (6K15006-06) Water									
Total Alkalinity	250	2.00	mg/L	1	EK61605	11/17/06	11/17/06	EPA 310.1M	
Chloride	223	5.00		10	EK61507	11/15/06	11/15/06	EPA 300.0	
Total Dissolved Solids	764	10.0	**	1	EK61611	11/15/06	11/16/06	EPA 160.1	
Sulfate	86.5	5.00	**	10	EK61507	11/15/06	11/15/06	EPA 300.0	
Total Organic Carbon	0.574	0.500	II.	1	EK61709	11/17/06	11/17/06	EPA 415.1	
IWW (6K15006-07) Water									
Total Alkalinity	254	2.00	mg/L	1	EK61605	11/17/06	11/17/06	EPA 310.1M	
Chloride	43.7	5.00		10	EK61507	11/15/06	11/15/06	EPA 300.0	
Total Dissolved Solids	434	10.0	"	1	EK61611	11/15/06	11/16/06	EPA 160.1	
Sulfate	78.1	5.00		10	EK61507	11/15/06	11/15/06	EPA 300.0	
Total Organic Carbon	0.879	0.500	"	1	EK61709	11/17/06	11/17/06	EPA 415.1	

Project: Hobbs N-6 Leak

Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

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

Analyte	Result	Reporting Limit	Units	Dilection	Dot-l	D J	و امسه	Mathe	NI_4
Monitor Well #2 (6K15006-01) Water	Resurt		Oillis	Dilution	Batch	Prepared	Analyzed	Method	Notes
					<del></del>		<del></del>	<u> </u>	
Calcium	105	0.810	mg/L	10	EK61703	11/17/06	11/17/06	EPA 6010B	*
Magnesium	18.3	0.360	"	16	11	н	н	"	
Potassium	2.46	0.600	"	**	н	и	п	11	
Sodium	38.4	0.430	14	0	"	**	а		
(ron	ND	0.0170	н	1	EK61702	11/17/06	11/17/06		
Monitor Well #3 (6K15006-02) Water		<u>:</u>							
Calcium	860	8.10	mg/L	100	EK61703	11/17/06	11/17/06	EPA 6010B	
Magnesium	218	1.80	H	50		"	**	w	
Potassium	74.5	3.00	"	. "	н	Ħ	"	н	
Sodium	4650	21.5	"	500	**	"	н	в	
Iron	1.72	0.0170	11	1	EK61702	11/17/06	11/17/06	**	
Monitor Well #4 (6K15006-03) Water									
Calcium	95.2	0.810	mg/L	10	EK61703	11/17/06	11/17/06	EPA 6010B	•
Magnesium	17.4	0.360	Ħ	"		n	u	ni	
Potassium	2.82	0.600	н	"	*	и	"	н	
Sodium	81.0	0.430	**	n.	0	ii	11	**	
Iron	0.0266	0.0170		1	EK61702	11/17/06	11/17/06	ú	
Monitor Well #5 (6K15006-04) Water									
Calcium	85.9	0.810	mg/L	10	EK61703	11/17/06	11/17/06	EPA 6010B	
Magnesium	17.6	0.360	10	n	"		"		*
Potassium	2.48	0.600	и .	"	"	п	u .	11	
Sodium	53.1	0.430	"		**	II.	н	n	
Iron	J [0.0126]	0.0170	**	1	EK61702	11/17/06	11/17/06	**	J
Monitor Well #6 (6K15006-05) Water									
Calcium	103	0.810	mg/L	10	EK61703	11/17/06	11/17/06	EPA 6010B	
Magnesium	18.4	0.360		u	ч .	п	II.	"	
Potassium	2.70	0.600	10	н	п	11	н	11	
Sodium	46.5	0.430	н	п	"	10	41	u .	
Iron	J [0.00480]	0.0170	п	1	EK61702	11/17/06	11/17/06	н	j

