

AP - 47

**ANNUAL  
MONITORING REPORT**

**YEAR(S):**  
2005



*Highlander Environmental Corp* 2005 1160 0005 3780 4852  
2005 1160 0005 3780 4852

Midland, Texas

CERTIFIED MAIL  
RETURN RECEIPT NO. 7004 1160 0005 3780 4852

March 17, 2006

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

**Re: 2005 Annual Summary Report, Rice Operating Company, Blinebry Drinkard (BD) SWD System Junction Box F-17, Unit F, Section 17, T-21-S, R-37-E, Lea County, New Mexico, NMOCD CASE #1R0426-14 (AP-47)**

Dear Mr. Price:

Highlander Environmental Corp. (Highlander) takes this opportunity to submit the 2005 Annual Summary Report for the Rice Operating Company (ROC), Blinebry Drinkard (BD) SWD System junction box F-17.

**Background**

As part of the ROC Junction Box Upgrade Workplan, starting on September 17, 2002, the junction box was removed and the Site was delineated vertically and horizontally with a backhoe. The Site was excavated to the approximate dimensions of 20 feet x 20 feet x 12 feet. Chloride impact was consistent vertically. No TPH impact was indicated.

During the excavation, an older junction box was discovered approximately 10 feet south of the existing location. On November 18, 2002, a soil boring was placed near this old box location and advanced to a depth of 75 feet. Chloride concentrations declined with depth, however, chloride impact to groundwater was observed.

Also on November 18, 2002, a 2 inch diameter monitor well was installed to a total depth of 85 feet. On December 13, 2002, ROC notified the NMOCD of groundwater impact, and on November 7, 2003 ROC submitted a Junction Box Disclosure Form to the NMOCD. Groundwater has been sampled and analyzed on a quarterly basis since June 2003. The quarterly sampling has confirmed that there is no hydrocarbon impact to groundwater at this

Site. The excavation was backfilled and the junction moved 45 feet south of the original site. The Site location is shown on Figure 1.

### **Stage I Abatement Plan**

On March 17, 2005 an Investigation and Characterization Plan (ICP) was submitted to the NMOCD. On May 5, 2005, Daniel Sanchez with the NMOCD requested a Rule 19, Stage I Abatement Plan for this site. On July 12, 2005 a Stage I Abatement Plan was submitted to the NMOCD. The plan was certified "Administratively Complete" on November 18, 2005. The Public Notice requirement of the Stage I Abatement Plan was satisfied in December, 2005. Prior to submission of this 2005 Annual Report, the Stage I Abatement Plan approval was received, dated February 23, 2006.

### **Monitor Well Sampling**

The site monitor well (MW-1) was sampled on January 26, April 28, June 21, September 16 and October 17, 2005. Prior to sampling, the well was gauged for static water level. The monitor well cap was opened and water level measurements were taken from the top of the casing. The measurements were taken to the nearest 0.01 feet.

The well was then purged using a portable submersible pump. Approximately three casing volumes of water were purged from the well prior to sampling. 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.

The well was also 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. The samples were delivered under proper chain-of-custody control to Environmental Labs of Texas, Inc., Odessa, Texas. 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.

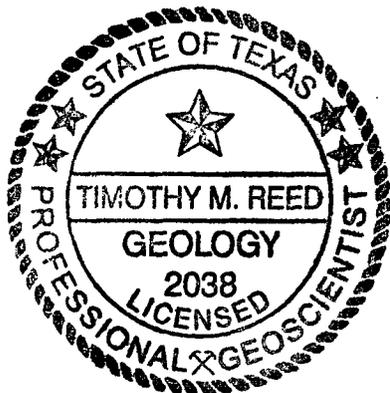
### **Monitor Well Sample Results**

In 2005, there were no BTEX constituents detected at or above reporting limits for MW-1. Chloride and total dissolved solid (TDS) concentrations from monitor well MW-1 exceeded the Water Quality Control Commission (WQCC) standards of 250 mg/L for chloride and 1000 mg/L for TDS in all sampling events. Cumulative analytical data is summarized in the Table Section of this report.



### Conclusions and Recommendations

1. In 2005, there were no BTEX constituents detected at or above reporting limits for MW-1.
2. Chloride and total dissolved solid (TDS) concentrations from monitor well MW-1 exceeded the Water Quality Control Commission (WQCC) standards of 250 mg/L for chloride and 1000 mg/L for TDS in all sampling events.
3. Quarterly monitoring at this site will continue and an annual report will be prepared and submitted to the NMOCD in the first quarter of 2007.
4. Prior to submission of this 2005 Annual Report, the Stage I Abatement Plan approval was received, dated February 23, 2006. The Stage I Abatement Plan will be implemented as approved. Once completed, a Stage II Abatement Plan will be prepared and submitted to the NMOCD.



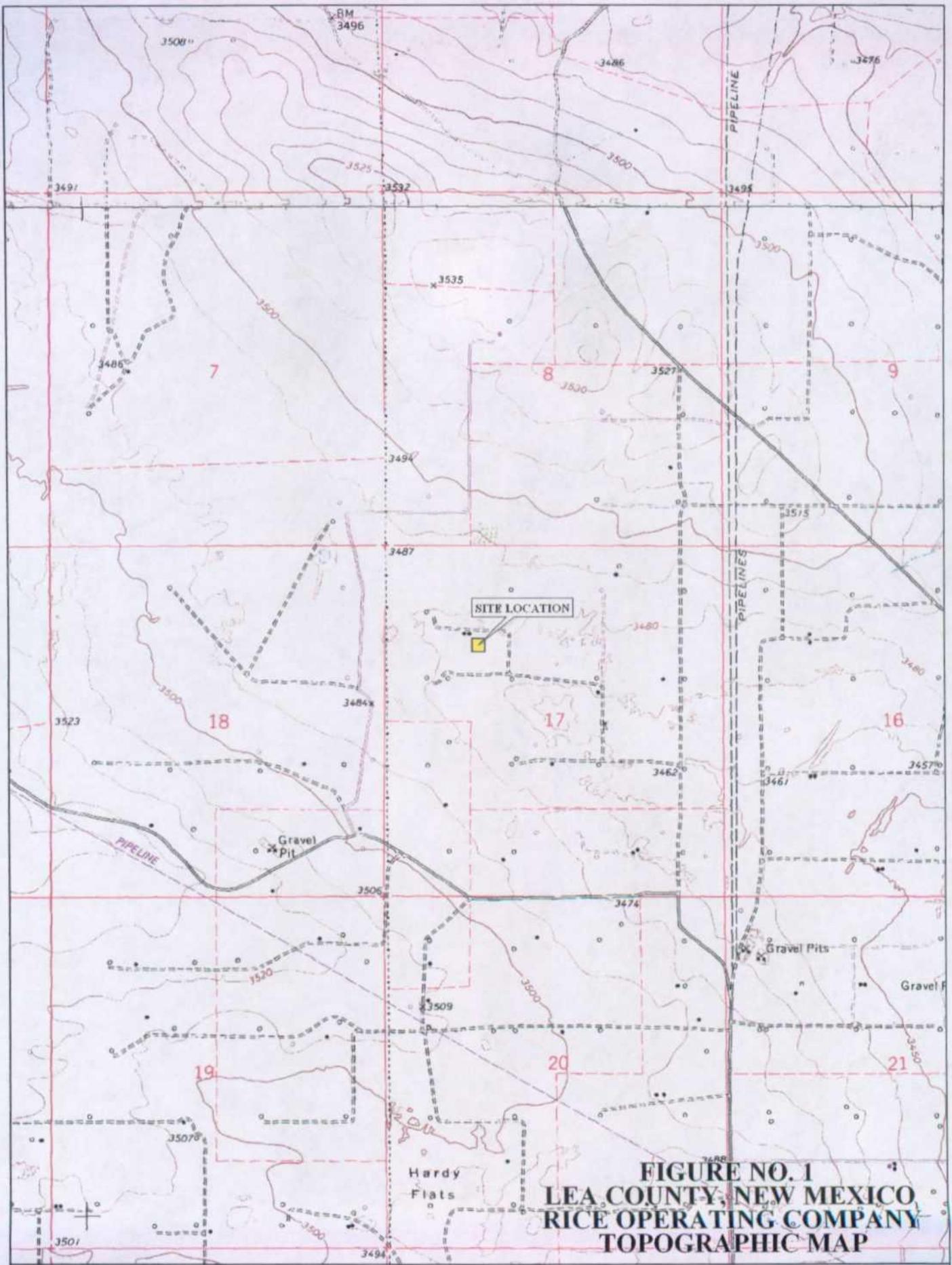
Respectfully Submitted,  
HIGHLANDER ENVIRONMENTAL CORP.

A handwritten signature in cursive script that reads "Tim Reed".

