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Analytical Report

Prepared for:

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

Project: MT000834.0001 Project Number: MT000834.0001 Location: Rice Operating

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Lab Order Number: 5E11007

Report Date: 05/16/05

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ARCADIS	Project: MT000834.0001	Fax: (432) 687-5401
1004 N. Big Spring Street	Project Number: MT000834.0001	Reported:
Midland TX, 79701	Project Manager: Sharon Hall	05/16/05 07:39

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BDK- 27 North (40'-40.5')	5E11007-01	Soil	05/09/05 15:45	05/11/05 15:30
BDK 27-1 (25'-30')	5E11007-02	Soil	05/10/05 09:37	05/11/05 15:30
BD M14 (60'-61')	5E11007-03	Soil	05/10/05 16:36	05/11/05 15:30
BD M14 (55'-60')	5E11007-04	Soil	05/10/05 16:30	05/11/05 15:30

Project: MT000834.0001 Project Number: MT000834.0001 Project Manager: Sharon Hall

Fax: (432) 687-5401 **Reported:** 05/16/05 07:39

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Organics by GC **Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BDK- 27 North (40'-40.5') (5E11007-0)	l) Soil						· · · · · · · · · · · · · · · · · · ·		
Benzene	ND	0.0250	mg/kg dry	25	EE51204	05/12/05	05/12/05	EPA 8021B	
Toluene	ND	0.0250	"		u.	**		11	
Ethylbenzene	ND	0.0250	"		11	11	**	u	
Xylene (p/m)	ND	0.0250	"	н	"	11	"	n	
Xylene (o)	ND	0.0250	"		"	11			
Surrogate: a,a,a-Trifluorotoluene		107 %	80-1	20	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.4 %	80-1	20	"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EE51202	05/12/05	05/12/05	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	11	n		n		n	
Total Hydrocarbon C6-C35	ND	10.0	н	н		n		11	
Surrogate: 1-Chlorooctane		84.0 %	70-1	30	"	"	"	"	
Surrogate: 1-Chlorooctadecane		78.0 %	70-1	30	"	"	"	"	
BDK 27-1 (25'-30') (5E11007-02) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EE51204	05/12/05	05/12/05	EPA 8021B	
Toluene	ND	0.0250	"	11	н	"	U	It	
Ethylbenzene	ND	0.0250	"	"	"	0	n	n	
Xylene (p/m)	ND	0.0250	"	и	*	U	"	"	
Xylene (o)	ND	0.0250	11	н	н		"	"	
Surrogate: a,a,a-Trifluorotoluene		85.8 %	80-1	20	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.3 %	80-1	20	"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EE51202	05/12/05	05/12/05	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	и	n	"	"	11	
Total Hydrocarbon C6-C35	· ND	10.0	11	10	N	"	11	1 1	
Surrogate: 1-Chlorooctane		88.2 %	70-1	30	"	"	"	"	
Surrogate: 1-Chlorooctadecane		80.2 %	70-1	30	"	"	"	"	
BD M14 (60'-61') (5E11007-03) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EE51204	05/12/05	05/12/05	EPA 8021B	
Toluene	ND	0.0250		"	11	n	11	11	
Ethylbenzene	ND	0.0250		"	"	"	11	"	
Xylene (p/m)	ND	0.0250	"	"	"	н	11	"	
Xylene (o)	ND	0.0250	u	"	"	н	U	n	
Surrogate: a,a,a-Trifluorotoluene		91.5 %	80	120	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.4 %	80-1	120	"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EE51202	05/12/05	05/12/05	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0		**	n	"	"		
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	и	11	"	

Environmental Lab of Texas

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				T000024 0)		Fax: (432)	687-5401
1004 N Big Spring Street		Project Nu	mber: M	T000834.0	001			Repor	ted:
Midland TX, 79701		Project Mar	nager: Sl	naron Hall				05/16/05	5 07:39
		Org	ganics	by GC					
		Environm	nental]	Lab of T	exas				
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note

BD M14 (60'-61') (5E11007-03) Soil								· · · · · · · · · · · · · · · · · · ·	
Surrogate: 1-Chlorooctane		87.6 %	70-13	0	EE51202	05/12/05	05/12/05	EPA 8015M	
Surrogate: 1-Chlorooctadecane		76.8 %	70-13	0	"	**	**	**	
BD M14 (55'-60') (5E11007-04) Soil					_		_		
Benzene	ND	0.0250	mg/kg dry	25	EE51204	05/12/05	05/12/05	EPA 8021B	
Toluene	ND	0.0250	IF	"		"	11		
Ethylbenzene	ND	0.0250	11		"	н	**	11	
Xylene (p/m)	ND	0.0250	n	**	n	**	"	"	
Xylene (o)	ND	0.0250	11	"	"	11	n	R	
Surrogate: a,a,a-Trifluorotoluene		92.8 %	80-12	0	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		87.9 %	80-12	0	"	"	"	n	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EE51202	05/12/05	05/12/05	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	11	"	**	n	n	"	
Total Hydrocarbon C6-C35	ND	10.0	n	"	"	11 	n	R	
Surrogate: 1-Chlorooctane		80.8 %	70-13	0	"	"	"	"	
Surrogate: 1-Chlorooctadecane		70.0 %	70-13	0	"	"	"	"	