Project: Hobbs N-6 Leak

Project Number: None Given

Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

### **Total Metals by EPA / Standard Methods**

### **Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Monitor Well #7 (6K15006-06) Water		· · · · · · · · · · · · · · · · · · ·							
Calcium	121	4.05	mg/L	50	EK61703	11/17/06	11/17/06	EPA 6010B	
Magnesium	18.9	0.360	"	10	11	+1	11	**	
Potassium	4.12	0.600	10	**	11	#		"	
Sodium	148	2.15	"	50	"	n		D	
Iron	J [0.00520]	0.0170	**	1	EK61702	11/17/06	11/17/06	н	
IWW (6K15006-07) Water									
Calcium	41.0	0.810	mg/L	10	EK61703	11/17/06	11/17/06	EPA 6010B	
Magnesium	7.84	0.360	11	н	н	. 0	11	н	
Potassium	3.65	0.600		**	u	н	11	"	
Sodium	110	2.15	н	50	и	"	**	11	
Iron	0.305	0.0170	"	1	EK61702	11/17/06	11/17/06	Ħ	

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

Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

# Dissolved Metals by EPA / Standard Methods Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Monitor Well #2 (6K15006-01) Water									
Iron	ND	0.0170	mg/L	1	EK61701	11/17/06	11/17/06	EPA 6010B	
Monitor Well #3 (6K15006-02) Water									
Iron	0.748	0.0170	mg/L	1	EK61701	11/17/06	11/17/06	EPA 6010B	
Monitor Well #4 (6K15006-03) Water									
Iron	0.0182	0.0170	mg/L	1	EK61701	11/17/06	11/17/06	EPA 6010B	
Monitor Well #5 (6K15006-04) Water							•		
Iron	J [0.0148]	0.0170	mg/L	1	EK61701	11/17/06	11/17/06	EPA 6010B	J
Monitor Well #6 (6K15006-05) Water									
Iron	ND	0.0170	mg/L	1	EK61701	11/17/06	11/17/06	EPA 6010B	
Monitor Well #7 (6K15006-06) Water									
Iron	J [0.00470]	0.0170	mg/L	1	EK61701	11/17/06	11/17/06	EPA 6010B	J
IWW (6K15006-07) Water									
Iron	J [0.0147]	0.0170	mg/L	1	EK61701	11/17/06	11/17/06	EPA 6010B	J

Rice Operating Co.

122 W. Taylor Hobbs NM, 88240 Project: Hobbs N-6 Leak

Project Number: None Given

Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
· · · · · · · · · · · · · · · · · · ·				201,0		70.000				
Batch EK61614 - EPA 5030C (GC)										
Blank (EK61614-BLK1)				Prepared:	11/16/06 . Ai	nalyzed: 11	/17/06			
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	47.8		ug/l	40.0		120	80-120			
Surrogate: 4-Bromofluorobenzene	40.5		"	40.0		101	80-120			
LCS (EK61614-BS1)				Prepared: 1	11/16/06 Aı	nalyzed: 11	/17/06			
Benzene	0.0594	0.00100	mg/L	0.0500		119	80-120			
Toluene	0.0562	0.00100	*	0.0500		112	80-120			
Ethylbenzene	0.0458	0.00100	. "	0.0500		91.6	80-120			
Xylene (p/m)	0.0949	0.00100	"	0.100		94.9	80-120			
Xylene (o)	0.0499	0.00100	"	0.0500		99.8	80-120			
Surrogate: a,a,a-Trifluorotoluene	46.1		ug/l	40.0		115	80-120			
Surrogate: 4-Bromofluorobenzene	44.2		"	40.0		110	80-120			
Calibration Check (EK61614-CCV1)				Prepared: 1	11/16/06 Aı	nalyzed: 11	/20/06			
Benzene	54.7		ug/l	50.0		109	80-120			
Toluene	48.5		"	50.0		97.0	80-120			
Ethylbenzene	42.1			50.0		84.2	80-120			
Xylene (p/m)	83.0			100		83.0	80-120		,	
Xylene (o)	43.3		11	50.0		86.6	80-120			
Surrogate: a,a,a-Trifluorotoluene	41.4		"	40.0		104	80-120			
Surrogate: 4-Bromofluorobenzene	37.0		,,	40.0		92.5	80-120			
Matrix Spike (EK61614-MS1)	Sou	rce: 6K13007-	01	Prepared: 1	11/16/06 Ai	nalyzed: 11	/17/06			
Benzene	0.0551	0.00100	mg/L	0.0500		110	80-120			
Toluene	0.0498	0.00100		0.0500		99.6	80-120			
Ethylbenzene	0.0401	0.00100		0.0500		80.2	80-120			
Xylene (p/m)	0.0844	0.00100	и	0.100		84.4	80-120			
Xylene (o)	0.0442	0.00100	"	0.0500		88.4	80-120			
Surrogate: a,a,a-Trifluorotoluene	41.1		ug/l	40.0		. 103	80-120	parameter to the		
Surrogate: 4-Bromofluorobenzene	42.4		"	40.0		106	80-120			