Timothy M. Reed, P.G.  
Vice President

cc: ROC



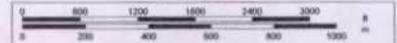


**FIGURE NO. 1  
LEA COUNTY, NEW MEXICO  
RICE OPERATING COMPANY  
TOPOGRAPHIC MAP**

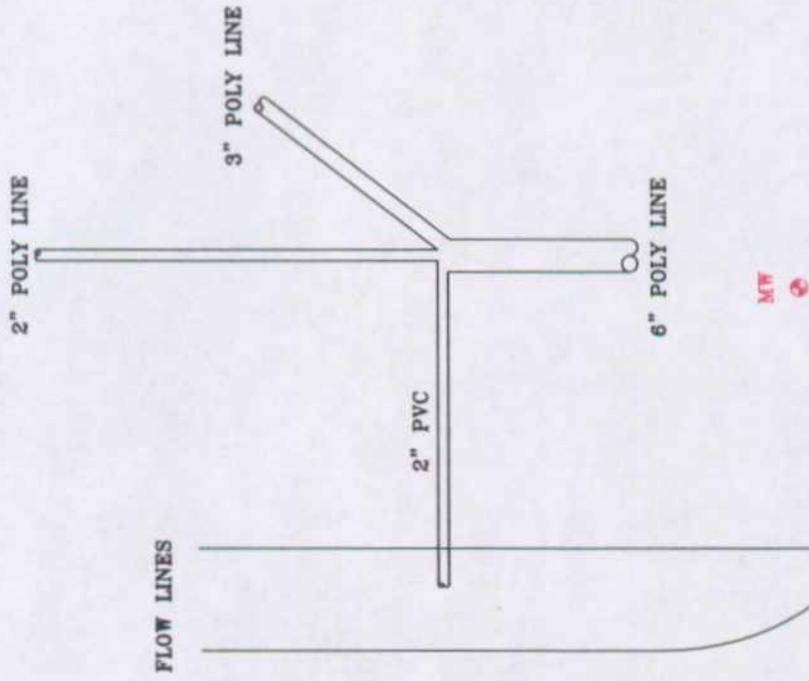


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www.delorme.com

Scale 1 : 24,000  
1" = 2000 ft



BATTERY 100 YDS NORTH



NOT TO SCALE

FIGURE NO. 2

LEA COUNTY, NEW MEXICO

RICE OPERATING COMPANY  
BD F-17 JUNCTION  
SITE MAP

HIGHLANDER ENVIRONMENTAL CORP.  
MIDLAND, TEXAS

DATE: 3/16/05

DWN. BY: JJ

FILE: 01/REV. 03/05  
DATE: 03/16/05

MONITOR WELL

BD jct. F-17  
unit 'F', Sec. 17, T21S, R37E

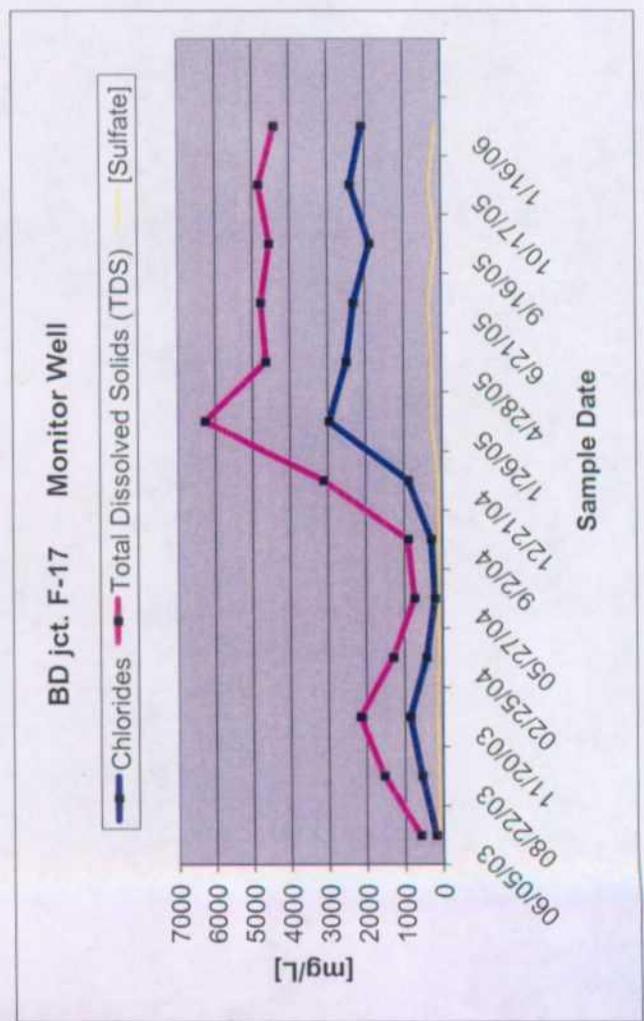
NMOCD Case #1R0426-14

RICE Operating Company  
Monitor Well Data Sheet

All concentrations are in mg/L

MW #	DEPTH TO WATER * (ft)	TOTAL DEPTH (ft)	WELL VOLUME (gal)	VOLUME PURGED (gal)	SAMPLE DATE	Cl-	TDS	BENZENE	TOLUENE	EIHYL BENZENE	TOTAL XYLENES	SULFATE	COMMENTS
1	75.67	85.20	1.524	4.50	06/05/03	177	589	0.004	<0.001	<0.001	<0.001	97.6	
1	75.73	85.12	1.500	4.50	08/22/03	549	1540	<0.001	<0.001	<0.001	<0.001	112	
1	75.75	84.85	1.456	4.30	11/20/03	851	2160	<0.001	<0.001	<0.001	<0.001	132	
1	75.73	84.48	1.400	4.20	02/25/04	415	1300	<0.001	<0.001	<0.001	<0.001	96.8	
1	71.75	85.12	2.130	6.40	05/27/04	195	726	<0.001	<0.001	<0.001	<0.001	97.8	
1	75.48	84.60	1.46	4.40	9/2/04	284	896	<0.001	<0.001	<0.001	<0.001	90.6	lt. brown; cloudy
1	75.10	84.00	1.42	4.50	12/21/04	886	3120	<0.001	<0.001	<0.001	<0.001	96.2	
1	75.18	84.07	1.42	4.26	1/26/05	2970	6280	<0.001	<0.001	<0.001	<0.001	257	re-sample
1	75.21	84.2	1.44	5.00	4/28/05	2510	4640	<0.001	<0.001	<0.001	<0.001	259	
1	75.2	84.15	1.43	10.00	6/21/05	2310	4770	<0.001	<0.001	<0.001	<0.001	339	
1	75.21	84.2	1.4	12.0	9/16/05	1890	4540	<0.001	<0.001	<0.001	<0.001	147	
1	75.2	84.2	1.4	5.0	10/17/05	2400	4830	<0.001	<0.001	<0.001	<0.001	319	
1	85.15	84.2	1.4	8.0	1/16/06	2090	4410	<0.001	<0.001	<0.001	<0.001	154	Silt to Clear no odor

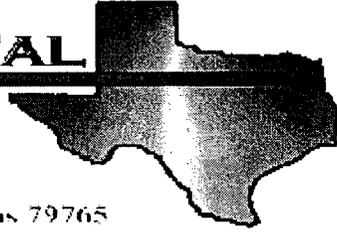
\* Depth to water is measured from top of casing  
Casing is 3.104 ft



**Analytical Report**

**2/02/2005**

**E NVIRONMENTAL**  
**LAB OF**



12600 West I-20 East - Odessa, Texas 79765

## Analytical Report

Prepared for:

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

Project: Jct. F-17 MW-1

Project Number: 505

Location: BD

Lab Order Number: 5A28003

Report Date: 02/02/05

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

Project: Jct. F-17 MW-1  
Project Number: 505  
Project Manager: Kristin Pope

Fax: (505) 397-1471  
Reported:  
02/02/05 13:10

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	5A28003-01	Water	01/26/05 12:27	01/28/05 11:14

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

Project: Jct. F-17 MW-1  
 Project Number: 505  
 Project Manager: Kristin Pope

Fax: (505) 397-1471  
 Reported:  
 02/02/05 13:10

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-1 (5A28003-01) Water</b>									
Benzene	ND	0.00100	mg/L	I	EB50102	01/28/05	01/28/05	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		104 %		80-120	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		83.5 %		80-120	"	"	"	"	

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

Project: Jct. F-17 MW-1  
Project Number: 505  
Project Manager: Kristin Pope

Fax: (505) 397-1471  
Reported:  
02/02/05 13:10

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-1 (5A28003-01) Water</b>									
Total Alkalinity	186	2.00	mg/L	1	EA53101	01/31/05	01/31/05	EPA 310.2M	
Chloride	2970	50.0	"	100	EB50115	01/28/05	01/28/05	EPA 300.0	
Total Dissolved Solids	6280	5.00	"	1	EB50103	01/31/05	02/01/05	EPA 160.1	
Sulfate	257	50.0	"	100	EB50115	01/28/05	01/28/05	EPA 300.0	

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

Project: Jct. F-17 MW-1  
Project Number: 505  
Project Manager: Kristin Pope

Fax: (505) 397-1471  
Reported:  
02/02/05 13:10

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-1 (5A28003-01) Water</b>									
Calcium	614	1.00	mg/L	100	EB50114	02/01/05	02/01/05	EPA 6010B	
Magnesium	331	0.100	"	"	"	"	"	"	
Potassium	23.9	0.500	"	10	"	"	"	"	
Sodium	1120	10.0	"	1000	"	"	"	"	

Environmental Lab of Texas

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

Page 4 of 10

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

Project: Jct. F-17 MW-1  
Project Number: 505  
Project Manager: Kristin Pope

Fax: (505) 397-1471  
Reported:  
02/02/05 13:10

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch EB50102 - EPA 5030C (GC)**

**Blank (EB50102-BLK1)**

Prepared & Analyzed: 01/28/05

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: <i>a,a,a</i> -Trifluorotoluene	23.1		ug/l	20.0		116	80-120			
Surrogate: <i>4</i> -Bromofluorobenzene	17.7		"	20.0		88.5	80-120			

