# AP. 50

# ANNUAL MONITORING REPORT

YEAR(S): 2006

# 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 guarters 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

Jct. Zachary Hinton (0-12)	' Hinton (O-	·12)		Table 1	: chemisı	Table 1: chemistry over time	ıe			
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								

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Monday, February 05, 2007

### Ground Water Quality at Zachary Hinton

### Site Name Zachary Hinton EOL (0-12 EOL)

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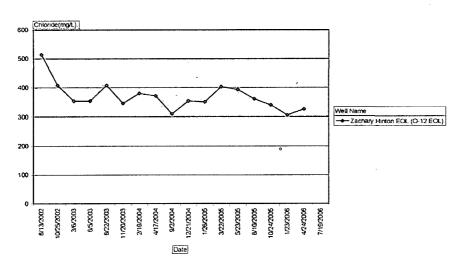
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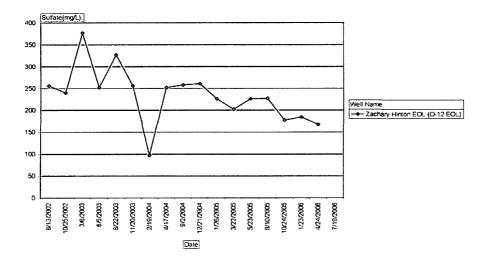
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Chloride Over Time

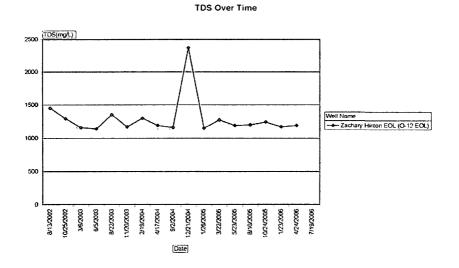


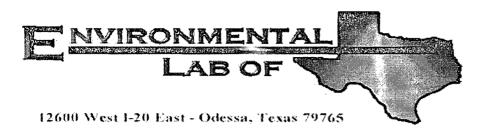
[Site Name Zachary Hinton EOL (O-12 EOL)]

Sulfate Over Time



Sile Name Zechary Hinton EOL (O-12 EOL)





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# 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.Project:BD Zachary HintonFax: (505) 397-1471122 W. TaylorProject Number:None GivenReported:Hobbs NM, 88240Project Manager:Kristin Farris-Pope02/01/06 11:42

### ANALYTICAL REPORT FOR SAMPLES

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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

Page 1 of 10

Rice Operating Co.	Project:	BD Zachary Hinton	Fax: (505) 397-1471
122 W. Taylor	Project Number:	None Given	Reported:
Hobbs NM, 88240	Project Manager:	Kristin Farris-Pope	02/01/06 11:42

# Organics by GC

**Environmental Lab of Texas** 

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Monitor Well #1 (6A25021-01) Water									
Benzene	ND	0.00100	mg/L	1	EA62618	01/26/06	01/27/06	EPA 8021B	
Toluene	ND	0.00100	"	и	. "	"		"	
Ethylbenzene	ND	0.00100		"	'n	91	U I		
Xylene (p/m)	ND	0.00100	•	•		н	11	"	
Xylene (o)	ND	0.00100		,	n	"	"	"	
Surrogate: a.a.a-Trifluorotoluene		95.2 %	80-12	0	"	"	n	11	·····
Surrogate: 4-Bromofluorobenzene		89.2 %	80-12	0	"	"	"	·	

Environmental Lab of Texas

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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.

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

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

**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
Monitor Well #1 (6A25021-01) Water	_								
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	

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Rice Operating Co.	Project:	BD Zachary Hinton	Fax: (505) 397-1471
122 W. Taylor	Project Number:	None Given	Reported:
Hobbs NM, 88240	Project Manager:	Kristin Farris-Pope	02/01/06 11:42

### Total Metals by EPA / Standard Methods

### **Environmental Lab of Texas**

Analyte Monitor Well #1 (6A25021-01) Water	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	93.8	0.100	mg/L	10	EA62615	01/26/06	01/26/06	EPA 6010B	<u> </u>
Magnesium	44.4	-0,0100	•	"		"	"		
Potassium	8.85	0.500			in .		"		
Sodium	208	0.500		50	"		н	n	

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Page 4 of 10

Rice Operating Co. 122 W. Taylor		Pr Project Nu		D Zachary Hi one Given	nton				Fax: (505) Repo	
Hobbs NM, 88240				istin Farris-P	ope				02/01/0	6 11:42
	0	rganics by	GC - (	Juality Co	ontrol					
		Environm	iental I	lab of Te	kas					
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EA62618 - EPA 5030C (GC)	2									
Blank (EA62618-BLK1)				Prepared: 0	01/26/06 A	nalyzed: 01	/27/06			
Benzene	ND	0.00100	mg/L							
Toluene	ND	0.00100	<b>~</b> 11							
Ethylbenzene	ND	0.00100	н							
Xylene (p/m)	ND	0.00100	"							
Xylene (0)	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: 0	)1/26/06 A	nalyzed: 01	/27/06			
Benzene	0.0566	0.00100	mg/L	0.0500		113	80-120			
Tolucne	0.0557	0,00100	n	0.0500		111	80-120			
Ethylbenzene	0.0547	0.00100	n	0.0500		109	80-120			
Xylene (p/m)	0.102	0.00100	"	0.100		102	80-120			
Xylene (0)	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: 0	)1/26/06 A	nalyzed: 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		14	100		101	80-120			
Xylene (0)	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)	Sou	irce: 6A24010-	-01	Prepared: (	)1/26/06 A	nalyzed: 01	./27/06			
Benzene	0.0559	0.00100	mg/L	0.0500	ND	112	80-120			
Toluene	0.0548	0.00100	н	0.0500	ND	110	80-120			
Ethylbenzene	0.0515	0,00100		0.0500	ND	103	80-120			
Xylene (p/m)	0.0835	0.00100	н	0.100	ND	83,5	80-120			
Xylene (0)	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			

