

AP - 49

ANNUAL MONITORING REPORT

YEAR(S):

2007



Highlander Environmental Corp.

Midland, Texas

CERTIFIED MAIL

RETURN RECEIPT NO. 7002 3150 0005 0508 7744

March 13, 2008

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

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2008 APR 3 PM 1 52

Re: 2007 Annual Groundwater Summary Report & Project Status Report, Rice Operating Company, Justis Saltwater Disposal System (SWD) Well #H-2, Unit H, Section 2, T-26-S, R-37-E, Lea County, New Mexico, NMOCD CASE #1R0423-01 (AP-49)

Dear Mr. Price:

Highlander Environmental Corp. (Highlander) takes this opportunity to submit the 2007 Annual Summary Report for the Rice Operating Company (ROC) Justis SWD Well #H-2 site located in the Justis Salt Water Disposal System (AP-49).

Background

On August 2, 2001, ROC submitted a Redwood Tank Replacement Closure Plan with the NMOCD. Tank replacement activities began at the Justis H-2 SWD facility on November 6, 2001 and are complete. On December 12, 2002, ROC submitted a Redwood Tank and Emergency Pit Closure Report for the Justis SWD Facility H-2. Soil samples were collected during tank replacement and sample results prompted the placement of monitor wells.

In January 2002, three (3) monitor wells were installed to evaluate groundwater in the vicinity of the H-2 injection facility. Originally, two monitor wells, MW-1 and MW-2 showed elevated chloride levels. On January 18, 2002, the NMOCD was notified of groundwater impact. After several quarterly sampling events, MW-2 continued to show elevated chloride levels. As a result, two (2) additional monitor wells were installed in February 2004.

On May 5, 2005, Daniel Sanchez with the NMOCD requested a Rule 19, Stage I Abatement Plan for the site. On July 13, 2005 a Stage I Abatement Plan was submitted to the NMOCD. The Stage I Abatement Plan approval was received, dated February 23, 2006.

Stage 2 Abatement Plan

A Stage 2 Abatement Plan was prepared and submitted to the NMOCD on May 25, 2006. On June 7, 2006, the NMOCD certified the plan "Administratively Complete". A public notice was submitted and approved on July 21, 2006. Final approval for the Stage 2 Abatement plan was received on October 3, 2006. The abatement system, consisting of a solar/wind powered pump and Reverse Osmosis (R/O) system was installed on November 6, 2006. From January 3, 2007 through December 17, 2007, a total of 85,335 gallons of water had been pumped from MW-2, with 31,670 gallons of treated water re-injected into the aquifer at the site, and 53,665 gallons disposed into the permitted SWD well on site. Since startup, 100,042 total gallons have been removed from MW-2, with 41,370 gallons re-injected and 58,662 gallons disposed into the permitted SWD well on site.

All remediated water that is injected into MW-1 at the site is tested for chloride and conductivity prior to injection. During the initial year of system placement and adaptation of this system, there were periods of time when the system was down or not operating properly. During these maintenance and modification times, the pumped water was taken to disposal. When operating as designed, the system efficiency is 75% with 25% reject water waste sent for disposal. Due to the maintenance and modifications to the system, the overall unit treatment efficiency in 2007 was 37%, with the 63% reject water waste stream being sent to disposal.

Monitor Well Sampling

Monitor wells MW-2, MW-3, MW-4, MW-5 were sampled on March 15, June 13, September 17, or November 13, 2007 (Quarterly). Prior to sampling, the monitor wells MW-3, MW-4, and MW-5 were gauged for static water levels. The pumping well MW-2 and reinjection well MW-1 were not gauged throughout the year. All monitor well caps were opened and water level measurements were taken from the top of the casing. The measurements were taken to the nearest 0.01 feet.

Each well was purged using a portable submersible pump. Approximately three casing volumes of water were purged from each well prior to sampling. Between wells, the pump and associated tubing were decontaminated with a laboratory grade detergent and rinsed with deionized water. Cumulative water level measurements and purge volumes for the monitor wells are included in the Tables Section of this report.

Each well was inspected for the presence of phase-separated hydrocarbons (PSH). Groundwater samples were collected as soon as possible after the groundwater returned to its static level.

Groundwater samples were collected using clean disposable polyethylene bailers and disposable line. The samples were transferred into labeled and preserved containers provided by the laboratory. All of the samples were delivered under proper chain-of-custody control to Environmental Labs of Texas, Inc., Odessa, Texas and Cardinal Labs of Hobbs, New Mexico. The groundwater samples were analyzed for major anions, by methods 310.1, 9253 and 375.4, cations by method 6010B, Total Dissolved Solids (TDS) by method 160.1 and Benzene, Toluene, Ethylbenzene, and Xylene (BTEX) by method EPA 8021B. Copies of the laboratory reports are enclosed in Appendix A.



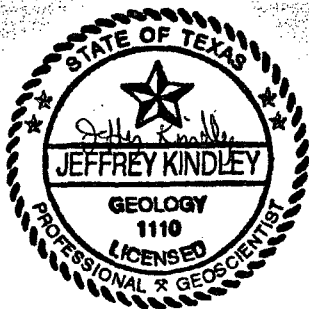
Water table maps were generated for all four quarterly sampling events, using the water level measurement data and are included as Figures 3-6. The general hydraulic gradient appears to be consistently towards the north-northwest. However, with the advent of pumping from monitor well MW-2, the gradient has changed to the northeast for the June 13, 2007 sampling event.

Monitor Well Sample Results

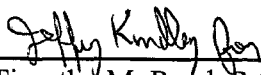
Chloride concentrations from monitor wells MW-3, MW-4 and MW-5 were all at or below the New Mexico Water Quality Control Commission (WQCC) standards of 250 mg/L during all four quarters of 2007. MW-2 exceeded the WQCC standards for all four quarters. Samples were not obtained in monitor well MW-1 since it is utilized as an injection well. No BTEX concentrations were detected at or above reporting limits in 2007. Cumulative analytical data is summarized in the Table Section of this report.

Conclusions

1. In 2007, there were no BTEX constituents at or above the New Mexico Water Quality Control Commission (WQCC) standards.
2. Chloride and TDS concentrations from monitor wells MW-3, MW-4 and MW-5 were all at or below the New Mexico Water Quality Control Commission (WQCC) standards of 250 mg/L and 1000 mg/L, respectively, during all four quarters of 2007. MW-2 exceeded the WQCC standards for all four quarters. Samples were not obtained from MW-1 since it is utilized as an injection well.
3. Since installation of the remediation system in November 2006, a total of 100,042 total gallons have been removed from MW-2, with 41,370 gallons re-injected and 58,662 gallons disposed into the permitted SWD well on site. Down time due to system maintenance and modification times reduced the normally expected 75% efficiency of the system to be reduced to 37% for 2007. In addition, 63% of the water generated by the system in 2007 was sent to the SWD well.
4. Quarterly monitoring at this site will continue and an annual report will be prepared and submitted to the NMOCD in the first quarter of 2009.



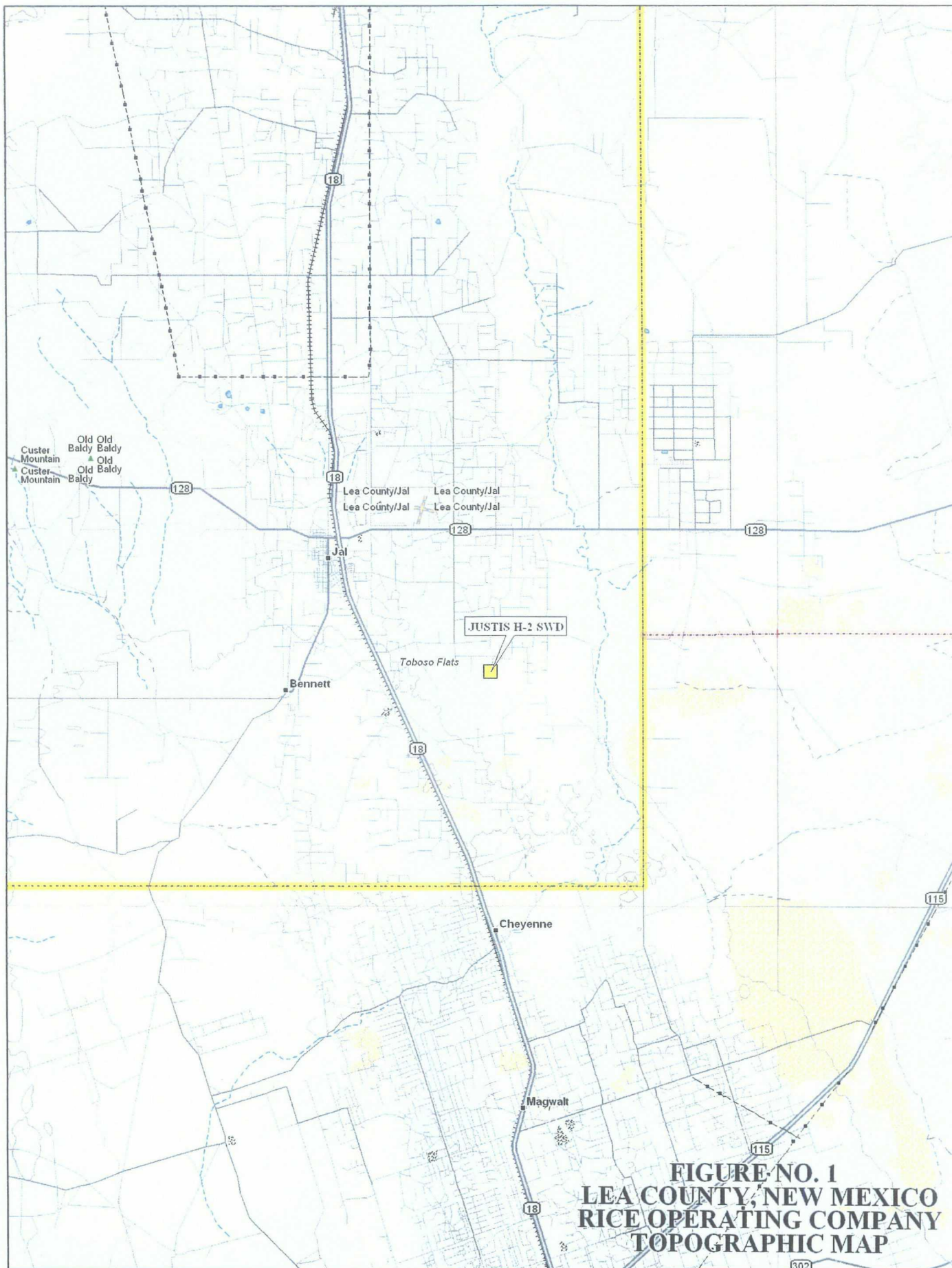
Respectfully Submitted,
HIGHLANDER ENVIRONMENTAL CORP.