**LCS (EB50102-BS1)**

Prepared & Analyzed: 01/28/05

Benzene	103		ug/l	100		103	80-120			
Toluene	107		"	100		107	80-120			
Ethylbenzene	99.9		"	100		99.9	80-120			
Xylene (p/m)	208		"	200		104	80-120			
Xylene (o)	102		"	100		102	80-120			
Surrogate: <i>a,a,a</i> -Trifluorotoluene	22.7		"	20.0		114	80-120			
Surrogate: <i>4</i> -Bromofluorobenzene	20.1		"	20.0		100	80-120			

**LCS Dup (EB50102-BSD1)**

Prepared & Analyzed: 01/28/05

Benzene	101		ug/l	100		101	80-120	1.96	20	
Toluene	103		"	100		103	80-120	3.81	20	
Ethylbenzene	94.6		"	100		94.6	80-120	5.45	20	
Xylene (p/m)	191		"	200		95.5	80-120	8.52	20	
Xylene (o)	98.8		"	100		98.8	80-120	3.19	20	
Surrogate: <i>a,a,a</i> -Trifluorotoluene	23.2		"	20.0		116	80-120			
Surrogate: <i>4</i> -Bromofluorobenzene	19.0		"	20.0		95.0	80-120			

**Calibration Check (EB50102-CCV1)**

Prepared: 01/28/05 Analyzed: 01/29/05

Benzene	100		ug/l	100		100	80-120			
Toluene	101		"	100		101	80-120			
Ethylbenzene	94.0		"	100		94.0	80-120			
Xylene (p/m)	194		"	200		97.0	80-120			
Xylene (o)	96.0		"	100		96.0	80-120			
Surrogate: <i>a,a,a</i> -Trifluorotoluene	20.6		"	20.0		103	80-120			
Surrogate: <i>4</i> -Bromofluorobenzene	19.6		"	20.0		98.0	80-120			

Environmental Lab of Texas

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

Project: Jct. F-17 MW-1  
 Project Number: 505  
 Project Manager: Kristin Pope

Fax: (505) 397-1471  
 Reported:  
 02/02/05 13:10

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch EB50102 - EPA 5030C (GC)**

**Matrix Spike (EB50102-MS1)**

Source: SA27004-02

Prepared: 01/28/05

Analyzed: 01/29/05

Benzene	99.4		ug/l	100	ND	99.4	80-120			
Toluene	98.5		"	100	ND	98.5	80-120			
Ethylbenzene	93.6		"	100	ND	93.6	80-120			
Xylene (p/m)	190		"	200	ND	95.0	80-120			
Xylene (o)	90.1		"	100	ND	90.1	80-120			
Surrogate: a,a,a-Trifluorotoluene	19.3		"	20.0		96.5	80-120			
Surrogate: 4-Bromofluorobenzene	16.4		"	20.0		82.0	80-120			

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

Project: Jct. F-17 MW-1  
Project Number: 505  
Project Manager: Kristin Pope

Fax: (505) 397-1471  
Reported:  
02/02/05 13:10

**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 EA53101 - General Preparation (WetChem)**

**Blank (EA53101-BLK1)**

Prepared & Analyzed: 01/31/05

Total Alkalinity ND 2.00 mg/L

**Calibration Check (EA53101-CCV1)**

Prepared & Analyzed: 01/31/05

Carbonate Alkalinity 0.0500 mg/L 0.0500 100 80-120

**Duplicate (EA53101-DUP1)**

Source: SA28003-01

Prepared & Analyzed: 01/31/05

Total Alkalinity 185 2.00 mg/L 186 0.539 20

**Batch EB50103 - General Preparation (WetChem)**

**Blank (EB50103-BLK1)**

Prepared: 01/31/05 Analyzed: 02/01/05

Total Dissolved Solids ND 5.00 mg/L

**Duplicate (EB50103-DUP1)**

Source: SA28003-01

Prepared: 01/31/05 Analyzed: 02/01/05

Total Dissolved Solids 6240 5.00 mg/L 6280 0.639 20

**Batch EB50115 - General Preparation (WetChem)**

**Blank (EB50115-BLK1)**

Prepared & Analyzed: 01/28/05

Chloride ND 0.500 mg/L

Sulfate ND 0.500 "

**LCS (EB50115-BS1)**

Prepared & Analyzed: 01/28/05

Chloride 9.70 mg/L 10.0 97.0 80-120

Sulfate 10.1 " 10.0 101 80-120

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

Project: Jct. F-17 MW-1  
Project Number: 505  
Project Manager: Kristin Pope

Fax: (505) 397-1471  
Reported:  
02/02/05 13:10

**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 EB50115 - General Preparation (WetChem)**

**LCS Dup (EB50115-BSD1)**

Prepared & Analyzed: 01/28/05

Chloride	9.88		mg/L	10.0		98.8	80-120	1.84	20	
Sulfate	10.3		"	10.0		103	80-120	1.96	20	

**Calibration Check (EB50115-CCV1)**

Prepared & Analyzed: 01/28/05

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

**Duplicate (EB50115-DUP1)**

Source: SA26007-01

Prepared & Analyzed: 01/28/05

Sulfate	1860	50.0	mg/L		1930			3.69	20	
Chloride	976	50.0	"		1010			3.42	20	

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

Project: Jct. F-17 MW-1  
Project Number: 505  
Project Manager: Kristin Pope

Fax: (505) 397-1471  
Reported:  
02/02/05 13:10

**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 EB50114 - 6010B/No Digestion**

**Blank (EB50114-BLK1)**

Prepared & Analyzed: 02/01/05

Calcium	ND	0.0100	mg/L							
Magnesium	ND	0.00100	"							
Potassium	ND	0.0500	"							
Sodium	ND	0.0100	"							

**Calibration Check (EB50114-CCV1)**

Prepared & Analyzed: 02/01/05

Calcium	2.14		mg/L	2.00		107	85-115			
Magnesium	2.19		"	2.00		110	85-115			
Potassium	2.12		"	2.00		106	85-115			
Sodium	2.17		"	2.00		108	85-115			

**Duplicate (EB50114-DUP1)**

Source: 5A28003-01

Prepared & Analyzed: 02/01/05

Calcium	640	1.00	mg/L		614			4.15	20	
Magnesium	346	0.100	"		331			4.43	20	
Potassium	24.0	0.500	"		23.9			0.418	20	
Sodium	1100	10.0	"		1120			1.80	20	

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

Project: Jct. F-17 MW-1  
Project Number: 505  
Project Manager: Kristin Pope

Fax: (505) 397-1471  
Reported:  
02/02/05 13:10

### 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  
Dup Duplicate

Report Approved By:

*Raland K Tuttle*

Date:

2/2/05

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

Jeanne Mc Murrey, Inorg. Tech Director  
James L. Hawkins, Chemist/Geologist  
Sandra Sanchez, Lab Tech.

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  
Variance / Corrective Action Report – Sample Log-In**

Client: Rice Operating Co.  
 Date/Time: 1/28/05 11:14  
 Order #: SA28005  
 Initials: CK

**Sample Receipt Checklist**

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

Other observations:

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**Variance Documentation:**

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

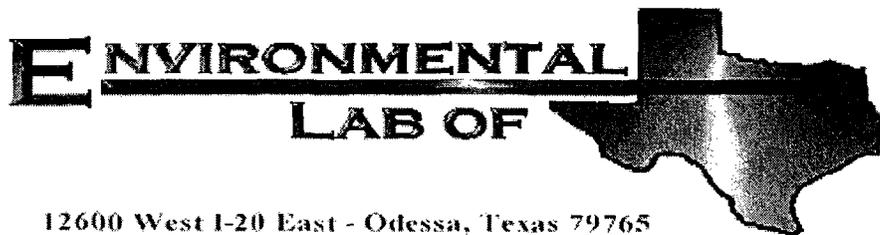
\_\_\_\_\_  
 \_\_\_\_\_

Corrective Action Taken:

\_\_\_\_\_  
 \_\_\_\_\_  
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 \_\_\_\_\_  
 \_\_\_\_\_  
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**Analytical Report**

**5/06/2005**



12600 West I-20 East - Odessa, Texas 79765

## Analytical Report

Prepared for:

Tim Reed

Highlander Environmental Corp.

