

AP - 59

F-35

**ANNUAL GW MONITORING
REPORT**

DATE:

2004

RICE Operating Company

122 West Taylor • Hobbs, New Mexico 88240
Phone: (505)393-9174 • Fax: (505) 397-1471

AP-59
F-35 Annual Gw Mon.
Report
2004

CERTIFIED MAIL
RETURN RECEIPT NO. 7002 2410 0000 4940 1688

January 14, 2005

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

**RE: 2004 MONITOR WELL REPORT/SAMPLING SUMMARY
F-35 SWD, VACUUM SWD SYSTEM
UNIT 'F', SEC. 35, T17S, R35E
NMOCD CASE #1R0330**

Mr. Price:

Rice Operating Company (ROC) takes this opportunity to submit the 2004 Monitor Well Report for the Vacuum F-35 SWD site located in the Vacuum Salt Water Disposal (SWD) System. One monitoring well was installed on 1/10/2002 during the delineation and removal of a redwood tanks. This well is sampled quarterly pursuant to NMOCD guidelines. In 2004, ROC and Basin Environmental Service Technologies (Basin) of Lovington sampled the well. In 2005, Basin will sample the well and Environmental Lab of Texas of Odessa, Texas will continue to analyze the water samples.

R. T. Hicks Consultants of Albuquerque has been contracted by ROC to address groundwater concerns at this. NMOCD may expect the submission of an Investigation & Characterization Plan (ICP) this year.

ROC is the service provider (operator) for the Vacuum Salt Water Disposal System and has no ownership of any portion of pipeline, well, or facility. The Vacuum SWD System is owned by a consortium of oil producers, System Partners, who provide all operating capital on a percentage ownership/usage basis. In 2004, the Vacuum System Partners approved the discontinuance of the SWD System. Efforts are moving toward abandonment.

Thank you for your consideration concerning this annual summary of groundwater monitoring information. If you have any questions, do not hesitate to contact me.