Environmental Lab of Texas

Project: MT000834.0001 Project Number: MT000834.0001 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
BDK- 27 North (40'-40.5') (5E11007-0	l) Soil					-			
Chloride	486	10.0	mg/kg	20	EE51403	05/13/05	05/13/05	EPA 300.0	
% Moisture	11.2	0.1	%	1	EE51203	05/12/05	05/13/05	% calculation	
BDK 27-1 (25'-30') (5E11007-02) Soil									
Chloride	1360	50.0	mg/kg	100	EE51403	05/13/05	05/13/05	EPA 300.0	
% Moisture	6.7	0.1	%	1	EE51203	05/12/05	05/13/05	% calculation	
BD M14 (60'-61') (5E11007-03) Soil									
Chloride	4710	100	mg/kg	200	EE51403	05/13/05	05/13/05	EPA 300.0	
% Moisture	5.3	0.1	%	1	EE51203	05/12/05	05/13/05	% calculation	
BD M14 (55'-60') (5E11007-04) Soil									
Chloride	8900	1000	mg/kg	2000	EE51403	05/13/05	05/13/05	EPA 300.0	
% Moisture	5.9	0.1	%	1	EE51203	05/12/05	05/13/05	% calculation	

Environmental Lab of Texas

ARCADIS		P	roject: MT	000834.00	001				Fax: (432)	687-5401
1004 N. Big Spring Street		Project Nu	mber: MT	000834.00	001				Repo	rted:
Midland TX, 79701		Project Ma	nager: Sha	ron Hall					05/16/0	5 07:39
	Or	ganics by	GC - Q	uality (Control					
]	Environn	nental L	ab of T	exas					
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EE51202 - Solvent Extraction	(GC)									
Blank (EE51202-BLK1)				Prepared	& Analyz	ed: 05/12/	05			
Gasoline Range Organics C6-C12	ND	10.0	mg/kg wet							
Diesel Range Organics >C12-C35	ND	10.0	"							
Total Hydrocarbon C6-C35	ND	10.0	n							
Surrogate: 1-Chlorooctane	36.6		mg/kg	50.0		73.2	70-130			·
Surrogate: 1-Chlorooctadecane	40.9		"	50.0		81.8	70-130			
LCS (EE51202-BS1)				Prepared	& Analyz	ed: 05/12/	05			
Gasoline Range Organics C6-C12	430	10.0	mg/kg wet	500		86.0	75-125			
Diesel Range Organics >C12-C35	474	10.0	17	500		94.8	75-125			
Total Hydrocarbon C6-C35	904	10.0		1000		90.4	75-125			
Surrogate: 1-Chlorooctane	36.5		mg/kg	50.0		73.0	70-130			
Surrogate: 1-Chlorooctadecane	36.5		"	50.0		73.0	70-130			
Calibration Check (EE51202-CCV1)				Prepared	& Analyz	ed: 05/12/	05			
Gasoline Range Organics C6-C12	468		mg/kg	500		93.6	80-120			
Diesel Range Organics >C12-C35	, 529		"	500		106	80-120			
Total Hydrocarbon C6-C35	997		"	1000		99.7	80-120			
Surrogate: 1-Chlorooctane	47.3		"	50.0		94.6	70-130			
Surrogate: 1-Chlorooctadecane	41.7		"	50.0		83.4	70-130			
Matrix Spike (EE51202-MS1)	So	ource: 5E110	07-01	Prepared	& Analyz	ed: 05/12/	05			
Gasoline Range Organics C6-C12	539	10.0	mg/kg dry	563	ND	95.7	75-125			
Diesel Range Organics >C12-C35	585	10.0	"	563	ND	104	75-125			
Total Hydrocarbon C6-C35	1120	10.0	*	1130	ND	99.1	75-125			
Surrogate: 1-Chlorooctane	48.6		mg/kg	50.0		97.2	70-130			
Surrogate: 1-Chlorooctadecane	38.5		"	50.0		77.0	70-130			
Matrix Spike Dup (EE51202-MSD1)	So	ource: 5E110	07-01	Prepared	& Analyz	ed: 05/12/	05			
Gasoline Range Organics C6-C12	511	10.0	mg/kg dry	563	ND	90.8	75-125	5.33	20	
Diesel Range Organics >C12-C35	604	10.0	н	563	ND	107	75-125	3.20	20	
Total Hydrocarbon C6-C35	1120	10.0	"	1130	ND	99.1	75-125	0.00	20	
Surrogate: 1-Chlorooctane	47.6		mg/kg	50.0		95.2	70-130			
Surrogate: 1-Chlorooctadecane	38.4		"	50.0		76.8	70-130			