1910 N. Big Spring St.

Midland, TX 79705

Project: Rice/ F-17

Project Number: 2305

Location: Lea County, NM

Lab Order Number: 5D28003

Report Date: 05/06/05

Highlander Environmental Corp.  
1910 N. Big Spring St.  
Midland TX, 79705

Project: Rice/ F-17  
Project Number: 2305  
Project Manager: Tim Reed

Fax: (432) 682-3946  
Reported:  
05/06/05 17:13

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	5D28003-01	Water	04/28/05 11:00	04/28/05 15:00

Highlander Environmental Corp.  
1910 N. Big Spring St.  
Midland TX, 79705

Project: Rice/ F-17  
Project Number: 2305  
Project Manager: Tim Reed

Fax: (432) 682-3946  
Reported:  
05/06/05 17:13

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-1 (5D28003-01) Water</b>									
Benzene	ND	0.00100	mg/L	1	EE50609	05/04/05	05/04/05	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		93.5 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.5 %	80-120		"	"	"	"	

Highlander Environmental Corp.  
1910 N. Big Spring St.  
Midland TX, 79705

Project: Rice/ F-17  
Project Number: 2305  
Project Manager: Tim Reed

Fax: (432) 682-3946

Reported:  
05/06/05 17:13

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-1 (SD28003-01) Water</b>									
Total Alkalinity	181	2.00	mg/L	1	EE50509	05/02/05	05/02/05	EPA 310.2M	
Chloride	2510	25.0	"	50	EE50302	05/02/05	05/02/05	EPA 300.0	
Total Dissolved Solids	4640	5.00	"	1	EE50508	05/03/05	05/04/05	EPA 160.1	
Sulfate	259	25.0	"	50	EE50302	05/02/05	05/02/05	EPA 300.0	

Environmental Lab of Texas

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Page 3 of 10

Highlander Environmental Corp.  
1910 N. Big Spring St.  
Midland TX, 79705

Project: Rice/ F-17  
Project Number: 2305  
Project Manager: Tim Reed

Fax: (432) 682-3946  
Reported:  
05/06/05 17:13

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-1 (5D28003-01) Water</b>									
Calcium	352	0.500	mg/L	50	EE50505	05/05/05	05/05/05	EPA 6010B	
Magnesium	216	0.0500	"	"	"	"	"	"	
Potassium	25.7	0.500	"	10	"	"	"	"	
Sodium	1110	10.0	"	1000	"	"	"	"	

Environmental Lab of Texas

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Page 4 of 10

Highlander Environmental Corp.  
1910 N. Big Spring St.  
Midland TX, 79705

Project: Rice/ F-17  
Project Number: 2305  
Project Manager: Tim Reed

Fax: (432) 682-3946  
Reported:  
05/06/05 17:13

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch EE50609 - EPA 5030C (GC)**

**Blank (EE50609-BLK1)**

Prepared & Analyzed: 05/04/05

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	16.6		ug/l	20.0		83.0	80-120			
Surrogate: 4-Bromofluorobenzene	16.4		"	20.0		82.0	80-120			

**LCS (EE50609-BS1)**

Prepared & Analyzed: 05/04/05

Benzene	99.6		ug/l	100		99.6	80-120			
Toluene	102		"	100		102	80-120			
Ethylbenzene	103		"	100		103	80-120			
Xylene (p/m)	206		"	200		103	80-120			
Xylene (o)	101		"	100		101	80-120			
Surrogate: a,a,a-Trifluorotoluene	17.5		"	20.0		87.5	80-120			
Surrogate: 4-Bromofluorobenzene	23.3		"	20.0		116	80-120			

**Calibration Check (EE50609-CCV1)**

Prepared: 05/04/05 Analyzed: 05/05/05

Benzene	92.7		ug/l	100		92.7	80-120			
Toluene	92.3		"	100		92.3	80-120			
Ethylbenzene	87.7		"	100		87.7	80-120			
Xylene (p/m)	191		"	200		95.5	80-120			
Xylene (o)	89.9		"	100		89.9	80-120			
Surrogate: a,a,a-Trifluorotoluene	16.8		"	20.0		84.0	80-120			
Surrogate: 4-Bromofluorobenzene	23.6		"	20.0		118	80-120			

**Matrix Spike (EE50609-MS1)**

Source: 5D29019-03

Prepared: 05/04/05 Analyzed: 05/06/05

Benzene	86.7		ug/l	100	ND	86.7	80-120			
Toluene	88.7		"	100	ND	88.7	80-120			
Ethylbenzene	86.8		"	100	ND	86.8	80-120			
Xylene (p/m)	177		"	200	ND	88.5	80-120			
Xylene (o)	86.5		"	100	ND	86.5	80-120			
Surrogate: a,a,a-Trifluorotoluene	16.5		"	20.0		82.5	80-120			
Surrogate: 4-Bromofluorobenzene	21.3		"	20.0		106	80-120			

Environmental Lab of Texas

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Page 5 of 10

Highlander Environmental Corp.  
 1910 N. Big Spring St.  
 Midland TX, 79705

Project: Rice/ F-17  
 Project Number: 2305  
 Project Manager: Tim Reed

Fax: (432) 682-3946  
 Reported:  
 05/06/05 17:13

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch EE50609 - EPA 5030C (GC)**

**Matrix Spike Dup (EE50609-MSD1)**

Source: SD29019-03

Prepared: 05/04/05 Analyzed: 05/06/05

Benzene	86.5		ug/l	100	ND	86.5	80-120	0.231	20	
Toluene	90.0		"	100	ND	90.0	80-120	1.45	20	
Ethylbenzene	90.6		"	100	ND	90.6	80-120	4.28	20	
Xylene (p/m)	186		"	200	ND	93.0	80-120	4.96	20	
Xylene (o)	91.6		"	100	ND	91.6	80-120	5.73	20	
Surrogate: <i>a,a,a</i> -Trifluorotoluene	16.8		"	20.0		84.0	80-120			
Surrogate: 4-Bromofluorobenzene	22.9		"	20.0		114	80-120			

Highlander Environmental Corp.  
 1910 N. Big Spring St.  
 Midland TX, 79705

Project: Rice/ F-17  
 Project Number: 2305  
 Project Manager: Tim Reed

Fax: (432) 682-3946  
 Reported:  
 05/06/05 17:13

**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 EE50302 - General Preparation (WetChem)**

**Blank (EE50302-BLK1)**

Prepared & Analyzed: 05/02/05

Chloride	ND	0.500	mg/L							
Sulfate	ND	0.500	"							

**LCS (EE50302-BS1)**

Prepared & Analyzed: 05/02/05

Sulfate	10.4		mg/L	10.0		104	80-120			
Chloride	9.94		"	10.0		99.4	80-120			

**Calibration Check (EE50302-CCV1)**

Prepared & Analyzed: 05/02/05

Chloride	10.9		mg/L	10.0		109	80-120			
Sulfate	11.3		"	10.0		113	80-120			

**Duplicate (EE50302-DUP1)**

Source: 5D28003-01

Prepared & Analyzed: 05/02/05

Sulfate	215	25.0	mg/L		259			18.6	20	
Chloride	2570	25.0	"		2510			2.36	20	

**Batch EE50508 - Filtration Preparation**

**Blank (EE50508-BLK1)**

Prepared: 05/03/05 Analyzed: 05/04/05

Total Dissolved Solids	ND	5.00	mg/L							
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**Duplicate (EE50508-DUP1)**

Source: 5D28003-01

Prepared: 05/03/05 Analyzed: 05/04/05

Total Dissolved Solids	4650	5.00	mg/L		4640			0.215	20	
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**Batch EE50509 - General Preparation (WetChem)**

**Blank (EE50509-BLK1)**

Prepared & Analyzed: 05/02/05

Total Alkalinity	ND	2.00	mg/L							
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Highlander Environmental Corp.  
 1910 N. Big Spring St.  
 Midland TX, 79705

Project: Rice/ F-17  
 Project Number: 2305  
 Project Manager: Tim Reed

Fax: (432) 682-3946  
 Reported:  
 05/06/05 17:13

**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 EE50509 - General Preparation (WetChem)**

**Duplicate (EE50509-DUP1)**

Source: 5D28003-01

Prepared & Analyzed: 05/02/05

Total Alkalinity	182	2.00	mg/L		181			0.551	20	
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**Reference (EE50509-SRM1)**

Prepared & Analyzed: 05/02/05

Bicarbonate Alkalinity	230		mg/L	200		115	80-120			
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Highlander Environmental Corp.  
 1910 N. Big Spring St.  
 Midland TX, 79705

Project: Rice/ F-17  
 Project Number: 2305  
 Project Manager: Tim Reed

Fax: (432) 682-3946  
 Reported:  
 05/06/05 17:13

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch EE50505 - 6010B/No Digestion**

**Blank (EE50505-BLK1)**

Prepared & Analyzed: 05/05/05

Calcium	ND	0.0100	mg/L							
Magnesium	ND	0.00100	"							
Potassium	ND	0.0500	"							
Sodium	ND	0.0100	"							

**Calibration Check (EE50505-CCV1)**

Prepared & Analyzed: 05/05/05

Calcium	1.71		mg/L	2.00		85.5	85-115			
Magnesium	2.24		"	2.00		112	85-115			
Potassium	1.90		"	2.00		95.0	85-115			
Sodium	2.21		"	2.00		110	85-115			

**Duplicate (EE50505-DUP1)**

Source: SD28003-01

Prepared & Analyzed: 05/05/05

Calcium	320	0.500	mg/L		352			9.52	20	
Magnesium	192	0.0500	"		216			11.8	20	
Potassium	21.5	0.500	"		25.7			17.8	20	
Sodium	999	10.0	"		1110			10.5	20	

Environmental Lab of Texas

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Highlander Environmental Corp.  
1910 N. Big Spring St.  
Midland TX, 79705

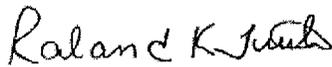
Project: Rice/ F-17  
Project Number: 2305  
Project Manager: Tim Reed

Fax: (432) 682-3946  
Reported:  
05/06/05 17:13

### 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  
Dup Duplicate

Report Approved By:



Date:

5/6/2005

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

Jeanne Mc Murrey, Inorg. Tech Director  
James L. Hawkins, Chemist/Geologist  
Sandra Sanchez, Lab Tech.