RICE OPERATING COMAPANY

Kristin Farris Pope

Kristin Farris Pope
Project Scientist

enclosures: Summary table & graph
 Analytical results
 Survey map

cc: LBG, CDH, R. T. Hicks, file, Rob Roy Industries,

Chris Williams
NMOCD, District I Office
1625 N. French Drive
Hobbs, NM 88240

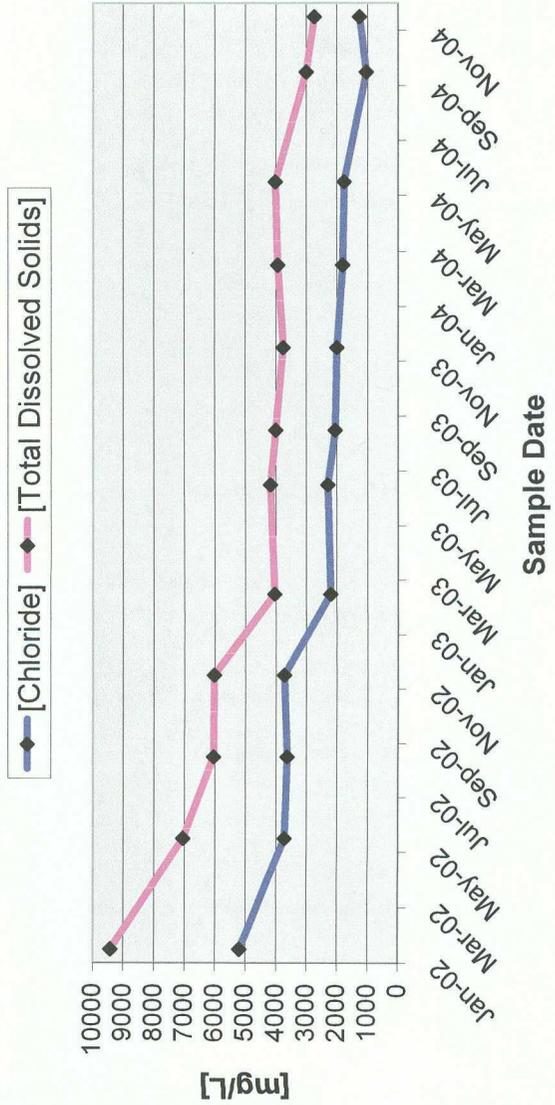
Vacuum F-35 SWD

unit 'F', Sec. 35, T17S, R35E

All concentrations are in mg/L

MW #	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	WELL VOLUME (gal)	VOLUME PURGED (gal)	SAMPLE DATE	Cl ⁻	TDS	BENZENE	TOLUENE	ETHYL BENZENE	TOTAL XYLENES	COMMENTS
1	58.00	66.00	1.300	3.90	1/10/02	5200	9425	0.050	0.053	0.050	0.0900	
1	XXX	XXX	XXX	XXX	5/15/02	3720	7050	0.744	0.207	0.510	0.3090	
1	XXX	XXX	XXX	XXX	8/19/02	3630	6040	0.705	0.172	0.112	0.0760	
1	XXX	XXX	XXX	XXX	11/11/02	3720	6020	1.210	0.343	0.835	0.4310	
1	XXX	XXX	XXX	XXX	2/28/03	2200	4040	0.909	0.840	0.321	0.1240	
1	XXX	XXX	XXX	XXX	6/5/03	2300	4180	0.632	0.134	0.061	0.0670	
1	XXX	XXX	XXX	XXX	8/21/03	2060	4000	0.617	0.360	0.202	0.1920	
1	XXX	XXX	XXX	XXX	11/19/03	2000	3760	0.797	0.301	0.264	0.2480	
1	58.20	64.00	0.930	2.78	2/18/04	1819	3932	0.349	0.038	0.121	0.0270	
1	58.50	64.00	0.880	2.64	5/27/04	1759	4008	0.726	0.176	0.268	0.2150	
1	58.20	64.20	0.960	2.90	9/7/04	1040	3000	0.429	0.221	0.143	0.2247	mod. odor; gray
1	57.81	64.20	1.000	3.10	11/24/04	1260	2740	0.0489	0.313	0.209	0.2507	mod. odor; gray

Vacuum F-35 SWD facility Monitor Well







PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
 PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

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

Receiving Date: 02/18/04
 Reporting Date: 02/20/04
 Project Number: NOT GIVEN
 Project Name: NOT GIVEN
 Project Location: VACUUM F-35

Sampling Date: 02/18/04
 Sample Type: GROUNDWATER
 Sample Condition: COOL & INTACT
 Sample Received By: AH
 Analyzed By: AH

LAB NUMBER	SAMPLE ID	Na (mg/L)	Ca (mg/L)	Mg (mg/L)	K (mg/L)	Conductivity (μ S/cm)	T-Alkalinity (mgCaCO ₃ /L)
ANALYSIS DATE:		02/19/04	02/19/04	02/19/04	02/19/04	02/19/04	02/19/04
H8471-1	VACUUM F-35 MW 1	1169	139	63	10.2	6759	598
Quality Control		NR	59	42	5.17	1322	NR
True Value QC		NR	50	50	5.00	1413	NR
% Recovery		NR	118	85	103	93.6	NR
Relative Percent Difference		NR	1.7	2.3	1.0	0.7	NR

METHODS:	SM3500-Ca-D	3500-Mg E	8049	120.1	310.1
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	Cl ⁻ (mg/L)	SO ₄ (mg/L)	CO ₃ (mg/L)	HCO ₃ (mg/L)	pH (s.u.)	TDS (mg/L)
ANALYSIS DATE:		02/19/04	02/19/04	02/19/04	02/19/04	02/20/04
H8471-1	VACUUM F-35 MW 1	1819	0.19	0	7.54	3932
Quality Control		1010	53.65	NR	1007	7.04
True Value QC		1000	50.00	NR	1000	7.00
% Recovery		101	107	NR	101	101
Relative Percent Difference		2.0	1.5	NR	1.1	0.3

METHODS:	SM4500-Cl-B	375.4	310.1	310.1	150.1	160.1
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Amy Hill
 Chemist

2/20/04
 Date

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**ARDINAL
LABORATORIES**

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

Receiving Date: 02/18/04
Reporting Date: 02/20/04
Project Number: NOT GIVEN
Project Name: NOT GIVEN
Project Location: VACUUM F-35

Sampling Date: 02/18/04
Sample Type: GROUNDWATER
Sample Condition: COOL & INTACT
Sample Received By: AH
Analyzed By: BC

LAB NUMBER	SAMPLE ID	BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL BENZENE (mg/L)	TOTAL XYLENES (mg/L)
ANALYSIS DATE		02/18/04	02/18/04	02/18/04	02/18/04
H8471-1	VACUUM F-35 MW 1	0.349	0.038	0.121	0.027
Quality Control		0.094	0.096	0.099	0.304
True Value QC		0.100	0.100	0.100	0.300
% Recovery		94.1	96.0	99.0	101
Relative Percent Difference		1.9	5.1	2.5	0.4

METHOD: EPA SW-846 8260


Chemist

2/20/04
Date



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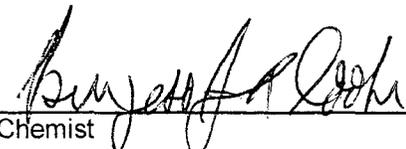
ANALYTICAL RESULTS FOR
 RICE OPERATING
 ATTN: KRISTIN FARRIS
 122 W. TAYLOR
 HOBBS, NM 88240
 FAX TO: (505) 397-1471

