

AP - 50

**ANNUAL  
MONITORING REPORT**

**YEAR(S):  
2006**

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# R. T. HICKS CONSULTANTS, LTD.

901 Rio Grande Blvd NW ▲ Suite F-142 ▲ Albuquerque, NM 87104 ▲ 505.266.5004 ▲ Fax: 505.266-0745

February 12, 2007

Wayne Price  
Oil Conservation Division  
1220 S. St. Francis Drive  
Santa Fe, NM 87505

RE: 2006 Annual Ground Water Monitoring Report  
Jct. Zachary Hinton (O-12), Sec 12, T22S, R37E, Unit "O"  
NMOCD Case #: AP-50

Dear Mr. Wayne Price:

R.T. Hicks Consultants, Ltd is pleased to submit the 2006 Annual Ground Water Monitoring Report for the Jct. Zachary Hinton (O-12) site located in the BD Salt Water Disposal System (SWD). This report consists of the following sections:

1. A table summarizing all laboratory results, depth to ground water and other pertinent data associated with ground water sampling at the site, including this past year.
2. Graphs showing chemical concentration vs. time for chloride and TDS.
3. Laboratory data sheets associated with the routine sampling for 2006.

The Final Closure Report will be submitted to NMOCD by February 26, 2007. Per agreement with NMOCD, the monitoring well at the site will be sampled twice a year, during the first and third quarters of the year..

Thank you for your consideration of this annual summary information. The attached CD contains an electronic copy of the annual report. If you have any questions, please contact us at 505-266-5004, or Kristin Farris Pope at ROC, 505-393-9174.

Sincerely,  
R.T. Hicks Consultants, Ltd.



Randall T. Hicks  
Principal

Copy: Hobbs NMOCD office; Rice Operating Company

# Table 1: chemistry over time

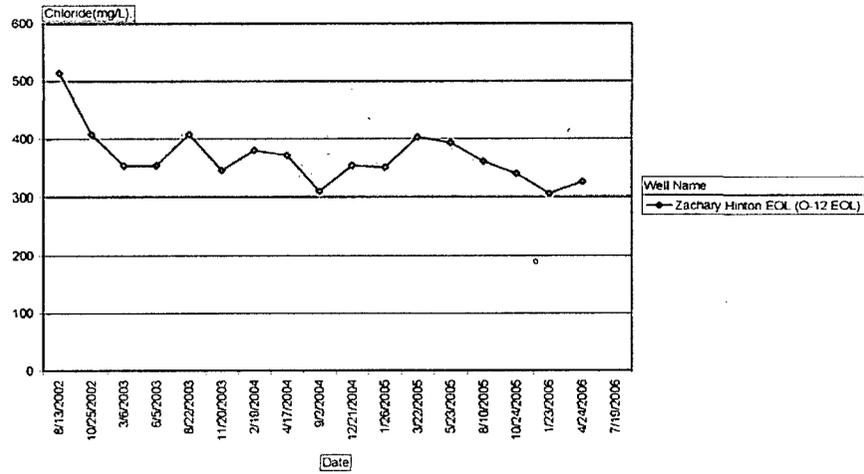
Jct. Zachary Hinton (O-12)

Well Name	Date	DTW (ft)	Chloride (mg/L)	Sulfate (mg/L)	TDS (mg/L)	Benzene (ug/L)	Toluene (ug/L)	EthylBenzene (ug/L)	Total Xylenes (ug/L)	Comments
MW-01	8/13/2002	56.10	514	256	1450	<0.001	<0.001	<0.001	<0.001	red & silty
MW-01	10/25/2002	56.14	408	240	1290	<0.001	<0.001	<0.001	<0.001	
MW-01	3/6/2003	56.07	354	377	1160	<0.001	<0.001	<0.001	<0.001	
MW-01	6/5/2003	56.00	354	252	1140	<0.001	<0.001	<0.001	<0.001	
MW-01	8/22/2003	56.00	408	327	1350	<0.001	<0.001	<0.001	<0.001	
MW-01	11/20/2003	56.00	346	256	1170	<0.001	<0.001	<0.001	<0.001	
MW-01	2/19/2004	56.59	380	97	1297	<0.002	<0.002	<0.002	<0.006	
MW-01	4/17/2004	55.65	372	252	1190	<0.001	<0.001	<0.001	<0.001	
MW-01	9/2/2004	56.00	310	258	1160	<0.001	<0.001	<0.001	<0.001	lt. brown; cloudy
MW-01	12/21/2004	55.90	354	261	2370	<0.001	<0.001	<0.001	<0.001	tan, silty
MW-01	1/26/2005	55.94	351	226	1150	<0.001	<0.001	<0.001	<0.001	
MW-01	3/22/2005	55.80	403	202	1270	<0.001	<0.001	<0.001	<0.001	clear, no odor
MW-01	5/23/2005	55.84	393	226	1190	<0.001	<0.001	<0.001	<0.001	
MW-01	8/10/2005	55.82	361	227	1200	<0.001	<0.001	<0.001	<0.001	
MW-01	10/24/2005	55.10	340	177	1240	<0.001	<0.001	<0.001	<0.001	clear, no odor
MW-01	1/23/2006	55.75	306	184	1170	<0.001	<0.001	<0.001	<0.001	
MW-01	4/24/2006	55.70	326	167	1190	<0.001	<0.001	<0.001	<0.001	
MW-01	7/19/2006	55.68								

### Ground Water Quality at Zachary Hinton

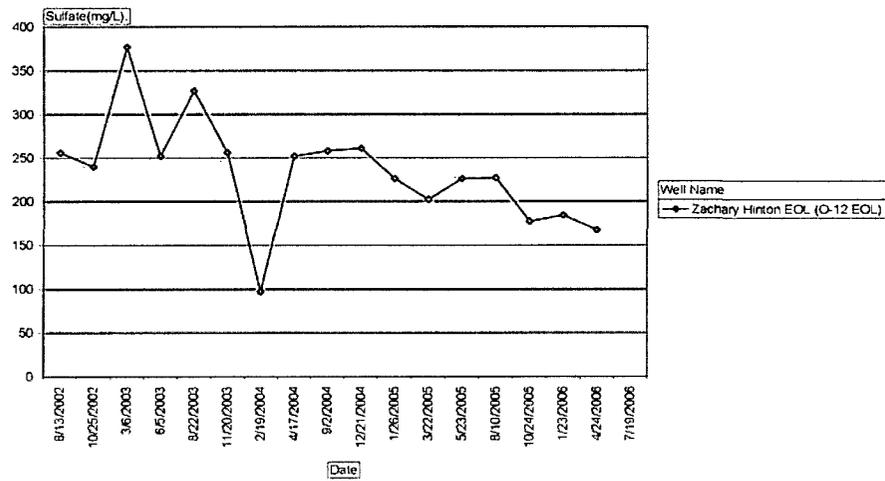
Site Name: Zachary Hinton EOL (O-12 EOL)