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

Client: Highlander  
 Date/Time: 4/28/05 3:15  
 Order #: 5D28003  
 Initials: CK

**Sample Receipt Checklist**

	Yes	No		
Temperature of container/cooler?			6.0	C
Shipping container/cooler in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Custody Seals intact on shipping container/cooler?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>Not present</u>	
Custody Seals intact on sample bottles?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>Not present</u>	
Chain of custody present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Sample Instructions complete on Chain of Custody?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Chain of Custody signed when relinquished and received?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Chain of custody agrees with sample label(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Container labels legible and intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Sample Matrix and properties same as on chain of custody?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples in proper container/bottle?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples properly preserved?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Sample bottles intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Preservations documented on Chain of Custody?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Containers documented on Chain of Custody?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Sufficient sample amount for indicated test?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
All samples received within sufficient hold time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
VGC samples have zero headspace?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>Not Applicable</u>	

Other observations:

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**Variance Documentation:**

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

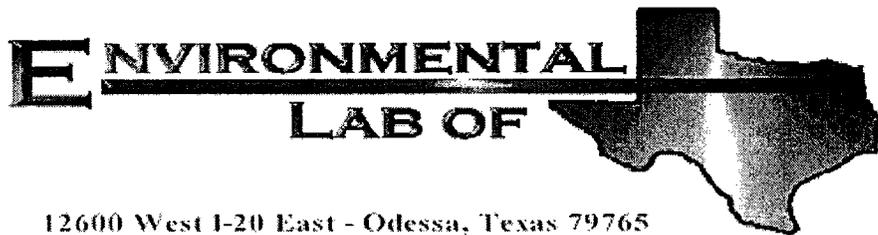
\_\_\_\_\_  
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Corrective Action Taken:

\_\_\_\_\_  
 \_\_\_\_\_  
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 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**Analytical Report**

**6/28/2005**



12600 West I-20 East - Odessa, Texas 79765

## Analytical Report

Prepared for:

Tim Reed

Highlander Environmental Corp.

1910 N. Big Spring St.

Midland, TX 79705

Project: Rice/ F-17

Project Number: 2305

Location: None Given

Lab Order Number: 5F22004

Report Date: 06/28/05

Highlander Environmental Corp.  
1910 N. Big Spring St.  
Midland TX, 79705

Project: Rice/ F-17  
Project Number: 2305  
Project Manager: Tim Reed

Fax: (432) 682-3946

Reported:  
06/28/05 16:46

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	5F22004-01	Water	06/21/05 16:15	06/22/05 09:00

Highlander Environmental Corp.  
 1910 N. Big Spring St.  
 Midland TX, 79705

Project: Rice/ F-17  
 Project Number: 2305  
 Project Manager: Tim Reed

Fax: (432) 682-3946  
 Reported:  
 06/28/05 16:46

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-1 (SF22004-01) Water</b>									
Benzene	ND	0.00100	mg/L	1	EF52711	06/27/05	06/27/05	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		<i>114 %</i>	<i>80-120</i>		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		<i>102 %</i>	<i>80-120</i>		"	"	"	"	

Highlander Environmental Corp.  
1910 N. Big Spring St.  
Midland TX, 79705

Project: Rice/ F-17  
Project Number: 2305  
Project Manager: Tim Reed

Fax: (432) 682-3946  
**Reported:**  
06/28/05 16:46

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-1 (SF22004-01) Water</b>									
Total Alkalinity	186	2.00	mg/L	1	EF52213	06/22/05	06/22/05	EPA 310.2M	
Chloride	2310	50.0	"	100	EF52301	06/22/05	06/22/05	EPA 300.0	
Total Dissolved Solids	4770	10.0	"	2	EF52212	06/22/05	06/23/05	EPA 160.1	
Sulfate	339	50.0	"	100	EF52301	06/22/05	06/22/05	EPA 300.0	

Environmental Lab of Texas

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Page 3 of 10

Highlander Environmental Corp.  
1910 N. Big Spring St.  
Midland TX, 79705

Project: Rice/ F-17  
Project Number: 2305  
Project Manager: Tim Reed

Fax: (432) 682-3946  
Reported:  
06/28/05 16:46

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-1 (SF22004-01) Water</b>									
Calcium	354	0.500	mg/L	50	EF52306	06/23/05	06/23/05	EPA 6010B	
Magnesium	178	0.0500	"	"	"	"	"	"	
Potassium	18.0	0.500	"	10	"	"	"	"	
Sodium	821	1.00	"	100	"	"	"	"	

Environmental Lab of Texas

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Page 4 of 10

Highlander Environmental Corp.  
1910 N. Big Spring St.  
Midland TX, 79705

Project: Rice/ F-17  
Project Number: 2305  
Project Manager: Tim Reed

Fax: (432) 682-3946  
Reported:  
06/28/05 16:46

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch EF52711 - EPA 5030C (GC)**

**Blank (EF52711-BLK1)**

Prepared & Analyzed: 06/27/05

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	21.7		ug/l	20.0		108	80-120			
Surrogate: 4-Bromofluorobenzene	19.2		"	20.0		96.0	80-120			

**LCS (EF52711-BS1)**

Prepared & Analyzed: 06/27/05

Benzene	104		ug/l	100		104	80-120			
Toluene	105		"	100		105	80-120			
Ethylbenzene	105		"	100		105	80-120			
Xylene (p/m)	206		"	200		103	80-120			
Xylene (o)	97.9		"	100		97.9	80-120			
Surrogate: a,a,a-Trifluorotoluene	22.2		"	20.0		111	80-120			
Surrogate: 4-Bromofluorobenzene	23.8		"	20.0		119	80-120			

**LCS Dup (EF52711-BSD1)**

Prepared & Analyzed: 06/27/05

Benzene	104		ug/l	100		104	80-120	0.00	20	
Toluene	106		"	100		106	80-120	0.948	20	
Ethylbenzene	98.9		"	100		98.9	80-120	5.98	20	
Xylene (p/m)	207		"	200		104	80-120	0.966	20	
Xylene (o)	93.7		"	100		93.7	80-120	4.38	20	
Surrogate: a,a,a-Trifluorotoluene	23.2		"	20.0		116	80-120			
Surrogate: 4-Bromofluorobenzene	21.4		"	20.0		107	80-120			

**Calibration Check (EF52711-CCV1)**

Prepared: 06/27/05 Analyzed: 06/28/05

Benzene	96.9		ug/l	100		96.9	80-120			
Toluene	98.6		"	100		98.6	80-120			
Ethylbenzene	92.8		"	100		92.8	80-120			
Xylene (p/m)	193		"	200		96.5	80-120			
Xylene (o)	87.5		"	100		87.5	80-120			
Surrogate: a,a,a-Trifluorotoluene	21.4		"	20.0		107	80-120			
Surrogate: 4-Bromofluorobenzene	20.0		"	20.0		100	80-120			

Environmental Lab of Texas

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Highlander Environmental Corp.  
 1910 N. Big Spring St.  
 Midland TX, 79705

Project: Rice/ F-17  
 Project Number: 2305  
 Project Manager: Tim Reed

Fax: (432) 682-3946

Reported:  
 06/28/05 16:46

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch EF52711 - EPA 5030C (GC)**

**Matrix Spike (EF52711-MS1)**

Source: SF27009-02

Prepared: 06/27/05 Analyzed: 06/28/05

Benzene	92.7		ug/l	100	ND	92.7	80-120			
Toluene	91.7		"	100	ND	91.7	80-120			
Ethylbenzene	87.5		"	100	ND	87.5	80-120			
Xylene (p/m)	177		"	200	ND	88.5	80-120			
Xylene (o)	85.0		"	100	ND	85.0	80-120			
Surrogate: a,a,a-Trifluorotoluene	20.0		"	20.0		100	80-120			
Surrogate: 4-Bromofluorobenzene	22.0		"	20.0		110	80-120			

Highlander Environmental Corp.  
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 Reported:  
 06/28/05 16:46

**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 EF52212 - Filtration Preparation**

<b>Blank (EF52212-BLK1)</b>		Prepared: 06/22/05 Analyzed: 06/23/05								
Total Dissolved Solids	ND	5.00	mg/L							

<b>Duplicate (EF52212-DUP1)</b>		Source: 5F16004-04 Prepared: 06/22/05 Analyzed: 06/23/05								
Total Dissolved Solids	277	5.00	mg/L		276			0.362	20	

**Batch EF52213 - General Preparation (WetChem)**

<b>Blank (EF52213-BLK1)</b>		Prepared & Analyzed: 06/22/05								
Total Alkalinity	ND	2.00	mg/L							

<b>Duplicate (EF52213-DUP1)</b>		Source: 5F16009-01 Prepared & Analyzed: 06/22/05								
Total Alkalinity	153	2.00	mg/L		153			0.00	20	

<b>Reference (EF52213-SRM1)</b>		Prepared & Analyzed: 06/22/05								
Bicarbonate Alkalinity	230		mg/L	200		115		80-120		

**Batch EF52301 - General Preparation (WetChem)**

<b>Blank (EF52301-BLK1)</b>		Prepared & Analyzed: 06/22/05								
Chloride	ND	0.500	mg/L							
Sulfate	ND	0.500	"							

<b>LCS (EF52301-BS1)</b>		Prepared & Analyzed: 06/22/05								
Chloride	11.8		mg/L	10.0		118		80-120		
Sulfate	11.1		"	10.0		111		80-120		

Highlander Environmental Corp.  
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 Project Manager: Tim Reed

Fax: (432) 682-3946  
 Reported:  
 06/28/05 16:46

**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
<b>Batch EF52301 - General Preparation (WetChem)</b>										
<b>Calibration Check (EF52301-CCV1)</b>					Prepared & Analyzed: 06/22/05					
Chloride	10.7		mg/L	10.0		107	80-120			
Sulfate	10.0		"	10.0		100	80-120			
<b>Duplicate (EF52301-DUP1)</b>					Source: 5F21001-01 Prepared & Analyzed: 06/22/05					
Sulfate	25.7	2.50	mg/L		28.1			8.92	20	
Chloride	17.1	2.50	"		17.0			0.587	20	