Project: Hobbs N-6 Leak

Project Number: None Given

Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

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

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch	EK61614 -	EPA 5030C	(GC)

Matrix Spike Dup (EK61614-MSD1)	Sour	ce: 6K13007-	-01	Prepared: 11/16/0	6 Analyzed: 1			
Benzene	0.0580	0.00100	mg/L	0.0500	116	80-120	5,31	20
Toluene	0.0550	0.00100	**	0.0500	110	80-120	9.92	20
Ethylbenzene	0.0421	0.00100	19	0.0500	84.2	80-120	4.87	20
Xylene (p/m)	0.0909	0.00100		0.100	90.9	80-120	7.42	20
Xylene (o)	0.0455	0.00100	н	0.0500	91.0	80-120	2.90	20
Surrogate: a,a,a-Trifluorotoluene	46.3		ug/l	40.0	116	80-120		
Surrogate: 4-Bromofluorobenzene	42.0		"	40.0	105	80-120		

Project: Hobbs N-6 Leak

Project Number: None Given

Fax: (505) 397-1471

Project Number: None Given

Project Manager: Kristin Farris-Pope

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

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit <sub>.</sub> .	Notes
Batch EK61507 - General Preparation (	WetChem)									
Blank (EK61507-BLK1)				Prepared &	Analyzed:	11/15/06				
Sulfate	0.579	0.500	mg/L							
Chloride	ND	0.500	"				•			
LCS (EK61507-BS1)				Prepared &	Analyzed:	11/15/06				
Sulfate	10.9	0.500	mg/L	10.0		109	80-120			
Chloride	11.1	0.500	н	10.0		111	80-120			
Calibration Check (EK61507-CCV1)				Prepared &	z Analyzed:	11/15/06				
Sulfate	12.0		mg/L	10.0		120	80-120			
Chloride	10.7		"	10.0		107	80-120			
Duplicate (EK61507-DUP1)	Source	ce: 6K15004-	01	Prepared &	Analyzed:	11/15/06				
Sulfate	79.9	5.00	mg/L		79.8			0.125	20	
Chloride	232	5.00	"		234			0.858	20	
Duplicate (EK61507-DUP2)	Source	e: 6K15006-	07	Prepared &	Analyzed:	11/15/06				*
Sulfate	78.2	5.00	mg/L		78.1			0.128	20	
Chloride	37.9	5.00	"		43.7			14.2	20	
Matrix Spike (EK61507-MS1)	Source	ce: 6K15004-	-01	Prepared &	Analyzed:	11/15/06				
Sulfate	175	5.00	mg/L	100	79.8	95.2	80-120			
Chloride	345	5.00	"	100	234	111	80-120			
Matrix Spike (EK61507-MS2)	Source	ce: 6K15006-	07	Prepared & Analyzed: 11/15/06						
Sulfate	175	5.00	mg/L	100	78.1	96.9	80-120	.,		
Chloride	142	5.00		100	43.7	98.3	80-120			