#### Chloride Over Time



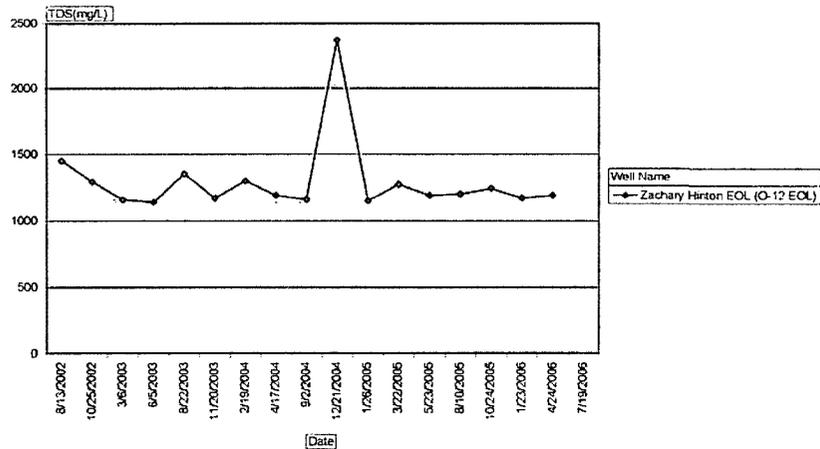
Site Name: Zachary Hinton EOL (O-12 EOL)

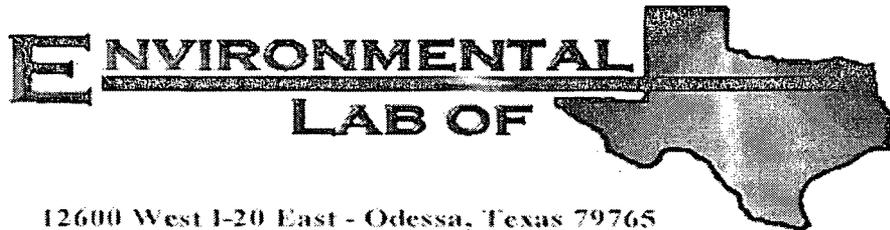
#### Sulfate Over Time



Site Name: Zachary Hinton EOL (O-12 EOL)

#### TDS Over Time





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 Zachary Hinton  
Project Number: None Given  
Location: Lea County

Lab Order Number: 6A25021

Report Date: 02/01/06

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

Project: BD Zachary Hinton  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**Reported:**  
02/01/06 11:42

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Monitor Well #1	6A25021-01	Water	01/23/06 09:45	01/25/06 13:25

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

Project: BD Zachary Hinton  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471  
**Reported:**  
02/01/06 11:42

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Monitor Well #1 (6A25021-01) Water</b>									
Benzene	ND	0.00100	mg/L	1	EA62618	01/26/06	01/27/06	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>		95.2 %	80-120	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		89.2 %	80-120	"	"	"	"	"	

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

Project: BD Zachary Hinton  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

Reported:  
02/01/06 11:42

**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 (6A25021-01) Water</b>									
Total Alkalinity	172	2.00	mg/L	1	EA62406	01/26/06	01/26/06	EPA 310.1M	
Chloride	306	10.0	"	20	EA63004	01/30/06	01/30/06	EPA 300.0	
Total Dissolved Solids	1170	5.00	"	1	EA63003	01/26/06	01/27/06	EPA 160.1	
Sulfate	184	10.0	"	20	EA63004	01/30/06	01/30/06	EPA 300.0	

Rice Operating Co. 122 W. Taylor Hobbs NM, 88240	Project: BD Zachary Hinton Project Number: None Given Project Manager: Kristin Farris-Pope	Fax: (505) 397-1471  <b>Reported:</b> 02/01/06 11:42
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**Total Metals by EPA / Standard Methods  
Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Monitor Well #1 (6A25021-01) Water**

Calcium	93.8	0.100	mg/L	10	EA62615	01/26/06	01/26/06	EPA 6010B	
Magnesium	44.4	0.0100	"	"	"	"	"	"	
Potassium	8.85	0.500	"	"	"	"	"	"	
Sodium	208	0.500	"	50	"	"	"	"	

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

Project: BD Zachary Hinton  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

Reported:  
02/01/06 11:42

**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 EA62618 - EPA 5030C (GC)**

**Blank (EA62618-BLK1)**

Prepared: 01/26/06 Analyzed: 01/27/06

Benzene	ND	0.00100	mg/L							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00100	"							
Xylene (o)	ND	0.00100	"							
Surrogate: a,a,a-Trifluorotoluene	38.5		ug/l	40.0		96.2	80-120			
Surrogate: 4-Bromofluorobenzene	42.4		"	40.0		106	80-120			

**LCS (EA62618-BS1)**

Prepared: 01/26/06 Analyzed: 01/27/06

Benzene	0.0566	0.00100	mg/L	0.0500		113	80-120			
Toluene	0.0557	0.00100	"	0.0500		111	80-120			
Ethylbenzene	0.0547	0.00100	"	0.0500		109	80-120			
Xylene (p/m)	0.102	0.00100	"	0.100		102	80-120			
Xylene (o)	0.0538	0.00100	"	0.0500		108	80-120			
Surrogate: a,a,a-Trifluorotoluene	41.2		ug/l	40.0		103	80-120			
Surrogate: 4-Bromofluorobenzene	32.8		"	40.0		82.0	80-120			