Receiving Date: 05/28/04
 Reporting Date: 05/31/04
 Project Number: NOT GIVEN
 Project Name: VACUUM F-35
 Project Location: F-35 MW 1

Sampling Date: 05/28/04
 Sample Type: GROUNDWATER
 Sample Condition: COOL & INTACT
 Sample Received By: AH
 Analyzed By: BC

LAB NUMBER	SAMPLE ID	BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL BENZENE (mg/L)	TOTAL XYLENES (mg/L)
ANALYSIS DATE		05/30/04	05/30/04	05/30/04	05/30/04
H8751-1	F-35 MW 1	0.726	0.176	0.268	0.215
Quality Control		0.094	0.097	0.086	0.257
True Value QC		0.100	0.100	0.100	0.300
% Recovery		94.3	97.3	86.4	85.6
Relative Percent Difference		5.2	1.5	1.4	0.3

METHOD: EPA SW-846 8260


 Chemist

5/31/04
 Date

PLEASE NOTE: **Liability and Damages.** Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise.



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

Receiving Date: 05/28/04
 Reporting Date: 06/02/04
 Project Number: NOT GIVEN
 Project Name: VACCUM F-35
 Project Location: F-35 MW1

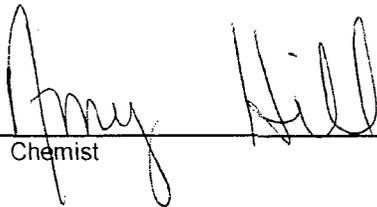
Sampling Date: 05/28/04
 Sample Type: GROUNDWATER
 Sample Condition: COOL & INTACT
 Sample Received By: AH
 Analyzed By: AH

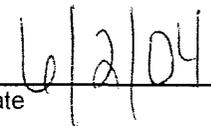
LAB NUMBER	SAMPLE ID	Na (mg/L)	Ca (mg/L)	Mg (mg/L)	K (mg/L)	Conductivity (uS/cm)	T-Alkalinity (mgCaCO ₃ /L)
ANALYSIS DATE:		06/01/04	06/01/04	06/01/04	06/01/04	06/01/04	06/01/04
H8751-1	F-35 MW1	1266	81	24	3.49	7586	572
		0					
Quality Control		NR	50	55	4.58	1322	NR
True Value QC		NR	50	50	5.00	1413	NR
% Recovery		NR	100	110	91.6	93.6	NR
Relative Percent Difference		NR	0	0	7.2	0.7	NR

METHODS:	SM3500-Ca-D	3500-Mg E	8049	120.1	310.1
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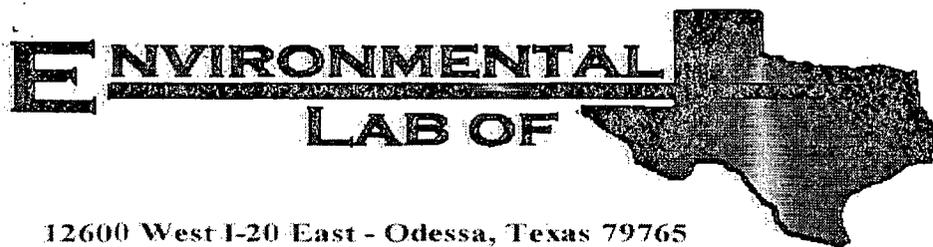
	Cl ⁻ (mg/L)	SO ₄ (mg/L)	CO ₃ (mg/L)	HCO ₃ (mg/L)	pH (s.u.)	TDS (mg/L)
ANALYSIS DATE:		06/01/04	06/01/04	06/01/04	06/01/04	06/02/04
H8751-1	F-35 MW1	1759	8.70	0	698	7.52
Quality Control		950	48.21	NR	927	7.02
True Value QC		1000	50.00	NR	1000	7.00
% Recovery		95.0	96.4	NR	92.7	101
Relative Percent Difference		6.0	6.2	NR	0	0.3

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


 Date

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12600 West I-20 East - Odessa, Texas 79765

Analytical Report

Prepared for:

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

Project: F-35 SWD
Project Number: None Given
Location: Vacuum

Lab Order Number: 4I10009

Report Date: 09/17/04

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

Project: F-35 SWD
Project Number: None Given
Project Manager: Kristin Pope

Fax: (505) 397-1471

Reported:
09/17/04 10:53

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	4110009-01	Water	09/07/04 10:40	09/09/04 19:20

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

Project: F-35 SWD
 Project Number: None Given
 Project Manager: Kristin Pope

Fax: (505) 397-1471

Reported:
 09/17/04 10:53

**Organics by GC
 Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (4H10009-01) Water									
Benzene	0.429	0.00100	mg/L	1	EI41604	09/14/04	09/16/04	EPA 8021B	
Toluene	0.221	0.00100	"	"	"	"	"	"	
Ethylbenzene	0.143	0.00100	"	"	"	"	"	"	
Xylene (p/m)	0.165	0.00100	"	"	"	"	"	"	
Xylene (o)	0.0597	0.00100	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		266 %	80-120		"	"	"	"	S-04
<i>Surrogate: 4-Bromofluorobenzene</i>		115 %	80-120		"	"	"	"	