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Page 5 of 10

Rice Operating Co.	Project:	BD Zachary Hinton	Fax: (505) 397-1471
122 W. Taylor	Project Number:	None Given	Reported:
Hobbs NM, 88240	Project Manager:	Kristin Farris-Pope	02/01/06 11:42

### **Organics by GC - Quality Control**

**Environmental Lab of Texas** 

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

Batch EA62618 - EPA 5030C (GC)

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Matrix Spike Dup (EA62618-MSD1)	Sou	rce: 6A24010-	01	Prepared: 0	1/26/06 A	nalyzed: 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	11	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	11	0.100	ND	84.1	80-120	0.716	20
Xylene (0)	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		

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Rice Operating Co.		Pr	oiect: Bl	D Zachary Hi	nton				Fax: (505)	397-1471
122 W. Taylor		Project Nu							Reno	rted:
Hobbs NM, 88240				ristin Farris-P	ope				02/01/0	
General (	Chemistry Para	-				ls - Qua	lity Con	trol		
······		Environm	iental l	Lab of Tex	(as	<u></u>				
		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EA62406 - General Preparation	(WetChem)									
lank (EA62406-BLK1)				Prepared &	Analyzed:	01/26/06				
fotal Alkalinity	ND	2.00	mg/L		-					
LCS (EA62406-BS1)				Prepared &	Analyzed:	01/26/06				
Bicarbonate Alkalinity	220		mg/L	200		110	85-115			
Duplicate (EA62406-DUP1)	Sour	ce: 6A19005-	01	Prepared &	Analyzed:	01/26/06				
Fotal Alkalinity	258	2.00	mg/L		256			0,778	20	
Reference (EA62406-SRM1)				Prepared &	: Analyzed:	01/26/06				
Total Alkalinity	97.0		mg/L	100		97.0	90-110			
Batch EA63003 - General Preparation	(WetChem)	-								
Blank (EA63003-BLK1)				Prepared: 0	)1/26/06 Ar	nalyzed: 01	/27/06			
otal Dissolved Solids	ND	5.00	mg/L							
Duplicate (EA63003-DUP1)	Sour	ce: 6A25018-	01	Prepared: 0	)1/26/06 Ar	nalyzed: 01	/27/06			
fotal Dissolved Solids	2020	5.00	mg/L		2080			2.93	5	
Batch EA63004 - General Preparation	(WetChem)									
Blank (EA63004-BLK1)				Prepared &	Analyzed:	01/30/06				
Sulfate	ND	0.500	mg/L							
Chloride	ND	0.500								
LCS (EA63004-BS1)				Prepared &	Analyzed:	01/30/06				
		0,500	mg/L	10.0		96.1	80-120	-		

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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 7 of 10

Rice Operating Co.	Project: BD Zachary Hinton	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	Reported:
Hobbs NM, 88240	Project Manager: Kristin Farris-Pope	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
Batch EA63004 - General Preparation (V	VetChem)									
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)	Sour	ce: 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	

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Rice Operating Co.	Project: BD Zachary Hinton	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	Reported:
Hobbs NM, 88240	Project Manager: Kristin Farris-Pope	02/01/06 11:42

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

### **Environmental Lab of Texas**

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

### Batch EA62615 - 6010B/No Digestion

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Blank (EA62615-BLK1)				Prepared & Analyze	d: 01/26/06				
Calcium	ND	0.0100	mg/L						
Magnesium	ND	0.00100	"						
Potassium	ND	0.0500	n						
Sodium	ND	0.0100	u						
Calibration Check (EA62615-CCV1)				Prepared & Analyze	d: 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		п	2.00	94.0	85-115			
Sodium	1.94		"	2.00	97.0	85-115			
Duplicate (EA62615-DUP1)	Sour	ce: 6A19005-	01	Prepared & Analyze	d: 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	

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Rice Ope	rating Co.		BD Zachary Hinton	Fax: (505) 397-1471		
122 W. T	2	Project Number:		Reported:		
Hobbs NI	M, 88240	Project Manager:	Kristin Farris-Pope	02/01/06 11:42		
		Notes and De	finitions			
DET	Analyte DETECTED					
ND	Analyte NOT DETECTED at or above the reporting lin	nit		,		
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 Junes

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.

Date:

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.