Timothy M. Reed, P.G.
Vice President

cc: ROC, Edward Hansen – NMOCD
Enclosures: Figures, Tables, Laboratory Analysis

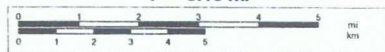


FIGURES



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Scale 1 : 200,000
1" = 3.16 mi



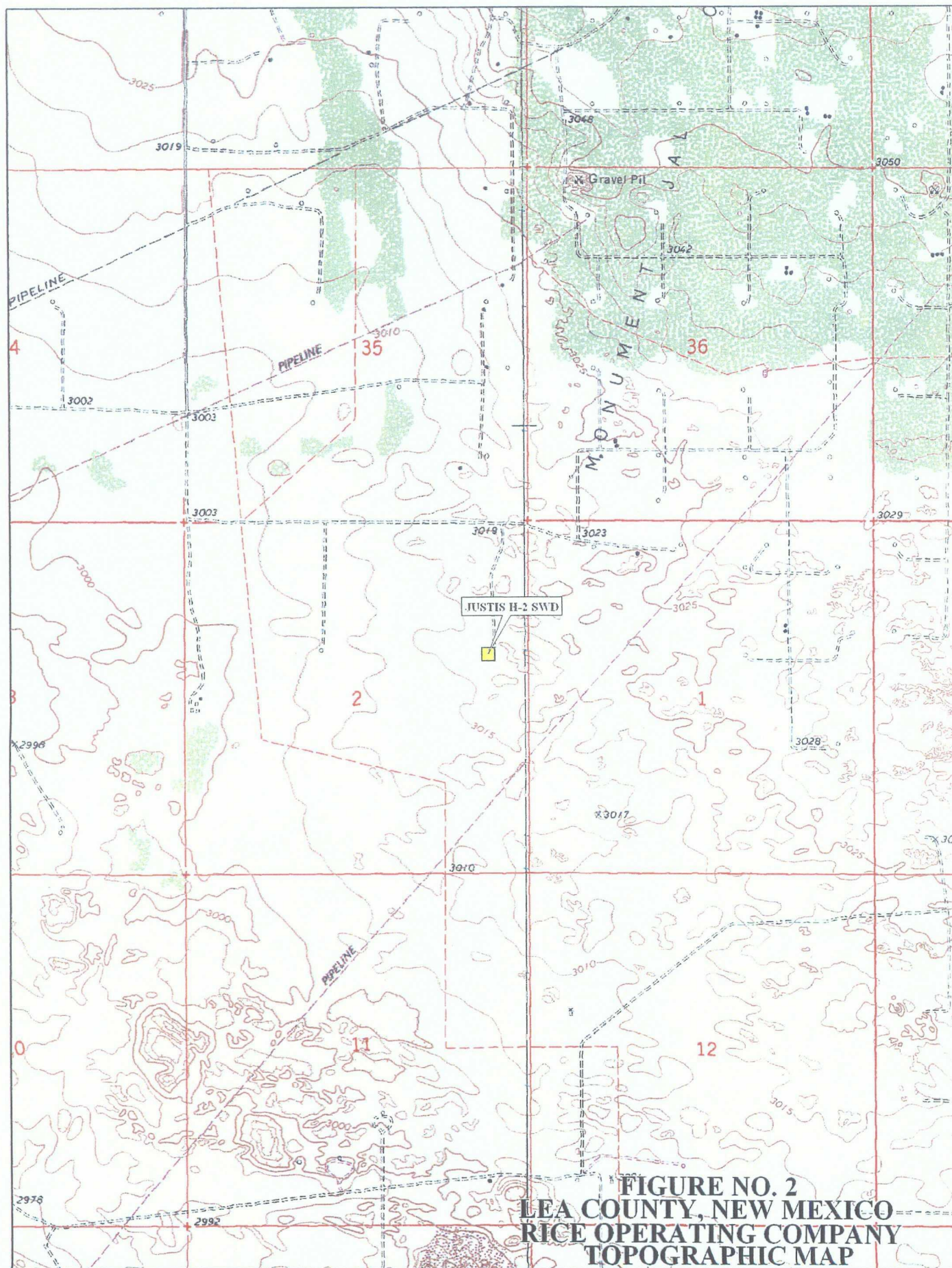
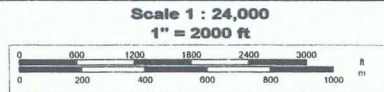
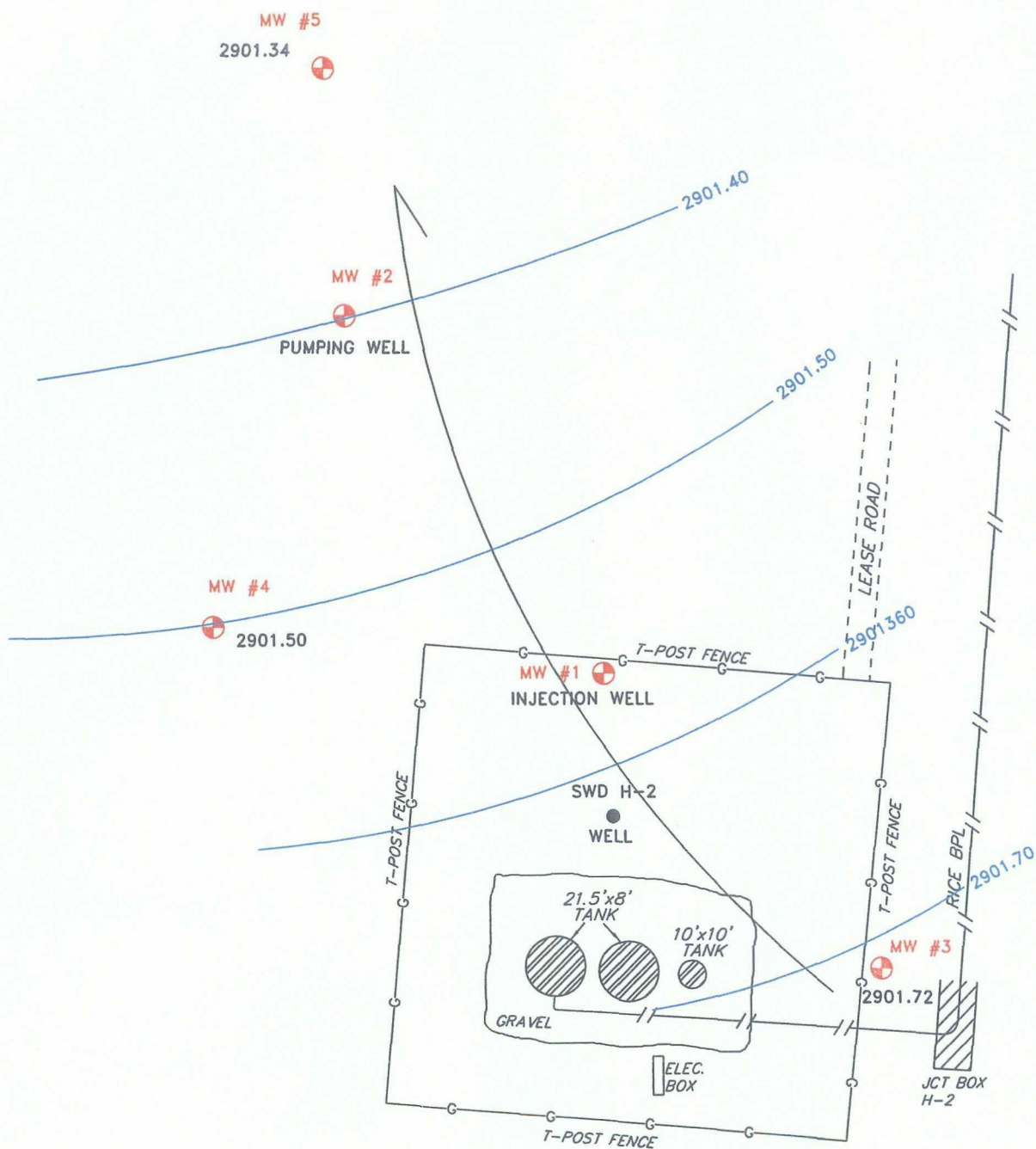


FIGURE NO. 2
LEA COUNTY, NEW MEXICO
RICE OPERATING COMPANY
TOPOGRAPHIC MAP



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SCALE: 1"=60'



FIGURE NO. 3

LEA COUNTY, NEW MEXICO

RICE OPERATING COMPANY

JUSTIS H-2 SWD
GROUNDWATER GRADIENT MAP
GAUGED ON 3-15-07

HIGHLANDER ENVIRONMENTAL CORP.
MIDLAND, TEXAS

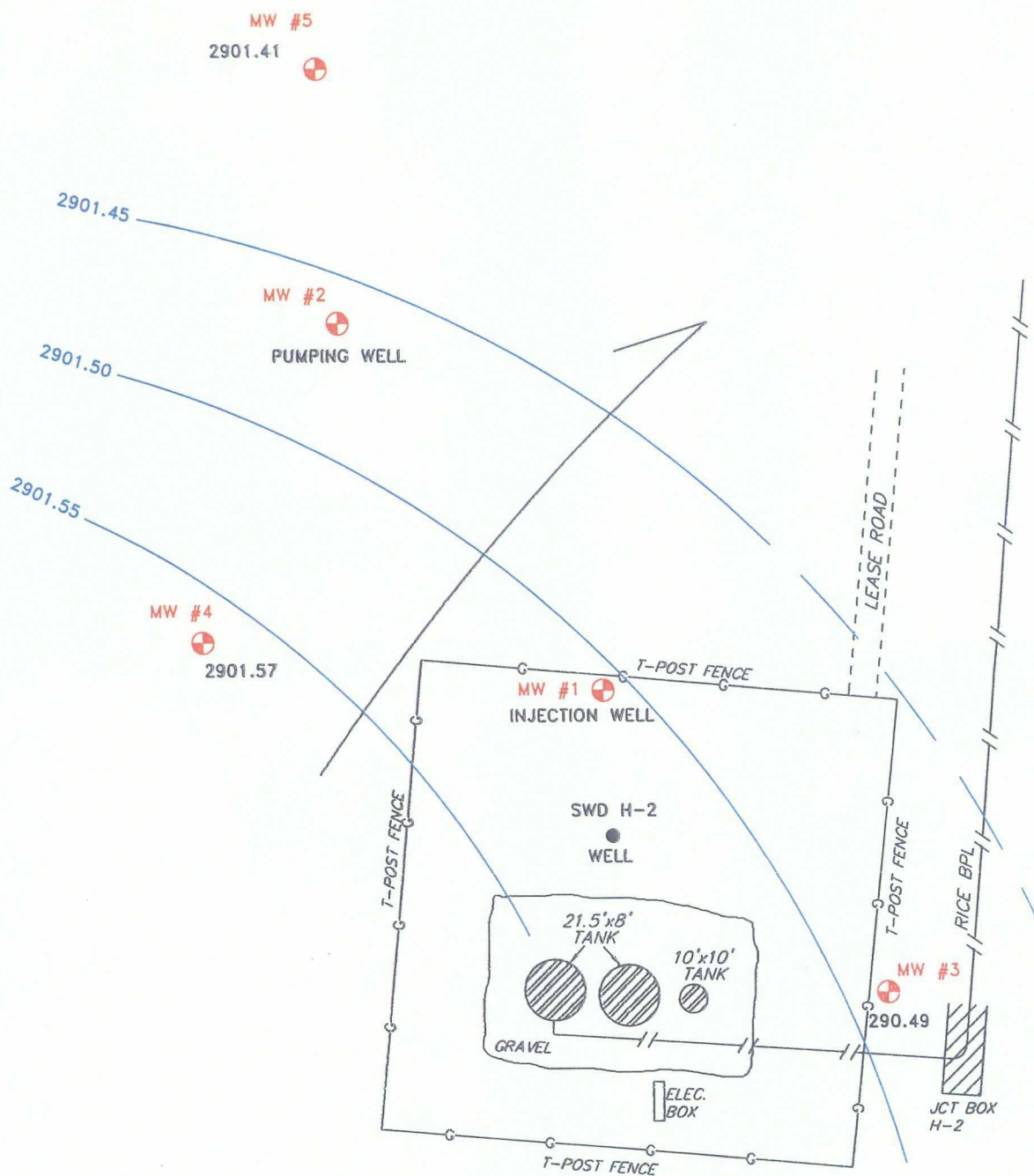


MONITOR WELL LOCATION

C.I. = 0.10'

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WTM 2007



SCALE: 1"=60'