Environmental Lab of Texas

ARCADIS		Pr	oject: M	Т000834.00)01				Fax: (432)	687-5401
1004 N. Big Spring Street Midland TX, 79701		Project Nur Project Mar	mber: M nager: Sh	T000834.00 aron Hall)01				Repo 05/16/0	rted: 5 07:39
	Org	ganics by	GC - (Quality (Control			,		
	1	Environm	ental I	Lab of T	exas					
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EE51204 - EPA 5030C (GC)										
Blank (EE51204-BLK1)				Prepared	& Analyz	ed: 05/12/	05			
Benzene	ND	0.00100	mg/kg wet	t						
Toluene	ND	0.00100	11							
Ethylbenzene	ND	0.00100	11							
Xylene (p/m)	ND	0.00100	11							
Xylene (o)	ND	0.00100	n							
Surrogate: a,a,a-Trifluorotoluene	89.7		ug/kg	100		89.7	80-120		· · · ·	•
Surrogate: 4-Bromofluorobenzene	82.0		"	100		82.0	80-120			
LCS (EE51204-BS1)				Prepared	& Analyz	ed: 05/12/	05			
Benzene	101		ug/kg	100		101	80-120			
Toluene	96.4		11	100		96.4	80-120			
Ethylbenzene	94.8			100		94.8	80-120			
Xylene (p/m)	210		"	200		105	80-120			
Xylene (o)	99.9		0	100		99.9	80-120			
Surrogate: a,a,a-Trifluorotoluene	101		"	100		101	80-120			
Surrogate: 4-Bromofluorobenzene	103		"	100		103	80-120			
Calibration Check (EE51204-CCV1)				Prepared	& Analyz	ed: 05/12/	05			
Benzene	99.3		ug/kg	100		99.3	80-120			
Toluene	102		"	100		102	80-120			
Ethylbenzene	95.8			100		95.8	80-120			
Xylene (p/m)	217		11	200		108	80-120			
Xylene (o)	103		11	100		103	80-120			
Surrogate: a,a,a-Trifluorotoluene	99.8		"	100		99.8	80-120			
Surrogate: 4-Bromofluorobenzene	94.1		"	100		94.1	80-120			
Matrix Spike (EE51204-MS1)	So	urce: 5E110	07-01	Prepared	& Analyz	ed: 05/12/	05			
Benzene	91.4		ug/kg	100	ND	91.4	80-120			
Toluene	85.8			100	ND	85.8	80-120			
Ethylbenzene	85.9		"	100	ND	85.9	80-120			
Xylene (p/m)	196		н	200	ND	98.0	80-120			
Xylene (o)	90.4		"	100	ND	90.4	80-120			
Surrogate: a,a,a-Trifluorotoluene	99.0	······	"	100		99.0	80-120			
Surrogate: 4-Bromofluorobenzene	107		"	100		107	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	Project: MT000834.0001	Fax: (432) 687-5401
1004 N. Big Spring Street	Project Number: MT000834.0001	Reported:
Midland TX, 79701	Project Manager: Sharon Hall	05/16/05 07:39

Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EE51204 - EPA 5030C (GC)										
NATION AND AND AND A	S		07.01	Droporod	& Anolyz	ad. 05/12/	15			

Matrix Spike Dup (EE51204-MSD1)	Source:	5E11007-01	Prepared	& Analyze	ea: 05/12/	05			
Benzene	80.3	ug/kg	100	ND	80.3	80-120	12.9	20	
Toluene	80.7	**	100	ND	80.7	80-120	6.13	20	
Ethylbenzene	80.3		100	ND	80.3	80-120	6.74	20	
Xylene (p/m)	182	"	200	ND	91.0	80-120	7.41	20	
Xylene (0)	88.9	"	100	ND	88.9	80-120	1.67	20	
Surrogate: a,a,a-Trifluorotoluene	85.7	"	100		85.7	80-120			
Surrogate: 4-Bromofluorobenzene	<i>89.9</i>	"	100		89.9	80-120			

Environmental Lab of Texas

ARCADIS		Project:	MT000834.0001	Fax: (432) 687	-5401
1004 N. Big	Spring Street	Project Number:	MT000834.0001	Reported	
Midland TX,	79701	Project Manager:	Sharon Hall	05/16/05 07	.39

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 EE51203 - General Preparation	(Prep)									
Blank (EE51203-BLK1)				Prepared:	05/12/05	Analyzed	I: 05/13/05			
% Moisture	ND	0.1	%							
Duplicate (EE51203-DUP1)	So	urce: 5E1100	7-01	Prepared:	05/12/05	Analyzed	1: 05/13/05			
% Moisture	10.8	0.1	%		11.2			3.64	20	
Batch EE51403 - Water Extraction					<u> </u>					
Blank (EE51403-BLK1)				Prepared	& Analyz	ed: 05/13/	05			
Chloride	ND	0.500	mg/kg							
LCS (EE51403-BS1)				Prepared	& Analyz	ed: 05/13/0	05			
Chloride	9.70		mg/L	10.0		97.0	80-120			
Calibration Check (EE51403-CCV1)				Prepared	& Analyz	ed: 05/13/	05			
Chloride	10.4		mg/L	10.0		104	80-120			
Duplicate (EE51403-DUP1)	So	urce: 5E1100	7-01	Prepared	& Analyz	ed: 05/13/	05			
Chloride	469	10.0	mg/kg		486			3.56	20	

Environmental Lab of Texas

ARCADIS 1004 N. Big Spring Street Midland TX, 79701	Project: MT000834.0001 Project Number: MT000834.0001 Project Manager: Sharon Hall	Fax: (432) 687-5401 Reported: 05/16/05 07:39
	Notes and Definitions	
DET Analyte DETECTI	D	
ND Analyte NOT DET	ECTED at or above the reporting limit	
NR Not Reported		
dry Sample results rep	orted on a dry weight basis	
RPD Relative Percent D	fference	
LCS Laboratory Control	Spike	
MS Matrix Spike		

Duplicate Dup

Report Approved By:

Kalandk Ibul 5-16-05 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.