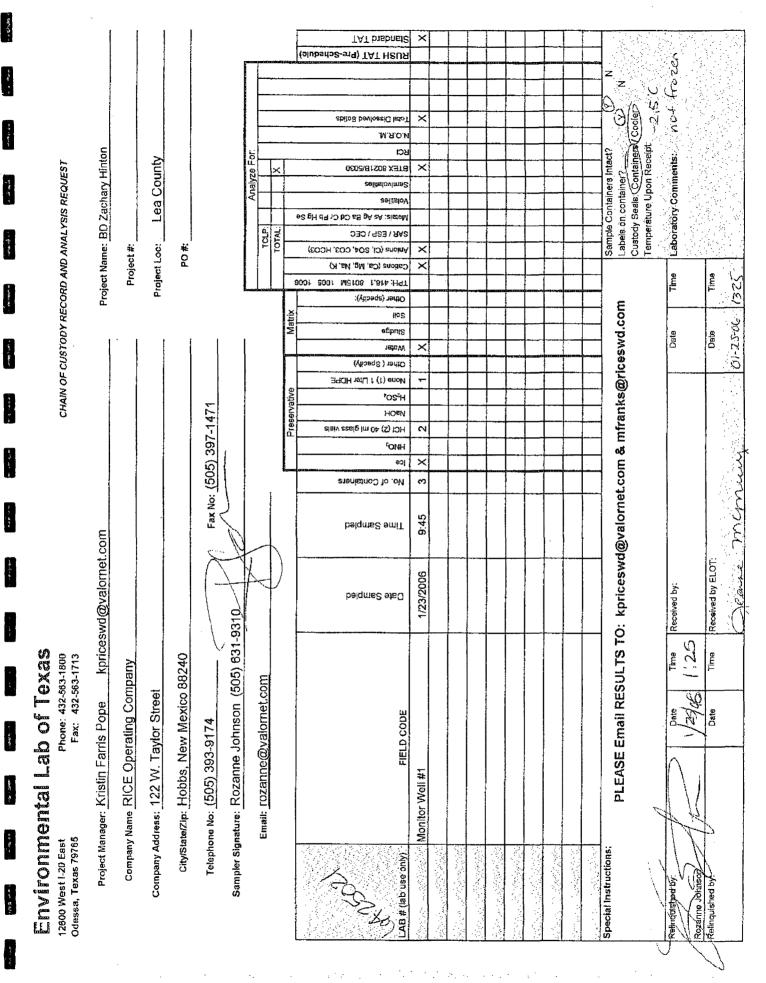
If you have received this material in error, please notify us immediately at 432-563-1800.

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

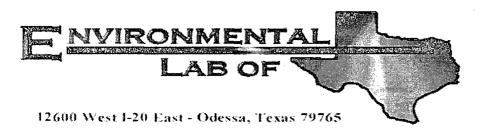
Client	Rice Op.
Date/Time:	1/25/06 13:25
Order #:	425021
Initials:	CRE

### Sample Receipt Checklist -2.5 Yes No С Temperature of container/cooler? Shipping container/cooler in good condition? No Yes, Custody Seals intact on shipping container/cooler? S No Not present Custody Seals intact on sample bottles? No ł Not present ¥æs\_ Chain of custody present? No XE5 | Sample Instructions complete on Chain of Custody? No XES 1 Chain of Custody signed when relinguished and received? No Xas I Chain of custody agrees with sample label(s) No Xes | Container labels legible and intact? HEB 1 No Sample Matrix and properties same as on chain of custody? ¥≈s No Samples in proper container/bottle? No Kes | Samples properly preserved? No X= Sample bottles intact? Yas I No Preservations documented on Chain of Custody? Xes I No Containers documented on Chain of Custody? No 1000 Sufficient sample amount for indicated test? No ¥=3 | All samples received within sufficient hold time? No YEST (32) VOC samples have zero headspace? Not Applicable No

### Other observations:

Variance Documentation: Dete Times

Regarding:			
······································			
Corrective Action Taken:			
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# 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.	Project:	BD Zachary Hinton	Fax: (505) 397-1471
122 W. Taylor	Project Number:	None Given	Reported:
Hobbs NM, 88240	Project Manager:	Kristin Farris-Pope	05/04/06 14:09

### ANALYTICAL REPORT FOR SAMPLES

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

Page 1 of 10

ſ	Rice Operating Co.	Project:	BD Zachary Hinton	Fax: (505) 397-1471
	122 W. Taylor	Project Number:	None Given	Reported:
	Hobbs NM, 88240	Project Manager:	Kristin Farris-Pope	05/04/06 14:09

# Organics by GC

### **Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Monitor Well #1 (6D27011-01) Water					· · · · ·		<u> </u>		
Benzene	ND	0.00100	mg/L	1	ED62807	04/28/06	04/30/06	EPA 8021B	
Toluene	ND	0.00100	u.	п	"	"	11		
Ethylbenzene	ND	0.00100	"	н			0		
Xylene (p/m)	ND	0.00100	n						
Xylene (0)	ND	0.00100				*		**	
Surrogate: a.a.a-Trifluorotoluene		102 %	80-12	0	n	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	80-12	0	"	"	"	"	

Environmental Lab of Texas

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Rice Operating Co.	Project: BD Zachary Hinton	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	Reported:
Hobbs NM, 88240	Project Manager: Kristin Farris-Pope	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
Monitor Well #1 (6D27011-01) Water									
Total Alkalinity	184	2.00	mg/L	1	EE60301	05/03/06	05/03/06	EPA 310.1M	
Chloride	326	5.00		10	EE60116	05/01/06	05/01/06	EPA 300.0	
Total Dissolved Solids	1190	5.00		1	EE60115	04/27/06	04/28/06	EPA 160.1	
Sulfate	167	5.00		10	EE60116	05/01/06	05/01/06	EPA 300.0	

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Ri	ce Operating Co.	Project: BD Zachary Hinton	Fax: (505) 397-1471
12	2 W. Taylor	Project Number: None Given	Reported:
Ho	obbs NM, 88240	Project Manager: Kristin Farris-Pope	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
Monitor Well #1 (6D27011-01) Water								-	
Calcium	85.0	0.100	mg/L	10	ED62719	04/27/06	04/27/06	EPA 6010B	
Magnesium	43.4	0.0100		"	n	н	11		
Potassium	9.70	0.500	0			n	н		
Sodium	238	0.500	•	50		n	и.	"	