FIGURE NO. 4

LEA COUNTY, NEW MEXICO

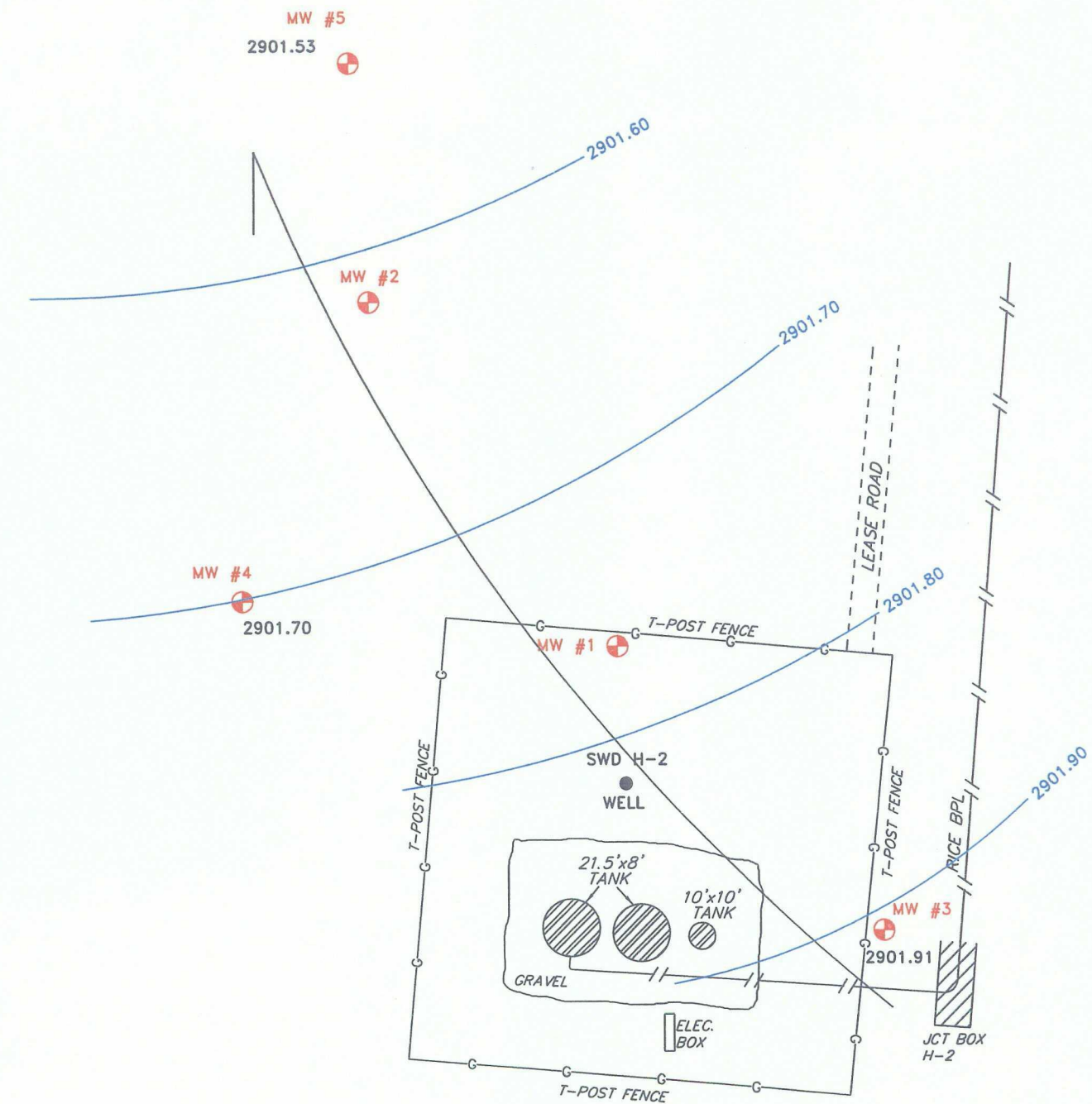
RICE OPERATING COMPANY

JUSTIS H-2 SWD
GROUNDWATER GRADIENT MAP
GAUGED ON 6-13-07

HIGHLANDER ENVIRONMENTAL CORP.
MIDLAND, TEXAS

MONITOR WELL LOCATION
C.I. = 0.5'

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WTM 2007



SCALE: 1"=60'



FIGURE NO. 5

LEA COUNTY, NEW MEXICO

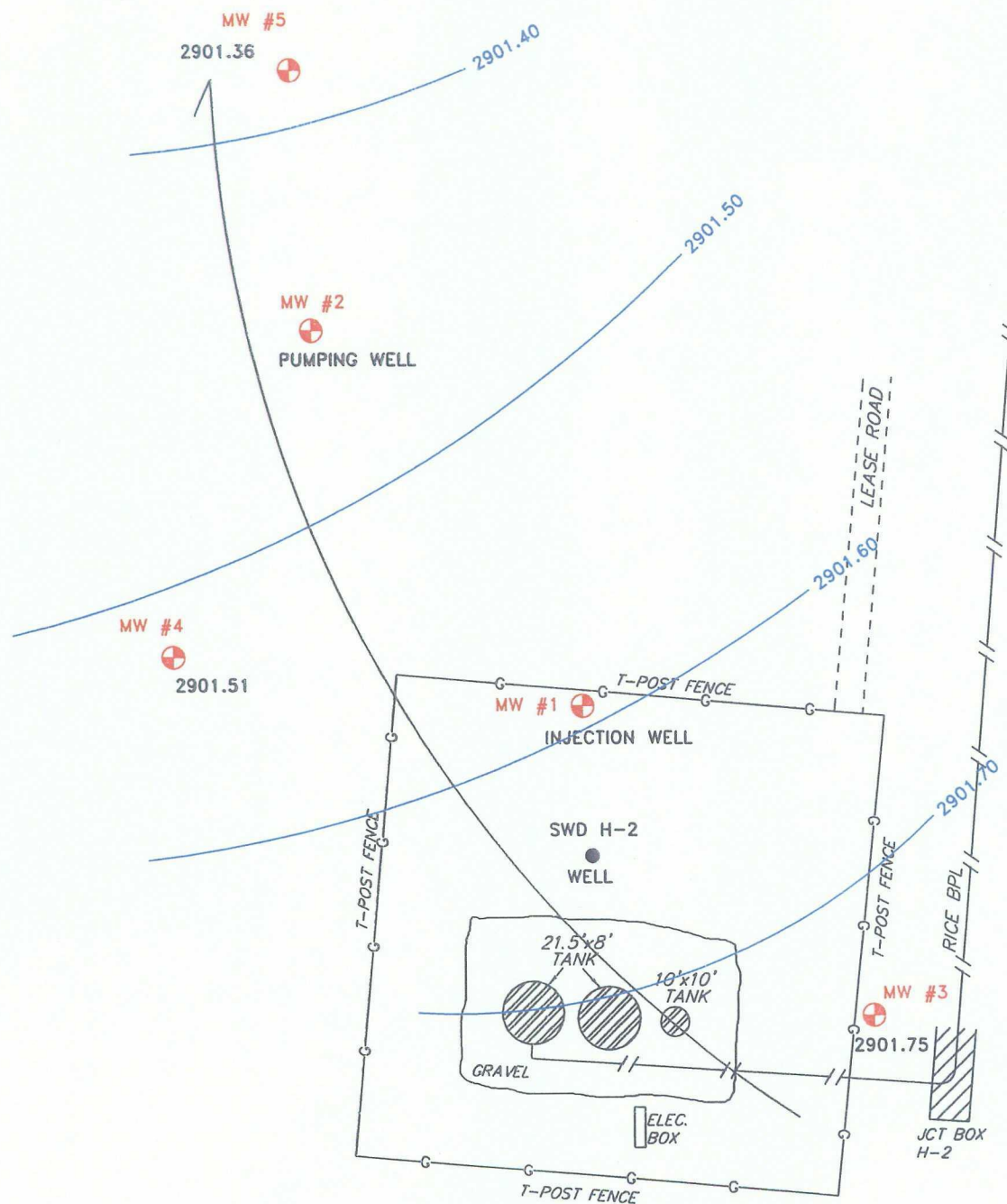
RICE OPERATING COMPANY

JUSTIS H-2 SWD
GROUNDWATER GRADIENT MAP
GAUGED ON 9-17-07

HIGHLANDER ENVIRONMENTAL CORP.
MIDLAND, TEXAS

MONITOR WELL LOCATION
C.I. = 0.10'

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WTM 2007



SCALE: 1"=60'



FIGURE NO. 6

LEA COUNTY, NEW MEXICO

RICE OPERATING COMPANY

JUSTIS H-2 SWD
GROUNDWATER GRADIENT MAP
GAUGED ON 11-13-07

HIGHLANDER ENVIRONMENTAL CORP.
MIDLAND, TEXAS

MONITOR WELL LOCATION
C.I. = 0.10'

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WTM 2007

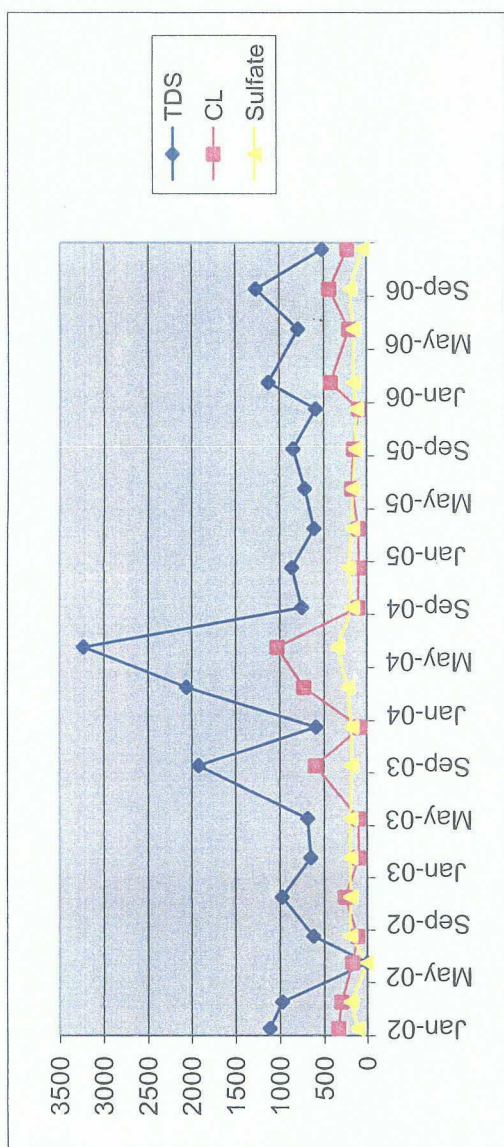
TABLES

Rice Engineering Operating
H-2

Lea County, New Mexico

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
1	116.20	145.00	18.80	56.4	01/03/02	336	1112	<0.002	<0.002	<0.002	<0.002	116	
1	XXX	XXX	XXX	XXX	03/01/02	301	971	XXX	XXX	XXX	XXX	190	
1	XXX	XXX	XXX	XXX	06/10/02	173	XXX	0.001	0.008	0.01	0.066	XXX	
1	116.20	137.00	XXX	66.0	08/16/02	111	619	<0.001	<0.001	<0.001	<0.001	202	
1	123.32	144.00	XXX	60.0	11/12/02	257	971	<0.001	<0.001	<0.001	<0.001	194	
1	122.95	144.00	XXX	70.0	02/13/03	97.5	647	<0.001	<0.001	<0.001	<0.001	200	
1	123.34	144.00	XXX	70.0	05/20/03	102	682	<0.001	<0.001	<0.001	<0.001	196	
1	122.94	144.00	XXX	70.0	09/16/03	594	1920	<0.001	<0.001	<0.001	<0.001	186	
1	123.19	144.00	XXX	70.0	12/16/03	81.5	587	0.013	<0.001	<0.001	<0.001	180	
1	122.43	144.00	XXX	70.0	03/11/04	727	2060	<0.001	<0.001	<0.001	<0.001	227	
1	122.24	144.00	XXX	70.0	06/28/04	1030	3230	0.0056	<0.001	<0.001	<0.001	349	
1	122.22	144.00	XXX	70.0	09/23/04	106	749	<0.001	<0.001	<0.001	<0.001	175	
1	122.18	144.00	XXX	68.0	12/21/04	93.1	858	<0.001	<0.001	<0.001	0.00108	215	
1	121.97	144.00	XXX	75.0	03/29/05	98.2	608	<0.001	<0.001	<0.001	<0.001	169	
1	122.08	144.00	XXX	80.0	06/16/05	173	711	<0.001	<0.001	<0.001	<0.001	166	
1	XXX	XXX	XXX	XXX	09/15/05	151	840	<0.001	<0.001	<0.001	<0.001	133	
1	122.12	153.00	31.50	100.0	12/05/05	93.5	586	<0.001	<0.001	<0.001	<0.001	114	
1	121.81	153.00	31.80	100.0	02/27/06	414	1120	<0.001	<0.001	<0.001	<0.001	157	
1	121.94	153.00	31.70	100.0	06/14/06	206	782	<0.001	<0.001	<0.001	<0.001	151	
1	121.80	153.00	31.80	100.0	09/13/06	430	1,260	<0.001	<0.001	<0.001	<0.001	194	
1	121.89	153.00	31.70	100.0	12/05/06	223	512	<0.001	<0.001	<0.001	<0.001	47.6	