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

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

Client:	RCADIS
Date/Time:	5/11/05 15:30
Order #:	5E11007
Initials:	CR

Sample Receipt Checklist

Temperature of container/ccoler?	Yes	No	2.0 CI
Shipping container/cooler in good condition?		No	
Custody Seals intact on shipping container/cccler?	Yes	No	Not present
Custody Seals intact on sample bottles?	Yes	No	(Not present)
Chain of custody present?	(AB)	Na	
Sample Instructions complete on Chain of Custody?	C	No	
Chain of Custody signed when relinquished and received?		No	
Chain of custody agrees with sample label(s)	1 Cos	No	
Container labels legible and intact?	1 Xen	No	1
Sample Matrix and properties same as on chain of custody?	1 (33, 1	No	
Samples in proper container/bottle?	Pas	No I	
Samples properly preserved?	B	No I	
Sample bottles intact?	B	No 1	
Freservations documented on Chain of Custody?	1 ASS	No I	
Containers documented on Chain of Custody?	18	NC	
Sufficient sample amount for indicated test?	123	No I	
All samples received within sufficient hold time?		NC	
VCC samples have zero headspace?	1 Cas	NC I	Not Applicable

Other observations:

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

ARCADIS GERAGHTY & MILLER Laboratory Task Order No./P.O.	O. CHAIN-OF-CUSTOD	Y RECORD Page of
Project Number/Name_MT000834.0001	ANALYSIS / METHOD / SIZE	
Project Location Rice Engineering Operating		
Project Manager Sharon Hall		
Sampler(s)/Affiliation_ <u>ARCADIS</u>		
Date/AixAdd Time		Remarks Total
BDK-27 Marth 40 - 4035 5/9/05 15:4 1		5511007-01 /
BDK 27-1(25-30) 5 5/10/05 7:37 1		- 05 1
BD MI4(60-61') 5 5/10/05 16:36 1		-03
BDM14(55-60) 5 5/10/05 16:36 1		0 <i>-</i> -
		•
		Total No. of Bottles/
Sample Matrix: L = Liquid; S = Solid; A = Air		Containers
Relinquished by: R. Jph Lens Organization: ARCAI Received by: <u>www.kww</u> Organization: <u>FL</u>	IS Date 5 11 1 CS	Time /5:30 Seal Intact? Time /5:30 Yes No N/A
Relinquished by: Organization:	Date 1 1	Time Seal Intact?
Received by: Organization:	Date / /	Time Yes No N/A
Special Instructions/Remarks: インの む		
Delivery Method: 🗆 In Person 🗆 Common Carrier	SPECIFY	Other SPECIFY AG 05-0597

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Analytical Report

Prepared for:

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

Project: MT000834.0001.00001 Project Number: MT000834.0001.00001 Location: Rice Operating

Lab Order Number: 5E11008

Report Date: 05/17/05

 ARCADIS
 Project:
 MT000834.0001.00001
 Fax: (432) 687-5401

 1004 N. Big Spring Street
 Project Number:
 MT000834.0001.00001
 Reported:

 Midland TX, 79701
 Project Manager:
 Sharon Hall
 05/17/05 13:27

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Trip Blank	5E11008-02	Water	05/10/05 00:00	05/11/05 15:30
BD K Z7-1	5E11008-03	Water	05/10/05 10:22	05/11/05 15:30
BD K North	5E11008-04	Water	05/10/05 11:00	05/11/05 15:30

Project: MT000834.0001.00001 Project Number: MT000834.0001.00001 Project Manager: Sharon Hall Fax: (432) 687-5401 Reported: 05/17/05 13:27

Organics by GC Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Trip Blank (5E11008-02) Water				· · ·					
Benzene	ND	0.00100	mg/L	1	EE51205	05/12/05	05/12/05	EPA 8021B	
Toluene	ND	0.00100		. n	н	n	"	11	
Ethylbenzene	ND	0.00100		"	"	н	**	"	
Xylene (p/m)	ND	0.00100	19	"	"	11	11	"	
Xylene (o)	ND	0.00100	"	н	"		n	*1	
Surrogate: a,a,a-Trifluorotoluene		89.2 %	80-1	20	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		82.6 %	80-1.	20	"	"	"	n	
BD K Z7-1 (5E11008-03) Water									
Benzene	ND	0.00100	mg/L	1	EE51205	05/12/05	05/12/05	EPA 8021B	
Toluene	ND	0.00100	н	11	**	n	n	n	
Ethylbenzene	ND	0.00100	"	19	11	"	n	11	
Xylene (p/m)	ND	0.00100		н	"	**	н	n	
Xylene (o)	ND	0.00100	11	н	11	"	n	n	
Surrogate: a,a,a-Trifluorotoluene		85.1 %	80-1	20	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.9 %	80-1	20	"	"	"	n	
BD K North (5E11008-04) Water									
Benzene	ND	0.00100	mg/L	1	EE51205	05/12/05	05/12/05	EPA 8021B	
Toluene	ND	0.00100	**	"	"	u	11		
Ethylbenzene	ND	0.00100	11	"	n	n	и		
Xylene (p/m)	ND	0.00100	"		"	"	n	"	
Xylene (o)	ND	0.00100	n		"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		88.7 %	80-1	20	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		81.1 %	80-1	20	"	"	"	"	