Project: Hobbs N-6 Leak

Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD ·	RPD Limit	Notes
Batch EK61605 - General Preparation		Limit	Omis	Level	Kesun	/BIXEC	Linits	KrD	Çinin.	Notes
Blank (EK61605-BLK1)				Prepared &	: Analyzed:	11/17/06			-	
Total Alkalinity	ND	2.00	mg/L					<del> </del>		:
Blank (EK61605-BLK2)				Prepared &	Analyzed:	11/17/06				
Total Alkalinity	. ND	2.00	mg/L							
LCS (EK61605-BS1)				Prepared &	: Analyzed:	11/17/06				
Bicarbonate Alkalinity	172		· mg/L	200		86.0	85-115			
LCS (EK61605-BS2)				Prepared &	Analyzed:	11/17/06				
Bicarbonate Alkalinity	172	, .,	mg/L	200		86.0	85-115			
Hydroxide Alkalinity	0.00	0.100	н				85-115			
Duplicate (EK61605-DUP1)	Sou	rce: 6K15001-	01	Prepared &	Analyzed:	11/17/06				
Total Alkalinity	238	2.00	mg/L	·	238			0.00	20	
Carbonate Alkalinity	0.00	0.100	**		0.00				20	
Bicarbonate Alkalinity	0.00	2.00	**		0.00				20	
Hydroxide Alkalinity	0.00	0.100	"		0.00				20	
Duplicate (EK61605-DUP2)	Sou	rce: 6K16005-	01	Prepared &	Analyzed:	11/17/06				
Total Alkalinity	296	2.00	mg/L		300			1.34	20	
Carbonate Alkalinity	0.00	0.100	**		0.00				20	
Bicarbonate Alkalinity	0.00	2.00	**		300				20	
Hydroxide Alkalinity	0.00	0.100	**		0.00				20	,
Reference (EK61605-SRM1)				Prepared &	Analyzed:	11/17/06				
Total Alkalinity	238		mg/L	250		95.2	90-110			
Reference (EK61605-SRM2)				Prepared &	: Analyzed:	11/17/06				
Total Alkalinity	238		mg/L	250	·	95,2	90-110			

Project: Hobbs N-6 Leak

Project Number: None Given

Project Manager: Kristin Farris-Pope

### 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
Analyte	Result	Ellint	Omis	Level	Result	70KEC	Limits	- KI D	Limit	Notes
Batch EK61611 - Filtration Preparation										
Blank (EK61611-BLK1)				Prepared:	11/15/06 A	nalyzed: 11	/16/06			
Total Dissolved Solids	ND	10.0	mg/L							
Duplicate (EK61611-DUP1)	Sou	rce: 6K15001	-01	Prepared:	11/15/06 A	nalyzed: 11				
Total Dissolved Solids	14000	10.0	mg/L		13200			5.88	5	QR-0
Duplicate (EK61611-DUP2)	Sou	rce: 6K15005	-03	Prepared:	11/15/06 A	nalyzed: 11	1/16/06			
Total Dissolved Solids	586	10.0	mg/L		622			5.96	5	QR-0:
Blank (EK61709-BLK1)		•		Prepared &	k Analyzed	: 11/17/06	<del></del>		*	
Batch EK61709 - General Preparation (Wo	etChem)									
Total Organic Carbon	ND	0,500	mg/L							
LCS (EK61709-BS1)				Prepared &	& Analyzed	11/17/06				•
Total Organic Carbon	8.22	0.500	mg/L	10.0		82.2	80-120			
LCS Dup (EK61709-BSD1)				Prepared &	k Analyzed	: 11/17/06				
Total Organic Carbon	8.25	0.500	mg/L	10.0		82.5	80-120	0.364	20 .	
Calibration Check (EK61709-CCV1)	•			Prepared &	k Analyzed	: 11/17/06				
Total Organic Carbon	10.1		mg/L	10.0		101	80-120	.,		
Duplicate (EK61709-DUP1)	Sou	rce: 6K09002	-01	Prepared &	k Analyzed	: 11/17/06				
Total Organic Carbon	15.0	0.500	mg/L		14.6	· · · · · · · · · · · · · · · · · · ·		2.70	20	