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

Project: F-35 SWD
Project Number: None Given
Project Manager: Kristin Pope

Fax: (505) 397-1471

Reported:
09/17/04 10:53

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (4110009-01) Water									
Chloride	1480	5.00	mg/L	1	EI41612	09/12/04	09/12/04	EPA 325.3M	
Total Dissolved Solids	3000	5.00	"	"	EI41702	09/13/04	09/13/04	EPA 160.1	
Sulfate	19.9	0.500	"	"	EI41701	09/10/04	09/10/04	EPA 375.4	

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

Project: F-35 SWD
Project Number: None Given
Project Manager: Kristin Pope

Fax: (505) 397-1471

Reported:
09/17/04 10:53

Total Metals by EPA / Standard Methods
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (4110009-01) Water									
Calcium	69.9	0.100	mg/L	10	EI41506	09/15/04	09/15/04	EPA 6010B	
Magnesium	27.9	0.0100	"	"	"	"	"	"	
Potassium	4.88	0.500	"	"	"	"	"	"	
Sodium	1020	1.00	"	100	"	"	"	"	

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

Project: F-35 SWD
Project Number: None Given
Project Manager: Kristin Pope

Fax: (505) 397-1471

Reported:
09/17/04 10:53

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 EI41604 - EPA 5030C (GC)

Blank (EI41604-BLK1)

Prepared & Analyzed: 09/14/04

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	20.0		ug/l	20.0		100	80-120			
Surrogate: 4-Bromofluorobenzene	17.4		"	20.0		87.0	80-120			

LCS (EI41604-BS1)

Prepared & Analyzed: 09/14/04

Benzene	95.7		ug/l	100		95.7	80-120			
Toluene	110		"	100		110	80-120			
Ethylbenzene	108		"	100		108	80-120			
Xylene (p/m)	228		"	200		114	80-120			
Xylene (o)	103		"	100		103	80-120			
Surrogate: a,a,a-Trifluorotoluene	21.5		"	20.0		108	80-120			
Surrogate: 4-Bromofluorobenzene	23.5		"	20.0		118	80-120			

LCS Dup (EI41604-BSD1)

Prepared & Analyzed: 09/14/04

Benzene	92.0		ug/l	100		92.0	80-120	3.94	20	
Toluene	104		"	100		104	80-120	5.61	20	
Ethylbenzene	103		"	100		103	80-120	4.74	20	
Xylene (p/m)	215		"	200		108	80-120	5.41	20	
Xylene (o)	99.5		"	100		99.5	80-120	3.46	20	
Surrogate: a,a,a-Trifluorotoluene	20.6		"	20.0		103	80-120			
Surrogate: 4-Bromofluorobenzene	21.2		"	20.0		106	80-120			

Calibration Check (EI41604-CCV1)

Prepared & Analyzed: 09/14/04

Benzene	82.8		ug/l	100		82.8	80-120			
Toluene	94.0		"	100		94.0	80-120			
Ethylbenzene	91.4		"	100		91.4	80-120			
Xylene (p/m)	196		"	200		98.0	80-120			
Xylene (o)	89.9		"	100		89.9	80-120			
Surrogate: a,a,a-Trifluorotoluene	18.1		"	20.0		90.5	80-120			
Surrogate: 4-Bromofluorobenzene	17.1		"	20.0		85.5	80-120			

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

Project: F-35 SWD
 Project Number: None Given
 Project Manager: Kristin Pope

Fax: (505) 397-1471

Reported:
 09/17/04 10:53

**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 EI41604 - EPA 5030C (GC)

Matrix Spike (EI41604-MS1)

Source: 4I10005-02

Prepared: 09/14/04 Analyzed: 09/16/04

Benzene	81.1		ug/l	100	ND	81.1	80-120			
Toluene	83.7		"	100	ND	83.7	80-120			
Ethylbenzene	81.6		"	100	ND	81.6	80-120			
Xylene (p/m)	174		"	200	ND	87.0	80-120			
Xylene (o)	80.6		"	100	ND	80.6	80-120			
<i>Surrogate: a,a,α-Trifluorotoluene</i>	<i>17.0</i>		<i>"</i>	<i>20.0</i>		<i>85.0</i>	<i>80-120</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>16.5</i>		<i>"</i>	<i>20.0</i>		<i>82.5</i>	<i>80-120</i>			

