# AP - <u>66</u>

## ANNUAL MONITORING REPORT

YEAR(S): 2004

## **RICE** Operating Company

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

CERTIFIED MAIL RETURN RECEIPT NO. 7002 2410 0000 4940 1855

January 26, 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 JUNCTION N-5, EME SWD SYSTEM UNIT 'N', SEC. 5, T20S, R37E NMOCD CASE #1R0427-90

Mr. Price:

Rice Operating Company (ROC) takes this opportunity to submit the 2004 Monitor Well Report for the <u>EME N-5 junction box site</u> located in the Eunice Monument Eumont (EME) Salt Water Disposal (SWD) System. One monitoring well was installed in 2002 during the delineation of a junction box. This well is sampled quarterly pursuant to NMOCD guidelines. In 2004, ROC and Arcadis G&M, Inc. of Midland, Texas sampled the well. In 2005, Trident Environmental (Trident) of Midland will sample the well and Environmental Lab of Texas of Odessa will continue to conduct analytical tests of the water samples.

Trident 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 EME Salt Water Disposal System and has no ownership of any portion of pipeline, well, or facility. The EME SWD System is owned by a consortium of oil producers, System Partners, who provide all operating capital on a percentage ownership/usage basis.

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

Knistin Fairis Pope

Kristin Farris Pope Project Scientist

enclosures:

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Summary table & graph Analytical results Map

cc: LBG, CDH, Trident, file, Rob Roy Industries,

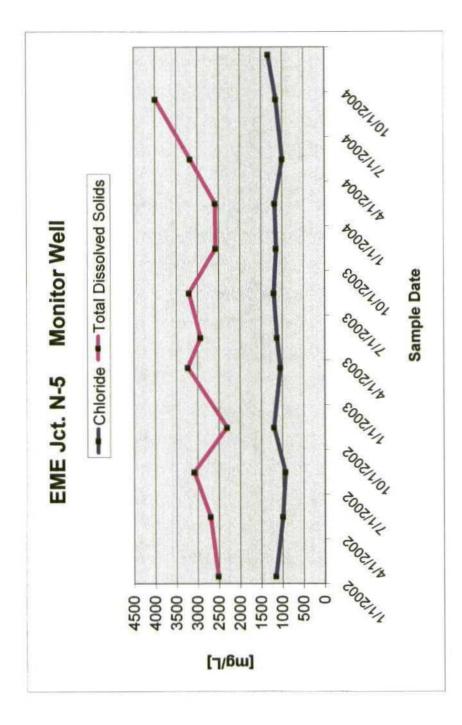
Chris Williams NMOCD, District I Office 1625 N. French Drive Hobbs, NM 88240

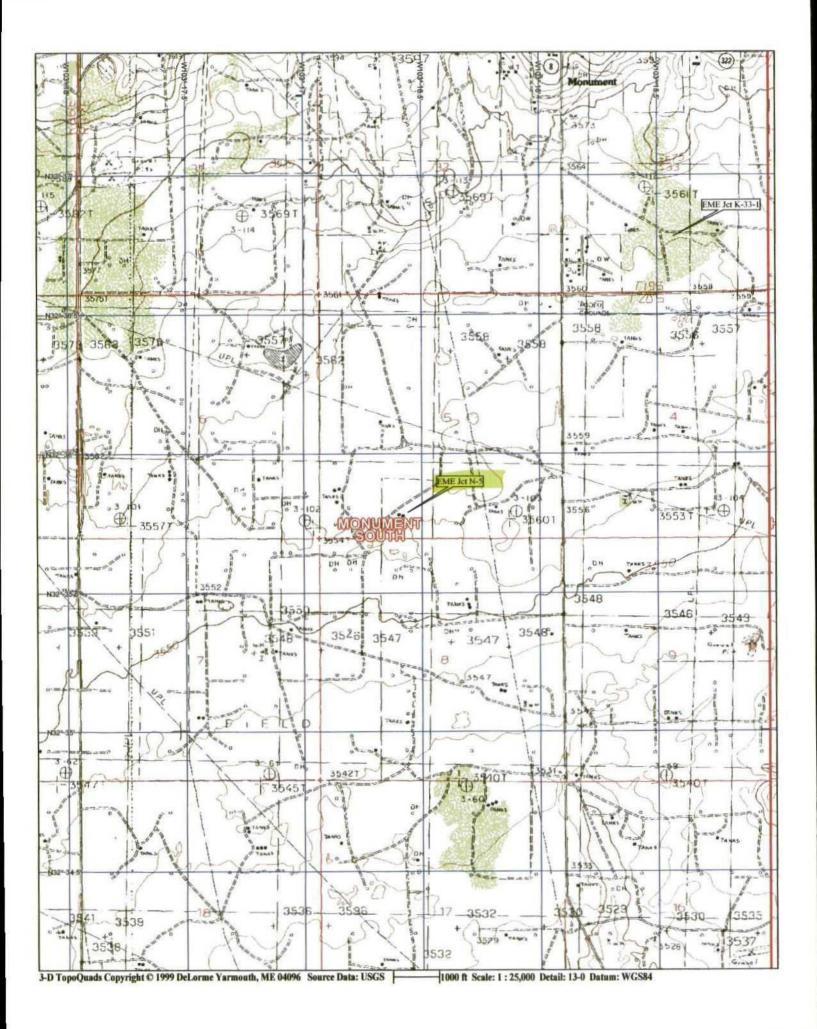
EME jct. N-5 unit 'N', Sec. 5, T20S, R37E

**RICE** *Operating Company* Monitor Well Data Sheet

	COMMENTS			sandy		sandy; slow recharge; hvdrocarbon odor		-		oil skim			hydrocarbon droplets. cloudy	
	_		<0.006	9.15 sa	0.001	<0.006 <sup>land</sup>	0.011	0.01	XXX  oil	0.012 oi	<0.006	0.010	0.002582 hydroc	<0.001
mg/L	ETHYL	BENZENE XYLENES	<0.006	2.80	<0.001	<0.002	0.004	0.004	XXX	0.003	<0.002	0.005	0.00159	<0.001
ttions are in	BENZENE TOLLIENE		<0.002	1.98	<0.001	<0.002	0.002	0.001	XXX	0.002	<0.002	0.005	0.00087	<0.001
All concentrations are in mg/L	BENZENE		<0.002	<1.00	<0.001	<0.002	<0.001	<0.001	XXX	<0.001	<0.002	<0.002	0.000463	<0.001
1	TDS	100	2652	2520	2700	3083	2310	3230	2930	3200	2575	2583	3170	3990
	-1-	5	1160	993	939	1200	1050	1130	1200	1150	1180	1000	1150	1330
	SAMPLE	DATE	1/10/02	5/13/02	8/12/02	11/4/02	3/14/03	5/29/03	8/22/03	11/20/03	2/20/04	5/26/04	9/2/04	12/21/04
(1	WELL VOLUME	PURGED	2.80	2.25	1.50	1.29	1.10	2.02	0.60	1.40	0.84	1.00	1.00	0.00
(gal)	WELL	VOLUME	0.900	0.434	0.390	0.368	0.380	0.600	0.200	0.400	0.280	0.390	XXX	XXX
()	TOTAL	DEPTH	41.30	40.18	40.19	40.20	40.17	42.21	40.21	41.55	40.25	40.25	40.35	37.00
(H)		WATER *	35.50	37.47	37.75	37.90	37.78	38.00	38.42	38.63	38.50	37.80	37.94	35.12
	MW #			-	-	-	_	-	-	-	-	-	-	-

\* Depth to water measured from top of casing Casing is <u>2.125 ft</u> RICE Operating Company Monitor Well Data Sheet





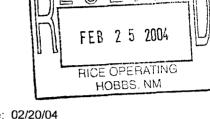


PHONE (915) 673-7001 · 2111 BEECHWOOD · ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS AILA 000

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

Receiving Date: 02/20/04 Reporting Date: 02/24/04 Project Number: NOT GIVEN Project Name: NOT GIVEN Project Location: EME-5



Sampling Date: 02/20/04 Sample Type: GROUNDWATER Sample Condition: COOL & INTACT Sample Received By: GP Analyzed By: AH

	Na	Ca	Mg	к	Conductivity	T-Alkalinity
LAB NUMBER SAMPLE ID	(mg/L)	(mg/L)	(mg/L)	(mg/L)	( <i>u</i> S/cm)	(mgCaCO <sub>3</sub> /L)
ANALYSIS DATE:	02/23/04	02/23/04	02/23/04	02/23/04	02/23/04	02/23/04
H8483-1 EME N-5 MW	444	335	72	7.69	4425	387
Quality Control	NR	59	42	5.17	1322	
True Value QC	NR	50	50	5.00	1413	NR
% Recovery	NR	118	85	103		NR
Relative Percent Difference	NR	1.7	2.3	1.0	0.7	NR
METHODS:	SMS	3500-Ca-D	3500-Mg E	8049	120.1	310.1
	cī_	SO₄	CO3	HCO₃	рH	TDS
	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(s.u.)	(mg/L)
ANALYSIS DATE:	02/23/04	02/23/04	02/23/04	02/23/04	02/23/04	02/24/04
H8483-1 EME N-5 MW	1180	57	0	472	7.00	2575
Quality Control	1010	53.65	NR	1007	7.04	NR
True Value QC	1000	50.00	NR	1000	7.00	NR
% Recovery	101	107	NR	101	101	NR
Relative Percent Difference	2.0	1.5	NR	1.1	0	1.4
METHODS:	SM4500-CI-B	375.4	310.1	310.1	150.1	160.1

METHODS:

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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 anialyses. 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 by 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 CO. ATTN: KRISTIN FARRIS 122 W. TAYLOR HOBBS, NM 88240 FAX TO: (505) 397-1471

Receiving Date: 02/20/04 Reporting Date: 02/23/04 Project Number: NOT GIVEN Project Name: NOT GIVEN Project Location: EME-5 Sampling Date: 02/20/04 Sample Type: GROUNDWATER Sample Condition: COOL & INTACT Sample Received By: GP Analyzed By: BC

LAB NUMBEF	SAMPLE ID	BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL BENZENE (mg/L)	TOTAL XYLENES (mg/L)
ANALYSIS DA	ATE	02/20/04	02/20/04	02/20/04	02/20/04
H8483-1	EME N-5 MONITOR	< 0.002	< 0.002	< 0.002	<0.006
	WELL				
Quality Contro		0.090	0.096	0.097	0.291
True Value Q0	j	0.100	0.100	0.100	0.300
% Recovery		90.2	96.1	96.6	97.0
<b>Relative Perce</b>	ent Difference	3.2	3.6	2.8	2.6

METHOD: EPA SW-846 8260

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Date

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(915) 673-7001 Fax (915) 673-7020	5-7020 (505) 393-2326 Fax (505) 393-2476	Paga of
Company Name: RICE ODICATIC		O ANALYSIS REQUEST
anager: KUS	\$ P.O. #	
City: Hobbs K. 10/101 State: A	A/M ZID: PPAVA Attn:	
##: (505) 393-9174 Fax #:	1/1/-765	
Project	1	
Project Name:	State: Zip:	
Project Location: Em E - 5	Ріюне#:	
Sampler Hame: K. Farris	Fax #:	
FOR LUB LISE CALLY	MATRIX PRESERV SA	SAMPLING
Lab I.D. Sample I.D.	(G)RAB OR (C)OMP. # CONTAINERS GROUNDWATER WASTEWATER SOIL CRUDE OIL SLUDGE OTHER : ACID/BASE: ICE / COCL OTHER : D M	The Cations Anions TDS BICX
HEYES -1 EME N- S Monitedwell EmE N-S Monitedwell		11:18 X 81:11
NEXCE NOTE: Under your Condent's BGBy and derive sextains county for any them and g whether based to come in the A.A. A. China and a for produces and any other cases which are had be derive and any other cases which are had be derived at the mode in the formation of the sector of t	and the set of the set	insonin publicy for died for the formation of the second state of
ampler Rellinguished: Date: Date: Time:	Sampler Rellinguished: Date: Date: Received By: Time:	Phone Result: [] Yes [] No Add'I Phone #: Fax Result: [] Yes [] No Add'I Fax #: REMARKS:
Reinquished by: Reinquished by: Delivered By: (Circle One) Sampler JUPS - Bus - Other:	Received By: (Lab Staff)	

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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: 05/26/04 Reporting Date: 05/28/04 Project Number: NOT GIVEN Project Name: EME:N-5 MW.\* Project Location: NOT GIVEN Sampling Date: 05/26/04 Sample Type: GROUNDWATER Sample Condition: COOL & INTACT Sample Received By: GP. Analyzed By: BC

LAB NUMBER SAMPLE ID	BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL BENZENE (mg/L)	TOTAL XYLENES (mg/L)
ANALYSIS DATE	05/27/04	05/27/04	05/27/04	05/27/04
H8743-1 N-5 M.W.	<0.002	0.005	0.005	0.010
Quality Control	0.098	0.099	0.088	0.256
True Value QC	0.100	0.100	0.100	0.300
% Recovery	97.9	98.9	87.7	85.4
Relative Percent Difference	7.4	5.0	1.8	3.6

METHOD: EPA SW-846 8260

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Date



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

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

Receiving Date: 05/26/04 Reporting Date: 05/28/04 Project Number: NOT GIVEN Project Name: EME N-5 MW Project Location: NOT GIVEN

MATHODS

hemist

Sampling Date: 05/26/04 Sample Type: GROUNDWATER Sample Condition: COOL & INTACT Sample Received By: GP Analyzed By: AH

	Na	Ca	Mg	К	Conductivity	T-Alkalinity
LAB NUMBER SAMPLE ID	(mg/L)	(mg/L)	(mg/L)	(mg/L)	( <i>u</i> S/cm)	(mgCaCO <sub>3</sub> /L)

ANALYSIS DATE:	05/27/04	05/27/04	05/27/04	05/27/04	05/27/04	05/27/04
H8743-1 N-5 M.W.	495	226	77	10.8	4027	480
······································						
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:	SM3	3500-Ca-D	3500-Mg E	8049	120.1	310.1
	Cl	SO4	CO3	HCO <sub>3</sub>	pН	TDS
	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(s.u.)	(mg/L)
ANALYSIS DATE:	05/27/04	05/27/04	05/27/04	05/27/04	05/27/04	05/28/04
H8743-1 N-5 M.W.	1000	79	0	586	6.88	2583
Quality Control	1010	48.21	NR	1007	6.95	NR
True Value QC	1000	50.00	NR	1000	7.00	NR
% Recovery	101	96.4	NR	101	99.3	NR
Relative Percent Difference	2.0	6.2	NR	1.1	1.6	1.4

375.4

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310.1

310.1

150.1

160.1

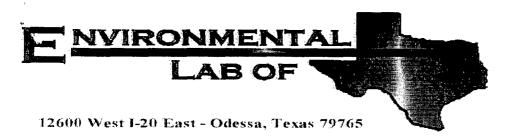
SM4500-CI-B

ARDINAL LABORATORIES,	S, INC.		CHAIN-OF-		CUSTODY AND ANALYSIS REQUEST
2111 Beechwood, Abilene, TX 79603 (915) 673-7001 Fax (915) 673-7020		obbs, NM 88240 (505) 993-2476			Pageof
Company Name: RICE ODICATION		BILLTO			ANALYSIS REQUEST
Project Manager: Klistin Fallis		P.O. #:			
61		Company:			
	ZID: 28249	Attn:			
• #:(505)393-9/74 Fax #: (	1141-745	Address:			
Project		Clty:			
Project Name: Entre At - 5 30 W		State: Zip:			
		Ріюни #:			
Sampler Name: K. Farris		Fax #:			
FOR LABURE CHEY	MATRIX	PRESERV SAMPLING	NG		
Lab I.D. Sample I.D.	(G)RAB OR (C)OMP # CONTAINERS GROUNDWATER WASTEWATER SOIL CRUDE OIL SLUDGE		TIME Cations		
$\frac{1}{12} \frac{1}{2} \frac{1}{\sqrt{3}} 1$	>   _ / 7,   		1.2:00 ×	X	
$\frac{1}{1} - \frac{2}{2} - \frac{1}{2} + \frac{1}$			12:00		
PLEASE HOTE: Using and Demogra. Can that a failing and observe washing remedy for any dama and go whether faces and in the low dama whether and a second public year and reparation of the application o	onnd water & where have been by the set of t	had h contract or bot, shad he imited to the second put typ	annt publicy the cloud her the	1	Terms and Conditions: James at the second on the right date of hydro 30 days president at the second of 21% per another term the right date of hydro
serke, Into ever shell god of a roketer a conserver diseases, brind witter there is benefore, bes of us, a two dipeter transity date, is schelicher stilden a reconserver while god of a roketer in an potentions of series hereater by Cardial regardises of whether tech during based you say of the shoe shied resone a offerwise.	thest instatue, buietees i terrepticu, loss of e scinal, regardees of whether such chain is been	ee, or lose of justifie trained by client, i d upon any of the above stated measure	ar offering, ar offering,		ethem, buckutheg uttommy's from,
Sampler Relinquished: Date: Received By:	Received By:		Phone Result: Fax Result:		Add'I Phone #: Add'I Fax #:
Jaietta darre Time:			REMARKS:		
Relinguished By: US/24/2014	Received By: (Lab Statt)				
Delivered By: (Circle One)	Sample Condition Cool Intact	1 CHECKED BY; (Initials)			
Sampler UPS - Bus - Other:		(mu <b>e</b> 10)			
† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476.	fax written changes to 505	-393-2476.			

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## Analytical Report

#### **Prepared for:**

Sharon Hall ARCADIS 1004 N. Big Spring Street Midland, TX 79701

Project: Jct N-5/ 510 Project Number: Jct. N-5 Location: Rice Operating/EME

Lab Order Number: 4I03009

Report Date: 09/19/04

ARCADIS 1004 N. Big Spring Street Midland TX, 79701

#### Project: Jct N-5/ 510 Project Number: Jct. N-5 Project Manager: Sharon Hall

#### Fax: (432) 687-5401 Reported:

09/19/04 11:17

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	4103009-01	Water	09/02/04 14:30	09/03/04 14:48

-	ARCADIS	Project:	Jet N-5/ 510	Fax: (432) 687-5401
	1004 N. Big Spring Street	Project Number:	Jct. N-5	Reported:
	Midland TX, 79701	Project Manager:	Sharon Hall	09/19/04 11:17
1				

#### Organics by GC

**Environmental Lab of Texas** 

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (4103009-01) Water									
Benzene	J [0.000463]	0.00100	mg/L	1	EI41004	09/08/04	09/10/04	EPA 8021B	J
Toluene	J [0.000870]	0.00100	н	и	н	H		U	J
Ethylbenzene	0.00159	0.00100	**			н	н	**	
Xylene (p/m)	0.00160	0.00100	11		**	<b>t</b> 1	"	"	
Xylene (0)	J [0.000982]	0.00100	U	II		"	**	"	J
Surrogate: a,a,a-Trifluorotoluene		98.5 %	80-12	0	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		86.5 %	80-12	0	"	"	" ~	"	

Environmental Lab of Texas

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

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#### ARCADIS 1004 N. Big Spring Street Midland TX, 79701

#### Project: Jct N-5/ 510 Project Number: Jct. N-5 Project Manager: Sharon Hall

#### General Chemistry Parameters by EPA / Standard Methods

**Environmental Lab of Texas** 

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (4I03009-01) Water							·	·	
Carbonate Alkalinity	ND	0.100	mg/L	1	EI41608	09/03/04	09/03/04	EPA 310.2M	
Bicarbonate Alkalinity	420	2.00	*	"	"	**	n	n	
Hydroxide Alkalinity	ND	0.100	ч	n	"	u	41		
Chloride	1150	5.00	"	"	EI40805	09/07/04	09/07/04	EPA 325.3M	
Total Dissolved Solids	3170	5.00	н	н	EI41607	09/09/04	09/09/04	EPA 160.1	
Sulfate	77.6	1.00	11	2	EI41312	09/10/04	09/10/04	EPA 375.4	

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ARCADIS 1004 N. Big Spring Street Midland TX, 79701

#### Project: Jct N-5/ 510 Project Number: Jct. N-5 Project Manager: Sharon Hall

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (4103009-01) Water									
Calcium	280	1.00	mg/L	100	EI41506	09/15/04	09/15/04	EPA 6010B	
Magnesium	111	0.100	n	н	н	н	u.	w	
Potassium	8.31	0.500	11	10	н	н	**	**	
Sodium	365	1.00	"	100	"		**	**	

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Project: Jct N-5/ 510 Project Number: Jct. N-5 Project Manager: Sharon Hall

#### **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
	Kesun		Onus	Level	Kesun	%KEC		RPD		Notes
Batch EI41004 - EPA 5030C (GC)										
Blank (E141004-BLK1)				Prepared	& Analyze	ed: 09/08/	04			
Benzene	ND	0.00100	mg/L							
Toluene	ND	0.00100	н							
Ethylbenzene	ND	0.00100	n							
Xylene (p/m)	ND	0.00100	"							
Xylene (o)	ND	0.00100	n							
Surrogate: a,a,a-Trifluorotoluene	23.4		ug/l	20 0		<u> 117</u>	80-120	~		
Surrogate: 4-Bromofluorobenzene	18.3		"	20.0		91.5	80-120			
LCS (EI41004-BS1)	·			Prepared:	09/08/04	Analyzed	l: 09/10/04			
Benzene	93.0		ug/l	100		93.0	80-120			
Toluene	95.0		н	100		95.0	80-120			
Ethylbenzene	95.1		**	100		95.1	80-120			
Xylene (p/m)	196		"	200		98.0	80-120			
Xylene (o)	104		н	100		104	80-120			
Surrogate: a,a,a-Trifluorotoluene	16.7		<i>"</i>	20.0		83.5	80-120			
Surrogate: 4-Bromofluorobenzene	18.6		"	20.0		93.0	80-120			
LCS Dup (EI41004-BSD1)				Prepared:	09/08/04	Analyzed	l: 09/10/04			
Benzene	96.3		ug/l	100		96.3	80-120	3.49	20	
Toluene	99.4		Ħ	100		99.4	80-120	4.53	20	
Ethylbenzene	99.5		н	100		99.5	80-120	4.52	20	
Xylene (p/m)	206		n	200		103	80-120	4.98	20	
Xylene (0)	105		H	100		105	80-120	0.957	20	
Surrogate: a,a,a-Trifluorotoluene	18.0			20.0		90.0	80-120			
Surrogate: 4-Bromofluorobenzene	21.9		"	20.0		110	80-120			
Calibration Check (EI41004-CCV1)				Prepared	& Analyze	ed: 09/08/	04			
Benzene	94.3		ug/l	100		94.3	80-120			
Toluene	95.8		n	100		95.8	80-120			
Ethylbenzene	102		"	100		102	80-120			
Xylene (p/m)	207		"	200		104	80-120			
Xylene (o)	105		н	100		105	80-120			
Surrogate: a,a,a-Trifluorotoluene	23.0			20.0		115	80-120			
Surrogate: 4-Bromofluorobenzene	18.6		"	20.0		<b>93</b> .0	80-120			

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#### Project: Jct N-5/ 510 Project Number: Jct. N-5 Project Manager: Sharon Hall

09/19/04 11:17

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

#### **Environmental Lab of Texas**

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

#### Batch EI41004 - EPA 5030C (GC)

Matrix Spike (EI41004-MS1)	Source:	4107001-01	Prepared:	09/08/04	Analyzed	1: 09/10/04			
Benzene	97.5	ug/l	100	ND	97.5	80-120			
Toluene	101	11	100	ND	101	80-120			
Ethylbenzene	97.8	n	100	ND	97.8	80-120			
Xylene (p/m)	203		200	ND	102	80-120			
Xylene (0)	102	н	100	ND	102	80-120			
Surrogate: a,a,a-Trifluorotoluene	17.2	н	20.0		86.0	80-120			
Surrogate: 4-Bromofluorobenzene	20.9	"	20.0		104	80-120			
Matrix Spike Dup (EI41004-MSD1)	Source:	4107001-01	Prepared:	09/08/04	Analyzed	1: 09/10/04			
Benzene	99.0	ug/l	100	ND	99.0	80-120	1.53	20	
Toluene	101	"	100	ND	101	80-120	0.00	20	
Ethylbenzene	99.6	н	100	ND	99.6	80-120	1.82	20	
Xylene (p/m)	201	n	200	ND	100	80-120	1.98	20	
Xylene (o)	100	п	100	ND	100	80-120	1.98	20	
Surrogate: a,a,a-Trifluorotoluene	16.5		20.0		82.5	80-120			<u> </u>
Surrogate: 4-Bromofluorobenzene	19.3	"	20.0		96.5	80-120			

Environmental Lab of Texas

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

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ARCADIS
1004 N. Big Spring Street
Midland TX, 79701

#### 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 El40805 - General Preparation	n (WetChem)									
Blank (El40805-BLK1)				Prepared	& Analyze	ed: 09/07/	04			
Chloride	ND	5.00	mg/L							
Matrix Spike (E140805-MS1)	Sour	ce: 410700	1-06	Prepared	& Analyze	ed: 09/07/	04			
Chloride	1670	5.00	mg/L	500	1170	100	90-110			
Matrix Spike Dup (EI40805-MSD1)	Sour	ce: 410700	1-06	Prepared	& Analyze	ed: 09/07/	04			
Chloride	1660	5.00	mg/L	500	1170	98.0	90-110	0.601	20	
Reference (EI40805-SRM1)				Prepared	& Analyze	ed: 09/07/	04			
Chloride	4960		mg/L	5000	<del></del>	99.2	80-120			
Batch El41312 - General Preparation Blank (El41312-BLK1)	n (WetChem)	<u> </u>		Prepared	& Analyze	ed: 09/10/	04			<u></u>
Sulfate	ND	0.500	mg/L	<b>·</b>						
Calibration Check (EI41312-CCV1)				Prepared	& Analyza	ed: 09/10/	04			
				50.0		97.8	80-120			
Sulfate	48.9		mg/L	50.0		2110	00 120			
		ce: 410301			& Analyze					
Duplicate (EI41312-DUP1)		<b>ce: 410301</b>			& Analyze 74.6			2.38	20	
Duplicate (EI41312-DUP1) Sulfate	<b>Sour</b> 76.4		0-01					2.38	20	
Sulfate Duplicate (EI41312-DUP1) Sulfate Batch EI41607 - Filtration Preparati Blank (EI41607-BLK1)	<b>Sour</b> 76.4		0-01	Prepared		ed: 09/10/	04	2.38	20	

Environmental Lab of Texas

ARCADIS		Pro	oject: Jct	t N-5/ 510					Fax: (432)	687-5401	
1004 N. Big Spring Street		Project Nur	nber: Je	t. N <b>-</b> 5					Repo	rted:	
Midland TX, 79701		Project Man							09/19/04 11:17		
General Ch	emistry Param	eters by nvironm				ods - Q	uality	Contro	]	·····	
	<b>...</b>				exas						
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch EI41607 - Filtration Prepa	iration										
	Source: 4103010-01 Prepared & Analyzed: 09/09/04										
Duplicate (EI41607-DUP1)	Soul	10501									
Duplicate (EI41607-DUP1) Total Dissolved Solids	1610	5.00	mg/L		1640			1.85	20		
	1610					ed: 09/03/0	)4	1.85	20		
Fotal Dissolved Solids Batch El41608 - General Prepar Blank (El41608-BLK1)	1610		mg/L			ed: 09/03/0	)4	1.85	20		
Fotal Dissolved Solids Batch El41608 - General Prepar Blank (El41608-BLK1) Carbonate Alkalinity	1610 ation (WetChem)	5.00				ed: 09/03/0	)4	1.85	20		
Fotal Dissolved Solids Batch EJ41608 - General Prepar Blank (El41608-BLK1) Carbonate Alkalinity Bicarbonate Alkalinity	1610 ation (WetChem) ND	0.100	mg/L mg/L			ed: 09/03/0	)4	1.85	20		
Fotal Dissolved Solids Batch EJ41608 - General Prepar Blank (El41608-BLK1) Carbonate Alkalinity Bicarbonate Alkalinity Hydroxide Alkalinity	1610 ation (WetChem) ND ND ND	5.00 0.100 2.00	mg/L mg/L "	Prepared	& Analyze	ed: 09/03/0		1.85	20		
Total Dissolved Solids Batch EJ41608 - General Prepar Blank (El41608-BLK1) Carbonate Alkalinity Bicarbonate Alkalinity Hydroxide Alkalinity Duplicate (EI41608-DUP1)	1610 ation (WetChem) ND ND ND	5.00 0.100 2.00 0.100	mg/L mg/L "	Prepared	& Analyze			1.85	20		
Total Dissolved Solids Batch EJ41608 - General Prepar Blank (El41608-BLK1) Carbonate Alkalinity Bicarbonate Alkalinity Hydroxide Alkalinity Duplicate (EI41608-DUP1) Carbonate Alkalinity	1610 ation (WetChem) ND ND ND Sour	5.00 0.100 2.00 0.100 rce: 410301	mg/L 	Prepared	& Analyze & Analyze			0.449			
Total Dissolved Solids Batch EJ41608 - General Prepar Blank (El41608-BLK1) Carbonate Alkalinity Bicarbonate Alkalinity Hydroxide Alkalinity Duplicate (EI41608-DUP1) Carbonate Alkalinity Bicarbonate Alkalinity	1610 ation (WetChem) ND ND ND Sour 0.00	5.00 0.100 2.00 0.100 rce: 410301 0.100	mg/L 	Prepared	& Analyze & Analyze 0.00				20		
Fotal Dissolved Solids Batch El41608 - General Prepar	1610 ation (WetChem) ND ND ND Sour 0.00 444	5.00 0.100 2.00 0.100 rce: 410301 0.100 2.00	mg/L " " 0-01 mg/L "	Prepared Prepared	& Analyze & Analyze 0.00 446 0.00		)4		20 20	-	

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 8 of

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

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ARCADIS
1004 N. Big Spring Street
Midland TX, 79701

#### Project: Jct N-5/ 510 Project Number: Jct. N-5 Project Manager: Sharon Hall

09/19/04 11:17

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

#### **Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EI41506 - General Preparation	n (Metals)									
Blank (EI41506-BLK1)				Prepared	& Analyze	ed: 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	& Analyze	ed: 09/15/	04			
Calcium	ND	0.0100	mg/L	<del>_</del>		<u> </u>		`		
Magnesium	ND	0.00100	**							
Potassium	ND	0.0500	"							
Sodium	ND	0.0100	н							
Calibration Check (EI41506-CCV1)				Prepared	& Analyze	ed: 09/15/	04			
Calcium	2.03		mg/L	2.00		102	85-115			
Magnesium	2.04		11	2.00		102	85-115			
Potassium	1.75		n	2.00		87.5	85-115			
Sodium	1.79		u	2.00		89.5	85-115			
Calibration Check (EI41506-CCV2)				Prepared	& Analyz	ed: 09/15/	04			
Calcium	1.93		mg/L	2.00		96.5	85-115			
Magnesium	2.02		11	2.00		101	85-115			
Potassium	1.76		н	2.00		88.0	85-115			
Sodium	1.77		Ħ	2.00		88.5	85-115			
Duplicate (EI41506-DUP1)	So	urce: 410300	9-01	Prepared	& Analyz	ed: 09/15/	04			
Calcium	281	1.00	mg/L		280			0.357	20	
Magnesium	110	0.100	11		111			0.905	20	
Potassium	8.18	0.500	IF.		8.31			1.58	20	
Sodium	359	1.00	n		365			1.66	20	

Environmental Lab of Texas

#### Project: Jct N-5/ 510 Project Number: Jct. N-5 Project Manager: Sharon Hall

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

#### **Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EI41506 - General Prepara	ation (Metals)									
Duplicate (EI41506-DUP2)	Sou	rce: 4I1001	5-01	Prepared	& Analyze	ed: 09/15/	04			
Calcium	20.2	0.100	mg/L		20.2			0.00	20	
Magnesium	28.4	0.0100	н		28.6			0.702	20	
Potassium	16.4	0.500	11		16.6			1.21	20	
Sodium	103	0.100	u		103			0.00	20	

Environmental Lab of Texas

	S Big Spring Street FX, 79701	Project Number:	Project: Jct N-5/ 510 Project Number: Jct. N-5 Project Manager: Sharon Hall				
	***************************************	Notes and De	finitions	······································			
J	Detected but below the Reporti	ng Limit; therefore, result is an e	stimated concentration (CLP J-Flag	g).			
DET	Analyte DETECTED						
ND	Analyte NOT DETECTED at or a	bove the reporting limit					
NR	Not Reported						
dry	Sample results reported on a dry v	weight basis					
RPD	Relative Percent Difference						
LCS	Laboratory Control Spike						
MS	Matrix Spike						
Dup	Duplicate			•			

and K Juno 9-18-04 Report Approved By: Date: 01

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.

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

Environmental Lab of Texas

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

Client: <u>Archadis</u>	-
Date/Time: <u>9-3-09</u>	_
Order #: _ 4 IC3009 -01	
Initials:	

#### Sample Receipt Checklist

Temperature of container/cooler?	(es./	No	3.5 C
Shipping container/cooler in good condition?	(es)	No	
Custody Seals intact on shipping container/cooler?	Yes	No	Not present
Custody Seals intact on sample bottles?	Yes	No	(Not present
Chain of custody present?	(Yes)	No	
Sample Instructions complete on Chain of Custody?	(Yes)	No	
Chain of Custody signed when relinquished and received?	(Tes)	No	
Chain of custody agrees with sample label(s)	(Yes)	No	
Container labels legible and intact?	Yes	No	
Sample Matrix and properties same as on chain of custody?	(Yes/	No	
Samples in proper container/bottle?	Yes	No	
Samples properly preserved?	(Yés)	No	
Sample bottles intact?	Ces	No	
Preservations documented on Chain of Custody?	Ves	No	·······
Containers documented on Chain of Custody?	(Yes)	No	
Sufficient sample amount for indicated test?	Yes	No	
All samples received within sufficient hold time?	Yes	No	
VOC samples have zero headspace?	(Yes/	No	Not Applicable

Other observations:

Contact Person: Regarding:	Variance Documentation: Date/Time:	_ Contacted by:
Corrective Action Taken:		

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No. CHAIN-OF-CUSTODY RECORD Page of	ATUSUCOTON		Lee 2 Teves Date 7/3/2 Time 1446 Yes No and	Date 1 1 Time Seal Intact? Date 1 1 Time Yes No N/A Dralysis te Kristin RAULCA RACH (DT	SPECIFY COURIER Other SPECIFY AG 05-0597
atory Task Order No./P.O.	Sample ID/Location Matrix Sampled Later 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		Sample Matrix: $= Liquid; S = Solid; A = AirRelinquished by: A = Liquid; S = Solid; A = AirReceived by: A = Air Organization: A = Air$	Relinquished by: Organization: Organization: Corganization: Corgan	Delivery Method: An Person Common Carrier

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## Analytical Report

#### **Prepared for:**

Sharon Hall ARCADIS 1004 N. Big Spring Street Midland, TX 79701

Project: Jct. N-5/ 510 Project Number: Jct. N-5/ 510 Location: Rice Operating/ EME

Lab Order Number: 4L22008

Report Date: 12/30/04

ARCADIS	Project: Jct. N-5/ 510	Fax: (432) 687-5401
1004 N. Big Spring Street	Project Number: Jct. N-5/ 510	Reported:
Midland TX, 79701	Project Manager: Sharon Hall	12/30/04 15:43

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	4L22008-01	Water	12/21/04 11:40	12/21/04 18:00

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ARCADIS	Project: Jct. N-5/ 510	Fax: (432) 687-5401
1004 N. Big Spring Street	Project Number: Jct. N-5/ 510	Reported:
Midland TX, 79701	Project Manager: Sharon Hall	12/30/04 15:43

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
Benzene	ND	0.00100	mg/L	1	EL43006	12/29/04	12/29/04	EPA 8021B	
Toluene	ND	0.00100	11	IF	"	"	"	"	
Ethylbenzene	ND	0.00100	II.	11	n		U.	н	
Xylene (p/m)	ND	0.00100	11	"	11	"	"	tr.	
Xylene (0)	ND	0.00100	н	u		ii	н	н	
Surrogate: a,a,a-Trifluorotoluene		101 %	80-12	20	"	"	"	* 11	
Surrogate: 4-Bromofluorobenzene		106 %	80-12	20	11	"	"	"	

Environmental Lab of Texas

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ARCADIS	Project: Jct. N-5/ 510	Fax: (432) 687-5401
1004 N. Big Spring Street	Project Number: Jct. N-5/ 510	Reported:
Midland TX, 79701	Project Manager: Sharon Hall	12/30/04 15:43

#### General Chemistry Parameters by EPA / Standard Methods

**Environmental Lab of Texas** 

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (4L22008-01) Water									
Total Alkalinity	414	2.00	mg/L	1	EL42907	12/29/04	12/29/04	EPA 310.2M	
Chloride	1330	5.00	n	"	EL42908	12/29/04	12/29/04	EPA 325.3M	
Total Dissolved Solids	3990	5.00	u	II.	EL42301	12/22/04	12/23/04	EPA 160.1	
Sulfate	231	2.50	0	5	EL42909	12/29/04	12/29/04	EPA 375.4	

Environmental Lab of Texas

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ARCA	DIS	Project: Jct. N-5/ 510	Fax: (432) 687-5401
1004 N	I. Big Spring Street	Project Number: Jct. N-5/ 510	Reported:
Midlar	nd TX, 79701	Project Manager: Sharon Hall	01/03/05 15:13

#### Total Metals by EPA / Standard Methods

**Environmental Lab of Texas** 

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
MW-1 (4L22008-01) Water			_						
Calcium	358	1.00	mg/L	100	EL42302	12/23/04	12/23/04	EPA 6010B	
Magnesium	142	0.100	"		и	11		"	
Potassium	10.1	0.500	11	10		"	u	"	
Sodium	373	1.00		100		n			

Environmental Lab of Texas

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ARCADIS 1004 N. Big Spring Street Midland TX, 79701		Project Nur Project Man	mber: Jct.						Fax: (432) <b>Repo</b> 12/30/0	rted:
	`	ganics by Environm		•						
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Límits	RPD	RPD Limit	Notes
Batch EL43006 - EPA 5030C (GC)		·								<u></u>
Blank (EL43006-BLK1)				Prepared	& Analyze	ed: 12/29/	04			
Benzene	ND	0.00100	mg/L	1						
l'oluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	н							
Xylene (p/m)	ND	0.00100	н							
Xylene (o)	ND	0.00100	"							
Surrogate: a,a,a-Trifluorotoluene			ug/l	100		100	80-120	~		
Surrogate: 4-Bromofluorobenzene	91.9		"	100		91.9	80-120			
LCS (EL43006-BS1)				Prepared	& Analyz	ed: 12/29/	04			
Benzene	86.8		ug/l	100		86.8	80-120			
foluene	85.1		"	100		85.1	80-120			
Ethylbenzene	86.6		п	100		86.6	80-120			
Xylene (p/m)	191		11	200		95.5	80-120			
Xylene (o)	92.9		v	100		92.9	80-120			
Surrogate: a,a,a-Trifluorotoluene	117		"	100		117	80-120			
Surrogate: 4-Bromofluorobenzene	<i>95.1</i>		"	100		95.1	80-120			
Calibration Check (EL43006-CCV1)				Prepared	& Analyz	ed: 12/29/	′04			
Benzene	89.5	·····	ug/l	100		89.5	80-120			
Toluene	89.6		"	100		89.6	80-120			
Ethylbenzene	91.8		"	100		91.8	80-120			
Xylene (p/m)	201		"	200		100	80-120			
Xylene (o)	99.5		"	100		99.5	80-120			
Surrogate: a,a,a-Trifluorotoluene	115		"	100		115	80-120			
Surrogate: 4-Bromofluorobenzene	95.0		"	100		95.0	80-120			
Matrix Spike (EL43006-MS1)	So	ource: 4L220	01-05	Prepared	& Analyz	ed: 12/29/	/04			
Benzene	90.0		ug/l	100	ND	90.0	80-120			
Toluene	91.6		"	100	ND	91.6	80-120			
Ethylbenzene	91.4		u.	100	ND	91.4	80-120			
Xylene (p/m)	201		n	200	ND	100	80-120			
Xylene (o)	95.8		"	100	ND	95.8	80-120			
Surrogate: a,a,a-Trifluorotoluene	118		"	100		118	80-120			
Surrogate: 4-Bromofluorobenzene	102		"	100		102	80-120			

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	Organics by GC - Quality Control	
Midland TX, 79701	Project Manager: Sharon Hall	12/30/04 15:43
1004 N. Big Spring Street	Project Number: Jct. N-5/ 510	Reported:
ARCADIS	Project: Jct. N-5/ 510	Fax: (432) 687-5401

#### 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 EL43006 - EPA 5030C (GC)

Matrix Spike Dup (EL43006-MSD1)	Source:	4L22001-05	Prepared	& Analyz	ed: 12/29/	'04		
Benzene	93.0	ug/l	100	ND	93.0	80-120	3.28	20
Toluene	94.6	11	100	ND	94.6	80-120	3.22	20
Ethylbenzene	92.4	11	100	ND	92.4	80-120	1.09	20
Xylene (p/m)	201	••	200	ND	100	80-120	0.00	20
Xylene (o)	95.6	н	100	ND	95.6	80-120	0.209	20
Surrogate: a,a,a-Trifluorotoluene	118	"	100		118	80-120	~	
Surrogate: 4-Bromofluorobenzene	102	"	100		102	80-120		

Environmental Lab of Texas

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

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ARCADIS 1004 N. Big Spring Street Midland TX, 79701		Pro Project Nun Project Man	nber: Jct						Fax: (432) <b>Repo</b> 12/30/04	rted:
General Chemi	v	ry Parameters by EPA / Standard Methods - Quality Contro Environmental Lab of Texas						Contro	1	
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Límits	RPD	RPD Limit	Notes
Batch EL42301 - 413.1										
Blank (EL42301-BLK1)				Prepared:	12/22/04	Analyzed	: 12/23/04	<u> </u>		
Total Dissolved Solids	ND	5.00	mg/L							
Duplicate (EL42301-DUP1)	Sour	ce: 4L2101	0-01	Prepared:	12/22/04	Analyzed	1: 12/23/04			
Total Dissolved Solids	590	5.00	mg/L		567			3.98	20	
Batch EL42907 - General Preparatio	on (WetChem)									<u></u>
Blank (EL42907-BLK1)				Prepared	& Analyz	ed: 12/29/	04	<u> </u>		
Total Alkalinity	ND	2.00	mg/L							
Duplicate (EL42907-DUP1)	Sour	rce: 4L2200	)2-01	Prepared	& Analyz	ed: 12/29/	04			
Total Alkalinity	181	2.00	mg/L		182			0.551	20	
Reference (EL42907-SRM1)				Prepared	& Analyz	ed: 12/29/	04			
Carbonate Alkalinity	0.0501		mg/L	0.0500		100	80-120			
Batch EL42908 - General Preparatio	on (WetChem)	)								
Blank (EL42908-BLK1)				Prepared	& Analyz	ed: 12/29/	04			
Chloride	ND	5.00	mg/L					·····		······································
Matrix Spike (EL42908-MS1)	Sour	rce: 4L2101	10-01	Prepared	& Analyz	ed: 12/29/	04			
Chloride	390	5.00	mg/L	250	155	94.0	80-120			
Matrix Spike Dup (EL42908-MSD1)	Sou	rce: 4L2101	10-01	Prepared	& Analyz	ed: 12/29/	04			
Chloride	394	5.00	mg/L	250	155	95.6	80-120	1.02	20	

ARCADIS		Pro	ject: Jct	. N-5/ 510					Fax: (432)	687-5401
1004 N. Big Spring Street		Project Nur	nber: Jct	. N-5/ 510					Repo	rted:
Midland TX, 79701		Project Man	ager: Sh	aron Hall					12/30/04	4 15:43
General Chemis	•	neters by Environm				ods - Q	Quality (	Contro	J	
	•	Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EL42908 - General Preparatio	n (WetChen	n)								
Reference (EL42908-SRM1)	Prepared & Analyzed: 12/29/04									
Chloride	4960		mg/L	5000		99.2	80-120			
Batch EL42909 - General Preparatio	n (WetChen	<u>n)</u>								
Blank (EL42909-BLK1)				Prepared	& Analyz	ed: 12/29/	04			
Sulfate	ND	0.500	mg/L							
Calibration Check (EL42909-CCV1)				Prepared	& Analyz	ed: 12/29/	04	~		
Sulfate	. 48.9		mg/L	50.0		97.8	80-120			
Duplicate (EL42909-DUP1)	So	urce: 4L2101	0-01	Prepared	& Analyz	ed: 12/29/	04			
Sulfate	96.6	1.00	mg/L		99.8			3.26	20	

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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Midland TX, 79701	Project Manager: Sharon Hall al Metals by EPA / Standard Methods - Quality C	01/03/05 15:13
1004 N. Big Spring Street	Project Number: Jct. N-5/ 510	Reported:
ARCADIS	Project: Jct. N-5/ 510	Fax: (432) 687-5401

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EL42302 - 6010B/No Digestion										
Blank (EL42302-BLK1)				Prepared	& Analyze	ed: 12/23/	04			
Calcium	ND	0.0100	mg/L							
Magnesium	ND	0.00100	11							
Potassium	ND	0.0500	н							
Sodium	ND	0.0100	11							
Calibration Check (EL42302-CCV1)				Prepared	& Analyze	ed: 12/23/	04			
Calcium	2.00	· · · · · · · · · · · · · · · · · · ·	mg/L	2.00		100	85-115	-		
Magnesium	2.28		n	2.00		114	85-115			
Potassium	1.78		11	2.00		89.0	85-115			
Sodium	1.92		"	2.00		96.0	85-115			
Duplicate (EL42302-DUP1)	So	urce: 4L2101	0-01RE	Prepared	& Analyz	ed: 12/23/	04			
Calcium	55.1	0.100	mg/L		57.3			3.91	20	
Magnesium	13.2	0.0100	"		13.0			1.53	20	
Potassium	12.5	0.500	et.		13.2			5.45	20	
Sodium	105	1.00	11		112			6.45	20	

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ARCADIS	
1004 N. Big Spring Street	Proje
Midland TX, 79701	Proje

#### **Notes and Definitions**

- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported

- Sample results reported on a dry weight basis dry
- RPD Relative Percent Difference
- LCS Laboratory Control Spike
- MŞ Matrix Spike
- Dup Duplicate

01/03. Report Approved By: Date:

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

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

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

Environmental Lab of Texas

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

Date/Time: 12-21-04 @ 1800

Order #: \_\_\_\_\_ 4 L 22008

Initials: JMM

#### Sample Receipt Checklist

Temperature of container/cooler?	(Yes)	No	1,0 · C
Shipping container/cooler in good condition?	Ves	No	
Custody Seals intact on shipping container/cooler?	Yes	No	Not present
Custody Seals intact on sample bottles?	Yes	No	Not present
Chain of custody present?	Yes	No	
Sample Instructions complete on Chain of Custody?	Yes	No	
Chain of Custody signed when relinquished and received?	Tes	No	
Chain of custody agrees with sample label(s)	Yes	No	
Container labels legible and intact?	Ves	No	
Sample Matrix and properties same as on chain of custody?	Yes	No	
Samples in proper container/bottle?	Yes	No	
Samples properly preserved?	(Yes)	No	
Sample bottles intact?	Yes	No	
Preservations documented on Chain of Custody?	(Yes)	No	
Containers documented on Chain of Custody?	(Yes)	No	
Sufficient sample amount for indicated test?	(Yes)	No	
All samples received within sufficient hold time?	Yes	No	
VOC samples have zero headspace?	Yes)	No	Not Applicable

Other observations:

Contact Person: Regarding:	Variance Documentation: Date/Time:	_ Contacted by:
Corrective Action Taken:		
-		

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ARCADIS GERAGHTY & MILLER Labor	ratory Task Order No./P.O. No.	CHAIN-OF-CUSTODY RECORD	Page /	of 1.
Project Number/Name <u>していいく くい</u> Project Location <u>Rice Operating / それで</u> Laboratory <u>Environmental Lab of Texas</u>	suories/s	ANALYSIS / METHOD / SIZE		
Project Manager Kristin Farris Pope Sampler(s)/Affiliation GC/ARCADIS	£1508			
Date/ <u>Firmer</u> Samule ID/I ocation Matrix Samuled	Time 2 FE		Remarks	Total
ר ר	e orii		10-2002-74	R
Sample Matrix: L = Liquid; S = Solid; A	A = Air		Total No. of Bottles/ Containers	~
Relinquished by: A C C b Received by: C Ran manutury	Organization: <u>ARCADES</u> Organization: ビン・レロン of ブメ	Date 12/21/04	Time <u>1 <b>8</b> </u>	N/A
	Oranization:	Date / /	Time Seal Intact?	tact?
Received by:	Organization:	Date / /		A/N o
Special Instructions/Remarks:			10 c c	n K e
Delivery Method: 🕅 In Person	Common Carrier	🗌 Lab Courier		AG 05-0597

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