**Calibration Check (EA62618-CCV1)**

Prepared: 01/26/06 Analyzed: 01/28/06

Benzene	51.3		ug/l	50.0		103	80-120			
Toluene	52.5		"	50.0		105	80-120			
Ethylbenzene	54.5		"	50.0		109	80-120			
Xylene (p/m)	101		"	100		101	80-120			
Xylene (o)	55.6		"	50.0		111	80-120			
Surrogate: a,a,a-Trifluorotoluene	34.3		"	40.0		85.8	80-120			
Surrogate: 4-Bromofluorobenzene	39.5		"	40.0		98.8	80-120			

**Matrix Spike (EA62618-MS1)**

Source: 6A24010-01

Prepared: 01/26/06 Analyzed: 01/27/06

Benzene	0.0559	0.00100	mg/L	0.0500	ND	112	80-120			
Toluene	0.0548	0.00100	"	0.0500	ND	110	80-120			
Ethylbenzene	0.0515	0.00100	"	0.0500	ND	103	80-120			
Xylene (p/m)	0.0835	0.00100	"	0.100	ND	83.5	80-120			
Xylene (o)	0.0512	0.00100	"	0.0500	ND	102	80-120			
Surrogate: a,a,a-Trifluorotoluene	37.5		ug/l	40.0		93.8	80-120			
Surrogate: 4-Bromofluorobenzene	34.3		"	40.0		85.8	80-120			

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

Project: BD Zachary Hinton  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471  
Reported:  
02/01/06 11:42

**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
<b>Batch EA62618 - EPA 5030C (GC)</b>										
<b>Matrix Spike Dup (EA62618-MSD1)</b>										
Source: 6A24010-01      Prepared: 01/26/06      Analyzed: 01/28/06										
Benzene	0.0482	0.00100	mg/L	0.0500	ND	96.4	80-120	15.0	20	
Toluene	0.0484	0.00100	"	0.0500	ND	96.8	80-120	12.8	20	
Ethylbenzene	0.0456	0.00100	"	0.0500	ND	91.2	80-120	12.2	20	
Xylene (p/m)	0.0841	0.00100	"	0.100	ND	84.1	80-120	0.716	20	
Xylene (o)	0.0448	0.00100	"	0.0500	ND	89.6	80-120	12.9	20	
Surrogate: a,a,a-Trifluorotoluene	33.0		ug/l	40.0		82.5	80-120			
Surrogate: 4-Bromofluorobenzene	32.4		"	40.0		81.0	80-120			

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

Project: BD Zachary Hinton  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

Reported:  
02/01/06 11:42

**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 EA62406 - General Preparation (WetChem)</b>										
<b>Blank (EA62406-BLK1)</b> Prepared & Analyzed: 01/26/06										
Total Alkalinity	ND	2.00	mg/L							
<b>LCS (EA62406-BS1)</b> Prepared & Analyzed: 01/26/06										
Bicarbonate Alkalinity	220		mg/L	200		110	85-115			
<b>Duplicate (EA62406-DUP1)</b> Source: 6A19005-01 Prepared & Analyzed: 01/26/06										
Total Alkalinity	258	2.00	mg/L		256			0.778	20	
<b>Reference (EA62406-SRMI)</b> Prepared & Analyzed: 01/26/06										
Total Alkalinity	97.0		mg/L	100		97.0	90-110			
<b>Batch EA63003 - General Preparation (WetChem)</b>										
<b>Blank (EA63003-BLK1)</b> Prepared: 01/26/06 Analyzed: 01/27/06										
Total Dissolved Solids	ND	5.00	mg/L							
<b>Duplicate (EA63003-DUP1)</b> Source: 6A25018-01 Prepared: 01/26/06 Analyzed: 01/27/06										
Total Dissolved Solids	2020	5.00	mg/L		2080			2.93	5	
<b>Batch EA63004 - General Preparation (WetChem)</b>										
<b>Blank (EA63004-BLK1)</b> Prepared & Analyzed: 01/30/06										
Sulfate	ND	0.500	mg/L							
Chloride	ND	0.500	"							
<b>LCS (EA63004-BS1)</b> Prepared & Analyzed: 01/30/06										
Sulfate	9.61	0.500	mg/L	10.0		96.1	80-120			
Chloride	8.40	0.500	"	10.0		84.0	80-120			

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

Project: BD Zachary Hinton  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471  
**Reported:**  
02/01/06 11:42

**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 EA63004 - General Preparation (WetChem)**

**Calibration Check (EA63004-CCV1)**

Prepared & Analyzed: 01/30/06

Sulfate	9.82		mg/L	10.0		98.2	80-120			
Chloride	8.64		"	10.0		86.4	80-120			

**Duplicate (EA63004-DUP1)**

Source: 6A25018-01

Prepared & Analyzed: 01/30/06

Sulfate	84.4	25.0	mg/L		88.2			4.40	20	
Chloride	879	25.0	"		886			0.793	20	

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

Project: BD Zachary Hinton  
 Project Number: None Given  
 Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471  
 Reported:  
 02/01/06 11:42

**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 EA62615 - 6010B/No Digestion**

**Blank (EA62615-BLK1)**

Prepared & Analyzed: 01/26/06

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

**Calibration Check (EA62615-CCV1)**

Prepared & Analyzed: 01/26/06

Calcium	2.12		mg/L	2.00		106	85-115			
Magnesium	1.99		"	2.00		99.5	85-115			
Potassium	1.88		"	2.00		94.0	85-115			
Sodium	1.94		"	2.00		97.0	85-115			

**Duplicate (EA62615-DUP1)**

Source: 6A19005-01

Prepared & Analyzed: 01/26/06

Calcium	224	0.500	mg/L		222			0.897	20	
Magnesium	115	0.0500	"		120			4.26	20	
Potassium	14.6	0.500	"		15.2			4.03	20	
Sodium	306	0.500	"		313			2.26	20	

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

Project: BD Zachary Hinton  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471  
**Reported:**  
02/01/06 11:42

### 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: 2/1/2006

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

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

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

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



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

Client: Rice Op.