Environmental Lab of Texas

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

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Project: MT000834.0001.00001 Project Number: MT000834.0001.00001 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
BD K Z7-1 (5E11008-03) Water									
Carbonate Alkalinity	ND	0.100	mg/L	1	EE51207	05/12/05	05/12/05	EPA 310.2M	
Bicarbonate Alkalinity	277	2.00		n	n	**	n	"	
Hydroxide Alkalinity	ND	0.100	"	н		n		**	
Chloride	2930	25.0	"	50	EE51309	05/11/05	05/11/05	EPA 300.0	
Specific Conductance (EC)	5800	5.00	umhos/cm	1	EE51713	05/17/05	05/17/05	EPA 120.1	
Fluoride	4.00	0.500	mg/L	5	EE51310	05/11/05	05/11/05	EPA 300.0	
Nitrate as N	10.0	0.250	n	н	11	· #	"	*1	
pH	7.06		pH Units	1	EE51716	05/16/05	05/16/05	EPA 150.1	
Total Dissolved Solids	7730	5.00	mg/L	11	EE51711	05/16/05	05/17/05	EPA 160.1	
Sulfate	676	25.0	"	50	EE51309	05/11/05	05/11/05	EPA 300.0	
BD K North (5E11008-04) Water									
Carbonate Alkalinity	ND	0.100	mg/L	1	EE51207	05/12/05	05/12/05	EPA 310.2M	
Bicarbonate Alkalinity	269	2.00	n	"		w	11	*1	
Hydroxide Alkalinity	ND	0.100	н	11	"	"	n	11	
Chloride	770	12.5	**	25	EE51309	05/11/05	05/11/05	EPA 300.0	
Specific Conductance (EC)	2590	5.00	umhos/cm	1	EE51713	05/17/05	05/17/05	EPA 120.1	
Fluoride	4.93	0.500	mg/L	5	EE51310	05/11/05	05/11/05	EPA 300.0	
Nitrate as N	4.30	0.250	"	11	н	н	м	"	
рН	7.35		pH Units	1	EE51716	05/16/05	05/16/05	EPA 150.1	
Total Dissolved Solids	1800	5.00	mg/L	"	EE51711	05/16/05	05/17/05	EPA 160.1	
Sulfate	376	12.5		25	EE51309	05/11/05	05/11/05	EPA 300.0	

Environmental Lab of Texas

Project: MT000834.0001.00001 Project Number: MT000834.0001.00001 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
BD K Z7-1 (5E11008-03) Water									
Calcium	683	1.00	mg/L	100	EE51307	05/13/05	05/13/05	EPA 6010B	
Magnesium	234	0.100	н	11		11	"	"	
Potassium	35.7	0.500	н	10	"	n	11		
Sodium	948	10.0	n	1000	"	11	11	H	
BD K North (5E11008-04) Water									
Calcium	175	0.500	mg/L	50	EE51307	05/13/05	05/13/05	EPA 6010B	
Magnesium	93.4	0.0500	"	"	"	n	11	"	
Potassium	13.0	0.500	н	10	н	U II	"	*	
Sodium	392	0.500	"	50	"		n		

Environmental Lab of Texas

ARCADIS	Project: MT000834.0001.00001	Fax: (432) 687-5401
1004 N. Big Spring Street	Project Number: MT000834.0001.00001	Reported:
Midland TX, 79701	Project Manager: Sharon Hall	05/17/05 13:27