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Rice Operating Co.

Project: Hobbs N-6 Leak

Fax: (505) 397-1471

122 W. Taylor Hobbs NM, 88240 Project Number: None Given

Project Manager: Kristin Farris-Pope

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

		Reporting		Spike	Source		%REC		RPD	,
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EK61702 - EPA 3005A										
Blank (EK61702-BLK1)				Prepared &	Analyzed:	11/17/06				
Iron	ND	0.0170	mg/L							
LCS (EK61702-BS1)				Prepared &	Analyzed:	11/17/06				
Iron	0.209	0.0170	mg/L	0.200		104	85-115		•	
LCS Dup (EK61702-BSD1)				Prepared &	Analyzed:	11/17/06				
Iron	0.214	0.0170	mg/L	0.200		107	85-115	2.36	20	
Calibration Check (EK61702-CCV1)				Prepared &	Analyzed:	11/17/06				
Iron	0.965		mg/L	1.00		96.5	90-110			
Matrix Spike (EK61702-MS1)	Sour	ce: 6K15006-	-01	Prepared &	. Analyzed:	11/17/06			٠	
Iron	0.195	0.0170	mg/L	0.200	ND	97.5	75-125			
Matrix Spike Dup (EK61702-MSD1)	Sour	ce: 6K15006-	-01	Prepared &	z Analyzed:	11/17/06				
Iron	0.199	0.0170	mg/L	0.200	ND	99.5	75-125	2.03	20	
Batch EK61703 - 6010B/No Digestion								_		
Blank (EK61703-BLK1)				Prepared &	Analyzed:	11/17/06				
Calcium	ND	0.0810	mg/L							
Magnesium	ND	0.0360								
Potassium	ND	0.0600	н							
Sodium	ND	0.0430								
Calibration Check (EK61703-CCV1)				Prepared &	Analyzed:	11/17/06				
Calcium	2.17		mg/L	2.00		108	85-115			
Magnesium	2.21		10	2.00		110	85-115			
Potassium	1.74		10	2.00		87.0	85-115			
Sodium	1,88		,,	2.00		94.0	85-115			

Rice Operating Co.

Project: Hobbs N-6 Leak

Fax: (505) 397-1471

122 W. Taylor Hobbs NM, 88240

Project Number: None Given
Project Manager: Kristin Farris-Pope

Total Metals by EPA / Standard Methods - Quality Control

### **Environmental Lab of Texas**

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Duplicate (EK61703-DUP1)	Source	e: 6K15001	-01	Prepared & Analyzed: 11/17/06		
Calcium	1300	40.5	mg/L	1340	3.03	20
Magnesium	461	3.60	**	461	0.00	20
Potassium	55.7	0.600	*	53.2	4.59	20
Sodium	2890	21.5	н	3100	7.01	20