MW-1

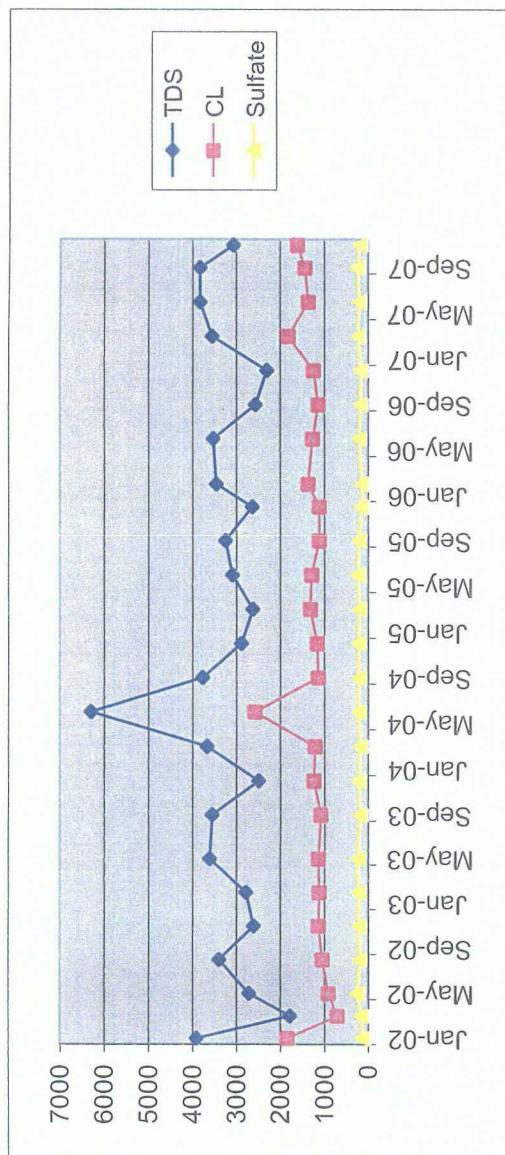


Rice Engineering Operating

H-2

Lea County, New Mexico

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
2	122.00	142.60	13.40	40.3	01/07/02	1839	3908	<0.002	<0.002	<0.002	<0.002	120	
2	XXX	XXX	XXX	XXX	03/01/02	700	1780	XXX	XXX	XXX	XXX	150	
2	XXX	XXX	XXX	XXX	05/23/02	904	2710	<0.001	<0.001	<0.001	<0.001	243	
2	121.85	142.00	XXX	25.0	08/16/02	1040	3390	<0.001	<0.001	<0.001	<0.001	188	
2	122.10	142.00	XXX	25.0	11/12/02	1130	2600	0.002	0.003	<0.001	<0.002	200	
2	121.71	142.00	XXX	25.0	02/13/03	1110	2780	<0.001	<0.001	<0.001	<0.001	216	
2	122.08	142.00	XXX	25.0	05/20/03	1130	3600	<0.001	<0.001	<0.001	<0.001	215	
2	121.70	142.00	XXX	25.0	09/16/03	1070	3540	<0.001	<0.001	<0.001	<0.001	167	
2	122.00	142.00	XXX	30.0	12/16/03	1230	2490	0.032	0.003	<0.001	<0.001	202	
2	121.87	142.00	XXX	30.0	03/11/04	1200	3660	<0.001	<0.001	<0.001	<0.001	164	
2	121.74	142.00	XXX	30.0	06/28/04	2570	6290	0.0112	<0.001	<0.001	<0.001	208	
2	121.70	142.00	XXX	25.0	09/23/04	1130	3760	<0.001	<0.001	<0.001	<0.001	198	
2	121.65	142.00	XXX	10.0	12/21/04	1150	2877	<0.001	<0.001	<0.001	<0.001	210	
2	121.45	142.00	XXX	25.0	03/29/05	1310	2620	<0.001	<0.001	<0.001	<0.001	186	
2	121.58	142.00	XXX	30.0	06/16/05	1280	3080	<0.001	<0.001	<0.001	<0.001	221	
2	XXX	XXX	XXX	XXX	09/15/05	1110	3240	<0.001	<0.001	<0.001	<0.001	196	
2	121.52	142.60	3.40	20.0	12/05/05	1110	2630	<0.001	<0.001	<0.001	<0.001	134	
2	121.40	142.60	3.40	20.0	02/27/06	1360	3450	<0.001	<0.001	<0.001	<0.001	139	
2	121.40	142.60	3.40	15.0	06/14/06	1260	3520	<0.001	<0.001	<0.001	<0.001	204	
2	121.34	142.60	3.40	15.0	09/13/06	1130	2,560	<0.001	<0.001	<0.001	<0.001	166	
2	Pump	142.60	XXX	XXX	12/05/06	1240	2,300	<0.001	<0.001	<0.001	<0.001	156	Clear no odor
2	Pump	142.60	XXX	XXX	03/15/07	1810	3,540	<0.001	<0.001	<0.001	<0.001	222	Clear no odor
2	Pump	142.60	XXX	XXX	06/13/07	1350	3,820	<0.001	<0.001	<0.001	<0.001	193	Clear no odor
2	Pump	142.60	XXX	XXX	09/17/07	1424	3,820	<0.002	<0.002	<0.002	<0.006	234	Clear no odor
2	Pump	142.60	XXX	XXX	11/13/07	1600	3053	<0.001	<0.001	<0.001	<0.003	177	Clear no odor

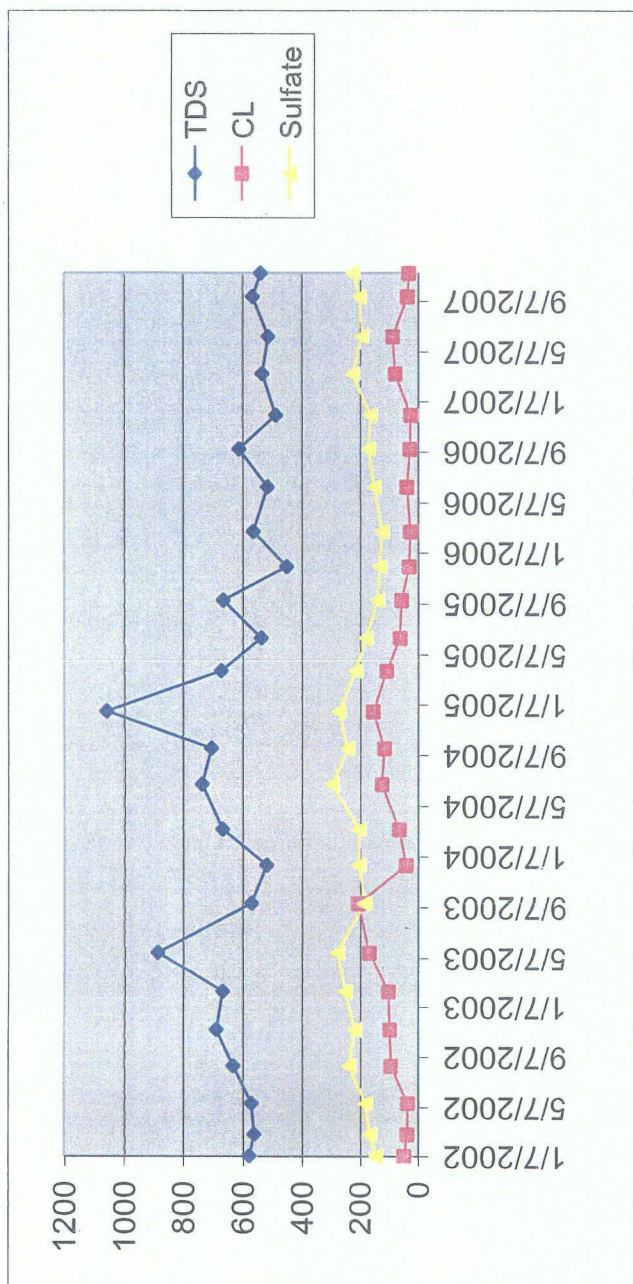


Rice Engineering Operating

H-2

Lea County, New Mexico

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
3	122.10	137.50	10.00	30.1	01/07/02	48	577	<0.005	<0.005	<0.005	<0.015	145	
3	XXX	XXX	XXX	XXX	03/01/02	37.2	561	XXX	XXX	XXX	XXX	167	
3	XXX	XXX	XXX	XXX	05/16/02	35.4	570	<0.001	<0.001	<0.001	<0.001	182	
3	118.68	133.00	XXX	20.0	08/16/02	93.1	631	<0.001	<0.001	<0.001	<0.001	238	
3	118.90	133.00	XXX	25.0	11/12/02	97.5	688	0.030	0.014	0.002	0.003	219	
3	118.53	133.00	XXX	25.0	02/13/03	102	666	<0.001	<0.001	<0.001	<0.001	250	
3	118.87	133.00	XXX	25.0	05/20/03	168	885	<0.001	<0.001	<0.001	<0.001	278	
3	118.53	133.00	XXX	25.0	09/16/03	204	568	<0.001	<0.001	<0.001	<0.001	184	
3	118.53	133.00	XXX	25.0	09/16/03	204	568	<0.001	<0.001	<0.001	<0.001	184	
3	118.79	133.00	XXX	30.0	12/16/03	40.8	517	0.013	<0.001	<0.001	<0.001	204	
3	118.71	133.00	XXX	30.0	03/11/04	65	666	<0.001	<0.001	<0.001	<0.001	203	
3	118.53	133.00	XXX	30.0	06/28/04	124	735	0.0124	<0.001	<0.001	<0.001	295	
3	118.52	133.00	XXX	25.0	09/23/04	115	703	0.00113	<0.001	<0.001	<0.001	242	
3	118.52	133.00	XXX	7.0	12/21/04	154	1057	0.0127	<0.001	0.00144	<0.001	272	
3	118.31	133.00	XXX	25.0	03/29/05	108	670	<0.001	<0.001	<0.001	<0.001	215	
3	118.41	133.00	XXX	30.0	06/16/05	62.4	535	<0.001	<0.001	<0.001	<0.001	180	
3	XXX	XXX	XXX	XXX	09/15/05	56.4	664	<0.001	<0.001	<0.001	<0.001	139	
3	118.25	133.70	2.50	20.0	12/05/05	30.7	450	<0.001	<0.001	<0.001	<0.001	131	
3	118.18	133.70	2.50	15.0	02/27/06	26.8	562	<0.001	<0.001	<0.001	<0.001	123	
3	118.18	133.70	2.50	15.0	06/14/06	38.3	514	<0.001	<0.001	<0.001	<0.001	151	
3	118.23	133.70	2.50	15.0	09/13/06	28	610	<0.001	<0.001	<0.001	<0.001	170	
3	118.21	133.70	2.50	10.0	12/05/06	26.1	486	<0.001	<0.001	<0.001	<0.001	164	
3	118.26	133.40	2.40	10.0	03/15/07	77.6	532	<0.001	<0.001	<0.001	<0.001	226	
3	118.49	133.40	2.40	10.0	06/13/07	86.9	512	<0.001	<0.001	<0.001	<0.001	193	
3	118.07	133.40	2.50	10.0	09/17/07	36	564	<0.002	<0.002	<0.002	<0.006	201	
3	118.23	133.40	2.40	10.0	11/13/07	32	537	<0.001	<0.001	<0.001	<0.003	223	