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Page 4 of 10

12600 West 1-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Rice Operating Co.	· · · · · · · · · · · · · · · · · · ·			O Zachary Hir	nton				Fax: (505)	397-1471
122 W. Taylor		Project Nu	mber: No	one Given					Repo	rted:
Hobbs NM, 88240		Project Mar	nager: Kr	istin Farris-Po	ope				05/04/0	6 14:09
	O	rganics by Environm								
				Spike	Source		%REC		RPD	
Analyte	Result	Reporting Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch ED62807 - EPA 5030C (GC)	· · · · · · · · · · · · · · · · · · ·									•
Blank (ED62807-BLK1)				Prepared: 0	4/28/06 A	nałyzed: 04	/30/06			
Benzene	ND	0.00100	mg/L							
Foluene	ND	0.00100								
Ethylbenzene	ND	0.00100	**							
Xylene (p/m)	ND	0.00100								
Xylene (o)	ND	0.00100	υ.,							
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: 0	04/28/06 A	nalyzed: 04	/30/06			
Benzene	0.0599	0.00100	mg/L	0.0500		120	80-120			
Foluene	0.0580	0.00100	*1	0.0500		116	80-120			
Ethylbenzene	0.0551	0.00100	11	0.0500		110	80-120			
Xylene (p/m)	0.120	0.00100	11	0.100		120	80-120			
Xylene (0)	0.0596	0.00100	н	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: 0	)4/28/06 A	nalyzed: 05	5/01/06			
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 (0)	55.9		н	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)	Sou	rce: 6D27008-	-01	Prepared: 0	04/28/06 A	nalyzed: 05	5/01/06			
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 (0)	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			

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Page 5 of 10

122 W. Taylor Project Number: None Given	Reported:
Hobbs NM, 88240 Project Manager: Kristin Farris-Pope	05/04/06 14:09

### **Organics by GC - Quality Control**

**Environmental Lab of Texas** 

		Reporting		Spike	Source		%REC	•	RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
the second s										

Batch ED62807 - EPA 5030C (GC)

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Matrix Spike Dup (ED62807-MSD1)	Sou	rce: 6D27008-	-01	Prepared: 04	4/28/06 A	nalyzed: 0:	5/01/06		
Benzene	0.0597	0.00100	mg/L	0.0500	ND	119	80-120	3.42	20
Toluene	0.0579	0.00100	8	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	NĎ	120	80-120	0.00	20
Xylene (o)	0.0598	0.00100	"	0.0500	ND	120	80-120	0.00	20
Surrogate: a,a,a-Trifluorotoluene	43.5		ug/l	40.0		109	80-120		
Surrogate: 4-Bromofluorohenzene	46.4		п,	40.0		116	80-120		

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Rice Operating Co.		Pr	oject: BI	O Zachary Hir	nton				Fax: (505)	397-147
122 W. Taylor		Project Nu	•						Reno	rted:
Hobbs NM, 88240	Project Manager: Kristin Farris-Pope									6 14:09
Conomal Ch	emistry Para	motore br	EDA /	Standard	Mothod		lity Con	tral	·	
General Ci	-	meters by Environm				is - Qua	uty Com			
<u></u>		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EE60115 - General Preparation (V	VetChem)									
Blank (EE60115-BLK1)				Prepared: 0	4/27/06 Ai	nalyzed: 04	/28/06			
Total Dissolved Solids	ND	5.00	mg/L							
Duplicate (EE60115-DUP1)	Sou	rce: 6D27015-	01	Prepared: 0	04/27/06 Ai	nalyzed: 04	/28/06			
Total Dissolved Solids	3020	5.00	mg/L		3040			0.660	5	
Batch EE60116 - General Preparation (V Blank (EE60116-BLK1)	veicnein)			Prepared &	Analyzed:	05/01/06			<u> </u>	
Chloride	ND	0.500	mg/L							,
Sulfate	ND	0.500								
LCS (EE60116-BS1)				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			
Calibration Check (EE60116-CCV1)				Prepared &	: Analyzed:	05/01/06				
Chloride	9.86	·	mg/L	10.0		98.6	80-120			
Sulfate	8.11		и	10.0		81.1	80-120			
Duplicate (EE60116-DUP1)	Sou	-ce: 6D27008-	01	Prepared &	Analyzed	05/01/06				
Sulfate	80.0	2.50	mg/L		79.2			1.01	20	
Chloride	49.3	2.50	n		49.0			0.610	20	
Batch EE60301 - General Preparation (V	VetChem)									
				Prepared &	Analyzed	05/03/06				
Blank (EE60301-BLK1)				Tropared ex						

Environmental Lab of Texas

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Page 7 of 10

Rice Operating Co.	Project:	BD Zachary Hinton	Fax: (505) 397-1471
122 W. Taylor	Project Number:	None Given	Reported:
Hobbs NM, 88240	Project Manager:	Kristin Farris-Pope	05/04/06 14:09

# General Chemistry Parameters by EPA / Standard Methods - Quality Control

### **Environmental Lab of Texas**

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EE60301 - General Preparatio	on (WetChem)									
LCS (EE60301-BS1)				Prepared &	Analyzed:	05/03/06				
Bicarbonate Alkalinity	214		mg/L	200		107	85-115			
Duplicate (EE60301-DUP1)	Sourc	e: 6D26006-	-01	Prepared &	Analyzed:	05/03/06				
Total Alkalinity	29.0	2.00	mg/L		28.0			3.51	20	
Reference (EE60301-SRM1)				Prepared &	Analyzed:	05/03/06				
Total Alkalinity	96.0		mg/L	100		96.0	90-110			