Date/Time: 1/25/06 13:25

Order #: 4A25021

Initials: CR

**Sample Receipt Checklist**

Temperature of container/cooler?	Yes	No	-2.5 C
Shipping container/cooler in good condition?	<del>Yes</del>	No	
Custody Seals intact on shipping container/cooler?	<del>Yes</del>	No	Not present
Custody Seals intact on sample bottles?	<del>Yes</del>	No	Not present
Chain of custody present?	<del>Yes</del>	No	
Sample Instructions complete on Chain of Custody?	<del>Yes</del>	No	
Chain of Custody signed when relinquished and received?	<del>Yes</del>	No	
Chain of custody agrees with sample label(s)	<del>Yes</del>	No	
Container labels legible and intact?	<del>Yes</del>	No	
Sample Matrix and properties same as on chain of custody?	<del>Yes</del>	No	
Samples in proper container/bottle?	<del>Yes</del>	No	
Samples properly preserved?	<del>Yes</del>	No	
Sample bottles intact?	<del>Yes</del>	No	
Preservations documented on Chain of Custody?	<del>Yes</del>	No	
Containers documented on Chain of Custody?	<del>Yes</del>	No	
Sufficient sample amount for indicated test?	<del>Yes</del>	No	
All samples received within sufficient hold time?	<del>Yes</del>	No	
VOC samples have zero headspace?	<del>Yes</del>	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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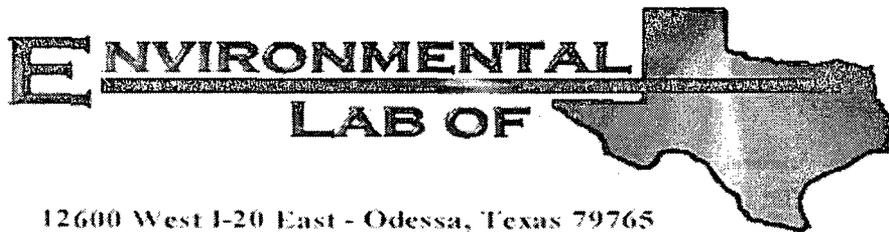
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12600 West I-20 East - Odessa, Texas 79765

## Analytical Report

Prepared for:

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

Project: BD Zachary Hinton  
Project Number: None Given  
Location: Lea County

Lab Order Number: 6D27011

Report Date: 05/04/06

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

Project: BD Zachary Hinton  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**Reported:**  
05/04/06 14:09

**ANALYTICAL REPORT FOR SAMPLES**

<b>Sample ID</b>	<b>Laboratory ID</b>	<b>Matrix</b>	<b>Date Sampled</b>	<b>Date Received</b>
Monitor Well #1	6D27011-01	Water	04/24/06 09:30	04/27/06 10:30

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

Project: BD Zachary Hinton  
 Project Number: None Given  
 Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471  
 Reported:  
 05/04/06 14:09

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Monitor Well #1 (6D27011-01) Water</b>									
Benzene	ND	0.00100	mg/L	1	ED62807	04/28/06	04/30/06	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>102 %</i>	<i>80-120</i>		<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>		<i>103 %</i>	<i>80-120</i>		<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>	

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

Project: BD Zachary Hinton  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471  
**Reported:**  
05/04/06 14:09

**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 (6D27011-01) Water</b>									
<b>Total Alkalinity</b>	<b>184</b>	2.00	mg/L	1	EE60301	05/03/06	05/03/06	EPA 310.1M	
<b>Chloride</b>	<b>326</b>	5.00	"	10	EE60116	05/01/06	05/01/06	EPA 300.0	
<b>Total Dissolved Solids</b>	<b>1190</b>	5.00	"	1	EE60115	04/27/06	04/28/06	EPA 160.1	
<b>Sulfate</b>	<b>167</b>	5.00	"	10	EE60116	05/01/06	05/01/06	EPA 300.0	

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

Project: BD Zachary Hinton  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

Reported:  
05/04/06 14:09

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Monitor Well #1 (6D27011-01) Water</b>									
Calcium	85.0	0.100	mg/L	10	ED62719	04/27/06	04/27/06	EPA 6010B	
Magnesium	43.4	0.0100	"	"	"	"	"	"	
Potassium	9.70	0.500	"	"	"	"	"	"	
Sodium	238	0.500	"	50	"	"	"	"	

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

Project: BD Zachary Hinton  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

Reported:  
05/04/06 14:09

**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 ED62807 - EPA 5030C (GC)**

**Blank (ED62807-BLK1)**

Prepared: 04/28/06 Analyzed: 04/30/06

Benzene	ND	0.00100	mg/L							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00100	"							
Xylene (o)	ND	0.00100	"							
Surrogate: a,a,a-Trifluorotoluene	42.7		ug/l	40.0		107	80-120			
Surrogate: 4-Bromofluorobenzene	42.2		"	40.0		106	80-120			

**LCS (ED62807-BS1)**

Prepared: 04/28/06 Analyzed: 04/30/06

Benzene	0.0599	0.00100	mg/L	0.0500		120	80-120			
Toluene	0.0580	0.00100	"	0.0500		116	80-120			
Ethylbenzene	0.0551	0.00100	"	0.0500		110	80-120			
Xylene (p/m)	0.120	0.00100	"	0.100		120	80-120			
Xylene (o)	0.0596	0.00100	"	0.0500		119	80-120			
Surrogate: a,a,a-Trifluorotoluene	43.0		ug/l	40.0		108	80-120			
Surrogate: 4-Bromofluorobenzene	42.2		"	40.0		106	80-120			

**Calibration Check (ED62807-CCV1)**

Prepared: 04/28/06 Analyzed: 05/01/06

Benzene	55.0		ug/l	50.0		110	80-120			
Toluene	53.0		"	50.0		106	80-120			
Ethylbenzene	55.9		"	50.0		112	80-120			
Xylene (p/m)	110		"	100		110	80-120			
Xylene (o)	55.9		"	50.0		112	80-120			
Surrogate: a,a,a-Trifluorotoluene	39.0		"	40.0		97.5	80-120			
Surrogate: 4-Bromofluorobenzene	39.1		"	40.0		97.8	80-120			