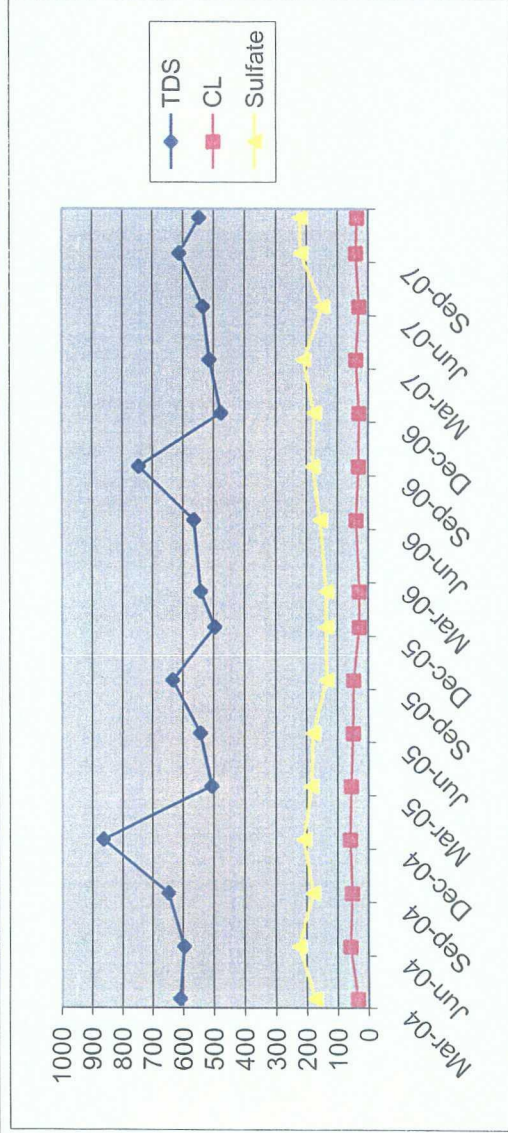


Rice Engineering Operating

H-2

Lea County, New Mexico

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
4	122.12	137.00	XXX	30.0	03/11/04	35.4	610	<0.001	<0.001	<0.001	<0.001	174	
4	121.96	137.00	XXX	30.0	06/28/04	57.6	596	0.00749	<0.001	<0.001	<0.001	225	
4	121.93	137.00	XXX	25.0	09/23/04	53.2	648	<0.001	<0.001	<0.001	<0.001	180	
4	121.88	137.00	XXX	8.0	12/21/04	59.1	865	0.00275	<0.001	<0.001	<0.001	210	
4	121.66	137.00	XXX	25.0	03/29/05	55.7	506	<0.001	<0.001	<0.001	<0.001	186	
4	121.80	137.00	XXX	30.0	06/16/05	49.8	543	<0.001	<0.001	<0.001	<0.001	179	
4	XXX	XXX	XXX	XXX	09/15/05	48.2	634	<0.001	<0.001	<0.001	<0.001	135	
4	121.81	141.40	3.10	20.0	12/05/05	29.1	496	<0.001	<0.001	<0.001	<0.001	136	
4	121.59	141.40	3.20	20.0	02/27/06	29.1	542	<0.001	<0.001	<0.001	<0.001	136	
4	121.61	141.40	3.20	15.0	06/14/06	39.6	564	<0.001	<0.001	<0.001	<0.001	157	
4	121.62	141.40	3.20	15.0	09/13/06	31.3	746	<0.001	<0.001	<0.001	<0.001	180	
4	121.63	141.40	3.20	15.0	12/05/06	30.0	476	<0.001	<0.001	<0.001	<0.001	176	Clear/no odor
4	121.65	140.95	3.10	15.0	03/15/07	40.8	514	<0.001	<0.001	<0.001	<0.001	211	Clear/no odor
4	121.58	140.95	3.10	15.0	06/13/07	30.3	534	<0.001	<0.001	<0.001	<0.001	149	Clear/no odor
4	121.45	140.95	3.10	15.0	09/17/07	40.0	612	<0.002	<0.002	<0.002	<0.006	220	Clear/no odor
4	121.64	140.95	3.10	15.0	11/13/07	36.0	547	<0.001	<0.001	<0.001	<0.003	222	Clear/no odor

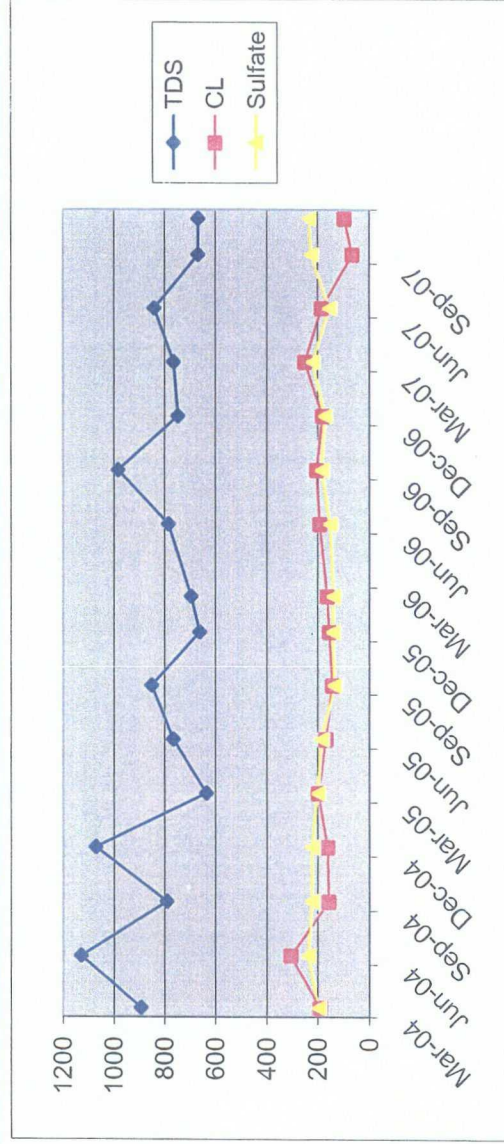


Rice Engineering Operating

H-2

Lea County, New Mexico

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
5	120.15	135.00	XXX	30.0	03/11/04	195	894	<0.001	<0.001	<0.001	<0.001	198	
5	120.04	135.00	XXX	30.0	06/28/04	310	1130	0.0105	<0.001	<0.001	<0.001	238	
5	119.98	135.00	XXX	25.0	09/23/04	160	792	<0.001	<0.001	<0.001	<0.001	224	
5	119.93	135.00	XXX	8.0	12/21/04	165	1072	0.00292	<0.001	<0.001	<0.001	224	
5	119.73	135.00	XXX	25.0	03/29/05	202	636	<0.001	<0.001	<0.001	<0.001	201	
5	119.88	135.00	XXX	30.0	06/16/05	172	767	<0.001	<0.001	<0.001	<0.001	187	
5	XXX	XXX	XXX	XXX	09/15/05	147	852	<0.001	<0.001	<0.001	<0.001	136	
5	119.80	140.00	3.20	20.0	12/05/05	159	662	<0.001	<0.001	<0.001	<0.001	142	
5	119.68	140.00	3.30	20.0	02/27/06	167	696	<0.001	<0.001	<0.001	<0.001	139	
5	119.65	140.00	3.30	15.0	06/14/06	197	786	<0.001	<0.001	<0.001	<0.001	152	
5	119.69	140.00	3.20	15.0	09/13/06	209	984	<0.001	<0.001	<0.001	<0.001	186	
5	119.74	140.00	3.20	15.0	12/05/06	186	748	<0.001	<0.001	<0.001	<0.001	173	Clear/no odor
5	119.72	138.80	3.10	15.0	03/15/07	255	766	<0.001	<0.001	<0.001	<0.001	220	Clear/no odor
5	119.65	138.80	3.10	15.0	06/13/07	189	842	<0.001	<0.001	<0.001	<0.001	156	Clear/no odor
5	119.53	138.80	3.10	15.0	09/17/07	68	668	<0.002	<0.002	<0.002	<0.006	227	Clear/no odor
5	119.70	138.80	3.10	15.0	11/13/07	100	669	<0.001	<0.001	<0.001	<0.003	234	Clear/no odor



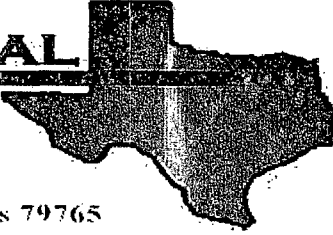
APPENDIX A

Rice Operating Company - H-2 RO System Operating Recap - 2007

Date	Activity	Field Cl- mg/L	Lab Cl- mg/L	MW-2 Conductivity or Lab data	Water injected into MW-1 from T-2 in gallons		Waste water metered to disposal in gallons
1/3/2007	discharge to MW-1	70	56		750	73.60	552
1/5/2007	discharge to MW-1	60			500	68.60	343
1/8/2007	discharge to MW-1	60			600	88.33	530
1/9/2007	discharge to MW-1	80			400	25.50	102
1/12/2007	discharge to MW-1	80			625	70.72	442
1/25/2007	discharge to MW-1	55			380	117.37	446
3/15/2007	discharge to MW-1				725	1084.14	7860
3/27/2007	discharge to MW-1	50			2500	42.04	1051
4/26/2007		59	56		1500	227.93	3419
4/27/2007		49			800	50.00	400
5/4/2007		59			1775	114.20	2027
5/11/2007		69			1125	224.80	2529
6/8/2007		45			1750	305.37	5344
9/10/2007		80			1950	400.21	7804
10/3/2007		130			1525	46.16	704
11/30/2007		30			1090	579.91	6321
12/4/2007		40			200	613.50	1227
12/5/2007		30			1300	50.54	657
12/10/2007		30			2200	72.41	1593
12/17/2007		80			275	1929.82	5307
	Totals				21970		48658

APPENDIX B

ENVIRONMENTAL LAB OF



12600 West I-20 East - Odessa, Texas 79765

A Xenco Laboratories Company

Analytical Report

Prepared for:

Kristin Farris-Pope

Rice Operating Co.

122 W. Taylor

Hobbs, NM 88240

Project: Justis H-2 SWD

Project Number: None Given

Location: T26S R37E Sec2H Lea County, NM

Lab Order Number: 7C20014

Report Date: 04/05/07

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

Project: Justis H-2 SWD
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	7C20014-01	Water	03/15/07 11:50	03-20-2007 13:45
Monitor Well #3	7C20014-02	Water	03/15/07 09:50	03-20-2007 13:45
Monitor Well #4	7C20014-03	Water	03/15/07 11:00	03-20-2007 13:45
Monitor Well #5	7C20014-04	Water	03/15/07 12:05	03-20-2007 13:45

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

Project: Justis H-2 SWD
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 #2 (7C20014-01) Water									
Benzene	ND	0.00100	mg/L	1	EC72814	03/28/07	03/28/07	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		96.2 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		85.2 %	80-120		"	"	"	"	
Monitor Well #3 (7C20014-02) Water									
Benzene	ND	0.00100	mg/L	1	EC72814	03/28/07	03/28/07	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		93.8 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		84.4 %	80-120		"	"	"	"	
Monitor Well #4 (7C20014-03) Water									
Benzene	ND	0.00100	mg/L	1	EC72814	03/28/07	03/28/07	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		89.2 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		83.4 %	80-120		"	"	"	"	
Monitor Well #5 (7C20014-04) Water									
Benzene	ND	0.00100	mg/L	1	EC72814	03/28/07	03/28/07	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		106 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		84.8 %	80-120		"	"	"	"	

Environmental Lab of Texas

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Page 2 of 10

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

Project: Justis H-2 SWD
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 (7C20014-01) Water									
Total Alkalinity	210	2.00	mg/L	1	EC72808	03/28/07	03/28/07	EPA 310.1M	
Chloride	1810	25.0	"	50	EC72304	03/22/07	03/23/07	EPA 300.0	
Total Dissolved Solids	3540	10.0	"	1	EC72210	03/21/07	03/22/07	EPA 160.1	
Sulfate	222	25.0	"	50	EC72304	03/22/07	03/23/07	EPA 300.0	
Monitor Well #3 (7C20014-02) Water									
Total Alkalinity	260	2.00	mg/L	1	EC72808	03/28/07	03/28/07	EPA 310.1M	
Chloride	77.6	25.0	"	50	EC72304	03/22/07	03/23/07	EPA 300.0	
Total Dissolved Solids	532	10.0	"	1	EC72210	03/21/07	03/22/07	EPA 160.1	
Sulfate	226	25.0	"	50	EC72304	03/22/07	03/23/07	EPA 300.0	
Monitor Well #4 (7C20014-03) Water									
Total Alkalinity	188	2.00	mg/L	1	EC72808	03/28/07	03/28/07	EPA 310.1M	
Chloride	40.8	5.00	"	10	EC72304	03/22/07	03/23/07	EPA 300.0	
Total Dissolved Solids	514	10.0	"	1	EC72210	03/21/07	03/22/07	EPA 160.1	
Sulfate	211	5.00	"	10	EC72304	03/22/07	03/23/07	EPA 300.0	
Monitor Well #5 (7C20014-04) Water									
Total Alkalinity	158	2.00	mg/L	1	EC72808	03/28/07	03/28/07	EPA 310.1M	
Chloride	255	5.00	"	10	EC72304	03/22/07	03/23/07	EPA 300.0	
Total Dissolved Solids	766	10.0	"	1	EC72210	03/21/07	03/22/07	EPA 160.1	
Sulfate	220	5.00	"	10	EC72304	03/22/07	03/23/07	EPA 300.0	