Project: Hobbs N-6 Leak

Project Number: None Given

Fax: (505) 397-1471

Project Manager: Kristin Farris-Pope

### Dissolved Metals by EPA / Standard Methods - Quality Control Environmental Lab of Texas

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EK61701 - EPA 3005A	<u></u>									
Blank (EK61701-BLK1)			•	Prepared &	Analyzed	: 11/17/06				
Iron	ND	0.0170	mg/L							
LCS (EK61701-BS1)				Prepared &	Analyzed	: 11/17/06				
Iron	0.210	0.0170	mg/L	0.200		105	85-115			
LCS Dup (EK61701-BSD1)				Prepared &	Analyzed	11/17/06				
الر	0.209	0.0170	mg/L	0.200		104	85-115	0.477	20	-
Calibration Check (EK61701-CCV1)				Prepared &	Analyzed	: 11/17/06				
Iron	1.00		mg/L	1.00	,	100	90-110			
Matrix Spike (EK61701-MS1)	Source: 6K15006-01			Prepared &	Analyzed	: 11/17/06				
Iron	0.182	0.0170	mg/L	0.200	ND	91.0	75-125			
Matrix Spike Dup (EK61701-MSD1)	Source: 6K15006-01			Prepared & Analyzed: 11/17/06						
Iron	0.184	0.0170	mg/L	0.200	ND	92.0	75-125	1.09	20	

Rice Operating Co.

Project: Hobbs N-6 Leak

Fax: (505) 397-1471

122 W. Taylor Hobbs NM, 88240 Project Number: None Given
Project Manager: Kristin Farris-Pope

### Notes and Definitions

QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values. J Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag). В Analyte is found in the associated blank as well as in the sample (CLP B-flag). Analyte DETECTED DET 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 Duplicate Dup

	Kaland KJulls		
Report Approved By:	Karan C 180	Date:	12/1/2006

Raland K. Tuttle, Lab Manager Celey D. Keene, Lab Director, Org. Tech Director Peggy Allen, QA Officer

Jeanne Mc Murrey, Inorg. Tech Director LaTasha Cornish, Chemist Sandra Sanchez, Lab Tech.

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# Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST 12600 West I-20 East

Odessa, Texas 79765

Phone: 432-563-1800 Fax: 432-563-1713

Project Loc: T19S R38E Sec 5 & 6 E/H ~ Lea County New Mexico □ NPDES TRRP Hobbs N-6 Leak Report Format: X Standard Project Mame: ₩ 04 Project #: rozanne@valornet.com (505) 397-1471 Fax No: e-mail: kpope@riceswd.com Hobbs, New Mexico 88240 RICE Operating Company Sampler Signature: Rozanne Johnson (505)631-9310 Company Address: 122 W. Taylor Street Kristin Farris Pope (505) 393-9174 Project Manager: Company Name Telephone No: City/State/Zip:

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## Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

nt: USO Oto.			
e/ Time: 1115/60 8:10			
ID#: (cK15006			
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als:			
Sample Receipt 0	Checklist		
			Client Initials
Temperature of container/ cooler?	Yes	No	6.5 °C
Shipping container in good condition?	Xes	No	
Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present
Custody Seals intact on sample bottles/ container?	Xes	No	Not Present
Chain of Custody present?		No	
Sample instructions complete of Chain of Custody?	Yes Yes	No	
Chain of Custody signed when relinquished/ received?	γes	No	
Chain of Custody agrees with sample label(s)?	Yeş	No	ID written on Cont./ Lid
Container label(s) legible and intact?	Yes	No	Not Applicable
Sample matrix/ properties agree with Chain of Custody?	Yes	No	
Containers supplied by ELOT?	Yes	No	
Samples in proper container/ bottle?	Yes	No	See Below
Samples properly preserved?	Yes	No	See Below
Sample bottles intact?	Yes	No	
Preservations documented on Chain of Custody?	Y68	No	
Containers documented on Chain of Custody?	Yes	No	
Sufficient sample amount for indicated test(s)?	Yes	No	See Below
All samples received within sufficient hold time?	Yes	No	See Below
Subcontract of sample(s)?	Yes	No	Not Applicable
VOC samples have zero headspace?	Yes	No	Not Applicable
Variance Docum	nentation		
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eck all that Apply: See attached e-mail/ fax			
Client understands and would	d like to pro	ceed with	analysis
Cooling process had begun s			