Highlander Environmental Corp.  
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 Reported:  
 06/28/05 16:46

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch EF52306 - 6010B/No Digestion**

<b>Blank (EF52306-BLK1)</b>				Prepared & Analyzed: 06/23/05						
Calcium	ND	0.0100	mg/L							
Magnesium	ND	0.00100	"							
Potassium	ND	0.0500	"							
Sodium	ND	0.0100	"							

<b>Calibration Check (EF52306-CCV1)</b>				Prepared & Analyzed: 06/23/05						
Calcium	1.79		mg/L	2.00		89.5	85-115			
Magnesium	2.07		"	2.00		104	85-115			
Potassium	1.76		"	2.00		88.0	85-115			
Sodium	1.91		"	2.00		95.5	85-115			

<b>Duplicate (EF52306-DUP1)</b>				Source: 5F21017-01		Prepared & Analyzed: 06/23/05				
Calcium	58.8	0.100	mg/L		57.8			1.72	20	
Magnesium	22.8	0.0100	"		23.0			0.873	20	
Potassium	18.3	0.500	"		19.2			4.80	20	
Sodium	150	0.500	"		155			3.28	20	

Highlander Environmental Corp.  
1910 N. Big Spring St.  
Midland TX, 79705

Project: Rice/ F-17  
Project Number: 2305  
Project Manager: Tim Reed

Fax: (432) 682-3946  
Reported:  
06/28/05 16:46

### 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  
Dup Duplicate

Report Approved By: \_\_\_\_\_

*Raland K Tuttle*

Date: 6/28/2005

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

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Page 10 of 10



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

Client: Highlander

Date/Time: 10/22/05 9:15

Order #: SF22004

Initials: CR

**Sample Receipt Checklist**

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

Other observations:  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

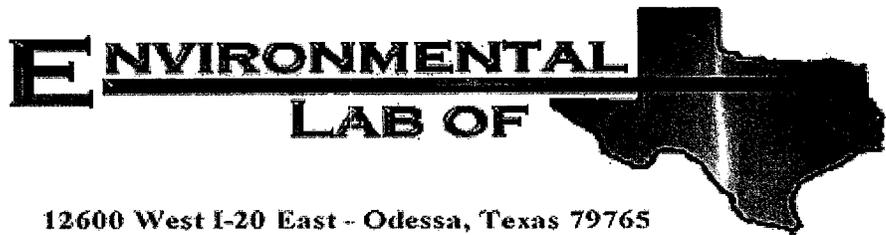
**Variance Documentation:**

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

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

**Analytical Report**

**9/28/2005**



12600 West I-20 East - Odessa, Texas 79765

## Analytical Report

Prepared for:

Tim Reed

Highlander Environmental Corp.

1910 N. Big Spring St.

Midland, TX 79705

Project: Rice/ F-17

Project Number: 2305

Location: None Given

Lab Order Number: 5119006

Report Date: 09/28/05

Highlander Environmental Corp.  
1910 N. Big Spring St.  
Midland TX, 79705

Project: Rice/ F-17  
Project Number: 2305  
Project Manager: Tim Reed

Fax: (432) 682-3946  
Reported:  
09/28/05 15:18

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	5I19006-01	Water	09/16/05 10:45	09/16/05 15:45

Highlander Environmental Corp.  
1910 N. Big Spring St.  
Midland TX, 79705

Project: Rice/ F-17  
Project Number: 2305  
Project Manager: Tim Reed

Fax: (432) 682-3946  
Reported:  
09/28/05 15:18

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-1 (5119006-01) Water</b>									
Benzene	ND	0.00100	mg/L	1	E151910	09/21/05	09/22/05	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
<i>Surrogate: <math>\alpha,\alpha,\alpha</math>-Trifluorotoluene</i>		94.5 %		80-120	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		84.2 %		80-120	"	"	"	"	

Highlander Environmental Corp.  
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Midland TX, 79705

Project: Rice/ F-17  
Project Number: 2305  
Project Manager: Tim Reed

Fax: (432) 682-3946  
Reported:  
09/28/05 15:18

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-1 (SI19006-01) Water</b>									
Total Alkalinity	173	2.00	mg/L	1	EI52214	09/21/05	09/21/05	EPA 310.2M	
Chloride	1890	25.0	"	50	EI52001	09/19/05	09/20/05	EPA 300.0	
pH	7.09		pH Units	1	EI52004	09/19/05	09/19/05	EPA 150.1	O-04
Total Dissolved Solids	4540	5.00	mg/L	"	EI52607	09/21/05	09/22/05	EPA 160.1	
Sulfate	147	25.0	"	50	EI52001	09/19/05	09/20/05	EPA 300.0	

Highlander Environmental Corp.  
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Midland TX, 79705

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Project Manager: Tim Reed

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Reported:  
09/28/05 15:18

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (5I19006-01) Water									
Calcium	312	0.500	mg/L	50	E152709	09/27/05	09/27/05	EPA 6010B	
Magnesium	152	0.0500	"	"	"	"	"	"	
Potassium	15.8	0.500	"	10	"	"	"	"	
Sodium	548	2.00	"	200	"	"	"	"	

Highlander Environmental Corp.  
1910 N. Big Spring St.  
Midland TX, 79705

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Reported:  
09/28/05 15:18

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch EI51910 - EPA 5030C (GC)**

**Blank (EI51910-BLK1)**

Prepared: 09/19/05 Analyzed: 09/22/05

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	37.3		ug/l	40.0		93.2	80-120			
Surrogate: 4-Bromofluorobenzene	35.7		"	40.0		89.2	80-120			

**LCS (EI51910-BS1)**

Prepared: 09/19/05 Analyzed: 09/21/05

Benzene	45.3		ug/l	50.0		90.6	80-120			
Toluene	42.9		"	50.0		85.8	80-120			
Ethylbenzene	48.3		"	50.0		96.6	80-120			
Xylene (p/m)	89.1		"	100		89.1	80-120			
Xylene (o)	54.6		"	50.0		109	80-120			
Surrogate: a,a,a-Trifluorotoluene	37.7		"	40.0		94.2	80-120			
Surrogate: 4-Bromofluorobenzene	46.0		"	40.0		115	80-120			

**Calibration Check (EI51910-CCV1)**

Prepared: 09/19/05 Analyzed: 09/22/05

Benzene	47.1		ug/l	50.0		94.2	80-120			
Toluene	44.9		"	50.0		89.8	80-120			
Ethylbenzene	49.1		"	50.0		98.2	80-120			
Xylene (p/m)	89.8		"	100		89.8	80-120			
Xylene (o)	52.6		"	50.0		105	80-120			
Surrogate: a,a,a-Trifluorotoluene	37.7		"	40.0		94.2	0-200			
Surrogate: 4-Bromofluorobenzene	36.9		"	40.0		92.2	0-200			

**Matrix Spike (EI51910-MS1)**

Source: 5115012-34

Prepared: 09/19/05 Analyzed: 09/22/05

Benzene	41.2		ug/l	50.0	ND	82.4	80-120			
Toluene	40.3		"	50.0	ND	80.6	80-120			
Ethylbenzene	40.0		"	50.0	ND	80.0	80-120			
Xylene (p/m)	80.7		"	100	ND	80.7	80-120			
Xylene (o)	40.6		"	50.0	ND	81.2	80-120			
Surrogate: a,a,a-Trifluorotoluene	35.7		"	40.0		89.2	80-120			
Surrogate: 4-Bromofluorobenzene	34.6		"	40.0		86.5	80-120			

Environmental Lab of Texas

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Highlander Environmental Corp.  
 1910 N. Big Spring St.  
 Midland TX, 79705

Project: Rice/ F-17  
 Project Number: 2305  
 Project Manager: Tim Reed

Fax: (432) 682-3946

Reported:  
 09/28/05 15:18

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch EI51910 - EPA 5030C (GC)**

Matrix Spike Dup (EI51910-MSD1)	Source: 5I15012-34	Prepared: 09/19/05	Analyzed: 09/22/05
Benzene	42.6	ug/l	50.0
Toluene	40.0	"	50.0
Ethylbenzene	41.6	"	50.0
Xylene (p/m)	81.2	"	100
Xylene (o)	42.9	"	50.0
Surrogate: a,a,a-Trifluorotoluene	35.1	"	40.0
Surrogate: 4-Bromofluorobenzene	35.6	"	40.0

Highlander Environmental Corp.  
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 Midland TX, 79705

Project: Rice/ F-17  
 Project Number: 2305  
 Project Manager: Tim Reed

Fax: (432) 682-3946

Reported:  
 09/28/05 15:18

**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 EI52001 - General Preparation (WetChem)**

**Blank (EI52001-BLK1)** Prepared: 09/19/05 Analyzed: 09/20/05

Chloride	ND	0.500	mg/L							
Sulfate	ND	0.500	"							