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Page 3 of 10

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

Project: Justis H-2 SWD
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 (7C20014-01) Water									
Calcium	352	8.10	mg/L	100	EC73011	03/30/07	03/30/07	EPA 6010B	
Magnesium	168	1.80	"	50	"	"	"	"	
Potassium	17.8	0.600	"	10	"	"	"	"	
Sodium	290	2.15	"	50	"	"	"	"	
Monitor Well #3 (7C20014-02) Water									
Calcium	58.0	0.810	mg/L	10	EC73011	03/30/07	03/30/07	EPA 6010B	
Magnesium	28.9	0.360	"	"	"	"	"	"	
Potassium	4.66	0.600	"	"	"	"	"	"	
Sodium	60.1	0.430	"	"	"	"	"	"	
Monitor Well #4 (7C20014-03) Water									
Calcium	48.6	0.810	mg/L	10	EC73011	03/30/07	03/30/07	EPA 6010B	
Magnesium	25.7	0.360	"	"	"	"	"	"	
Potassium	4.38	0.600	"	"	"	"	"	"	
Sodium	55.2	0.430	"	"	"	"	"	"	
Monitor Well #5 (7C20014-04) Water									
Calcium	102	4.05	mg/L	50	EC73011	03/30/07	03/30/07	EPA 6010B	
Magnesium	43.5	0.360	"	10	"	"	"	"	
Potassium	5.96	0.600	"	"	"	"	"	"	
Sodium	78.2	2.15	"	50	"	"	"	"	

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Page 4 of 10

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

Project: Justis H-2 SWD
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 EC72814 - EPA 5030C (GC)										
Blank (EC72814-BLK1)			Prepared & Analyzed: 03/28/07							
Benzene	ND	0.00100	mg/L							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00100	"							
Xylene (o)	ND	0.00100	"							
Surrogate: a,a,a-Trifluorotoluene	47.4		ug/l	50.0		94.8	80-120			
Surrogate: 4-Bromofluorobenzene	42.2		"	50.0		84.4	80-120			
LCS (EC72814-BS1)			Prepared & Analyzed: 03/28/07							
Benzene	0.0513	0.00100	mg/L	0.0500		103	80-120			
Toluene	0.0493	0.00100	"	0.0500		98.6	80-120			
Ethylbenzene	0.0500	0.00100	"	0.0500		100	80-120			
Xylene (p/m)	0.0943	0.00100	"	0.100		94.3	80-120			
Xylene (o)	0.0511	0.00100	"	0.0500		102	80-120			
Surrogate: a,a,a-Trifluorotoluene	49.9		ug/l	50.0		99.8	80-120			
Surrogate: 4-Bromofluorobenzene	44.7		"	50.0		89.4	80-120			
Calibration Check (EC72814-CCV1)			Prepared: 03/28/07 Analyzed: 03/29/07							
Benzene	50.9		ug/l	50.0		102	80-120			
Toluene	49.5		"	50.0		99.0	80-120			
Ethylbenzene	50.4		"	50.0		101	80-120			
Xylene (p/m)	93.8		"	100		93.8	80-120			
Xylene (o)	52.6		"	50.0		105	80-120			
Surrogate: a,a,a-Trifluorotoluene	51.0		"	50.0		102	80-120			
Surrogate: 4-Bromofluorobenzene	47.9		"	50.0		95.8	80-120			
Matrix Spike (EC72814-MS1)			Source: 7C20014-02	Prepared: 03/28/07 Analyzed: 03/29/07						
Benzene	0.0523	0.00100	mg/L	0.0500	ND	105	80-120			
Toluene	0.0500	0.00100	"	0.0500	ND	100	80-120			
Ethylbenzene	0.0524	0.00100	"	0.0500	ND	105	80-120			
Xylene (p/m)	0.0955	0.00100	"	0.100	ND	95.5	80-120			
Xylene (o)	0.0533	0.00100	"	0.0500	ND	107	80-120			
Surrogate: a,a,a-Trifluorotoluene	52.9		ug/l	50.0		106	80-120			
Surrogate: 4-Bromofluorobenzene	46.7		"	50.0		93.4	80-120			

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Page 5 of 10

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

Project: Justis H-2 SWD
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 EC72814 - EPA 5030C (GC)										
Matrix Spike Dup (EC72814-MSD1)		Source: 7C20014-02			Prepared: 03/28/07 Analyzed: 03/29/07					
Benzene	0.0527	0.00100	mg/L	0.0500	ND	105	80-120	0.00	20	
Toluene	0.0502	0.00100	"	0.0500	ND	100	80-120	0.00	20	
Ethylbenzene	0.0515	0.00100	"	0.0500	ND	103	80-120	1.92	20	
Xylene (p/m)	0.0950	0.00100	"	0.100	ND	95.0	80-120	0.525	20	
Xylene (o)	0.0528	0.00100	"	0.0500	ND	106	80-120	0.939	20	
Surrogate: <i>a,a,a</i> -Trifluorotoluene	52.5		ug/l	50.0		105	80-120			
Surrogate: 4-Bromofluorobenzene	44.6		"	50.0		89.2	80-120			

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Page 6 of 10

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

Project: Justis H-2 SWD
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 Limits	RPD	RPD Limit	Notes
Batch EC72210 - General Preparation (WetChem)									
Blank (EC72210-BLK1)				Prepared: 03/21/07 Analyzed: 03/22/07					
Total Dissolved Solids	ND	10.0	mg/L						
Duplicate (EC72210-DUP1)				Source: 7C21003-01 Prepared: 03/21/07 Analyzed: 03/22/07					
Total Dissolved Solids	442	10.0	mg/L		462		4.42	20	
Duplicate (EC72210-DUP2)				Source: 7C20016-03 Prepared: 03/21/07 Analyzed: 03/22/07					
Total Dissolved Solids	566	10.0	mg/L		574		1.40	20	
Batch EC72304 - General Preparation (WetChem)									
Blank (EC72304-BLK1)				Prepared: 03/22/07 Analyzed: 03/23/07					
Sulfate	ND	0.500	mg/L						
Chloride	ND	0.500	"						
LCS (EC72304-BS1)				Prepared: 03/22/07 Analyzed: 03/23/07					
Sulfate	9.16	0.500	mg/L	10.0		91.6	80-120		
Chloride	8.95	0.500	"	10.0		89.5	80-120		
Calibration Check (EC72304-CCV1)				Prepared: 03/22/07 Analyzed: 03/23/07					
Sulfate	10.3		mg/L	10.0		103	80-120		
Chloride	9.20		"	10.0		92.0	80-120		
Duplicate (EC72304-DUP1)				Source: 7C19004-62 Prepared: 03/22/07 Analyzed: 03/23/07					
Chloride	90.3	5.00	mg/L		92.6		2.52	20	
Sulfate	244	5.00	"		245		0.409	20	
Duplicate (EC72304-DUP2)				Source: 7C20014-03 Prepared: 03/22/07 Analyzed: 03/23/07					
Sulfate	212	5.00	mg/L		211		0.473	20	
Chloride	41.0	5.00	"		40.8		0.489	20	

Environmental Lab of Texas

A Xenco Laboratories Company

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Page 7 of 10

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

Project: Justis H-2 SWD
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 EC72304 - General Preparation (WetChem)										
Matrix Spike (EC72304-MS1)		Source: 7C19004-62		Prepared: 03/22/07 Analyzed: 03/23/07						
Chloride	220	5.00	mg/L	100	92.6	127	80-120			M1
Sulfate	389	5.00	"	100	245	144	80-120			M1
Matrix Spike (EC72304-MS2)		Source: 7C20014-03		Prepared: 03/22/07 Analyzed: 03/23/07						
Chloride	171	5.00	mg/L	100	40.8	130	80-120			M1
Sulfate	364	5.00	"	100	211	153	80-120			M1
Batch EC72808 - General Preparation (WetChem)										
Blank (EC72808-BLK1)		Prepared & Analyzed: 03/28/07								
Total Alkalinity	ND	2.00	mg/L							
LCS (EC72808-BS1)		Prepared & Analyzed: 03/28/07								
Bicarbonate Alkalinity	176	2.00	mg/L	200		88.0	85-115			
Duplicate (EC72808-DUP1)		Source: 7C20014-01		Prepared & Analyzed: 03/28/07						
Total Alkalinity	200	2.00	mg/L		210			4.88	20	
Reference (EC72808-SRM1)		Prepared & Analyzed: 03/28/07								
Total Alkalinity	246		mg/L	250		98.4	90-110			

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Page 8 of 10

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

Project: Justis H-2 SWD
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 EC73011 - 6010B/No Digestion

Blank (EC73011-BLK1)

Prepared & Analyzed: 03/30/07

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

Calibration Check (EC73011-CCV1)

Prepared & Analyzed: 03/30/07

Calcium	2.29		mg/L	2.00		114	85-115			
Magnesium	1.89		"	2.00		94.5	85-115			
Potassium	1.78		"	2.00		89.0	85-115			
Sodium	1.77		"	2.00		88.5	85-115			

Duplicate (EC73011-DUP1)

Source: 7C20014-02

Prepared & Analyzed: 03/30/07

Calcium	49.8	0.810	mg/L		58.0			15.2	20	
Magnesium	25.0	0.360	"		28.9			14.5	20	
Potassium	4.29	0.600	"		4.66			8.27	20	
Sodium	51.4	0.430	"		60.1			15.6	20	

Environmental Lab of Texas

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Page 9 of 10

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

Project: Justis H-2 SWD
Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

Notes and Definitions

MI The MS and/or MSD were above the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference
LCS Laboratory Control Spike
MS Matrix Spike
Dup Duplicate

Report Approved By:



Date:

4/5/2007

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

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

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

Environmental Lab of Texas

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Page 10 of 10

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 Manager: Kristin Farris Pope kpope@riceswd.com
Company Name: RICE Operating Company
Company Address: 122 W. Taylor Street
City/State/Zip: Hobbs, New Mexico 88240
Telephone No: (505) 393-9174
Fax No: (505) 397-1471
Sampler Signature: Rozanne Johnson (505) 831-9310
e-mail: rozanne@valornet.com

Project Name: Justis H-2 SWD

Project #:

Project Loc: T26S R37E Sec2H - Lea County New Mexico

PO #:

Report Format: ☒ Standard ☐ TRRP ☐ NPDES

(lab use only)

ORDER #:

7C20014

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total #. of Containers	Preservation & # of Containers										Matrix	Analyze For:																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
								Ice	HNO ₃	HCl (2) 40 ml glass vials	H ₂ SO ₄	NaOH	Na ₂ S ₂ O ₃	None (1) 1 Liter HDPE	Other (Specify)	DV: Drinking Water Sl. Sudge	GW: Groundwater Sl. Sudge		MP: Non-Potable Spec. Other	TPH: 418.1 8015M 8015B	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO ₄ , Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030	RCL	N.O.R.M	Total Dissolved Solids	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
01	Monitor Well #2			3/15/2007	11:50		3	X	2							1	GW														X																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						

Special Instructions:

Please email to: kpope@riceswd.com
jpurvis@riceswd.com

matt@riceswd.com

rozanne@valornet.com

Relinquished by:

Relinquished by:

Relinquished by:

Relinquished by:

Relinquished by:

Relinquished by:

Date 3-20-07

Time 11:45

Date

Time

Date

Time

Received by:

Received by:

Received by:

Received by:

Received by:

Received by:

Date 3/20/07

Time 11:45

Date

Time

Date

Time

Date

Time

Date

Time

Date

Time

Laboratory Comments:

Sample Containers intact?

VOCs Free of Headspace?

Labels on container(s)

Custody seals on container(s)

Custody seals on cooler(s)

Sample Hand Delivered

by Courier?