**Matrix Spike (ED62807-MS1)**

Source: 6D27008-01

Prepared: 04/28/06 Analyzed: 05/01/06

Benzene	0.0576	0.00100	mg/L	0.0500	ND	115	80-120			
Toluene	0.0568	0.00100	"	0.0500	ND	114	80-120			
Ethylbenzene	0.0587	0.00100	"	0.0500	ND	117	80-120			
Xylene (p/m)	0.120	0.00100	"	0.100	ND	120	80-120			
Xylene (o)	0.0600	0.00100	"	0.0500	ND	120	80-120			
Surrogate: a,a,a-Trifluorotoluene	41.7		ug/l	40.0		104	80-120			
Surrogate: 4-Bromofluorobenzene	47.5		"	40.0		119	80-120			

Rice Operating Co. 122 W. Taylor Hobbs NM, 88240	Project: BD Zachary Hinton Project Number: None Given Project Manager: Kristin Farris-Pope	Fax: (505) 397-1471  <b>Reported:</b> 05/04/06 14:09
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**Organics by GC - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch ED62807 - EPA 5030C (GC)**

Matrix Spike Dup (ED62807-MSD1)	Source: 6D27008-01			Prepared: 04/28/06		Analyzed: 05/01/06				
Benzene	0.0597	0.00100	mg/L	0.0500	ND	119	80-120	3.42	20	
Toluene	0.0579	0.00100	"	0.0500	ND	116	80-120	1.74	20	
Ethylbenzene	0.0585	0.00100	"	0.0500	ND	117	80-120	0.00	20	
Xylene (p/m)	0.120	0.00100	"	0.100	ND	120	80-120	0.00	20	
Xylene (o)	0.0598	0.00100	"	0.0500	ND	120	80-120	0.00	20	
<i>Surrogate: a,a,a-Trifluorotoluene</i>	<i>43.5</i>		<i>ug/l</i>	<i>40.0</i>		<i>109</i>	<i>80-120</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>46.4</i>		<i>"</i>	<i>40.0</i>		<i>116</i>	<i>80-120</i>			

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

Project: BD Zachary Hinton  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471  
**Reported:**  
05/04/06 14:09

**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 EE60115 - General Preparation (WetChem)</b>										
<b>Blank (EE60115-BLK1)</b> Prepared: 04/27/06 Analyzed: 04/28/06										
Total Dissolved Solids	ND	5.00	mg/L							
<b>Duplicate (EE60115-DUP1)</b> Source: 6D27015-01 Prepared: 04/27/06 Analyzed: 04/28/06										
Total Dissolved Solids	3020	5.00	mg/L		3040			0.660	5	
<b>Batch EE60116 - General Preparation (WetChem)</b>										
<b>Blank (EE60116-BLK1)</b> Prepared & Analyzed: 05/01/06										
Chloride	ND	0.500	mg/L							
Sulfate	ND	0.500	"							
<b>LCS (EE60116-BS1)</b> Prepared & Analyzed: 05/01/06										
Sulfate	9.47	0.500	mg/L	10.0		94.7	80-120			
Chloride	9.71	0.500	"	10.0		97.1	80-120			
<b>Calibration Check (EE60116-CCV1)</b> Prepared & Analyzed: 05/01/06										
Chloride	9.86		mg/L	10.0		98.6	80-120			
Sulfate	8.11		"	10.0		81.1	80-120			
<b>Duplicate (EE60116-DUP1)</b> Source: 6D27008-01 Prepared & Analyzed: 05/01/06										
Sulfate	80.0	2.50	mg/L		79.2			1.01	20	
Chloride	49.3	2.50	"		49.0			0.610	20	
<b>Batch EE60301 - General Preparation (WetChem)</b>										
<b>Blank (EE60301-BLK1)</b> Prepared & Analyzed: 05/03/06										
Total Alkalinity	ND	2.00	mg/L							

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

Project: BD Zachary Hinton  
 Project Number: None Given  
 Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471  
 Reported:  
 05/04/06 14:09

**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 EE60301 - General Preparation (WetChem)</b>										
<b>LCS (EE60301-BS1)</b>				Prepared & Analyzed: 05/03/06						
Bicarbonate Alkalinity	214		mg/L	200		107	85-115			
<b>Duplicate (EE60301-DUP1)</b>				Source: 6D26006-01 Prepared & Analyzed: 05/03/06						
Total Alkalinity	29.0	2.00	mg/L		28.0			3.51	20	
<b>Reference (EE60301-SRM1)</b>				Prepared & Analyzed: 05/03/06						
Total Alkalinity	96.0		mg/L	100		96.0	90-110			

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

Project: BD Zachary Hinton  
 Project Number: None Given  
 Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471  
 Reported:  
 05/04/06 14:09

**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 ED62719 - 6010B/No Digestion**

**Blank (ED62719-BLK1)**

Prepared & Analyzed: 04/27/06

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

**Calibration Check (ED62719-CCV1)**

Prepared & Analyzed: 04/27/06

Calcium	2.08		mg/L				85-115			
Magnesium	2.16		"				85-115			
Potassium	1.94		"				85-115			
Sodium	1.96		"				85-115			

**Duplicate (ED62719-DUP1)**

Source: 6D26006-01

Prepared & Analyzed: 04/27/06

Calcium	0.0366	0.0100	mg/L		0.0367			0.273	20	
Magnesium	ND	0.00100	"		ND				20	
Potassium	0.275	0.0500	"		0.275			0.00	20	
Sodium	13.0	0.100	"		12.1			7.17	20	

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

Project: BD Zachary Hinton  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

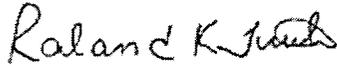
Fax: (505) 397-1471

Reported:  
05/04/06 14:09

### 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:

5/4/2006

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

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

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



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

at: Rice Op.  
 Time: 4/24/00 10:30  
 er #: 6027011  
 als: OK

Sample Receipt Checklist

	Yes	No	ZC	C
Temperature of container/cooler?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Cooling container/cooler in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Body Seals intact on shipping container/cooler?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Not present	
Body 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"/>		
Observations 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"/>		
Samples received within sufficient hold time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
GC samples have zero headspace?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Not Applicable	

Other observations:

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

Variance Documentation:

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

\_\_\_\_\_

Corrective Action Taken:

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



# TRACE ANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9    Lubbock, Texas 79424    800•378•1296    806•794•1296    FAX 806•794•1298  
 155 McCutcheon, Suite H    El Paso, Texas 79932    888•588•3443    915•585•3443    FAX 915•585•4944  
 E-Mail lab@traceanalysis.com

## Analytical and Quality Control Report

Kristen Farris-Pope  
 Rice Operating Company  
 122 W Taylor Street  
 Hobbs, NM, 88240

Report Date: August 9, 2006

Work Order: 6072143



Project Location: Lea County, NM  
 Project Name: BD Zachary Hinton  
 Project Number: BD Zachary Hinton

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
96140	Monitor Well #1	water	2006-07-19	12:55	2006-07-21

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 10 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

*Michael Alfred*

Dr. Blair Leftwich, Director

## Analytical Report

### Sample: 96140 - Monitor Well #1

Analysis: Alkalinity	Analytical Method: SM 2320B	Prep Method: N/A
QC Batch: 28340	Date Analyzed: 2006-07-26	Analyzed By: LJ
Prep Batch: 24777	Sample Preparation: 2006-07-25	Prepared By: LJ

Parameter	Flag	RL Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCo3	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCo3	1	1.00
Bicarbonate Alkalinity		<b>188</b>	mg/L as CaCo3	1	4.00
Total Alkalinity		<b>188</b>	mg/L as CaCo3	1	4.00

### Sample: 96140 - Monitor Well #1

Analysis: BTEX	Analytical Method: S 8021B	Prep Method: S 5030B
QC Batch: 28277	Date Analyzed: 2006-07-24	Analyzed By: MT
Prep Batch: 24759	Sample Preparation: 2006-07-24	Prepared By: MT

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.00100	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0961	mg/L	1	0.100	96	66.2 - 127.7
4-Bromofluorobenzene (4-BFB)	1	0.0585	mg/L	1	0.100	58	70.6 - 129.2

### Sample: 96140 - Monitor Well #1

Analysis: Cations	Analytical Method: S 6010B	Prep Method: S 3005A
QC Batch: 28356	Date Analyzed: 2006-07-26	Analyzed By: TP
Prep Batch: 24749	Sample Preparation: 2006-07-24	Prepared By: TS

Parameter	Flag	RL Result	Units	Dilution	RL
Dissolved Calcium		<b>98.2</b>	mg/L	1	0.500
Dissolved Potassium		<b>12.8</b>	mg/L	1	1.00
Dissolved Magnesium		<b>49.3</b>	mg/L	1	1.00
Dissolved Sodium		<b>230</b>	mg/L	10	1.00

### Sample: 96140 - Monitor Well #1

Analysis: Ion Chromatography	Analytical Method: E 300.0	Prep Method: N/A
QC Batch: 28782	Date Analyzed: 2006-08-02	Analyzed By: WB
Prep Batch: 25167	Sample Preparation: 2006-08-02	Prepared By: WB

<sup>1</sup>BFB surrogate recovery outside normal limits. ICV/CCV and TFT surrogate recovery show the method to be in control.

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		375	mg/L	50	0.500
Sulfate		234	mg/L	50	0.500

**Sample: 96140 - Monitor Well #1**

Analysis: TDS Analytical Method: SM 2540C Prep Method: N/A  
 QC Batch: 28406 Date Analyzed: 2006-07-27 Analyzed By: SM  
 Prep Batch: 24850 Sample Preparation: 2009-07-26 Prepared By: SM

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		1318	mg/L	2	10.00

**Method Blank (1) QC Batch: 28277**

QC Batch: 28277 Date Analyzed: 2006-07-24 Analyzed By: MT  
 Prep Batch: 24759 QC Preparation: 2006-07-24 Prepared By: MT

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.000255	mg/L	0.001
Toluene		<0.000210	mg/L	0.001
Ethylbenzene		<0.000317	mg/L	0.001
Xylene		<0.000603	mg/L	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0949	mg/L	1	0.100	95	76.1 - 117
4-Bromofluorobenzene (4-BFB)		0.0633	mg/L	1	0.100	63	58.5 - 118

**Method Blank (1) QC Batch: 28340**

QC Batch: 28340 Date Analyzed: 2006-07-26 Analyzed By: LJ  
 Prep Batch: 24777 QC Preparation: 2006-07-25 Prepared By: LJ

Parameter	Flag	MDL Result	Units	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCo3	1
Carbonate Alkalinity		<1.00	mg/L as CaCo3	1
Bicarbonate Alkalinity		<4.00	mg/L as CaCo3	4
Total Alkalinity		<4.00	mg/L as CaCo3	4

**Method Blank (1) QC Batch: 28356**

QC Batch: 28356 Date Analyzed: 2006-07-26 Analyzed By: TP  
 Prep Batch: 24749 QC Preparation: 2006-07-24 Prepared By: TS

Parameter	Flag	MDL Result	Units	RL
Dissolved Calcium		0.132	mg/L	0.5
Dissolved Potassium		1.08	mg/L	1
Dissolved Magnesium		<0.704	mg/L	1
Dissolved Sodium		0.836	mg/L	1

**Method Blank (1)** QC Batch: 28406

QC Batch: 28406 Date Analyzed: 2006-07-27 Analyzed By: SM  
 Prep Batch: 24850 QC Preparation: 2006-07-26 Prepared By: SM

Parameter	Flag	MDL Result	Units	RL
Total Dissolved Solids		<5.000	mg/L	10

**Method Blank (1)** QC Batch: 28782

QC Batch: 28782 Date Analyzed: 2006-08-02 Analyzed By: WB  
 Prep Batch: 25167 QC Preparation: 2006-08-02 Prepared By: WB

Parameter	Flag	MDL Result	Units	RL
Chloride		<0.0181	mg/L	0.5
Sulfate		<0.0485	mg/L	0.5

**Duplicates (1)**

QC Batch: 28340 Date Analyzed: 2006-07-26 Analyzed By: LJ  
 Prep Batch: 24777 QC Preparation: 2006-07-25 Prepared By: LJ

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Hydroxide Alkalinity	<1.00	<1.00	mg/L as CaCo3	1	0	20
Carbonate Alkalinity	<1.00	<1.00	mg/L as CaCo3	1	0	20
Bicarbonate Alkalinity	110	108	mg/L as CaCo3	1	2	12.6
Total Alkalinity	110	108	mg/L as CaCo3	1	2	11.5

**Duplicates (1)**

QC Batch: 28406 Date Analyzed: 2006-07-27 Analyzed By: SM  
 Prep Batch: 24850 QC Preparation: 2006-07-26 Prepared By: SM

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Total Dissolved Solids	768.0	928.0	mg/L	2	19	17.2

**Laboratory Control Spike (LCS-1)**

QC Batch: 28277  
 Prep Batch: 24759

Date Analyzed: 2006-07-24  
 QC Preparation: 2006-07-24

Analyzed By: MT  
 Prepared By: MT

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.109	mg/L	1	0.1	0	109	
Toluene	0.108	mg/L	1	0.1	0	108	
Ethylbenzene	0.109	mg/L	1	0.1	0	109	
Xylene	0.322	mg/L	1	0.3	0	107.333	

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	0.104	mg/L	1	0.1	0	109		4.7	20
Toluene	0.103	mg/L	1	0.1	0	108		4.7	20
Ethylbenzene	0.101	mg/L	1	0.1	0	109		7.6	20
Xylene	0.306	mg/L	1	0.3	0	107.333		5.1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCS Result	Units	Dil.	Spike Amount	LCS Rec.	LCS Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.101	0.101	mg/L	1	0.100	101	101	81.8 - 114
4-Bromofluorobenzene (4-BFB)	0.112	0.111	mg/L	1	0.100	112	111	72.7 - 116

**Laboratory Control Spike (LCS-1)**

QC Batch: 28356  
 Prep Batch: 24749

Date Analyzed: 2006-07-26  
 QC Preparation: 2006-07-24

Analyzed By: TP  
 Prepared By: TS

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Dissolved Calcium	51.7	mg/L	1	50	0	103.4	
Dissolved Potassium	50.8	mg/L	1	50	0	101.6	
Dissolved Magnesium	51.5	mg/L	1	50	0	103	
Dissolved Sodium	50.5	mg/L	1	50	0	101	

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Dissolved Calcium	51.7	mg/L	1	50	0	103.4		0	20
Dissolved Potassium	49.3	mg/L	1	50	0	101.6		3	20
Dissolved Magnesium	49.8	mg/L	1	50	0	103		3.4	20
Dissolved Sodium	48.6	mg/L	1	50	0	101		3.8	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

**Laboratory Control Spike (LCS-1)**

QC Batch: 28782  
 Prep Batch: 25167

Date Analyzed: 2006-08-02  
 QC Preparation: 2006-08-02

Analyzed By: WB  
 Prepared By: WB

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	12.2	mg/L	1	12.5	0	97.6	
Sulfate	12.5	mg/L	1	12.5	0	100	

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	12.3	mg/L	1	12.5	0	97.6		0.8	20
Sulfate	12.5	mg/L	1	12.5	0	100		0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

**Matrix Spike (MS-1) Spiked Sample: 96149**

QC Batch: 28277  
 Prep Batch: 24759

Date Analyzed: 2006-07-24  
 QC Preparation: 2006-07-24

Analyzed By: MT  
 Prepared By: MT

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.107	mg/L	1	0.100	<0.000255	107	70.9 - 126
Toluene	0.105	mg/L	1	0.100	<0.000210	105	70.8 - 125
Ethylbenzene	0.106	mg/L	1	0.100	<0.000317	106	74.8 - 125
Xylene	0.311	mg/L	1	0.300	<0.000603	104	75.7 - 126

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	<sup>2</sup> NA	mg/L	1	0.100	<0.000255	0	70.9 - 126	200	20
Toluene	<sup>3</sup> NA	mg/L	1	0.100	<0.000210	0	70.8 - 125	200	20
Ethylbenzene	<sup>4</sup> NA	mg/L	1	0.100	<0.000317	0	74.8 - 125	200	20
Xylene	<sup>5</sup> NA	mg/L	1	0.300	<0.000603	0	75.7 - 126	200	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	<sup>6</sup> 0.101	NA	mg/L	1	0.1	101	0	73.6 - 121
4-Bromofluorobenzene (4-BFB)	<sup>7</sup> 0.110	NA	mg/L	1	0.1	110	0	81.8 - 114

**Matrix Spike (MS-1) Spiked Sample: 96124**

QC Batch: 28356  
 Prep Batch: 24749

Date Analyzed: 2006-07-26  
 QC Preparation: 2006-07-24

Analyzed By: TP  
 Prepared By: TS

<sup>2</sup>RPD is out of range because a matrix spike duplicate was not prepared.  
<sup>3</sup>RPD is out of range because a matrix spike duplicate was not prepared.  
<sup>4</sup>RPD is out of range because a matrix spike duplicate was not prepared.  
<sup>5</sup>RPD is out of range because a matrix spike duplicate was not prepared.  
<sup>6</sup>RPD is out of range because a matrix spike duplicate was not prepared.  
<sup>7</sup>RPD is out of range because a matrix spike duplicate was not prepared.

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Dissolved Calcium	416	mg/L	1	50.0	361	110	68.4 - 138
Dissolved Potassium	73.8	mg/L	1	50.0	22	104	82 - 129
Dissolved Magnesium	208	mg/L	1	50.0	147	122	61.2 - 135
Dissolved Sodium	633	mg/L	1	50.0	578	110	81.8 - 125

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Dissolved Calcium	406	mg/L	1	50.0	361	90	68.4 - 138	2	20
Dissolved Potassium	81.3	mg/L	1	50.0	22	119	82 - 129	10	20
Dissolved Magnesium	194	mg/L	1	50.0	147	94	61.2 - 135	7	20
Dissolved Sodium	637	mg/L	1	50.0	578	118	81.8 - 125	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

**Matrix Spike (MS-1) Spiked Sample: 96141**

QC Batch: 28782  
 Prep Batch: 25167

Date Analyzed: 2006-08-02  
 QC Preparation: 2006-08-02

Analyzed By: WB  
 Prepared By: WB

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	2210	mg/L	100	12.5	988	98	25.4 - 171
Sulfate	1580	mg/L	100	12.5	298	102	0 - 677

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	2200	mg/L	100	12.5	988	97	25.4 - 171	0	20
Sulfate	1550	mg/L	100	12.5	298	100	0 - 677	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

**Standard (ICV-1)**

QC Batch: 28277

Date Analyzed: 2006-07-24

Analyzed By: MT

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.104	104	85 - 115	2006-07-24
Toluene		mg/L	0.100	0.104	104	85 - 115	2006-07-24
Ethylbenzene		mg/L	0.100	0.104	104	85 - 115	2006-07-24
Xylene		mg/L	0.300	0.314	105	85 - 115	2006-07-24

**Standard (CCV-1)**

QC Batch: 28277

Date Analyzed: 2006-07-24

Analyzed By: MT

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.107	107	85 - 115	2006-07-24
Toluene		mg/L	0.100	0.105	105	85 - 115	2006-07-24
Ethylbenzene		mg/L	0.100	0.106	106	85 - 115	2006-07-24
Xylene		mg/L	0.300	0.311	104	85 - 115	2006-07-24

**Standard (ICV-1)**

QC Batch: 28340

Date Analyzed: 2006-07-26

Analyzed By: LJ

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Alkalinity		mg/L as CaCo3	250	240	96	90 - 110	2006-07-26

**Standard (CCV-1)**

QC Batch: 28340

Date Analyzed: 2006-07-26

Analyzed By: LJ

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Alkalinity		mg/L as CaCo3	250	240	96	90 - 110	2006-07-26

**Standard (ICV-1)**

QC Batch: 28356

Date Analyzed: 2006-07-26

Analyzed By: TP

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	50.0	50.7	101	90 - 110	2006-07-26
Dissolved Potassium		mg/L	50.0	52.0	104	90 - 110	2006-07-26
Dissolved Magnesium		mg/L	50.0	49.6	99	90 - 110	2006-07-26
Dissolved Sodium		mg/L	50.0	50.9	102	90 - 110	2006-07-26

**Standard (CCV-1)**

QC Batch: 28356

Date Analyzed: 2006-07-26

Analyzed By: TP

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	50.0	51.2	102	90 - 110	2006-07-26
Dissolved Potassium		mg/L	50.0	54.6	109	90 - 110	2006-07-26
Dissolved Magnesium		mg/L	50.0	50.0	100	90 - 110	2006-07-26
Dissolved Sodium		mg/L	50.0	53.2	106	90 - 110	2006-07-26

**Standard (ICV-1)**

QC Batch: 28406

Date Analyzed: 2006-07-27

Analyzed By: SM

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	1056	106	90 - 110	2006-07-27

**Standard (CCV-1)**

QC Batch: 28406

Date Analyzed: 2006-07-27

Analyzed By: SM

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	1075	108	90 - 110	2006-07-27

**Standard (ICV-1)**

QC Batch: 28782

Date Analyzed: 2006-08-02

Analyzed By: WB

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	12.4	99	90 - 110	2006-08-02
Sulfate		mg/L	12.5	12.7	102	90 - 110	2006-08-02

**Standard (CCV-1)**

QC Batch: 28782

Date Analyzed: 2006-08-02

Analyzed By: WB

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	12.2	98	90 - 110	2006-08-02
Sulfate		mg/L	12.5	12.4	99	90 - 110	2006-08-02

<b>TraceAnalysis, Inc.</b> 5707 Aberdeen Ave, Suite 9 Lubbock, Texas 79424 Tel (806) 794-1266 Fax (806) 794-1268 1 (800) 316-1296		135 McCullerston Way, Suite H El Paso, Texas 79932 Tel (915) 585-3443 Fax (915) 585-4844 1 (888) 586-3443	
Company Name: RICE Operating Company Address: (Street, City, Zip) 122 W Taylor Street, Hobbs, New Mexico 88240 Contact Person: Kristin Farris - Pope, Project Scientist Invoice to: (if different from above) Project #: None Given Project Name: BD Zachary Hinton Project Location: Lea County - New Mexico Sampler Signature: Rozanne Johnson (505) 631-9310 rozanne@valornet.com		Phone #: (505) 393-9174 Fax #: (505) 397-1471 kpope@riceswd.com	
<b>CHAIN-OF-CUSTODY AND ANALYSIS REQUEST</b> LAB Order ID # <u>4072193</u>		<b>ANALYSIS REQUEST</b> (Circle of Specify Method No.)	
LAB USE ONLY In tact <input checked="" type="checkbox"/> N Headspace <input checked="" type="checkbox"/> N Temp <u>40</u> Log-in Review <u>NA</u>		REMARKS: <input type="checkbox"/> check if special reporting limits needed	
Relinquished by: <u>Rozanne Johnson</u> Date: <u>7-20-06</u> Time: <u>8:00</u> Relinquished by: _____ Date: _____ Time: _____ Relinquished by: _____ Date: _____ Time: _____		Received by: _____ Date: _____ Time: _____ Received by: _____ Date: _____ Time: _____ Received at Laboratory by: <u>Megan Moore</u> Date: <u>7-21-06</u> Time: <u>11:05</u>	
Carrier # <u>BWA 611690177159</u>		Turn Around Time if different from standard	
Total Metals Ag As Ba Cd Cr Pb Se Hg 60108/200.7 TCLP Metals Ag As Ba Cd Cr Pb Se Hg TCLP Semi Volatiles TCLP Pesticides RCI GC/MS Vol. 8260B/824 GC/MS Semi. Vol. 8270C/825 PCBs 8082/608 Pesticides 3081A/608 BOD, TSS, pH Moisture Content Cations (Ca, Mg, Na, K) Anions (Cl, SSSSO4, CO3, HCO3) Total Dissolved Solids		PAH 8270C TPH 418.1/TX1005 / TX1005 Extended (C35) MTE 80219/602 BTEX 80218/602 X MTBE 80219/602 X	
FIELD CODE LAB # <u>96140</u> (LAB USE ONLY)		# CONTAINERS 2 1	
MATRIX WATER SOIL AIR SLUDGE		PRESERVATIVE METHOD HCL HNO3 NaHSO4 H2SO4 ICE NONE	
Volume/Amount 40 ml 1L		SAMPLING DATE 2006 7-19 12:55 7-19 12:55	

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of COC