**LCS (EI52001-BS1)** Prepared: 09/19/05 Analyzed: 09/20/05

Chloride	8.10		mg/L	10.0		81.0	80-120			
Sulfate	8.85		"	10.0		88.5	80-120			

**Calibration Check (EI52001-CCV1)** Prepared: 09/19/05 Analyzed: 09/20/05

Chloride	10.2		mg/L	10.0		102	80-120			
Sulfate	10.2		"	10.0		102	80-120			

**Duplicate (EI52001-DUP1)** Source: 5I19003-01 Prepared: 09/19/05 Analyzed: 09/20/05

Chloride	154	5.00	mg/L		151			1.97	20	
Sulfate	134	5.00	"		133			0.749	20	

**Batch EI52004 - General Preparation (WetChem)**

**Calibration Check (EI52004-CCV1)** Prepared & Analyzed: 09/19/05

pH	6.96		pH Units	7.00		99.4	97.5-102.5			O-04
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**Duplicate (EI52004-DUP1)** Source: 5I19003-01 Prepared & Analyzed: 09/19/05

pH	7.27		pH Units		7.32			0.685	2.5	O-04
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**Batch EI52214 - General Preparation (WetChem)**

**Blank (EI52214-BLK1)** Prepared & Analyzed: 09/21/05

Total Alkalinity	ND	2.00	mg/L							
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Highlander Environmental Corp.  
1910 N. Big Spring St.  
Midland TX, 79705

Project: Rice/ F-17  
Project Number: 2305  
Project Manager: Tim Reed

Fax: (432) 682-3946

Reported:  
09/28/05 15:18

**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
<b>Batch EI52214 - General Preparation (WetChem)</b>										
<b>Calibration Check (EI52214-CCV1)</b>				Prepared & Analyzed: 09/21/05						
Bicarbonate Alkalinity	229		mg/L	200		114	80-120			
<b>Duplicate (EI52214-DUP1)</b>				Source: 5I19006-01		Prepared & Analyzed: 09/21/05				
Total Alkalinity	174	2.00	mg/L		173			0.576	20	
<b>Batch EI52607 - General Preparation (WetChem)</b>										
<b>Blank (EI52607-BLK1)</b>				Prepared & Analyzed: 09/22/05						
Total Dissolved Solids	ND	5.00	mg/L							
<b>Duplicate (EI52607-DUP1)</b>				Source: 5I19003-01		Prepared & Analyzed: 09/22/05				
Total Dissolved Solids	812	5.00	mg/L		840			3.39	5	
<b>Duplicate (EI52607-DUP2)</b>				Source: 5I19033-08		Prepared & Analyzed: 09/22/05				
Total Dissolved Solids	22100	5.00	mg/L		22400			1.35	5	

Highlander Environmental Corp.  
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 Project Manager: Tim Reed

Fax: (432) 682-3946

Reported:  
 09/28/05 15:18

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch E152709 - 6010B/No Digestion**

**Blank (E152709-BLK1)**

Prepared & Analyzed: 09/27/05

Calcium	ND	0.0100	mg/L							
Magnesium	ND	0.00100	"							
Potassium	ND	0.0500	"							
Sodium	ND	0.0100	"							

**Calibration Check (E152709-CCV1)**

Prepared & Analyzed: 09/27/05

Calcium	2.02		mg/L	2.00	101	85-115				
Magnesium	1.83		"	2.00	91.5	85-115				
Potassium	2.08		"	2.00	104	85-115				
Sodium	1.77		"	2.00	88.5	85-115				

**Duplicate (E152709-DUP1)**

Source: S119003-01

Prepared & Analyzed: 09/27/05

Calcium	78.0	0.500	mg/L		80.2			2.78	20	
Magnesium	32.2	0.0100	"		32.6			1.23	20	
Potassium	8.07	0.250	"		8.08			0.124	20	
Sodium	88.9	0.500	"		87.7			1.36	20	

Environmental Lab of Texas

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

Page 9 of 10

Highlander Environmental Corp.  
1910 N. Big Spring St.  
Midland TX, 79705

Project: Rice/ F-17  
Project Number: 2305  
Project Manager: Tim Reed

Fax: (432) 682-3946

Reported:  
09/28/05 15:18

### Notes and Definitions

O-04 This sample was analyzed outside the EPA recommended holding time.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

LCS Laboratory Control Spike

MS Matrix Spike

Dup Duplicate

Report Approved By:

*Raland K Tuttle*

Date:

9/28/2005

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

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Page 10 of 10

# Analysis Request and Chain of Custody Record

## HIGHLANDER ENVIRONMENTAL CORP.

1910 N. Big Spring St.  
Midland, Texas 79705

(432) 682-4559

Fax (432) 682-3946

CLIENT NAME: Rice SITE MANAGER: Tin Reed

PROJECT NO.: 2305 PROJECT NAME: Rice / F-17

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION
19000	9/11/05	10:45			X	MW-1

PRESERVATIVE METHOD

NUMBER OF CONTAINERS

FILTERED (Y/N)

HCL

HNO3

ICE

NONE

3

N

X

X

X

X

X

PAGE: \_\_\_\_\_ OF: \_\_\_\_\_  
ANALYSIS REQUEST  
(Circle or Specify Method No.)

<input checked="" type="checkbox"/>	GC/MS Vol. R240/R200/R24
<input type="checkbox"/>	GC/MS Semi Vol. R270/R25
<input type="checkbox"/>	PCB's R080/R09
<input type="checkbox"/>	PCB's R08/R08
<input checked="" type="checkbox"/>	HOD, TSS, (DB) Chloride
<input type="checkbox"/>	German Spec.
<input type="checkbox"/>	Alpha Beta (Ab)
<input type="checkbox"/>	PLM (Asbestos)
<input type="checkbox"/>	Metal/Lead

DATE: 9/16/05  
TIME: 7:30  
SAMPLED BY: Tin Reed  
SAMPLE SHIPPED BY: (Circle) RUS  
OTHER: UPS  
AIRBILL # \_\_\_\_\_  
RESULTS BY: \_\_\_\_\_  
HIGHLANDER CONTACT PERSON: Tin Reed  
RUSH CHARGES AUTHORIZED: Yes \_\_\_\_\_ No \_\_\_\_\_

RECEIVED BY: (Signature) \_\_\_\_\_ DATE: 9/16/05 TIME: 8:45  
RECEIVED BY: (Signature) \_\_\_\_\_ DATE: 9/16/05 TIME: 8:45  
RECEIVED BY: (Signature) \_\_\_\_\_ DATE: 9/16/05 TIME: 8:45  
RECEIVED BY: (Signature) \_\_\_\_\_ DATE: 9/16/05 TIME: 8:45

RECEIVING LABORATORY: FET  
ADDRESS: \_\_\_\_\_ STATE: TX ZIP: \_\_\_\_\_  
CITY: DD PHONE: \_\_\_\_\_  
MATERIAL: W-Water A-Air SD-Solid  
S-fal EL-Sludge O-Other

SAMPLE CONDITION WHEN RECEIVED: 3.0 Label Seal  
REMARKS: \_\_\_\_\_  
Please Fill out all copies - Laboratory retains yellow copy - Return original copy to Highlander Environmental Corp. - Project Manager retains pink copy - Accounting receives Gold copy.

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

Client: Highlander

Date/Time: 9/16/05 3:45

Order #: SL 19006

Initials: CK

Sample Receipt Checklist

	Yes	No		
Temperature of container/cooler?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3.0	C
Shipping container/cooler in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Custody Seals intact on shipping container/cooler?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Not present	
Custody Seals intact on sample bottles?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Not present	
Chain of custody present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Sample Instructions complete on Chain of Custody?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Chain of Custody signed when relinquished and received?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Chain of custody agrees with sample label(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Container labels legible and intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Sample Matrix and properties same as on chain of custody?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples in proper container/bottle?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples properly preserved?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Sample bottles intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Preservations documented on Chain of Custody?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Containers documented on Chain of Custody?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Sufficient sample amount for indicated test?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
All samples received within sufficient hold time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
VOC samples have zero headspace?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Not Applicable	

Other observations:

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Variance Documentation:

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

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

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Corrective Action Taken:

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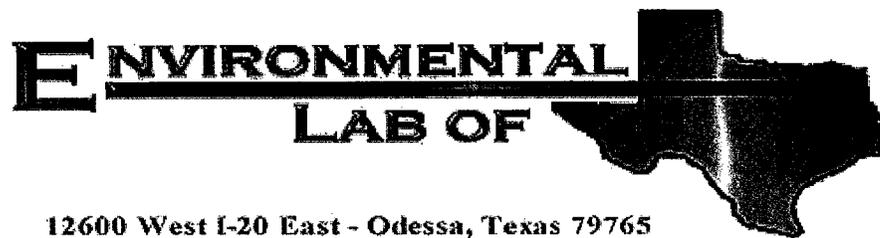
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**Analytical Report**

**10/31/2005**



12600 West I-20 East - Odessa, Texas 79765

## Analytical Report

**Prepared for:**

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

Project: BD Jct. F-17

Project Number: None Given

Location: Lea County

Lab Order Number: 5J20010

Report Date: 10/31/05

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

Project: BD Jct. F-17  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471  
**Reported:**  
10/31/05 10:41

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Monitor Well #1	5J20010-01	Water	10/17/05 14:20	10/20/05 09:30

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

Project: BD Jct. F-17  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

Reported:  
10/31/05 10:41

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Monitor Well #1 (5J20010-01) Water</b>									
Benzene	ND	0.00100	mg/L	1	EJ52011	10/20/05	10/20/05	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		95.0 %	80-120	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		80.0 %	80-120	"	"	"	"	"	

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

Project: BD Jct. F-17  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

Reported:  
10/31/05 10:41

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Monitor Well #1 (5J20010-01) Water</b>									
Total Alkalinity	166	2.00	mg/L	1	EJ52114	10/21/05	10/21/05	EPA 310.2M	
Chloride	2400	50.0	"	100	EJ52110	10/21/05	10/21/05	EPA 300.0	
Total Dissolved Solids	4830	5.00	"	1	EJ52403	10/20/05	10/21/05	EPA 160.1	
Sulfate	319	50.0	"	100	EJ52110	10/21/05	10/21/05	EPA 300.0	

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

Project: BD Jct. F-17  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

Reported:  
10/31/05 10:41

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Monitor Well #1 (5J20010-01) Water**

Calcium	295	1.00	mg/L	100	EJ52111	10/21/05	10/21/05	EPA 6010B	
Magnesium	129	0.0500	"	50	"	"	"	"	
Potassium	16.8	0.500	"	10	"	"	"	"	
Sodium	753	1.00	"	100	"	"	"	"	

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

Project: BD Jct. F-17  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

Reported:  
10/31/05 10:41

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch EJ52011 - EPA 5030C (GC)**

**Blank (EJ52011-BLK1)**

Prepared & Analyzed: 10/20/05

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	38.1		ug/l	40.0		95.2	80-120			
Surrogate: 4-Bromofluorobenzene	35.4		"	40.0		88.5	80-120			

**LCS (EJ52011-BS1)**

Prepared & Analyzed: 10/20/05

Benzene	0.0402	0.00100	mg/L	0.0500		80.4	80-120			
Toluene	0.0490	0.00100	"	0.0500		98.0	80-120			
Ethylbenzene	0.0592	0.00100	"	0.0500		118	80-120			
Xylene (p/m)	0.115	0.00100	"	0.100		115	80-120			
Xylene (o)	0.0584	0.00100	"	0.0500		117	80-120			
Surrogate: a,a,a-Trifluorotoluene	37.3		ug/l	40.0		93.2	80-120			
Surrogate: 4-Bromofluorobenzene	39.9		"	40.0		99.8	80-120			

**Calibration Check (EJ52011-CCV1)**

Prepared: 10/20/05 Analyzed: 10/24/05

Benzene	0.0598		mg/L	0.0500		120	80-120			
Toluene	0.0593		"	0.0500		119	80-120			
Ethylbenzene	0.0586		"	0.0500		117	80-120			
Xylene (p/m)	0.113		"	0.100		113	80-120			
Xylene (o)	0.0584		"	0.0500		117	80-120			
Surrogate: a,a,a-Trifluorotoluene	45.9		ug/l	40.0		115	80-120			
Surrogate: 4-Bromofluorobenzene	40.0		"	40.0		100	80-120			

**Matrix Spike (EJ52011-MS1)**

Source: 5J20030-02

Prepared: 10/20/05 Analyzed: 10/24/05

Benzene	0.0578	0.00100	mg/L	0.0500	ND	116	80-120			
Toluene	0.0568	0.00100	"	0.0500	ND	114	80-120			
Ethylbenzene	0.0584	0.00100	"	0.0500	ND	117	80-120			
Xylene (p/m)	0.109	0.00100	"	0.100	ND	109	80-120			
Xylene (o)	0.0571	0.00100	"	0.0500	ND	114	80-120			
Surrogate: a,a,a-Trifluorotoluene	41.9		ug/l	40.0		105	80-120			
Surrogate: 4-Bromofluorobenzene	34.8		"	40.0		87.0	80-120			

Environmental Lab of Texas

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

Project: BD Jct. F-17  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

Reported:  
10/31/05 10:41

**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 EJ52011 - EPA 5030C (GC)**

**Matrix Spike Dup (EJ52011-MSD1)**

Source: 5J20030-02

Prepared: 10/20/05 Analyzed: 10/24/05

Benzene	0.0591	0.00100	mg/L	0.0500	ND	118	80-120	1.71	20	
Toluene	0.0599	0.00100	"	0.0500	ND	120	80-120	5.13	20	
Ethylbenzene	0.0597	0.00100	"	0.0500	ND	119	80-120	1.69	20	
Xylene (p/m)	0.119	0.00100	"	0.100	ND	119	80-120	8.77	20	
Xylene (o)	0.0596	0.00100	"	0.0500	ND	119	80-120	4.29	20	
Surrogate: <i>a,a,a</i> -Trifluorotoluene	43.8		ug/l	40.0		110	80-120			
Surrogate: 4-Bromofluorobenzene	40.7		"	40.0		102	80-120			

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

Project: BD Jct. F-17  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471  
Reported:  
10/31/05 10:41

**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 EJ52110 - General Preparation (WetChem)**

**Blank (EJ52110-BLK1)**

Prepared & Analyzed: 10/21/05

Chloride	ND	0.500	mg/L							
Sulfate	ND	0.500	"							

**LCS (EJ52110-BS1)**

Prepared & Analyzed: 10/21/05

Chloride	8.53		mg/L	10.0		85.3	80-120			
Sulfate	8.86		"	10.0		88.6	80-120			

**Calibration Check (EJ52110-CCV1)**

Prepared & Analyzed: 10/21/05

Chloride	8.88		mg/L	10.0		88.8	80-120			
Sulfate	9.26		"	10.0		92.6	80-120			

**Duplicate (EJ52110-DUP1)**

Source: 5J20007-01

Prepared & Analyzed: 10/21/05

Chloride	992	12.5	mg/L		978			1.42	20	
Sulfate	355	12.5	"		357			0.562	20	

**Batch EJ52114 - General Preparation (WetChem)**

**Blank (EJ52114-BLK1)**

Prepared & Analyzed: 10/21/05

Total Alkalinity	ND	2.00	mg/L							
------------------	----	------	------	--	--	--	--	--	--	--

**Duplicate (EJ52114-DUP1)**

Source: 5J20006-01

Prepared & Analyzed: 10/21/05

Total Alkalinity	229	2.00	mg/L		230			0.436	20	
------------------	-----	------	------	--	-----	--	--	-------	----	--

**Reference (EJ52114-SRM1)**

Prepared & Analyzed: 10/21/05

Bicarbonate Alkalinity	229		mg/L	200		114	80-120			
------------------------	-----	--	------	-----	--	-----	--------	--	--	--

Environmental Lab of Texas

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Page 7 of 10

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

Project: BD Jct. F-17  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

Reported:  
10/31/05 10:41

**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 EJS2403 - General Preparation (WetChem)**

**Blank (EJS2403-BLK1)**

Prepared: 10/20/05 Analyzed: 10/21/05

Total Dissolved Solids ND 5.00 mg/L

**Duplicate (EJS2403-DUP1)**

Source: 5J20006-01

Prepared: 10/20/05 Analyzed: 10/21/05

Total Dissolved Solids 732 5.00 mg/L 766 4.54 5

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

Project: BD Jct. F-17  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

Reported:  
10/31/05 10:41

**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 EJ52111 - 6010B/No Digestion**

**Blank (EJ52111-BLK1)**

Prepared & Analyzed: 10/21/05

Calcium	ND	0.0100	mg/L							
Magnesium	ND	0.00100	"							
Potassium	ND	0.0500	"							
Sodium	ND	0.0100	"							

**Calibration Check (EJ52111-CCV1)**

Prepared & Analyzed: 10/21/05

Calcium	1.94		mg/L	2.00		97.0	85-115			
Magnesium	2.11		"	2.00		106	85-115			
Potassium	1.86		"	2.00		93.0	85-115			
Sodium	1.89		"	2.00		94.5	85-115			

**Duplicate (EJ52111-DUP1)**

Source: 5J20006-01

Prepared & Analyzed: 10/21/05

Calcium	43.0	0.100	mg/L		43.2			0.464	20	
Magnesium	23.8	0.0100	"		24.0			0.837	20	
Potassium	11.0	0.500	"		10.9			0.913	20	
Sodium	136	0.500	"		135			0.738	20	

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

Project: BD Jct. F-17  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

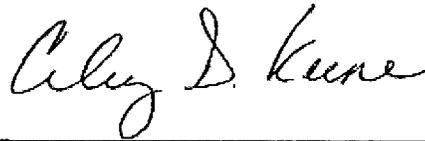
Fax: (505) 397-1471

Reported:  
10/31/05 10:41

### 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  
Dup Duplicate

Report Approved By: \_\_\_\_\_



Date: \_\_\_\_\_

10/31/2005

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

Jeanne Mc Murrey, Inorg. Tech Director  
James L. Hawkins, Chemist/Geologist  
Sandra Sanchez, Lab Tech.

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

Environmental Lab of Texas

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

Page 10 of 10



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

Client: rice

Date/Time: 10/20/05 9:30

Order #: 5520010

Initials: ck

### Sample Receipt Checklist

	Yes	No	
Temperature of container/cooler?			1.0 C
Shipping container/cooler in good condition?	Yes	No	
Custody Seals intact on shipping container/cooler?	Yes	No	Not present
Custody Seals intact on sample bottles?	Yes	No	Not present
Chain of custody present?	Yes	No	
Sample Instructions complete on Chain of Custody?	Yes	No	
Chain of Custody signed when relinquished and received?	Yes	No	
Chain of custody agrees with sample label(s)	Yes	No	
Container labels legible and intact?	Yes	No	
Sample Matrix and properties same as on chain of custody?	Yes	No	
Samples in proper container/bottle?	Yes	No	
Samples properly preserved?	Yes	No	
Sample bottles intact?	Yes	No	
Preservations documented on Chain of Custody?	Yes	No	
Containers documented on Chain of Custody?	Yes	No	
Sufficient sample amount for indicated test?	Yes	No	
All samples received within sufficient hold time?	Yes	No	
VOC samples have zero headspace?	Yes	No	Not Applicable

Other observations:

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### Variance Documentation:

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

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Corrective Action Taken:

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