UPS

DHL

FedEx

Lone Star

Temperature Upon Receipt:

2.0 °C

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Rice Operating
 Date/ Time: 03-20-07 @ 1345
 Lab ID #: 7C20014
 Initials: JMM

Sample Receipt Checklist

Client Initials

#1	Temperature of container/ cooler?	<u>Yes</u>	No	2.0 °C	
#2	Shipping container in good condition?	<u>Yes</u>	No		
#3	Custody Seals intact on shipping container/ cooler?	<u>Yes</u>	No	Not Present	
#4	Custody Seals intact on sample bottles/ container?	<u>Yes</u>	No	Not Present	
#5	Chain of Custody present?	<u>Yes</u>	No		
#6	Sample instructions complete of Chain of Custody?	<u>Yes</u>	No		
#7	Chain of Custody signed when relinquished/ received?	<u>Yes</u>	No		
#8	Chain of Custody agrees with sample label(s)?	<u>Yes</u>	No	ID written on Cont. / Lid	
#9	Container label(s) legible and intact?	<u>Yes</u>	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	<u>Yes</u>	No		
#11	Containers supplied by ELOT?	<u>Yes</u>	No		
#12	Samples in proper container/ bottle?	<u>Yes</u>	No	See Below	
#13	Samples properly preserved?	<u>Yes</u>	No	See Below	
#14	Sample bottles intact?	<u>Yes</u>	No		
#15	Preservations documented on Chain of Custody?	<u>Yes</u>	No		
#16	Containers documented on Chain of Custody?	<u>Yes</u>	No		
#17	Sufficient sample amount for indicated test(s)?	<u>Yes</u>	No	See Below	
#18	All samples received within sufficient hold time?	<u>Yes</u>	No	See Below	
#19	Subcontract of sample(s)?	<u>Yes</u>	No	<u>Not Applicable</u>	
#20	VOC samples have zero headspace?	<u>Yes</u>	No	Not Applicable	

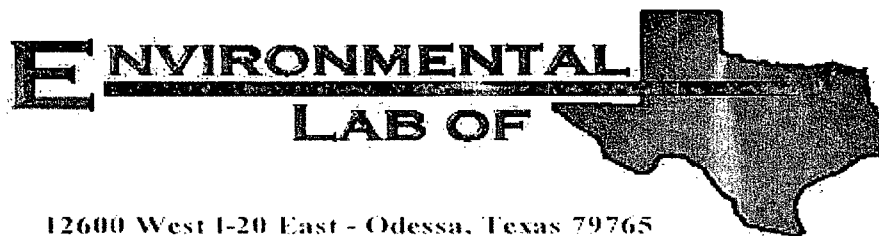
Variance Documentation

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

Regarding: _____

Corrective Action Taken: _____

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



12600 West I-20 East - Odessa, Texas 79765

A Xenco Laboratories Company

Analytical Report

Prepared for:

Kristin Farris-Pope

Rice Operating Co.

122 W. Taylor

Hobbs, NM 88240

Project: Justis H-2 SWD

Project Number: None Given

Location: T26S R37E Sec2H ~ Lea County New Mexico

Lab Order Number: 7F14020

Report Date: 06/27/07

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

Project: Justis H-2 SWD
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	7F14020-01	Water	06/13/07 11:15	06-14-2007 13:45
Monitor Well #3	7F14020-02	Water	06/13/07 12:20	06-14-2007 13:45
Monitor Well #4	7F14020-03	Water	06/13/07 13:35	06-14-2007 13:45
Monitor Well #5	7F14020-04	Water	06/13/07 14:40	06-14-2007 13:45

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

Project: Justis H-2 SWD
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 #2 (7F14020-01) Water									
Benzene	ND	0.00100	mg/L	I	EF71906	06/19/07	06/19/07	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: <i>a,a,a</i> -Trifluorotoluene		95.0 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		88.8 %	80-120		"	"	"	"	
Monitor Well #3 (7F14020-02) Water									
Benzene	ND	0.00100	mg/L	I	EF71906	06/19/07	06/20/07	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: <i>a,a,a</i> -Trifluorotoluene		93.8 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		88.2 %	80-120		"	"	"	"	
Monitor Well #4 (7F14020-03) Water									
Benzene	ND	0.00100	mg/L	I	EF71906	06/19/07	06/20/07	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: <i>a,a,a</i> -Trifluorotoluene		102 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		89.8 %	80-120		"	"	"	"	
Monitor Well #5 (7F14020-04) Water									
Benzene	ND	0.00100	mg/L	I	EF71906	06/19/07	06/20/07	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: <i>a,a,a</i> -Trifluorotoluene		93.8 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		89.6 %	80-120		"	"	"	"	

Environmental Lab of Texas

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Page 2 of 10

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

Project: Justis H-2 SWD
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 (7F14020-01) Water									
Total Alkalinity	200	2.00	mg/L	1	EF71905	06/19/07	06/19/07	EPA 310.1M	
Chloride	1350	25.0	"	50	EF71803	06/18/07	06/20/07	EPA 300.0	
Total Dissolved Solids	3820	10.0	"	1	EF72004	06/18/07	06/20/07	EPA 160.1	
Sulfate	193	25.0	"	50	EF71803	06/18/07	06/20/07	EPA 300.0	
Monitor Well #3 (7F14020-02) Water									
Total Alkalinity	220	2.00	mg/L	1	EF71905	06/19/07	06/19/07	EPA 310.1M	
Chloride	86.9	5.00	"	10	EF71803	06/18/07	06/20/07	EPA 300.0	
Total Dissolved Solids	512	10.0	"	1	EF72004	06/18/07	06/20/07	EPA 160.1	
Sulfate	118	5.00	"	10	EF71803	06/18/07	06/20/07	EPA 300.0	
Monitor Well #4 (7F14020-03) Water									
Total Alkalinity	230	2.00	mg/L	1	EF71905	06/19/07	06/19/07	EPA 310.1M	
Chloride	30.3	5.00	"	10	EF71803	06/18/07	06/20/07	EPA 300.0	
Total Dissolved Solids	534	10.0	"	1	EF72004	06/18/07	06/20/07	EPA 160.1	
Sulfate	149	5.00	"	10	EF71803	06/18/07	06/20/07	EPA 300.0	
Monitor Well #5 (7F14020-04) Water									
Total Alkalinity	180	2.00	mg/L	1	EF71905	06/19/07	06/19/07	EPA 310.1M	
Chloride	189	5.00	"	10	EF71803	06/18/07	06/20/07	EPA 300.0	
Total Dissolved Solids	842	10.0	"	1	EF72004	06/18/07	06/20/07	EPA 160.1	
Sulfate	156	5.00	"	10	EF71803	06/18/07	06/20/07	EPA 300.0	

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Page 3 of 10

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

Project: Justis H-2 SWD
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 (7F14020-01) Water									
Calcium	266	4.05	mg/L	50	EF72001	06/20/07	06/20/07	EPA 6010B	
Magnesium	111	1.80	"	"	"	"	"	"	
Potassium	24.0	0.600	"	10	"	"	"	"	
Sodium	324	10.8	"	250	"	"	"	"	
Monitor Well #3 (7F14020-02) Water									
Calcium	38.7	4.05	mg/L	50	EF72001	06/20/07	06/20/07	EPA 6010B	
Magnesium	16.3	0.360	"	10	"	"	"	"	
Potassium	9.06	0.600	"	"	"	"	"	"	
Sodium	62.6	2.15	"	50	"	"	"	"	
Monitor Well #4 (7F14020-03) Water									
Calcium	34.4	0.810	mg/L	10	EF72001	06/20/07	06/20/07	EPA 6010B	
Magnesium	15.7	0.360	"	"	"	"	"	"	
Potassium	9.25	0.600	"	"	"	"	"	"	
Sodium	70.7	2.15	"	50	"	"	"	"	
Monitor Well #5 (7F14020-04) Water									
Calcium	67.3	4.05	mg/L	50	EF72001	06/20/07	06/20/07	EPA 6010B	
Magnesium	27.4	0.360	"	10	"	"	"	"	
Potassium	11.5	0.600	"	"	"	"	"	"	
Sodium	84.4	2.15	"	50	"	"	"	"	

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Page 4 of 10

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

Project: Justis H-2 SWD
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 EF71906 - EPA 5030C (GC)										
Blank (EF71906-BLK1)			Prepared & Analyzed: 06/19/07							
Benzene	ND	0.00100	mg/L							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00100	"							
Xylene (o)	ND	0.00100	"							
Surrogate: a,a,a-Trifluorotoluene	42.5		ug/l	50.0		85.0	80-120			
Surrogate: 4-Bromofluorobenzene	40.8		"	50.0		81.6	80-120			
LCS (EF71906-BS1)			Prepared & Analyzed: 06/19/07							
Benzene	0.0444	0.00100	mg/L	0.0500		88.8	80-120			
Toluene	0.0459	0.00100	"	0.0500		91.8	80-120			
Ethylbenzene	0.0504	0.00100	"	0.0500		101	80-120			
Xylene (p/m)	0.0898	0.00100	"	0.100		89.8	80-120			
Xylene (o)	0.0485	0.00100	"	0.0500		97.0	80-120			
Surrogate: a,a,a-Trifluorotoluene	44.8		ug/l	50.0		89.6	80-120			
Surrogate: 4-Bromofluorobenzene	44.9		"	50.0		89.8	80-120			
Calibration Check (EF71906-CCV1)			Prepared: 06/19/07 Analyzed: 06/20/07							
Benzene	0.0508		mg/L	0.0500		102	80-120			
Toluene	0.0499		"	0.0500		99.8	80-120			
Ethylbenzene	0.0484		"	0.0500		96.8	80-120			
Xylene (p/m)	0.0907		"	0.100		90.7	80-120			
Xylene (o)	0.0508		"	0.0500		102	80-120			
Surrogate: a,a,a-Trifluorotoluene	51.2		ug/l	50.0		102	80-120			
Surrogate: 4-Bromofluorobenzene	46.4		"	50.0		92.8	80-120			
Matrix Spike (EF71906-MS1)			Source: 7F14023-01	Prepared: 06/19/07 Analyzed: 06/20/07						
Benzene	0.0506	0.00100	mg/L	0.0500	ND	101	80-120			
Toluene	0.0505	0.00100	"	0.0500	ND	101	80-120			
Ethylbenzene	0.0542	0.00100	"	0.0500	ND	108	80-120			
Xylene (p/m)	0.0948	0.00100	"	0.100	ND	94.8	80-120			
Xylene (o)	0.0524	0.00100	"	0.0500	ND	105	80-120			
Surrogate: a,a,a-Trifluorotoluene	51.4		ug/l	50.0		103	80-120			
Surrogate: 4-Bromofluorobenzene	49.9		"	50.0		99.8	80-120			

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Page 5 of 10

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

Project: Justis H-2 SWD
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 EF71906 - EPA 5030C (GC)										
Matrix Spike Dup (EF71906-MSD1)		Source: 7F14023-01		Prepared: 06/19/07		Analyzed: 06/20/07				
Benzene	0.0513	0.00100	mg/L	0.0500	ND	103	80-120	1.96	20	
Toluene	0.0514	0.00100	"	0.0500	ND	103	80-120	1.96	20	
Ethylbenzene	0.0552	0.00100	"	0.0500	ND	110	80-120	1.83	20	
Xylene (p/m)	0.0963	0.00100	"	0.100	ND	96.3	80-120	1.57	20	
Xylene (o)	0.0540	0.00100	"	0.0500	ND	108	80-120	2.82	20	
Surrogate: a,a,a-Trifluorotoluene	48.6		ug/l	50.0		97.2	80-120			
Surrogate: 4-Bromofluorobenzene	49.2		"	50.0		98.4	80-120			

Environmental Lab of Texas

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Page 6 of 10

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

Project: Justis H-2 SWD
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 Limits	RPD	RPD Limit	Notes
Batch EF71803 - General Preparation (WetChem)									
Blank (EF71803-BLK1)		Prepared: 06/18/07 Analyzed: 06/20/07							
Chloride	ND	0.500	mg/L						
Sulfate	ND	0.500	"						
LCS (EF71803-BS1)		Prepared: 06/18/07 Analyzed: 06/20/07							
Chloride	9.87	0.500	mg/L	10.0		98.7	80-120		
Sulfate	9.99	0.500	"	10.0		99.9	80-120		
Calibration Check (EF71803-CCV1)		Prepared: 06/18/07 Analyzed: 06/20/07							
Chloride	8.94		mg/L	10.0		89.4	80-120		
Sulfate	10.8		"	10.0		108	80-120		
Duplicate (EF71803-DUP1)		Source: 7F14003-06		Prepared: 06/18/07 Analyzed: 06/20/07					
Sulfate	407	100	mg/L		326		22.1	20	R2
Chloride	8400	100	"		6670		23.0	20	R2
Matrix Spike (EF71803-MS1)		Source: 7F14003-06		Prepared: 06/18/07 Analyzed: 06/20/07					
Chloride	9860	100	mg/L	2000	6670	160	80-120		QM-10
Sulfate	2060	100	"	2000	326	86.7	80-120		
Batch EF71905 - General Preparation (WetChem)									
Blank (EF71905-BLK1)		Prepared & Analyzed: 06/19/07							
Total Alkalinity	ND	2.00	mg/L						
LCS (EF71905-BS1)		Prepared & Analyzed: 06/19/07							
Bicarbonate Alkalinity	174	2.00	mg/L	200		87.0	85-115		