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

Project: F-35 SWD
Project Number: None Given
Project Manager: Kristin Pope

Fax: (505) 397-1471

Reported:
09/17/04 10:53

**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 EI41612 - General Preparation (WetChem)										
Blank (EI41612-BLK1) Prepared & Analyzed: 09/12/04										
Chloride	ND	5.00	mg/L							
Matrix Spike (EI41612-MS1) Source: 4I09007-03 Prepared & Analyzed: 09/12/04										
Chloride	1280	5.00	mg/L	500	780	100	90-110			
Matrix Spike Dup (EI41612-MSD1) Source: 4I09007-03 Prepared & Analyzed: 09/12/04										
Chloride	1280	5.00	mg/L	500	780	100	90-110	0.00	20	
Reference (EI41612-SRM1) Prepared & Analyzed: 09/12/04										
Chloride	4960		mg/L	5000		99.2	80-120			
Batch EI41701 - General Preparation (WetChem)										
Blank (EI41701-BLK1) Prepared & Analyzed: 09/10/04										
Sulfate	ND	0.500	mg/L							
Calibration Check (EI41701-CCV1) Prepared & Analyzed: 09/10/04										
Sulfate	48.6		mg/L	50.0		97.2	80-120			
Duplicate (EI41701-DUP1) Source: 4I10005-01 Prepared & Analyzed: 09/10/04										
Sulfate	128	1.00	mg/L		129			0.778	20	
Batch EI41702 - Filtration Preparation										
Blank (EI41702-BLK1) Prepared & Analyzed: 09/13/04										
Total Dissolved Solids	ND	5.00	mg/L							

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

Project: F-35 SWD
Project Number: None Given
Project Manager: Kristin Pope

Fax: (505) 397-1471

Reported:
09/17/04 10:53

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 EI41702 - Filtration Preparation

Duplicate (EI41702-DUP1)

Source: 4I10005-02

Prepared & Analyzed: 09/13/04

Total Dissolved Solids	797	5.00	mg/L		937			16.1	20	
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Rice Operating Co.
122 W. Taylor
Hobbs NM, 88240

Project: F-35 SWD
Project Number: None Given
Project Manager: Kristin Pope

Fax: (505) 397-1471

Reported:
09/17/04 10:53

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 EI41506 - General Preparation (Metals)

Blank (EI41506-BLK1)

Prepared & Analyzed: 09/15/04

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

Blank (EI41506-BLK2)

Prepared & Analyzed: 09/15/04

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

Calibration Check (EI41506-CCV1)

Prepared & Analyzed: 09/15/04

Calcium	2.03		mg/L	2.00		102	85-115			
Magnesium	2.04		"	2.00		102	85-115			
Potassium	1.75		"	2.00		87.5	85-115			
Sodium	1.79		"	2.00		89.5	85-115			

Calibration Check (EI41506-CCV2)

Prepared & Analyzed: 09/15/04

Calcium	1.93		mg/L	2.00		96.5	85-115			
Magnesium	2.02		"	2.00		101	85-115			
Potassium	1.76		"	2.00		88.0	85-115			
Sodium	1.77		"	2.00		88.5	85-115			

Duplicate (EI41506-DUP1)

Source: 4I03009-01

Prepared & Analyzed: 09/15/04

Calcium	281	1.00	mg/L	280		0.357	20			
Magnesium	110	0.100	"	111		0.905	20			
Potassium	8.18	0.500	"	8.31		1.58	20			
Sodium	359	1.00	"	365		1.66	20			

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

Project: F-35 SWD
 Project Number: None Given
 Project Manager: Kristin Pope

Fax: (505) 397-1471

Reported:
 09/17/04 10:53

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 E141506 - General Preparation (Metals)

Duplicate (E141506-DUP2)	Source: 4I10015-01			Prepared & Analyzed: 09/15/04						
Calcium	20.2	0.100	mg/L		20.2			0.00	20	
Magnesium	28.4	0.0100	"		28.6			0.702	20	
Potassium	16.4	0.500	"		16.6			1.21	20	
Sodium	103	0.100	"		103			0.00	20	

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

Project: F-35 SWD
Project Number: None Given
Project Manager: Kristin Pope

Fax: (505) 397-1471

Reported:
09/17/04 10:53

Notes and Definitions

S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference
LCS Laboratory Control Spike
MS Matrix Spike
Dup Duplicate

Report Approved By:

Raland K Tuttle

Date:

9-18-09

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

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

Jeanne McMurrey

From: "Kristin Farris" <enviro@leaco.net>
To: "Jeanne McMurrey" <jeanne@elabtxas.com>
Sent: Friday, September 10, 2004 9:33 AM
Subject: MW samples

Please do not analyze the water samples that were collected on 9/7/2004 for HCO₃ since the hold time of 48 hrs. has expired.

Also, for the COC for the site F-35 SWD, the corresponding samples were mistakenly labeled as H-35 SWD.