Organics by GC - Quality Control

Environmental Lab of Texas

Batch EE51205 - EPA 5030C (GC) Blank (EE51205-BLK1) Benzene Toluene Ethylbenzene Xylene (p/m) Xylene (o) Surrogate: a,a,a-Trifluorotoluene Surrogate: 4-Bromofluorobenzene LCS (EE51205-BS1) Benzene 0. Toluene 0. Ethylbenzene 0. Xylene (p/m) 0.									
Blank (EE51205-BLK1) Benzene Toluene Ethylbenzene Xylene (p/m) Xylene (o) Surrogate: a,a,a-Trifluorotoluene Surrogate: 4-Bromofluorobenzene LCS (EE51205-BS1) Benzene 0. Toluene 0. Ethylbenzene 0. Xylene (p/m) 0.									
Benzene Toluene Ethylbenzene Xylene (p/m) Xylene (o) Surrogate: a,a,a-Trifluorotoluene Surrogate: 4-Bromofluorobenzene LCS (EE51205-BS1) Benzene 0. Toluene 0. Ethylbenzene 0. Xylene (p/m) 0. Xylene (o) 0.	NID			Prepared a	& Analyze	d: 05/12/0)5		
Toluene Ethylbenzene Xylene (p/m) Xylene (o) Surrogate: a,a,a-Trifluorotoluene Surrogate: 4-Bromofluorobenzene LCS (EE51205-BS1) Benzene 0. Toluene 0. Ethylbenzene 0. Xylene (p/m) 0. Xylene (o) 0.	ND	0.00100	mg/L					-	
Ethylbenzene Xylene (p/m) Xylene (o) Surrogate: a,a,a-Trifluorotoluene Surrogate: 4-Bromofluorobenzene LCS (EE51205-BS1) Benzene 0. Toluene 0. Ethylbenzene 0. Xylene (p/m) 0.	ND	0.00100	n						
Xylene (p/m) Xylene (o) Surrogate: a,a,a-Trifluorotoluene Surrogate: 4-Bromofluorobenzene LCS (EE51205-BS1) Benzene 0. Toluene 0. Ethylbenzene 0. Xylene (p/m) 0. Xylene (o) 0.	ND	0.00100	**						
Xylene (o) Surrogate: a,a,a-Trifluorotoluene Surrogate: 4-Bromofluorobenzene LCS (EE51205-BS1) Benzene 0. Toluene 0. Ethylbenzene 0. Xylene (p/m) 0. Xylene (o) 0.	ND	0.00100	11						
Surrogate: a,a,a-Trifluorotoluene Surrogate: 4-Bromofluorobenzene LCS (EE51205-BS1) Benzene 0. Toluene 0. Ethylbenzene 0. Xylene (p/m) 0. Xylene (o) 0.	ND	0.00100	67						
Surrogate: 4-BromofluorobenzeneLCS (EE51205-BS1)BenzeneToluene0.Ethylbenzene0.Xylene (p/m)Xylene (o)0.	85.9		ug/l	100		85.9	80-120	 	
LCS (EE51205-BS1)Benzene0.Toluene0.Ethylbenzene0.Xylene (p/m)0.Xylene (o)0.	81.1		"	100		81.1	80-120		
Benzene0.Toluene0.Ethylbenzene0.Xylene (p/m)0.Xylene (o)0.				Prepared a	& Analyze	d: 05/12/0)5		
Toluene0.Ethylbenzene0.Xylene (p/m)0.Xylene (o)0.	0959	0.00100	mg/L	0.100	·	95.9	80-120		
Ethylbenzene0.Xylene (p/m)0.Xylene (o)0.	0897	0.00100	"	0.100		89.7	80-120		
Xylene (p/m)0Xylene (o)0.	0897	0.00100	11	0.100		89.7	80-120		
Xylene (o) 0.	0.201	0.00100	и	0.200		100	80-120		
	0996	0.00100	н	0.100		99.6	80-120		
Surrogate: a,a,a-Trifluorotoluene	84.4		ug/l	100		84.4	80-120	 	
Surrogate: 4-Bromofluorobenzene	81.8		"	100		81.8	80-120		
Calibration Check (EE51205-CCV1)				Prepared a	& Analyze	d: 05/12/0)5		
Benzene	98.7		ug/l	100		98.7	80-120	 	
Toluene	91.2		19	100		91.2	80-120		
Ethylbenzene	85.7		11	100		85.7	80-120		
Xylene (p/m)	191		н	200		95.5	80-120		
Xylene (o)	90.0		9	100		90.0	80-120		
Surrogate: a,a,a-Trifluorotoluene	95.5		"	100		95.5	80-120	 	
Surrogate: 4-Bromofluorobenzene	87.7		"	100		87.7	80-120		
Matrix Spike (EE51205-MS1)	Sour	rce: 5E1100	8-04	Prepared a	& Analyze	ed: 05/12/0)5		
Benzene	0.105	0.00100	mg/L	0.100	ND	105	80-120	 	
Toluene 0	.0996	0.00100	"	0.100	ND	99.6	80-120		
Ethylbenzene 0.	.0986	0.00100	"	0.100	ND	98.6	80-120		
Xylene (p/m)	0.217	0.00100	*	0.200	ND	108	80-120		
Xylene (o)	0.104	0.00100		0.100	ND	104	80-120		
Surrogate: a,a,a-Trifluorotoluene	103		ug/l	100		103	80-120	 	····
Surrogate: 4-Bromofluorobenzene			5						

Environmental Lab of Texas

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ARCADIS	Project: MT000834.0001.00001	Fax: (432) 687-5401
1004 N. Big Spring Street	Project Number: MT000834.0001.00001	Reported:
Midland TX, 79701	Project Manager: Sharon Hall	05/17/05 13:27

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 EE51205 - EPA 5030C (GC)

Matrix Spike Dup (EE51205-MSD1)	Sou	ırce: 5E1100	8-04	Prepared a	& Analyze	ed: 05/12/	/05			
Benzene	0.107	0.00100	mg/L	0.100	ND	107	80-120	1.89	20	
Toluene	0.102	0.00100		0.100	ND	102	80-120	2.38	20	
Ethylbenzene	0.103	0.00100	12	0.100	ND	103	80-120	4.37	20	
Xylene (p/m)	0.218	0.00100		0.200	ND	109	80-120	0.922	20	
Xylene (o)	0.105	0.00100	11	0.100	ND	105	80-120	0.957	20	
Surrogate: a,a,a-Trifluorotoluene	107		ug/l	100		107	80-120			-
Surrogate: 4-Bromofluorobenzene	106		"	100		106	80-120			

Environmental Lab of Texas

ARCADIS	Project: MT000834.0001.00001	Fax: (432) 687-5401
1004 N. Big Spring Street	Project Number: MT000834.0001.00001	Reported:
Midland TX, 79701	Project Manager: Sharon Hall	05/17/05 13:27