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Page 7 of 10

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

Project: Justis H-2 SWD
Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EF71905 - General Preparation (WetChem)

Duplicate (EF71905-DUP1)		Source: 7F14003-01		Prepared & Analyzed: 06/19/07			
Total Alkalinity	260	2.00	mg/L	260		0.00	20

Reference (EF71905-SRM1)		Prepared & Analyzed: 06/19/07			
Total Alkalinity	250	mg/L	250	100	90-110

Batch EF72004 - General Preparation (WetChem)

Blank (EF72004-BLK1)				Prepared: 06/18/07 Analyzed: 06/20/07			
Total Dissolved Solids	ND	10.0	mg/L				

Duplicate (EF72004-DUP1)		Source: 7F14003-01		Prepared: 06/18/07 Analyzed: 06/20/07			
Total Dissolved Solids	3220	10.0	mg/L		3180	1.25	20

Duplicate (EF72004-DUP2)		Source: 7F14020-03		Prepared: 06/18/07 Analyzed: 06/20/07			
Total Dissolved Solids	526	10.0	mg/L	534		1.51	20

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Page 8 of 10

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

Project: Justis H-2 SWD
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 EF72001 - 6010B/No Digestion

Blank (EF72001-BLK1)

Prepared & Analyzed: 06/20/07

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

Calibration Check (EF72001-CCV1)

Prepared & Analyzed: 06/20/07

Calcium	2.08		mg/L	2.00		104	85-115			
Magnesium	2.17		"	2.00		108	85-115			
Potassium	1.93		"	2.00		96.5	85-115			
Sodium	2.02		"	2.00		101	85-115			

Duplicate (EF72001-DUP1)

Source: 7F12005-01

Prepared & Analyzed: 06/20/07

Calcium	76.1	4.05	mg/L		70.5			7.64	20	
Magnesium	13.7	0.360	"		14.2			3.58	20	
Potassium	2.32	0.600	"		2.39			2.97	20	
Sodium	31.5	0.430	"		32.9			4.35	20	

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Page 9 of 10

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

Project: Justis H-2 SWD
Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

Notes and Definitions

R2 The RPD exceeded the acceptance limit.
QM-10 LCS/LCSD were analyzed in place of MS/MSD.
DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference
LCS Laboratory Control Spike
MS Matrix Spike
Dup Duplicate

Report Approved By: 

Date: 6/27/2007

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

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

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Page 10 of 10

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Rice
 Date/ Time: 10/14/07 1:45
 Lab ID #: 7F14020
 Initials: CR

Sample Receipt Checklist

				Client Initials
#1	Temperature of container/ cooler?	Yes	No	1.5 °C
#2	Shipping container in good condition?	<u>Yes</u>	No	
#3	Custody Seals intact on shipping container/ cooler?	<u>Yes</u>	No	Not Present
#4	Custody Seals intact on sample bottles/ container?	<u>Yes</u>	No	Not Present
#5	Chain of Custody present?	<u>Yes</u>	No	
#6	Sample instructions complete of Chain of Custody?	<u>Yes</u>	No	
#7	Chain of Custody signed when relinquished/ received?	<u>Yes</u>	No	
#8	Chain of Custody agrees with sample label(s)?	<u>Yes</u>	No	ID written on Cont./ Lid
#9	Container label(s) legible and intact?	<u>Yes</u>	No	Not Applicable
#10	Sample matrix/ properties agree with Chain of Custody?	<u>Yes</u>	No	
#11	Containers supplied by ELOT?	<u>Yes</u>	No	
#12	Samples in proper container/ bottle?	<u>Yes</u>	No	See Below
#13	Samples properly preserved?	<u>Yes</u>	No	See Below
#14	Sample bottles intact?	<u>Yes</u>	No	
#15	Preservations documented on Chain of Custody?	<u>Yes</u>	No	
#16	Containers documented on Chain of Custody?	<u>Yes</u>	No	
#17	Sufficient sample amount for indicated test(s)?	<u>Yes</u>	No	See Below
#18	All samples received within sufficient hold time?	<u>Yes</u>	No	See Below
#19	Subcontract of sample(s)?	Yes	No	<u>Not Applicable</u>
#20	VOC samples have zero headspace?	<u>Yes</u>	No	Not Applicable

Variance Documentation

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

Regarding: _____

Corrective Action Taken: _____

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



ARDINAL LABORATORIES

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

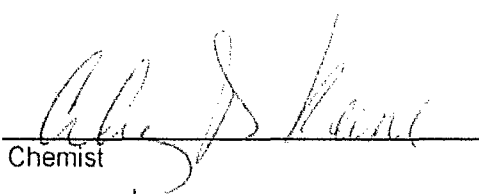
ANALYTICAL RESULTS FOR
RICE OPERATING COMPANY
ATTN: KRISTIN FARRIS-POPE
122 W. TAYLOR
HOBBS, NM 88240
FAX TO: (505) 397-1471

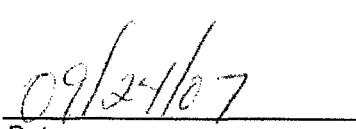
Receiving Date: 09/18/07
Reporting Date: 09/19/07
Project Number: NOT GIVEN
Project Name: JUSTIS H-2 SWD
Project Location: T26S-R37E-SEC2 H ~ LEA COUNTY, NM

Sampling Date: 09/17/07
Sample Type: GROUNDWATER
Sample Condition: COOL & INTACT
Sample Received By: SB
Analyzed By: BC

LAB NUMBER	SAMPLE ID	BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL BENZENE (mg/L)	TOTAL XYLENES (mg/L)
ANALYSIS DATE		09/18/07	09/18/07	09/18/07	09/18/07
H13313-1	MONITOR WELL #2	<0.002	<0.002	<0.002	<0.006
H13313-2	MONITOR WELL #3	<0.002	<0.002	<0.002	<0.006
H13313-3	MONITOR WELL #4	<0.002	<0.002	<0.002	<0.006
H13313-4	MONITOR WELL #5	<0.002	<0.002	<0.002	<0.006
Quality Control		0.092	0.094	0.093	0.261
True Value QC		0.100	0.100	0.100	0.300
% Recovery		91.7	94.3	93.4	86.9
Relative Percent Difference		6.4	2.5	2.3	4.2

METHOD: EPA 602/SW-846 8260


Chemist


Date

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

Receiving Date: 09/18/07
Reporting Date: 09/19/07
Project Owner: NOT GIVEN
Project Name: JUSTIS H-2 SWD
Project Location: T26S-R37E-SEC2 H-LEA COUNTY, NM

Sampling Date: 09/17/07
Sample Type: WATER
Sample Condition: COOL & INTACT
Sample Received By: SB
Analyzed By: HM/KS/AB

LAB NUMBER	SAMPLE ID	Na (mg/L)	Ca (mg/L)	Mg (mg/L)	K (mg/L)	Conductivity (μ S/cm)	T-Alkalinity (mgCaCO ₃ /L)
ANALYSIS DATE:		09/19/07	09/18/07	09/18/07	09/18/07	09/19/07	09/19/07
H13313-1	MONITOR WELL #2	368	333	175	12.1	4,820	144
H13313-2	MONITOR WELL #3	42	56.6	40.3	4.83	771	176
H13313-3	MONITOR WELL #4	52	49.9	44.4	4.83	810	172
H13313-4	MONITOR WELL #5	53	66.5	44.4	5.20	892	168
Quality Control		NR	50.6	50.8	1.79	9,860	NR
True Value QC		NR	50.0	50.0	2.00	10,000	NR
% Recovery		NR	101	102	89.5	98.6	NR
Relative Percent Difference		NR	< 0.1	1.6	6.5	0.1	NR

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

		Cl ⁻ (mg/L)	SO ₄ (mg/L)	CO ₃ (mg/L)	HCO ₃ (mg/L)	pH (s.u.)	TDS (mg/L)
ANALYSIS DATE:		09/18/07	09/19/07	09/19/07	09/19/07	09/19/07	09/19/07
H13313-1	MONITOR WELL #2	1,424	234	0	144	7.83	3,820
H13313-2	MONITOR WELL #3	36	201	0	176	8.02	564
H13313-3	MONITOR WELL #4	40	220	0	172	7.96	612
H13313-4	MONITOR WELL #5	68	227	0	168	8.10	668
Quality Control		500	26.7	NR	1024	6.96	NR
True Value QC		500	25.0	NR	1000	7.00	NR
% Recovery		100	107	NR	102	99.4	NR
Relative Percent Difference		< 0.1	1.7	NR	2.4	0.3	NR

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

Chemist

Date

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

Receiving Date: 11/16/07

Reporting Date: 11/19/07

Project Number: NOT GIVEN

Project Name: JUSTIS H-2 SWD

Project Location: T26S-R37E-SEC2 H ~ LEA COUNTY, NM

Sampling Date: 11/13/07

Sample Type: GROUNDWATER

Sample Condition: COOL & INTACT

Sample Received By: HM

Analyzed By: AB

LAB NUMBER	SAMPLE ID	BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL BENZENE (mg/L)	TOTAL XYLENES (mg/L)
ANALYSIS DATE		11/19/07	11/19/07	11/19/07	11/19/07
H13738-1	MONITOR WELL #1	<0.001	<0.001	<0.001	<0.003
H13738-2	MONITOR WELL #2	<0.001	<0.001	<0.001	<0.003
H13738-3	MONITOR WELL #3	<0.001	<0.001	<0.001	<0.003
H13738-4	MONITOR WELL #4	<0.001	<0.001	<0.001	<0.003
Quality Control		0.112	0.101	0.101	0.315
True Value QC		0.100	0.100	0.100	0.300
% Recovery		112	101	101	105
Relative Percent Difference		2.6	4.2	1.6	2.6

METHOD: EPA SW-846 8021B

Chemist

Date

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

Receiving Date: 11/16/07
Reporting Date: 11/26/07
Project Number: NOT GIVEN
Project Name: JUSTIS H-2 SWD
Project Location: T26S-R37E-SEC2 H-LEA COUNTY, NM

Sampling Date: 11/13/07
Sample Type: WATER
Sample Condition: COOL & INTACT
Sample Received By: HM
Analyzed By: HM/KS

LAB NUMBER	SAMPLE ID	Na (mg/L)	Ca (mg/L)	Mg (mg/L)	K (mg/L)	Conductivity (u S/cm)	T-Alkalinity (mgCaCO ₃ /L)
ANALYSIS DATE:		11/21/07	11/21/07	11/21/07	11/21/07	11/20/07	11/20/07
H13738-1	MONITOR WELL #2	386	386	182	22.4	5,150	144
H13738-2	MONITOR WELL #3	88	57.2	29.0	6.38	786	184
H13738-3	MONITOR WELL #4	97	51.9	28.2	7.40	795	184
H13738-4	MONITOR WELL #5	90	75.8	37.1	7.94	978	164
Quality Control		NR	51.5	50.8	2.89	1,409	NR
True Value QC		NR	50.0	50.0	3.00	1,413	NR
% Recovery		NR	103	102	96.3	99.7	NR
Relative Percent Difference		NR	4.6	1.6	2.1	0.4	NR

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

		Cl ⁻ (mg/L)	SO ₄ (mg/L)	CO ₃ (mg/L)	HCO ₃ (mg/L)	pH (s.u.)	TDS (mg/L)
ANALYSIS DATE:		11/20/07	11/21/07	11/20/07	11/20/07	11/20/07	11/19/07
H13738-1	MONITOR WELL #2	1,600	177	0	176	7.71	3,053
H13738-2	MONITOR WELL #3	32	223	0	224	7.90	537
H13738-3	MONITOR WELL #4	36	222	0	224	7.81	547
H13738-4	MONITOR WELL #5	100	234	0	200	7.75	669
Quality Control		500	26.4	NR	1000	7.06	NR
True Value QC		500	25.0	NR	1000	7.00	NR
% Recovery		100	106	NR	100	101	NR
Relative Percent Difference		< 0.1	14.9	NR	1.2	0.1	NR

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

Kristin Supra
Chemist

11/26/07
Date

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