Thank you.
Kristin Farris Pope
RICE Operating Company
Hobbs, NM 88240
(505) 393-9174

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This message has been scanned for viruses and dangerous content by MailScanner at BasinBroadBand.com, and is believed to be clean.

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

Client: Rice Operating Co.

Date/Time: 09-10-04 @ 0900

Order #: 4I10009

Initials: JMM

Sample Receipt Checklist

Temperature of container/cooler?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	4.0 C
Shipping container/cooler in good condition?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Custody Seals intact on shipping container/cooler?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Not present
Custody Seals intact on sample bottles?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Not present
Chain of custody present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Sample Instructions complete on Chain of Custody?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Chain of Custody signed when relinquished and received?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Chain of custody agrees with sample label(s)	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	see attached e-mail
Container labels legible and intact?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Sample Matrix and properties same as on chain of custody?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Samples in proper container/bottle?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Samples properly preserved?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Sample bottles intact?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Preservations documented on Chain of Custody?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Containers documented on Chain of Custody?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Sufficient sample amount for indicated test?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
All samples received within sufficient hold time?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	CO ₃ /HCO ₃ out of 48 hr. hold time
VOC samples have zero headspace?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Not Applicable

Other observations:

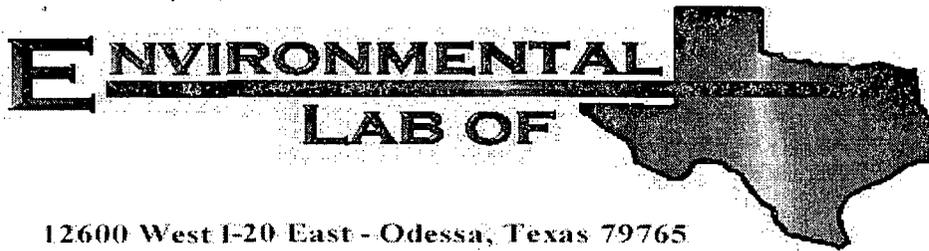
Variance Documentation:

Contact Person: - Kristin Farris Date/Time: 09-10-04 @ 0930 Contacted by: Jeanne

Regarding: hold time - CO₃/HCO₃
mislabeled sample

Corrective Action Taken:

client doesn't want to run CO₃/HCO₃
on 9/7/4 samples. see attached e-mail



12600 West I-20 East - Odessa, Texas 79765

Analytical Report

Prepared for:

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

Project: F-35 SWD
Project Number: None Given
Location: Vacuum

Lab Order Number: 4K30006

Report Date: 12/08/04

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

Project: F-35 SWD
Project Number: None Given
Project Manager: Kristin Pope

Fax: (505) 397-1471
Reported:
12/08/04 17:21

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	4K30006-01	Water	11/24/04 12:30	11/30/04 10:35

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

Project: F-35 SWD
Project Number: None Given
Project Manager: Kristin Pope

Fax: (505) 397-1471

Reported:
12/08/04 17:21

Organics by GC
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (4K30006-01) Water									
Benzene	0.489	0.0100	mg/L	10	EL40601	12/02/04	12/02/04	EPA 8021B	
Toluene	0.313	0.0100	"	"	"	"	"	"	
Ethylbenzene	0.209	0.0100	"	"	"	"	"	"	
Xylene (p/m)	0.172	0.0100	"	"	"	"	"	"	
Xylene (o)	0.0787	0.0100	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		128 %	80-120		"	"	"	"	S-04
<i>Surrogate: 4-Bromofluorobenzene</i>		116 %	80-120		"	"	"	"	

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

Project: F-35 SWD
Project Number: None Given
Project Manager: Kristin Pope

Fax: (505) 397-1471

Reported:
12/08/04 17:21

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (4K30006-01) Water									
Total Alkalinity	442	2.00	mg/L	1	EL40313	12/03/04	12/03/04	EPA 310.2M	
Total Dissolved Solids	2740	5.00	"	"	EL40105	11/30/04	12/01/04	EPA 160.1	

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

Project: F-35 SWD
Project Number: None Given
Project Manager: Kristin Pope

Fax: (505) 397-1471

Reported:
12/08/04 17:21

Total Metals by EPA / Standard Methods
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (4K30006-01) Water									
Calcium	66.2	0.100	mg/L	10	EL40101	11/30/04	11/30/04	EPA 6010B	
Magnesium	24.7	0.0100	"	"	"	"	"	"	
Potassium	6.02	0.500	"	"	"	"	"	"	
Sodium	842	1.00	"	100	"	"	"	"	

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

Project: F-35 SWD
Project Number: None Given
Project Manager: Kristin Pope

Fax: (505) 397-1471

Reported:
12/08/04 17:21

Anions by EPA Method 300.0
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (4K30006-01) Water									
Chloride	1260	15.0	mg/L	30	EL40811	12/02/04	12/02/04	EPA 300.0	
Sulfate	51.0	15.0	"	"	EL40812	"	"	"	