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 EE51207 - General Preparation	n (WetChen	- <u></u> 1)							·	
Blank (EE51207-BLK1)	· · · · · · · · · · · · · · · · · · ·			Prepared	& Analyze	ed: 05/12/	05			
Carbonate Alkalinity	ND	0.100	mg/L	•						
Bicarbonate Alkalinity	ND	2.00								
Hydroxide Alkalinity	ND	0.100	n							
Duplicate (EE51207-DUP1)	Source: 5E11008-03		Prepared	ared & Analyzed: 05/12/05						
Carbonate Alkalinity	0.00	0.100	mg/L		0.00				20	
Bicarbonate Alkalinity	276	2.00	н		277			0.362	20	
Hydroxide Alkalinity	0.00	0.100	"		0.00				20	
Reference (EE51207-SRM1)				Prepared	& Analyze	ed: 05/12/	05			
Bicarbonate Alkalinity	230		mg/L	200		115	80-120			
Batch EE51309 - General Preparation	n (WetChen	1)								
Blank (EE51309-BLK1)				Prepared	& Analyze	ed: 05/11/	05			
Chloride	ND	0.500	mg/L							
Sulfate	ND	0.500	9							
LCS (EE51309-BS1)				Prepared	& Analyze	ed: 05/11/	05			
Chloride	10.3		mg/L	10.0		103	80-120			
Sulfate	10.6		11	10.0		106	80-120			
Calibration Check (EE51309-CCV1)				Prepared	& Analyze	ed: 05/11/	05			
Chloride	10.3		mg/L	10.0		103	80-120			
Sulfate	10.6		"	10.0		106	80-120			
Duplicate (EE51309-DUP1)	So	urce: 5E1100	8-04	Prepared	& Analyze	ed: 05/11/	05			
Sulfate	380	12.5	mg/L		376			1.06	20	
Chloride	777	12.5	"		770			0.905	20	

Environmental Lab of Texas

ARCADIS	Project: 1	MT000834.0001.00001	Fax: (432) 687-5401
1004 N. Big Spring Street	Project Number: 1	MT000834.0001.00001	Reported:
Midland TX, 79701	Project Manager:	Sharon Hall	05/17/05 13:27

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

		Reporting		Spike	Source	4/22÷	%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EE51310 - General Preparatio	n (WetChen	n)								
Blank (EE51310-BLK1)				Prepared	& Analyze	ed: 05/11/	05			
Nitrate as N	ND	0.0500	mg/L							
Fluoride	ND	0.100	"							
LCS (EE51310-BS1)				Prepared	& Analyze	ed: 05/11/	05			
Nitrate as N	2.15		mg/L	2.00		108	80-120			
Fluoride	2.12		"	2.00		106	80-120			
Calibration Check (EE51310-CCV1)				Prepared	& Analyze	ed: 05/11/	05			
Nitrate as N	2.13		mg/L	2.00		106	80-120			
Fluoride	2.08		н	2.00		104	80-120			
Duplicate (EE51310-DUP1)	So	urce: 5E110()8-04	Prepared	& Analyz	ed: 05/11/	05			
Nitrate as N	4.31	0.250	mg/L		4.30			0.232	20	
Fluoride	4.96	0.500	"		4.93			0.607	20	
Batch EE51711 - Filtration Preparat	ion									
Blank (EE51711-BLK1)				Prepared	05/16/05	Analyzed	1: 05/17/05			
Total Dissolved Solids	ND	5.00	mg/L							
Duplicate (EE51711-DUP1)	So	urce: 5E120	13-01	Prepared	05/16/05	Analyzed	1: 05/17/05			
Total Dissolved Solids	11200	5.00	mg/L		10700			4.57	20	
Batch EE51713 - General Preparatio	n (WetChen	n)								
Calibration Check (EE51713-CCV1)	,			Prepared	& Analyz	ed: 05/17/	05			
Specific Conductance (EC)	1420		umhos/cm	1410		101	80-120			

Environmental Lab of Texas

1004 N. Big Spring Street	Project Number: MT000834.0001.00001	Reported:
Midland TX, 79701	Project Manager: Sharon Hall	05/17/05 13:27

Environmental Lab of Texas

Analyte	Result	Reporting Limit Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EE51713 - General Preparatio	n (WetChem)		<u> </u>				·	a .	
Duplicate (EE51713-DUP1)	Sour	ce: 5E11008-03	Prepared	& Analyze	d: 05/17/	05			
Specific Conductance (EC)	5820	5.00 umhos/cm		5800			0.344	20	
Batch EE51716 - General Preparatio	n (WetChem)						<u></u>		
Calibration Check (EE51716-CCV1)			Prepared	& Analyze	d: 05/16/	05			
pH	6.99	pH Units	7.00		99.9	97.5-102.5			
Duplicate (EE51716-DUP1)	Sour	ce: 5E11008-03	Prepared	& Analyze	:d: 05/16/	05			