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Rie	ce Operating Co.	Project:	BD Zachary Hinton	Fax: (505) 397-1471
12	2 W. Taylor	Project Number:	None Given	Reported:
Ho	bbs NM, 88240	Project Manager:	Kristin Farris-Pope	05/04/06 14:09

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

### **Environmental Lab of Texas**

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 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 &	z Analyzed:	04/27/06				
Calcium	2.08		mg/L				85-115			
Magnesium	2.16		н				85-115			
Potassium	1.94		*1				85-115			
Sodium	1.96		"				85-115			
Duplicate (ED62719-DUP1)	Sou	rce: 6D26006-	01	Prepared &	Analyzed:	04/27/06				
Calcium	0.0366	0.0100	mg/L		0.0367			0.273	20	
Magnesium	ND	0.00100	81		ND				20	
Potassium	0.275	0.0500	"		0.275			0.00	20	
Sodium	13.0	0.100	"		12.1			7.17	20	

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Rice Operat 122 W. Tay Hobbs NM,	lor	Project Number:	BD Zachary Hinton None Given Kristin Farris-Pope		Fax: (505) 397-1471 <b>Reported:</b> 05/04/06 14:09
		Notes and De	finitions		
DET	Analyte DETECTED				
ND	Analyte NOT DETECTED at or above the reporting limit			2	
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 Junis

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.

Date:

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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

CHAIN OF CUSTODY RECORD AND AMALYSIS REQUEST	Project Name: <u>BD Zachary Hinton</u>	Project #:	Project Lee: Lea County	P0#			Analyze For:	< 	(Pre-Schedule) a Solids 550 550 550 550 550 550 550 550 550 55	SAR / ESP / G Metals: As A Volatiles Settist 6021B/6 B/EX 6021B/6 RCI N/.O.R.M. TCI TCI N/.O.R.M.	x x x x x					Sample, Containers, Intact? N Laisels on container? N Criendy, Saals: Containers / 770/167		Laboratory Comments.	
STODY RECORD AN	Project	Pro	Projec	-				Metrix	001 5001 Weide .(4	Water Soit Ofher (specify Ofher (specify	×					vd.com		Date Time 4/27/64 4:0/	Date Time
CHAIN OF CUS					397-1471			Preservative	ter HOPE	Одлас (2660) Иоло (1) 1 П ИСІ (3) 40 ш/ ИСІ (5) 40 ш/ ИО2 ИЛО <sup>2</sup>	X 2 1					k mfranks@ricesv		21 4	4
	E				Fax No: (505)	0		L		Time Sami No. of Contr	9:30 3 >					 @riceswd.com δ	`.	me Jame	1.00/000
6	kpope@riceswd.com					31-9310 0	10 N		peic	gme2 steU	4/24/2006					TS TO: kpope		Received by	
Environmental Lab of Texas 12600 West 1-20 East Ddessa, Texas 79765 Fax: 432-663-1713	Project Manager: Kristin Farris Pope kpoj	company Name RICE Operating Company	company Address: 122 W. Taylor Street	city/state/zip: Hobbs, New Mexico 88240	Telephone No: (505) 393-9174	sampler signature: Rozanne Johnson (505) 631-9310	Email: rozanne@valornet.com	\		FIELD CODE	Monitor Well #1	an a				PLEASE Email RESULTS TO: kpope@riceswd.com & mfranks@riceswd.com		Date Time	211100 - 1/27/06 10-30
Environme 12600 West 1-20 East Odessa, Texas 79765	Project Mana	Company N	Company Addr	City/State/	Telephone	Sampler Signat	Ш		lion	UDB # (lab use only)	No. Colored Mi					Special Instructions:		Reingdished by: Bozanne Johnson	Relinguished by:

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

٦t 4/2/1020 10:30 /Time: er#: MAC als:

### Sample Receipt Checklist 20 perature of container/cooler? Yes No Cī cing container/cooler in good condition? YES NO ody Seals intact on shipping container/cooler? No Ves Not present cdy Seals intact on sample bottles? Yes. No Not present in of custody present? No é s tple Instructions complete on Chain of Custody? ěs. No in of Custody signed when relinquished and received? No 1 Xas in ci custody agrees with sample label(s) Xay 1 No tainer labels legible and intact? 100 No tole Matrix and properties same as on chain of custody? No Xeg 1 notes in procer container/bottle? Ves. No ncies procesiy presarved? YES No No note bottles intact? XE) servations documented on Chain of Custody? No Yes itainers documented on Chain of Custody? 735 No ficient sample amount for indicated test? Vez No samples received within sufficient hold time? K Dis No

ner observations:

samples have zero headspace?

()

No

Not Acclicable

 UMULTRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 155 McCutcheon, Suite H Lubbock, Texas 79424 800•378•1296 El Paso, Texas 79932 868•588•3443 E-Mail lab@traceanalysis.com 806•794•1296 FAX 806•794•1298 915•585•3443 FAX 915•585•4944

# **Analytical and Quality Control Report**

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

Project Location:Lea County,NMProject Name:BD Zachary HintonProject Number:BD Zachary Hinton

Report Date: August 9, 2006

Work Order: 6072143

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

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	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 about

Dr. Blair Leftwich, Director

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# **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
			RL	,		
Parameter		Flag	Result	Units	Dilution	RL
Hydroxide A	Ikalinity		<1.00	mg/L as CaCo3	1	1.00
Carbonate A	lkalinity		<1.00	mg/L as CaCo3	1	1.00
Bicarbonate	Alkalinity		188	mg/L as CaCo3	1	4.00
Total Alkalir	nity		188	mg/L as CaCo3	1	4.00

### Sample: 96140 - Monitor Well #1

Analysis:BTEXQC Batch:28277Prep Batch:24759		Analytical M Date Analyz Sample Prep	ed:	S 8021B 2006-07-24 2006-07-24		Prep Meth Analyzed Prepared F	By: MT
		R	L				
Parameter Flag		Resu	lt	Units	Γ	Dilution	RL
Benzene	<u> </u>	< 0.0010	00	mg/L		1	0.00100
Toluene		< 0.0010	00	mg/L		1	0.00100
Ethylbenzene		< 0.0010	00	mg/L		1	0.00100
Xylene		< 0.0010	00	mg/L		1	0.00100
					Spike	Percent	Recovery
Surrogate	Flag	Result	Units	Dilution	Amount	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:CationsQC Batch:28356Prep Batch:24749		Analytical Method: Date Analyzed: Sample Preparation:	S 6010B 2006-07-26 2006-07-24	Prep Method: Analyzed By: Prepared By:	
		RL			
Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium	· · · · · · · · · · · · · · · · · · ·	98.2	mg/L	1	0.500
Dissolved Potassium		12.8	mg/L	1	1.00
Dissolved Magnesium		49.3	mg/L	1	1.00
Dissolved Sodium		230	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.

Report Date: August 9, 2006 BD Zachary Hinton			Vork Order: BD Zachar			•	umber: 3 of 1 ea County,NN
		RL					
Parameter F	lag	Result		Units	Di	lution	RI
Chloride		375		mg/L	· · · · · · · · · · · · · · · · · · ·	50	0.50
Sulfate		234		mg/L		50	0.50
x							
Sample: 96140 - Monitor W	ell #1						
Analysis: TDS		Analytical		SM 2540C			Aethod: N/A
QC Batch: 28406		Date Analy		2006-07-27			zed By: SM
Prep Batch: 24850		Sample Pre	paration:	2009-07-26		Prepar	ed By: SM
Dem		n	RL	TT.		Dilution	D
Parameter	Flag		esult	Units		Dilution	R1 10.0
Total Dissolved Solids			1318	mg/L		2	10.0
	ntch: 28277					<i>,</i>	
QC Batch: 28277		Date Ana	2	006-07-24			zed By: MI
Prep Batch: 24759		QC Prepa	aration: 20	006-07-24		Prepar	ed By: MT
Parameter	Flag			IDL sult	Unit	te	RL
Benzene	Tidg		<0.000		mg/	-	0.00
Toluene			< 0.000		mg/		0.00
Ethylbenzene			< 0.000		mg/		0.00
Xylene	<u> </u>		< 0.000	603	mg/		0.00
			<b>T T T</b>		Spike	Percent	Recover
Surrogate	Flag	Result 0.0949	Units	Dilution	Amount	Recovery 95	Limits
Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BF	B)	0.0949	mg/L mg/L	1	0.100 0.100	93 63	76.1 - 11 58.5 - 11
Method Blank (1) QC Ba	atch: 28340						<b></b>
QC Batch: 28340		Date Ana	alvzed: 2	.006-07-26		Anal	yzed By: L
Prep Batch: 24777		QC Prep		006-07-25			ared By: L.
			MI				
Parameter	Flag	, ,	Res		Uni		R
Hydroxide Alkalinity			<1.		mg/L as		1
Carbonate Alkalinity			<1.		mg/L as		1
Bicarbonate Alkalinity			<4.		mg/L as		4
Total Alkalinity			<4.	(HU)	mg/L as	19003	4

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# Method Blank (1) QC Batch: 28356

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

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Report Date: August 9, 200 BD Zachary Hinton	6		er: 6072143 hary Hinton		Page Number: Lea Cour	
			MDL			
Parameter	Flag		Result	Units		R
Dissolved Calcium	1 Mg		0.132	mg/L		
Dissolved Potassium			1.08	mg/L		]
Dissolved Magnesium			< 0.704	mg/L		1
Dissolved Sodium			0.836	mg/L		
Method Blank (1) QC I	Batch: 28406		· .			
QC Batch: 28406	т	Date Analyzed:	2006-07-27		Analyzed By:	SN
Prep Batch: 24850		OC Preparation:	2006-07-26		Prepared By:	SN
110p Baten, 24050		ge i reparation.	2000-07-20		Trepared By:	51
			MDL			
Parameter	Flag		Result	Units		R
Total Dissolved Solids			< 5.000	mg/L		]
Method Blank (1) QC I QC Batch: 28782 Prep Batch: 25167		Date Analyzed: QC Preparation:	2006-08-02 2006-08-02		Analyzed By: Prepared By:	W W
			MDL			_
Parameter	Flag		esult	Units		R
Chloride Sulfate			0181 0485	mg/L mg/L		0
		< 0.		ing/L		
Duplicates (1)						
QC Batch: 28340	]	Date Analyzed:	2006-07-26		Analyzed By	': L
Prep Batch: 24777		QC Preparation:	2006-07-25		Prepared By:	
_	Duplicate	Sample				RP
Param	Result	Result	Units	Dilution	RPD	Lin
Hydroxide Alkalinity Carbonate Alkalinity	<1.00 <1.00	<1.00 <1.00	mg/L as CaCo3 mg/L as CaCo3	1 1	0 0	20 20
Bicarbonate Alkalinity	110	108	mg/L as CaCo3	1	2	12.
Total Alkalinity	110	108	mg/L as CaCo3	1	2	11
Duplicates (1) QC Batch: 28406 Prep Batch: 24850		Date Analyzed: QC Preparation:	2006-07-27 2006-07-26		Analyzed By: Prepared By:	S. S.
		Course 1	<b>.</b>			RP
	Dunligata					- M P
Param	Duplicate Result	Sample Result		Dilution	RPD	Lin

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Report Date: August 9, 2006 BD Zachary Hinton		<u>, , , , , , , , , , , , , , , , , ,</u>		rder: 6072 chary Hint				Page		er: 5 of 1 ounty,NN
Laboratory Control Spike (LCS-1)	)									•
QC Batch: 28277		Date A	nalyzed:	2006-0	7-24			Ana	lyzed E	By: MT
Prep Batch: 24759			eparation:	2006-01	7-24				ared B	
	LCS					Spike	Matrix			Rec.
Param	Resul		Units	Dil.		Amount	Result	Re		Limi
Benzene	0.109		mg/L	1		0.1	0	10		
Toluene	0.108		mg/L	1		0.1	0	10		
Ethylbenzene	0.109		mg/L	1		0.1	0	10		
Xylene	0.322		mg/L	· 1	2	0.3	0	107.	333	
Percent recovery is based on the spil	ke result. RPD	is based	l on the sp	oike and s	pike c	luplicate resu	ılt.			
	LCSD			Spike		Matrix		Rec.		RPE
Param	Result	Units	Dil.	Amoun	t	Result	Rec.	Limit	RPD	Limi
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 1	07.333		5.1	20
Percent recovery is based on the spik	ke result. RPD	is based	I on the sp	oike and s	pike c	luplicate resu	lt.			
	LCS	LC	CSD	-		Suite	LCS	LCSE	<b>`</b>	Rec.
Surrogate	Result			Units	Dil.	Spike		Rec.		Limit
Trifluorotoluene (TFT)	0.101				$\frac{DII.}{1}$	Amount 0.100				31.8 - 114
				mg/L			101	101		
4-Bromofluorobenzene (4-BFB)	0.112	0.1		mg/L	1	0.100	112	111		2.7 - 11
Laboratory Control Spike (LCS-1)	)									
QC Batch: 28356		Date A	nalyzed:	2006-0	7-26			An	alyzed	By: TP
Prep Batch: 24749			eparation:	2006-0	7-24				pared E	
	ICS					Spiles	Matuin			Dee
	LCS		Unite	D:I		Spike	Matrix		90	
Param	Resu	lt	Units	Dil.		Amount	Result	R	ec.	
Param Dissolved Calcium	Resu 51.7	<u>lt</u>	mg/L	1		Amount 50	Result 0	R 10	3.4	
Param Dissolved Calcium Dissolved Potassium	Resu 51.7 50.8	<u>lt</u>	mg/L mg/L	1		Amount 50 50	Result 0 0	R 10 10	3.4 1.6	
Param Dissolved Calcium	Resu 51.7	<u>lt</u>	mg/L	1		Amount 50	Result 0	R 10 10	3.4	Rec. Limi

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	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)

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

Report Date: August 9, 2006 BD Zachary Hinton	,	Work Order: 6072143 BD Zachary Hinton							Page Number: 6 of 10 Lea County,NM		
Param	LC Res	-	Units	Dil.	Spike Amount	Mat Res		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 sp	vike result. RPI	) is based	l on the spi	ke and spike	duplicate res	ult.					
•											
	LCSD			Spike	Matrix		Rec.		RPD		
Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit		
Param Chloride		Units mg/L	Dil.			Rec. 97.6		RPD 0.8			

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

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

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

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

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

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

Report Date: August 9, 2006	Work Order: 6072143	Page Number: 7 of 10
BD Zachary Hinton	BD Zachary Hinton	Lea County,NM
·····		

	MS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	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.

	MSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	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	Date Analyzed:	2006-08-02	Analyzed By:	WB
Prep Batch:	25167	QC Preparation:	2006-08-02	Prepared By:	WB

<b>`</b>	MS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	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.

	MSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	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)

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QC Batch: 282	277		Date Analy	zed: 2006-07-3	24	Ana	lyzed By: MT
			ICVs	ICVs	ICVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	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

Report Date: Au BD Zachary Hir	-			rk Order: 60721 D Zachary Hinto		Page	Number: 8 of 10 Lea County,NM
Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene	0	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)

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QC Batch:	28340		Date Analyzed:	2006-07-26		Ana	alyzed By: LJ
			ICVs	ICVs	ICVs	Percent	Dete
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Total Alkalin	ity	mg/L as CaCo	3 250	240	96	90 - 110	2006-07-26

# Standard (CCV-1)

QC Batch: 2834	<u>)</u>	Da	ate Analyzed:	2006-07-26		Ana	alyzed By: LJ
			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	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		Ana	lyzed By: TP
			ICVs	ICVs	ICVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	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		Ana	alyzed By: TP
			CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	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

BD Zachary Hinton	2006			Order: 607214 Achary Hinton		Page	Number: 9 of 1 Lea County,NM
Standard (ICV-1)				,			
QC Batch: 28406		Dat	te Analyzed:	2006-07-2	7	Ana	lyzed By: SM
			ICVs	ICVs	ICVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Total Dissolved Solids		mg/L	1000	1056	106	90 - 110	2006-07-2
Standard (CCV-1)			÷				
QC Batch: 28406		Dat	te Analyzed:	2006-07-2	7	Ana	lyzed By: SM
			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
		<b>.</b> .	Como	Conc.	Recovery	Limits	Analyzed
Param	Flag	Units	Conc.	Conc.	neecovery	13 mmeo	
Param Total Dissolved Solids Standard (ICV-1)	Flag	mg/L	1000	1075	108	90 - 110	2006-07-2
Total Dissolved Solids	Flag	mg/L	1000 e Analyzed:		108	90 - 110	2006-07-2
Total Dissolved Solids Standard (ICV-1) QC Batch: 28782		mg/L Dat ICVs True	1000 Te Analyzed:	1075	108	90 - 110 Anal Percent Recovery	2006-07-2 lyzed By: WB Date
Total Dissolved Solids Standard (ICV-1) QC Batch: 28782 Param Flag	Units	mg/L Dat ICVs True Conc	1000 Te Analyzed: S I F . C	1075 2006-08-02 CVs ound Conc.	108 ICVs Percent Recovery	90 - 110 Anal Percent Recovery Limits	2006-07-2 lyzed By: WE Date Analyzed
Total Dissolved Solids <b>Standard (ICV-1)</b> QC Batch: 28782 Param Flag Chloride	Units mg/L	mg/L Dat ICVs True Conc 12.5	1000 re Analyzed: s I F . C	1075 2006-08-02 CVs ound Conc. 12.4	ICVs Percent Recovery 99	90 - 110 Anal Percent Recovery Limits 90 - 110	2006-07-2 lyzed By: WE Date Analyzed 2006-08-0
Total Dissolved Solids <b>Standard (ICV-1)</b> QC Batch: 28782 Param Flag Chloride Sulfate	Units	mg/L Dat ICVs True Conc	1000 re Analyzed: s I F . C	1075 2006-08-02 CVs ound Conc.	108 ICVs Percent Recovery	90 - 110 Anal Percent Recovery Limits	2006-07-2 lyzed By: WB
Total Dissolved Solids         Standard (ICV-1)         QC Batch: 28782         Param       Flag         Chloride         Sulfate         Standard (CCV-1)	Units mg/L	mg/L Dat ICVs True Conc 12.5 12.5	1000 e Analyzed: s I F . C	1075 2006-08-02 CVs ound Conc. 12.4 12.7	ICVs Percent Recovery 99 102	90 - 110 Anal Percent Recovery Limits 90 - 110 90 - 110	2006-07-2 lyzed By: WE Date Analyzed 2006-08-0 2006-08-0
Total Dissolved Solids <b>Standard (ICV-1)</b> QC Batch: 28782 Param Flag Chloride Sulfate	Units mg/L	mg/L Dat ICVs True Conc 12.5 12.5	1000 re Analyzed: s I F . C	1075 2006-08-02 CVs ound Conc. 12.4 12.7	ICVs Percent Recovery 99 102	90 - 110 Anal Percent Recovery Limits 90 - 110 90 - 110	2006-07-2 lyzed By: WE Date Analyzed 2006-08-0 2006-08-0
Total Dissolved Solids         Standard (ICV-1)         QC Batch: 28782         Param       Flag         Chloride         Sulfate         Standard (CCV-1)	Units mg/L	mg/L Dat ICVs True Conc 12.5 12.5	1000 e Analyzed: s I F . C	1075 2006-08-02 CVs ound Conc. 12.4 12.7	ICVs Percent Recovery 99 102	90 - 110 Anal Percent Recovery Limits 90 - 110 90 - 110 Anal Percent	2006-07-2 lyzed By: WE Date Analyzed 2006-08-0 2006-08-0
Total Dissolved Solids         Standard (ICV-1)         QC Batch:       28782         Param       Flag         Chloride       Sulfate         Standard (CCV-1)       QC Batch:       28782	Units mg/L mg/L	mg/L Dat ICV: True Conc 12.5 12.5 Dat	1000 e Analyzed: s I . C e Analyzed: s C	1075 2006-08-02 CVs ound Cone. 12.4 12.7 2006-08-02 CCVs ound	108 ICVs Percent Recovery 99 102 CCVs Percent	90 - 110 Anal Percent Recovery Limits 90 - 110 90 - 110 Anal Percent Recovery	2006-07-2 lyzed By: WB Date Analyzed 2006-08-0
Total Dissolved Solids         Standard (ICV-1)         QC Batch:       28782         Param       Flag         Chloride       Sulfate         Standard (CCV-1)       QC Batch:       28782         Param       Flag       Flag         Param       Flag       Flag	Units mg/L mg/L Units	mg/L Dat ICV3 True Conc 12.5 12.5 Dat CCV True Conc	1000 e Analyzed: s I . C e Analyzed: s C . F	1075 2006-08-02 CVs ound Conc. 12.4 12.7 2006-08-02 CCVs ound Conc.	108 ICVs Percent Recovery 99 102 CCVs Percent Recovery	90 - 110 Anal Percent Recovery Limits 90 - 110 90 - 110 Anal Percent Recovery Limits	2006-07-2 lyzed By: WE Date Analyzed 2006-08-0 2006-08-0 2006-08-0 Uyzed By: WE Date Analyzed
Total Dissolved Solids         Standard (ICV-1)         QC Batch:       28782         Param       Flag         Chloride       Sulfate         Standard (CCV-1)       QC Batch:       28782	Units mg/L mg/L	mg/L Dat ICV3 True Conc 12.5 12.5 Dat CCV True	1000 e Analyzed: s I . C . C . S . C	1075 2006-08-02 CVs ound Cone. 12.4 12.7 2006-08-02 CCVs ound	108 ICVs Percent Recovery 99 102 CCVs Percent	90 - 110 Anal Percent Recovery Limits 90 - 110 90 - 110 Anal Percent Recovery	2006-07-2 lyzed By: WE Date Analyzed 2006-08-0 2006-08-0 2006-08-0 lyzed By: WE Date

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