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

Project: F-35 SWD
Project Number: None Given
Project Manager: Kristin Pope

Fax: (505) 397-1471

Reported:
12/08/04 17:21

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 EL40601 - EPA 5030C (GC)

Blank (EL40601-BLK1)

Prepared & Analyzed: 12/02/04

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	0.0223		"	0.0200		112	80-120			
Surrogate: 4-Bromofluorobenzene	0.0183		"	0.0200		91.5	80-120			

LCS (EL40601-BS1)

Prepared & Analyzed: 12/02/04

Benzene	99.2		ug/l	100		99.2	80-120			
Toluene	107		"	100		107	80-120			
Ethylbenzene	107		"	100		107	80-120			
Xylene (p/m)	219		"	200		110	80-120			
Xylene (o)	116		"	100		116	80-120			
Surrogate: a,a,a-Trifluorotoluene	0.0196		mg/L	0.0200		98.0	80-120			
Surrogate: 4-Bromofluorobenzene	0.0199		"	0.0200		99.5	80-120			

LCS Dup (EL40601-BSD1)

Prepared & Analyzed: 12/02/04

Benzene	100		ug/l	100		100	80-120	0.803	20	
Toluene	110		"	100		110	80-120	2.76	20	
Ethylbenzene	111		"	100		111	80-120	3.67	20	
Xylene (p/m)	230		"	200		115	80-120	4.44	20	
Xylene (o)	119		"	100		119	80-120	2.55	20	
Surrogate: a,a,a-Trifluorotoluene	0.0199		mg/L	0.0200		99.5	80-120			
Surrogate: 4-Bromofluorobenzene	0.0202		"	0.0200		101	80-120			

Calibration Check (EL40601-CCV1)

Prepared: 12/02/04 Analyzed: 12/03/04

Benzene	98.7		ug/l	100		98.7	80-120			
Toluene	105		"	100		105	80-120			
Ethylbenzene	109		"	100		109	80-120			
Xylene (p/m)	221		"	200		110	80-120			
Xylene (o)	111		"	100		111	80-120			
Surrogate: a,a,a-Trifluorotoluene	0.0218		mg/L	0.0200		109	80-120			
Surrogate: 4-Bromofluorobenzene	0.0227		"	0.0200		114	80-120			

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

Project: F-35 SWD
Project Number: None Given
Project Manager: Kristin Pope

Fax: (505) 397-1471

Reported:
12/08/04 17:21

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 EL40601 - EPA 5030C (GC)

Matrix Spike (EL40601-MS1)

Source: 4K30004-03

Prepared: 12/02/04 Analyzed: 12/03/04

Benzene	107		ug/l	100	ND	107	80-120			
Toluene	108		"	100	ND	108	80-120			
Ethylbenzene	114		"	100	ND	114	80-120			
Xylene (p/m)	229		"	200	ND	114	80-120			
Xylene (o)	111		"	100	ND	111	80-120			
Surrogate: <i>a,a,a</i> -Trifluorotoluene	0.0206		mg/L	0.0200		103	80-120			
Surrogate: 4-Bromofluorobenzene	0.0201		"	0.0200		100	80-120			

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

Project: F-35 SWD
Project Number: None Given
Project Manager: Kristin Pope

Fax: (505) 397-1471

Reported:
12/08/04 17:21

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 EL40105 - General Preparation (WetChem)

Blank (EL40105-BLK1) Prepared: 11/30/04 Analyzed: 12/01/04

Total Dissolved Solids ND 5.00 mg/L

Duplicate (EL40105-DUP1) Source: 4K24009-01 Prepared: 11/30/04 Analyzed: 12/01/04

Total Dissolved Solids 1480 5.00 mg/L 1480 0.00 20

Batch EL40313 - General Preparation (WetChem)

Blank (EL40313-BLK1) Prepared & Analyzed: 12/03/04

Total Alkalinity ND 2.00 mg/L

Duplicate (EL40313-DUP1) Source: 4K30004-01 Prepared & Analyzed: 12/03/04

Total Alkalinity 207 2.00 mg/L 208 0.482 20

Reference (EL40313-SRM1) Prepared & Analyzed: 12/03/04

Carbonate Alkalinity 0.0501 mg/L 0.0500 100 80-120

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

Project: F-35 SWD
 Project Number: None Given
 Project Manager: Kristin Pope

Fax: (505) 397-1471

Reported:
 12/08/04 17:21

**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 EL40101 - 6010B/No Digestion

Blank (EL40101-BLK1)

Prepared & Analyzed: 11/30/04

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

Calibration Check (EL40101-CCV1)

Prepared & Analyzed: 11/30/04

Calcium	1.87		mg/L	2.00		93.5	85-115			
Magnesium	2.08		"	2.00		104	85-115			
Potassium	1.83		"	2.00		91.5	85-115			
Sodium	1.78		"	2.00		89.0	85-115			