Environmental Lab of Texas

 ARCADIS
 Project:
 MT000834.0001.00001
 Fax: (432) 687-5401

 1004 N. Big Spring Street
 Project Number:
 MT000834.0001.00001
 Reported:

 Midland TX, 79701
 Project Manager:
 Sharon Hall
 05/17/05 13:27

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 EE51307 - 6010B/No Digestion		<u> </u>								
Blank (EE51307-BLK1)				Prepared	& Analyze	ed: 05/13/	05			
Calcium	ND	0.0100	mg/L							
Magnesium	ND	0.00100	11							
Potassium	ND	0.0500	14							
Sodium	ND	0.0100	**							
Calibration Check (EE51307-CCV1)				Prepared	& Analyze	ed: 05/13/	05			
Calcium	1.86		mg/L	2.00		93.0	85-115			
Magnesium	2.19			2.00		110	85-115			
Potassium	1.97		17	2.00		98.5	85-115			
Sodium	2.18		u	2.00		109	85-115			
Duplicate (EE51307-DUP1)	So	urce: 5E1100	8-04	Prepared	& Analyze	ed: 05/13/0	05			
Calcium	172	0.500	mg/L		175			1.73	20	
Magnesium	92.9	0.0500			93.4			0.537	20	
Potassium	13.4	0.500	"		13.0			3.03	20	
Sodium	356	0.500	"		392			9.63	20	

Environmental Lab of Texas

ARCADI 1004 N. H Midland	S Big Spring Street TX, 79701	Project: MT000834.0001. Project Number: MT000834.0001. Project Manager: Sharon Hall	Fax: (432) 687-5401 00001 Reported: 05/17/05 13:27					
		Notes and Definitions						
DET	Analyte DETECTED							
ND	Analyte NOT DETECTED at or above the reporting limit							
NR	Not Reported							
dry	Sample results reported on a dry weight	nt basis						
RPD	Relative Percent Difference							
LCS	Laboratory Control Spike							
MS	Matrix Spike							
Dup	Duplicate							

Kalandk. The Report Approved By: Date: 5-18-05

Raland K. Tuttle, Lab Manager Celey D. Keene, Lab Director, Org. Tech Director Peggy Allen, QA Officer Jeanne Mc Murrey, Inorg. Tech Director James L. Hawkins, Chemist/Geologist Sandra Sanchez, Lab Tech.

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

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

Environmental Lab of Texas

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

Client: AR	LADIS
Date/Time:P	3/11/05 15:30
Order #:	ELIDDE
Initials:	CK

Sample Receipt Checklist

Temperature of container/ccoler?	Yes	No	2.0 CI
Shipping container/cooler in good condition?	(res)	No	
Custody Seals intact on shipping container/cooler?	Yes	No	Actoresent
Custody Seals intact on sample bottles? See Note #	Yes	No	Not present
Chain of custody present?	1 Ces	Na	
Sample Instructions complete on Chain of Custody?	1 Yes	No	
Chain of Custody signed when relinquished and received?	200	No	
Chain of custody agrees with sample label(s)	1 Dess	No	
Container labels legible and intact?	(AS)	No	
Sample Matrix and properties same as on chain of custody?	1 Keg	No	
Samples in proper container/bottle?	Xes	No	!
Samples properly preserved?	1201	No	
Sample bottles intact?	IXEDI	NC	
Preservations documented on Chain of Custody?	Rol	No	
Containers documented on Chain of Custody?	1000	NC	
Sufficient sample amount for indicated test?	12001	No	
All samcles received within sufficient hold time?	1931	No	
VCC samples have zero headspace?	A3	Nc	Not Applicable

Other observations:

2

Custody geals were present (labels	placed over lid) on	the gomL
VOAS: nowever, there were no	custody seak on .	the plastic
liter containers.		

Variance Documentation:

Contact Person: -_____ Date/Time: _____ Contacted by: _____ Regarding: Corrective Action Taken:

2

ARCADIS	Labor	atory Task (Order No./P.O. No		CHAIN-OF-CUSTOD	Y RECORD Page	of
Project Number/Name	MT000834.0001.000	01		AN	ALYSIS / METHOD / SIZE		
Project Location Rice	e Engineering			- \$3,			
Laboratory <u>Envir</u> c	onmental Labs of	Texas		28 J. UIG 7 8			
Project Manager Shai	ron Hall		BON	S Che			
Sampler(s)/Affiliation	ARCADIS		TT TT TT TT TT TT TT TT	et de			
Sample ID/Location	Date/XXXX Matrix Sampled	K Time XabraD	A BE HIL CONCE	CHIO		Remarks	Total
Tamp Bluck	1		đ			5F1068- 0	
TripBlent	۲		A.				22 20
BD K ZF-1	L 5/10/0	s /0;2	12			l	<u>2</u> 23
BOK North	L 5/10/0	5 /1:00	2 /				24-3
Sample Matrix: L = Liq Relinquished by:	uid; S = Solid; A	= Air Organiz	ation: ARCADIS ation:			Time Conception	Sottles/ Sottles/ Sottles/ Sottles/ Sottles/ Sottles/ Seal Intact? Seal Intact? Seal Intact?
Received by:		Organiz	ation:		Date / _/	Time	Yes No N/A
Special Instructions/Remark 2、 ひ ^ゃ の	:53						
Delivery Method:	🗆 In Person		on Carrier		□ Lab Courier	□ Other	
				SPECIFY			SPECIFY AG 05-12/0