Duplicate (EL40101-DUP1)

Source: 4K24009-01

Prepared & Analyzed: 11/30/04

Calcium	108	1.00	mg/L		122			12.2	20	
Magnesium	46.0	0.0100	"		51.6			11.5	20	
Potassium	11.1	0.500	"		13.2			17.3	20	
Sodium	222	1.00	"		235			5.69	20	

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

Project: F-35 SWD
Project Number: None Given
Project Manager: Kristin Pope

Fax: (505) 397-1471

Reported:
12/08/04 17:21

**Anions by EPA Method 300.0 - Quality Control
Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EL40811 - General Preparation (WetChem)										
Blank (EL40811-BLK1) Prepared & Analyzed: 12/02/04										
Chloride	0.00	0.500	mg/L							
Blank (EL40811-BLK2) Prepared & Analyzed: 12/02/04										
Chloride	0.00	0.500	mg/L							
LCS (EL40811-BS1) Prepared & Analyzed: 12/02/04										
Chloride	5.73	0.500	mg/L	5.00		115	80-120			
LCS (EL40811-BS2) Prepared & Analyzed: 12/02/04										
Chloride	5.81	0.500	mg/L	5.00		116	80-120			
LCS Dup (EL40811-BSD1) Prepared & Analyzed: 12/02/04										
Chloride	5.42	0.500	mg/L	5.00		108	80-120	5.56	20	
LCS Dup (EL40811-BSD2) Prepared & Analyzed: 12/02/04										
Chloride	5.51	0.500	mg/L	5.00		110	80-120	5.30	20	
Calibration Check (EL40811-CCV1) Prepared & Analyzed: 12/02/04										
Chloride	25.8		mg/L	25.0		103	80-120			
Calibration Check (EL40811-CCV2) Prepared & Analyzed: 12/02/04										
Chloride	26.1		mg/L	25.0		104	80-120			
Duplicate (EL40811-DUP1) Source: 4K30004-03 Prepared & Analyzed: 12/02/04										
Chloride	55.7	10.0	mg/L		55.2			0.902	20	
Duplicate (EL40811-DUP2) Source: 4K30006-01RE1 Prepared & Analyzed: 12/02/04										
Chloride	446	10.0	mg/L		445			0.224	20	

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

Project: F-35 SWD
Project Number: None Given
Project Manager: Kristin Pope

Fax: (505) 397-1471

Reported:
12/08/04 17:21

**Anions by EPA Method 300.0 - Quality Control
Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EL40812 - General Preparation (WetChem)										
Blank (EL40812-BLK1) Prepared & Analyzed: 12/02/04										
Sulfate	0.00	0.500	mg/L							
Blank (EL40812-BLK2) Prepared & Analyzed: 12/02/04										
Sulfate	0.00	0.500	mg/L							
LCS (EL40812-BS1) Prepared & Analyzed: 12/02/04										
Sulfate	5.28	0.500	mg/L	5.00		106	80-120			
LCS (EL40812-BS2) Prepared & Analyzed: 12/02/04										
Sulfate	5.53	0.500	mg/L	5.00		111	80-120			
LCS Dup (EL40812-BSD1) Prepared & Analyzed: 12/02/04										
Sulfate	5.22	0.500	mg/L	5.00		104	80-120	1.14	20	
LCS Dup (EL40812-BSD2) Prepared & Analyzed: 12/02/04										
Sulfate	5.34	0.500	mg/L	5.00		107	80-120	3.50	20	
Calibration Check (EL40812-CCV1) Prepared & Analyzed: 12/02/04										
Sulfate	10.1		mg/L	10.0		101	80-120			
Calibration Check (EL40812-CCV2) Prepared & Analyzed: 12/02/04										
Sulfate	10.3		mg/L	10.0		103	80-120			
Duplicate (EL40812-DUP1) Source: 4K30004-03 Prepared & Analyzed: 12/02/04										
Sulfate	101	10.0	mg/L		99.2			1.80	20	
Duplicate (EL40812-DUP2) Source: 4K30006-01RE1 Prepared & Analyzed: 12/02/04										
Sulfate	123	10.0	mg/L		123			0.00	20	

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

Project: F-35 SWD
Project Number: None Given
Project Manager: Kristin Pope

Fax: (505) 397-1471
Reported:
12/08/04 17:21

Notes and Definitions

S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.

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: 12-09-04

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

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

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

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

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

Client: Rice Operating Co.

Date/Time: 11-30-04 @ 1200

Order #: 4K 30006

Initials: JMM

Sample Receipt Checklist

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

Other observations:

Variance Documentation:

Contact Person: - _____ Date/Time: _____ Contacted by: _____
Regarding: _____

Corrective Action Taken:
