District I 1625 N. French Dr., Hobbs, NM 88240 District II 1301 W. Grand Avenue, Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505

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State of New Mexico	State	of New	Mexico
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RECEIVED

Form C-141 Revised October 10, 2003

Energy Minerals and Natural Resources 18 201 Oil Conservation Division 108850CD 1220 South St. Francis Dr.

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Santa Fe, NM 8750	כו

			Rela	ease Notific	ation	and Co	orrective A	ction	Ì		
						OPERA	ГOR		🛛 Initia	al Report 🔲 Final R	eport
Name of Co	mpany C	hevron Mid	continent	LP		Contact Larry Ridenour					
Address H	CR 60 Bo	x 423 Lovin	gton, NM	88260		Telephone No. 505-396-4414 x128					
Facility Nat	ne Loving	gton Paddocl	k Unit #8	7	1	Facility Typ	e Oil well				
	City of	£1 arrimaton		Mineral C	humar	State			Lease N	Jo 23220	
Surface Ow	ner Chy c	of Lovington		Millieral C	WHEI L				Thease I	10. 25220	
			LOCA	TION OF RI	ELEA	SE Al	PI # 3002531	10800)00		
Unit Letter	Section	Township	Range	Feet from the	North/	South Line	Feet from the	East/V	Vest Line	County	
в	36	168	30E		Soum			Casi		Lea	
L	<u>k</u>	L	L	Latitude_32.8	8257_I	Longitude_	W 103.3038	-		L ee, <u>1997</u>	
				NAT	URE	OF REL	EASE				
Type of Rele	ase Crude	oil and produ	ced water			Volume of 5 bbl water	Release 1 bbl oil	l and	Volume F	Recovered 1/2 bbl	
Source of Re	lease hole	in 2 ½" flowli	ne			Date and H	lour of Occurrence	e	Date and	Hour of Discovery	
						05/30/07 1	0:00 am		05/30/07	10:00 am	
was immedi	ate Notice (лven?	Yes 🗆	No 🗂 Not Re	equired	Pat Capert	on (left message of	on answ	ering mach	ine)	
By Whom?	Larry Willi	دع 			1	Date and H	Jour 05/30/07 11.	30 am		·	
Was a Water	course Read	ched?				If YES, Vo	olume Impacting t	he Wate	ercourse.		
			Yes 🛛	No						20 10 10 10 10 10 10 10 10 10 10 10 10 10	
If a Waterco	irse was Im	pacted. Descr	ibe Fully.	*		.1	······		1	3242526.25	
		, ,							222	1.50	
D 1 0	CD 11	1.D	1-1 A -41-	- T-1 +					/.9^v		
Describe Cat	ise of Problem	em and Reme	dial Actio	n laken. ''/'' steel flow line	e Well	was shut in a	at the time of leak	1	12 6	Ser 6 SI	
Chlorides 3	5,000 ppm	Oil gravity 3	3.9		c. <i>wen</i>	was shar m				er le la	
Had roustabo	ut gang pic	k up standing	fluid with	vacuum trailer. D	Did emer	gency one ca	ll and picked up w	vet soil	on location	Plauled contaminated soil	to
Sundance.											
Called and le	ft message	on Kirt voice	mail that v	works for the City	of Lovi	ngton as well				e .	
									· ··.	the colder	
Describe Are	a Affected	and Cleanup /	Action Tal	ken.*							
Affected area	approxima	tely 65 x 60	; ;								
Affected area	was marke	d with flags.	One call w	will be done and c	ontamin	ated soil dow	n to rock will be r	removed	d. Once the	e soil has been removed san	ples
will be taken	to check for	r extent of rer	naining co	ontaminated soil.	Contami	inated soil wi	ll be replaced with	h fresh s	soil.		
I hereby certi	fy that the i	nformation ai	ven above	is true and comp	lete to th	e best of my	knowledge and us	nderstor	ad that nur	mont to NMOCD sulse and	,
regulations a	l operators	are required to	o report ar	nd/or file certain r	elease no	otifications ar	id perform correct	tive acti	ions for rele	eases which may endanger	
public health	or the envir	onment. The	acceptant	ce of a C-141 repo	rt by the	NMOCD m	arked as "Final Re	eport" d	loes not reli	ieve the operator of liability	
should their of	perations h	ave failed to a	idequately	investigate and re-	emediate	e contaminati	on that pose a three f_{a}	eat to gr	ound water	r, surface water, human heal	th
federal, state,	or local lav	vs and/or regu	lations.		icport de	Jes not renew	e die operator of r	esponsi	binty for C	omphance with any other	
		1	11	1	Γ	•••••••	OIL CONS	SERV	ATION	DIVISION	
Signature	×:	/_	///	la .	_						
Signature	~~~~	700			-		ENVIRO	ENG	E ()	
Printed Name	: Larry W	illiams				Approved by	District Superviso	x: K	LL Z	been	
Title: HES S	pecialist					Approval Dat	e: 6.4.0-	7 1	Expiration 1	Date: 8.4.07	
E-mail Address: lcwl@Chevron.com				(Conditions of	Approval:			2		
Date: 5/20	/07		Dhan	505 207 4414	120 4	Attached					
Attach Addit	ional Shee	ts If Necess	rnone:	JUJ-370-4414 X	120 1	MAL C. I	TI W/ DOCU	MENT	ATION C		
A tuber / tuber	ional blice		u y		April	world Au	1 backfill) RP (B)	0
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,		•••••••			<u></u>	N. Ung	VI NMQCI	1)-191	0000		
				1	Qq	111311	L			1	

Table 1 CHEVRON USA LPU #87 Lea County, New Mexico

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Sample Samp ID Date	Sample	e Sample Date	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample	ple Sample	Depth	Soi	l Status	TP	H (mg/l	kg)	Benzene	Toluene	Ethlybenzene	Xylene	Chloride
	Date	Depth (ft)	(BEB)	In-Situ	Removed	GRO	DRO	Total	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)										
AH-1	7/15/2010	0-6"		х		<2.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<200										
	r				r	r	·	· · · · · · · · · · · · · · · · · · ·					·										
AH-2	7/15/2010	0-6"		Х		<2.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<200										
		·····	r																				
AH-3	7/15/2010	0-6"		х		<2.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<200										

BEB Below Excavation Bottom

ł

(--) Not Analyzed

Table 2 CHEVRON USA LPU #87 Lea County, New Mexico

Sample Sample		Sample	Sample De	le Depth	Soil Status		TPH (mg/kg)		Benzene	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene	Chloride (mg/kg)
ID	Date Depth (ft) (BEB) In-Situ Remo	Removed	GRO	DRO	Total	(mg/kg)	(mg/kg)						
T-1	8/18/2010	0.5-1'		х		-	-	-	-	-	-	-	<200
		· · · · · · · · · · · · · · · · · · ·		r					Г Г	·······			
T-2	8/18/2010	1-1.5'		X		-	-	-	-	-	-	-	<200
	······································			1			· · · · · · · · · · · · · · · · · · ·	· · · · · ·	r	······	· · · · · · · · ·		
Т-3	8/18/2010	1-1.5'		X		-	-	-	-	-	-	The second secon	<200

BEB Below Excavation Bottom

i

(--) Not Analyzed

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Summary Report

Ike Tavarez Tetra Tech 1910 N. Big Spring Street Midland, TX 79705

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Report Date: July 20, 2010

Work Order: 10071917

Project Location:Lea County, NMProject Name:LPU #87Project Number:114-6400599

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
238010	AH-1 0-6 in.	soil	2010-07-15	00:00	2010-07-19
238011	AH-2 0-6 in.	soil	2010-07-15	00:00	2010-07-19
238012	AH-3 0-6 in.	soil	2010-07-15	00:00	2010-07-19

]	BTEX	TPH DRO - NEW	TPH GRO	
	Benzene	Toluene	Ethylbenzene	Xylene	DRO	GRO
Sample - Field Code	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
238010 - AH-1 0-6 in.	< 0.0200	< 0.0200	< 0.0200	< 0.0200	<50.0	<2.00
238011 - AH-2 0-6 in.	< 0.0200	< 0.0200	< 0.0200	< 0.0200	<50.0	<2.00
238012 - AH-3 0-6 in.	< 0.0200	< 0.0200	< 0.0200	<0.0200	<50.0	$<\!2.00$

Sample: 238010 - AH-1 0-6 in.

Param	Flag	Result	Units	\mathbf{RL}
Chloride		<200	mg/Kg	4.00

Sample: 238011 - AH-2 0-6 in.

Param	Flag	Result	Units	\mathbf{RL}
Chloride		<200	mg/Kg	4.00

Sample: 238012 - AH-3 0-6 in.

Param	Flag	\mathbf{Result}	Units	\mathbf{RL}
Chloride		<200	mg/Kg	4.00

TraceAnalysis, Inc. • 6701 Aberdeen Ave., Suite 9 • Lubbock, TX 79424-1515 • (806) 794-1296 This is only a summary. Please, refer to the complete report package for quality control data.

IL MULLIUM TRACEAN	ALYSIS, INC.							
6701 Aberdeen Avenue, Suite 9 – Lubbock, Texas 79424 200 East Sunset Road, Suite E – El Paso, Texas 79922	800•378•1296 806•794•1296 888•588•3443 915•585•3443	FAX 806•794•1298 FAX 915•585•4944						
5002 Basin Street, Suite A1 Midland, Texas 79703 6015 Harris Parkway, Suite 110 Ft. Worth, Texas 76132 E-Mail: Jab	432 • 689 • 6301 817 • 201 • 5260 @traceanalysis.com	FAX 432•589•6313						
Certifications								
WBENC: 237019 HUB: NCTRCA	1752439743100-86536 WFWB38444Y0909	DBE: VN	1 20657					

NELAP Certifications

Lubbock: T104704219-08-TX LELAP-02003 Kansas E-10317

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El Paso: T104704221-08-TX LELAP-02002

Midland: T104704392-08-TX

Analytical and Quality Control Report

Ike Tavarez Tetra Tech 1910 N. Big Spring Street Midland, TX, 79705

Report Date: July 20, 2010

Work Order: 10071917

Project Location: Lea County, NM **Project Name:** LPU #87 Project Number: 114-6400599

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

			Date	\mathbf{Time}	Date
Sample	Description	Matrix	Taken	Taken	Received
238010	AH-1 0-6 in.	soil	2010-07-15	00:00	2010-07-19
238011	AH-2 0-6 in.	soil	2010-07-15	00:00	2010-07-19
238012	AH-3 0-6 in.	soil	2010-07-15	00:00	2010-07-19

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

This report consists of a total of 15 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Michael april

Dr. Blair Leftwich, Director Dr. Michael Abel, Project Manager

*--

Standard Flags

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 \mathbf{B} - The sample contains less than ten times the concentration found in the method blank.

Case Narrative

Samples for project LPU #87 were received by TraceAnalysis, Inc. on 2010-07-19 and assigned to work order 10071917. Samples for work order 10071917 were received intact at a temperature of 3.3 C.

Samples were analyzed for the following tests using their respective methods.

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		\mathbf{Prep}	Prep	\mathbf{QC}	Analysis
Test	Method	Batch	Date	Batch	Date
BTEX	S 8021B	61608	2010-07-19 at 16:00	71883	2010-07-19 at 15:44
Chloride (Titration)	SM 4500-Cl B	61618	2010-07-20 at 08:51	71894	2010-07-20 at 11:55
TPH DRO - NEW	S 8015 D	61591	2010-07-19 at 14:30	71872	2010-07-19 at 14:30
TPH GRO	S 8015 D	61608	2010-07-19 at 16:00	71884	2010-07-19 at 16:29

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 10071917 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

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Analytical Report

Sample: 238010 - AH-1 0-6 in.

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	71883	Date Analyzed:	2010-07-19	Analyzed By:	AG
Prep Batch:	61608	Sample Preparation:	2010-07-19	Prepared By:	AG

		RI	1				
Parameter	Flag	Result	t	\mathbf{Units}	D	ilution	RL
Benzene		< 0.0200)	mg/Kg		1	0.0200
Toluene		< 0.0200)	mg/Kg		1	0.0200
Ethylbenzene		< 0.0200)	mg/Kg		1	0.0200
Xylene		< 0.0200)	mg/Kg		1	0.0200
					Spike	Percent	Recovery
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)		1.65	mg/Kg	1	2.00	82	52.8 - 137

mg/Kg

1

2.00

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38.4 - 157

1.72

Sample: 238010 - AH-1 0-6 in.

4-Bromofluorobenzene (4-BFB)

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 71894 61618	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-Cl B 2010-07-20 2010-07-20	Prep Method: Analyzed By: Prepared By:	N/A AR AR
		RL			
Parameter	Flag	Result	Units	Dilution	\mathbf{RL}
Chloride		<200	mg/Kg	50	4.00

Sample: 238010 - AH-1 0-6 in.

Laboratory: Analysis: QC Batch: Prep Batch:	Midland TPH DRO - NEW 71872 61591	Analytical Metho Date Analyzed: Sample Preparati	d: S 8015 D 2010-07-19 on: 2010-07-19	Prep Method: Analyzed By: Prepared By:	N/A kg kg
		\mathbf{RL}			
Parameter	Flag	Result	Units	Dilution	\mathbf{RL}
DRO		<50.0	mg/Kg	1	50.0

Report Date: July 20, 2010 114-6400599			Work Order: 10071917 LPU #87				Page Number: 5 of 15 Lea County, NM		
Surrogate	Flag	Result	Units	Dil	ution	Spike Amount	Percent Recovery	Recovery Limits	
n-Tricosane		88.3	mg/Kg		1	100	88	70 - 130	
Sample: 23	8010 - AH-3	l 0-6 in.							
Laboratory:	Midland								
Analysis:	TPH GRO		Analytical	Method:	S 8015 D		Prep Met	hod: S 5035	
QC Batch:	71884		Date Anal Sample P	lyzea:	2010-07-19		Analyzed	By: AG	
riep batch:	01008		Sample F	eparation	2010-07-19		riepared	by: AG	
			\mathbf{RL}				•		
Parameter		Flag	Result		Units		Dilution	\mathbf{RL}	
GRO	· · · · · · · · · · · · · · · · · · ·		<2.00		mg/Kg		1	2.00	
						Spike	Percent	Recovery	
Surrogate		Flag	Result	Units	Dilution	Amount	Recovery	Limits	
Trifluorotolu	ene (TFT)		1.92	mg/Kg	1	2.00	96	48.5 - 152	
4-Bromofluor	robenzene (4-)	BFB)	1.87	mg/Kg	1	2.00	94	42 - 159	
Sample: 23 Laboratory: Analysis: QC Batch: Prep Batch:	8011 - AH-2 Midland BTEX 71883 61608	2 0-6 in.	Analytical 1 Date Analy Sample Pre	Method: zed: paration:	S 8021B 2010-07-19 2010-07-19		Prep Met Analyzed Prepared	hod: S 5035 By: AG By: AG	
			RL	I					
Parameter		Flag	Result	·	Units		Dilution	RL	
Benzene			< 0.0200)	mg/Kg		1	0.0200	
Toluene			< 0.0200		mg/Kg		1	0.0200	
Ethylbenzene	9		< 0.0200	I	mg/Kg		1	0.0200	

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Xylene		<0.0200	l	mg/Kg		1	0.0200
Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.21	mg/Kg	1	2.00	60	52.8 - 137
4-Bromofluorobenzene (4-BFB)		1.24	mg/Kg	1	2.00	62	38.4 - 157

Report Date: July 20, 2010 114-6400599			Wo	rk Order: 10 LPU #87		Page Number: 6 of 15 Lea County, NM			
Sample: 23	8011 - AH-2 0	-6 in.							
Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titra 71894 61618	ation)	Analyt Date A Sampl	tical Method: Analyzed: e Preparatioi	SM 4500 2010-07- n: 2010-07-	0-Cl B 20 20	Prep Me Analyze Prepared	*thod: d By: d By:	N/A AR AR
			BI.						
Parameter	FI	ຊອ	Besult		Units		Dilution		ΒI
Chloride		~~5	<200		mg/Kg		50		4.00
Sample: 23 Laboratory: Analysis: QC Batch: Prep Batch:	8011 - AH-2 0 Midland TPH DRO - N 71872 61591	-6 in. EW	Analy Date Samp	ytical Methoc Analyzed: de Preparatic	l: S_8015 2010-07 on: 2010-07	D 7-19 7-19	Prep Me Analyzeo Prepareo	sthod: d By: d By:	N/# kg kg
			DI						-
Parameter	Fl	ag	RL Result		Units		Dilution		RI
DRO			<50.0		mg/Kg		1		50.0
Surrogate	Flag	Result	Units	Diluti	on A	Spike	Percent	Rec	overy
n-Tricosane	1 148	96.1	mg/Kg	1		100	96	70	- 130
		6 in							
Sample: 23 Laboratory: Analysis: QC Batch: Prep Batch:	8011 - AH-2 0 Midland TPH GRO 71884 61608	-0 m.	Analytical Date Anal Sample Pr	Method: S yzed: S eparation: S	S 8015 D 2010-07-19 2010-07-19		Prep Meth Analyzed 1 Prepared I	nod: S By: A By: A	5033 .G .G
Sample: 23 Laboratory: Analysis: QC Batch: Prep Batch:	8011 - AH-2 0 Midland TPH GRO 71884 61608	-0 m.	Analytical Date Anal Sample Pr RL	Method: yzed: 2 eparation: 2	S 8015 D 2010-07-19 2010-07-19		Prep Meth Analyzed 1 Prepared I	iod: S By: A By: A	5033 .G .G
Sample: 23 Laboratory: Analysis: QC Batch: Prep Batch: Parameter	8011 - AH-2 0 Midland TPH GRO 71884 61608 Fl	ag	Analytical Date Anal Sample Pr RL Result	Method: 5 yzed: 5 eparation: 5	S 8015 D 2010-07-19 2010-07-19 Units		Prep Meth Analyzed I Prepared H Dilution	ıod: S By: A By: A	5033 .G .G .RI
Sample: 23 Laboratory: Analysis: QC Batch: Prep Batch: Parameter GRO	8011 - AH-2 0 Midland TPH GRO 71884 61608 Fl	ag	Analytical Date Anal Sample Pr RL Result <2.00	Method: yzed: eparation:	S 8015 D 2010-07-19 2010-07-19 <u>Units</u> mg/Kg		Prep Meth Analyzed 1 Prepared 1 Dilution	nod: S By: A By: A 	503 G .G <u>R1</u> 2.0
Sample: 23 Laboratory: Analysis: QC Batch: Prep Batch: Parameter GRO Surrogate	8011 - AH-2 0 Midland TPH GRO 71884 61608 F1	agFlag	Analytical Date Anal Sample Pr RL Result <2.00 Result	Method: yzed: eparation: Units	S 8015 D 2010-07-19 2010-07-19 Units mg/Kg Dilution	Spike	Prep Meth Analyzed 1 Prepared 1 Dilution 1 Percent Recovery	nod: S By: A By: A Reco Lin	503 G G RI 2.00 overy nits
Sample: 23 Laboratory: Analysis: QC Batch: Prep Batch: Parameter GRO Surrogate Trifluorotolu	8011 - AH-2 0 Midland TPH GRO 71884 61608 Fl	ag Flag	Analytical Date Anal Sample Pr RL Result <2.00 Result 1.40	Method: 9 yzed: 9 eparation: 9 Units mg/Kg	S 8015 D 2010-07-19 2010-07-19 Units mg/Kg Dilution	Spike Amount 2.00	Prep Meth Analyzed J Prepared I Dilution 1 Percent Recovery 70	nod: S By: A By: A Reco Lin 48.5	503; G .G <u>RI</u> 2.00 overy nits - 152

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Report Date: July 20, 2010	Work Order: 10071917	Page Number: 7 of 15
114-6400599	LPU #87	Lea County, NM

Sample: 238012 - AH-3 0-6 in.

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Laboratory: Analysis: QC Batch: Prep Batch:	Midland BTEX 71883 61608			Analytical Date Analy Sample Pre	Method: zed: paration:	S 8021B 2010-07-19 2010-07-19		Prep Metl Analyzed Prepared	nod: S 5035 By: AG By: AG
				RL	I				
Parameter		Flag		Result		Units	D	ilution	RL
Benzene				< 0.0200		mg/Kg		1	0.0200
Toluene				< 0.0200		mg/Kg		1	0.0200
Ethylbenzene				< 0.0200	ł	mg/Kg		1	0.0200
Xylene				< 0.0200		mg/Kg		1	0.0200
							Spike	Percent	Recovery
Surrogate			Flag	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotolue	ne (TFT)			1.33	mg/Kg	1	2.00	66	52.8 - 137
4-Bromofluoro	benzene (4-E	SFB)		1.35	mg/Kg	1	2.00	68	38.4 - 157

Sample: 238012 - AH-3 0-6 in.

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 71894 61618	Analytical Method: Date Analyzed: Sample Preparation	SM 4500-Cl B 2010-07-20 : 2010-07-20	Prep Method: Analyzed By: Prepared By:	N/A AR AR
		RL			
Parameter	\mathbf{Flag}	Result	Units	Dilution	\mathbf{RL}
Chloride		<200	mg/Kg	50	4.00

Sample: 238012 - AH-3 0-6 in.

Laboratory: Analysis: QC Batch: Prep Batch:	Laboratory: Midland Analysis: TPH DRO - NEW QC Batch: 71872 Prep Batch: 61591		Analytical Method:S 8015 DDate Analyzed:2010-07-19Sample Preparation:2010-07-19			Prep M Analyz Prepare	lethod: N/A ed By: kg ed By: kg
Doromotor	ים	b.c.	RL	TT	nita	Dilution	DI
	£1	ag	$\frac{1}{50.0}$	<u></u>	/Ka	1	<u> </u>
				1118,		1	0.0
					Spike	Percent	Recovery
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits
n-Tricosane	4	97.0	mg/Kg	1	100	97	70 - 130

Report Date 114-6400599	: July 20, 2010		Wo	ork Order: LPU #	10071917 ±87		Page Nu Lea	mber: 8 of 18 a County, NM
Sample: 23	8012 - AH-3 ()-6 in.						
Laboratory: Analysis: QC Batch: Prep Batch:	Midland TPH GRO 71884 61608		Analytical Date Anal Sample Pr	Method: lyzed: ceparation:	S 8015 D 2010-07-19 2010-07-19		Prep Met Analyzed Prepared	hod: S 503 <u>5</u> By: AG By: AG
_		_	RL					5.7
Parameter	F	lag	Result		Units		Dilution	
GRO		<u></u>	<2.00		mg/Kg	······	1	2.00
Surrogate		Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotolu	ene (TFT)		1.53	mg/Kg	1	2.00	76	48.5 - 152
4-Bromofluor	robenzene (4-BI	7B)	1.48	mg/Kg	1	2.00	74	42 - 159
QC Batch: Prep Batch: Parameter	71872 61591	Flag	Date Ana QC Prep	alyzed: aration: MDI Result	2010-07-19 2010-07-19	Uni	Analy Prepa ts	zed By: kg red By: kg RL
DRO				<14.5)	mg/l	Kg	50
Surrogate	Flag	Result	Units	Dilt	ition	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		91.3	mg/Kg		1	100	91	70 - 130
Method Bl QC Batch: Prep Batch:	ank (1) Q 71883 61608	C Batch: 71883	Date Ana QC Prepa	lyzed: 2 aration: 2	010-07-19 010-07-19		Analyz Prepar	ed By: AG ed By: AG
Parameter		Flag		M. Bes	DL	Un	ite	BI.
Benzene				< 0.0	150	mg/	Kg	0.02
Toluene				< 0.009	950	mg/	ΊKg	0.02
Ethylbenzene	Э			< 0.02	106	mg/	Kg	0.02
Xylene				< 0.009)30	mg/	Kg	0.02
a ,		ות	Dec. 3	T T **	י וימ	Spike	Percent	Recovery
Surrogate		Flag	Result	Units	Dilution	Amount	Recovery	Limits
1 rimilorofolu	ene (IFI)		2.20	mg/Kg	Ł	2.00	113	00.6 - 122
4-Bromofluor	ohenzene (A. RI	(B)	2.26	mg/Kg	1	2.00	112	55 / 199

 $e_{i}^{(1)} = e_{i}^{(1)} e_{i}^{(1)}$

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114-6400599	20, 2010			ork Orde LPU	r: 100719 #87	917		Page N L	lumber: ea Coun	9 01 1 ty, NM
Method Blank (1)	QC Bate	h: 71884								
QC Batch: 71884 Prep Batch: 61608			Date Ana QC Prep	alyzed: aration:	2010-07 2010-07	-19 -19		Analy Prepa	yzed By: ared By:	AG AG
				M	DL					
Parameter	Fl	ag		Res	ult		Units	}		RI
GRO				<1	65		mg/K	g		2
Surrogate		Flag	Result	Unit	s Di	lution	Spike Amount	Percent Recovery	Re L	covery imits
Trifluorotoluene (TF	T)		2.61	mg/K	g	1	2.00	130	67.	6 - 150
4-Bromofluorobenzer	ne (4-BFB)		2.46	mg/K	g	1	2.00	123	52.4	4 - 130
				М	ЭT.					
Parameter Chloride	Fl	lag		Res	ult 18		Units mg/K	g		$\frac{\text{RL}}{4}$
Parameter Chloride	Fl	ag		Res <2	ult 18		Units mg/K	g		RI 4
Parameter Chloride Laboratory Contro	ol Spike (LC)	s-1)	Date An	Res <2	2010 07	/ 10	Units mg/K	g Ano		RI 4
Parameter Chloride Laboratory Contro QC Batch: 71872 Prep Batch: 61591	ol Spike (LC:	s-1)	Date An QC Prep	alyzed:	2010-07 2010-07	7-19 7-19	Units mg/K	g Ana Prej	lyzed By pared By	RI 4 7: kg
Parameter Chloride Laboratory Contr QC Batch: 71872 Prep Batch: 61591	Fl	S-1)	Date An QC Prep	alyzed:	2010-07 2010-07	7-19 7-19 Spike	Units mg/K Matrix	g Ana Prej	lyzed By pared By R	RI 4 7: kg 7: kg ec.
Parameter Chloride Laboratory Contr QC Batch: 71872 Prep Batch: 61591 Param	Fl	S-1) LCS Resu 215	Date An QC Prep 5 It U	alyzed: paration:	2010-07 2010-07 2010-07 Dil.	7-19 7-19 Spike <u>Amount</u> 250	Units mg/K Matrix Result	g Ana Preg <u>Rec.</u> 86	lyzed By pared By R Li	RI 4 7: kg 7: kg ec. mit
Parameter Chloride Laboratory Contro QC Batch: 71872 Prep Batch: 61591 Param DRO Percent recovery is b	ol Spike (LC;	S-1) Resu 215 ike result.	Date An QC Prep It U: BPD is ba	Res <2 alyzed: paration: nits s/Kg ased on t	2010-07 2010-07 2010-07 Dil. 1 he spike	7-19 7-19 Spike Amount 250 and spike d	Units mg/K Matrix Result <14.5	g Ana Preg Rec. <u>86</u>	lyzed By pared By R Li 57.4	RI 4 7: kg 7: kg mit - 133.4
Parameter Chloride Laboratory Contro QC Batch: 71872 Prep Batch: 61591 Param DRO Percent recovery is b	ol Spike (LC)	S-1)	Date An QC Prep It U RPD is ba	Res <pre></pre>	2010-07 2010-07 2010-07 Dil. 1 he spike	7-19 7-19 Amount 250 and spike d	Units mg/K Matrix Result <14.5 luplicate res	g Ana Prep <u>Rec.</u> 86 sult. Bec	lyzed By pared By R Li 57.4	RI 4 7: kg 7: kg ec. mit - 133.4
Parameter Chloride Laboratory Contr QC Batch: 71872 Prep Batch: 61591 Param DRO Percent recovery is b Param	ol Spike (LC)	S-1) LCS Resu 215 ike result. LCSD Result	Date An QC Prep It U RPD is ba Units	Res <pre> Res </pre> <pre> Alyzed: oaration: aration: S/Kg ased on t Dil. Dil. </pre>	2010-07 2010-07 2010-07 Dil. 1 he spike Spike Amount	7-19 7-19 2-19 250 and spike d Matrix Result	Units mg/K Matrix Result <14.5 luplicate res Rec.	g Ana Prep Rec. 86 sult. Rec. Limit	lyzed By bared By R Li 57.4 RPD	RI 4 7: kg 7: kg ecc. mit - 133.4 RPD Limit
Parameter Chloride Laboratory Contro QC Batch: 71872 Prep Batch: 61591 Param DRO Percent recovery is b Param DRO	Fl ol Spike (LC: pased on the sp	S-1)	Date An QC Prep It U RPD is ba Units mg/Kg	Res <pre> Res </pre> <pre> alyzed: oaration: </pre> <pre> nits /Kg ased on t Dil. 1 </pre>	2010-07 2010-07 2010-07 Dil. 1 he spike Spike Amount 250	7-19 Y-19 Amount 250 and spike d Matrix Result <14.5	Units mg/K Matrix Result <14.5 luplicate res Rec. 90 57	Ana <u>g</u> Rec. <u>86</u> sult. Rec. Limit 7.4 - 133.4	lyzed By pared By R Li 57.4 RPD 5	RI 4 7: kg 7: kg ec. mit - 133.4 RPD Limit 20
Parameter Chloride Laboratory Contro QC Batch: 71872 Prep Batch: 61591 Param DRO Percent recovery is b Param DRO Percent recovery is b	Fl ol Spike (LC) based on the sp	S-1) LCS Resu 215 ike result. LCSD Result 226 ike result.	Date An QC Prep It U RPD is ba Mg/Kg RPD is ba	Res <pre> Res </pre> <pre> All res </pre> <pre> </pre> <pre> All res </pre> <pre> </pre> <pre></pre>	2010-07 2010-07 2010-07 Dil. 1 he spike Spike Amount 250 he spike	7-19 Y-19 Z-19 and spike d Matrix Result <14.5 and spike d	Units mg/K Matrix Result <14.5 luplicate res Rec. 90 57 luplicate res	Ana g Ana Prep <u>Rec.</u> 86 sult. Rec. Limit 7.4 - 133.4 sult.	lyzed By pared By R Li 57.4 RPD 5	RI 4 7: kg 7: kg ec. mit - 133.4 RPD Limit 20
Parameter Chloride Laboratory Contr QC Batch: 71872 Prep Batch: 61591 Param DRO Percent recovery is b Param DRO Percent recovery is b	Fl ol Spike (LC; pased on the sp pased on the sp LCS	S-1) LCS Resu 215 ike result. LCSD Result 226 ike result. LCSD	Date An QC Prep It U RPD is ba Units mg/Kg RPD is ba	Res <pre> Res </pre> <pre> Alyzed: oaration: aration: Dil. Dil. 1 ased on t 1 ased on t </pre>	2010-07 2010-07 2010-07 Dil. 1 he spike Spike Amount 250 he spike	7-19 7-19 250 and spike d Matrix Result <14.5 and spike d Spike	Units mg/K Matrix Result <14.5 luplicate res Rec. 90 57 luplicate res LCS	g Ana Prep Rec. 86 sult. Rec. Limit 7.4 - 133.4 sult. LCSD	lyzed By pared By Li 57.4 RPD 5	RI 4 7: kg 7: kg ec. mit - 133.4 RPD Limit 20 Rec.
Parameter Chloride Laboratory Contro QC Batch: 71872 Prep Batch: 61591 Param DRO Percent recovery is b Param DRO Percent recovery is b Surrogate	ol Spike (LC: pased on the sp based on the sp LCS Result	S-1) LCS Resul 215 ike result. LCSD Result 226 ike result. LCSD Result	Date An QC Prep It U RPD is ba Units mg/Kg RPD is ba Units	Res Res <2 alyzed: paration: nits <u>5/Kg</u> ased on t <u>1</u> ased on t its	2010-07 2010-07 2010-07 Dil. 1 he spike Spike Amount 250 he spike Dil.	7-19 7-19 Z-19 and spike d Matrix Result <14.5 and spike d Spike Amount	Units mg/K Matrix Result <14.5 luplicate res Rec. 90 57 luplicate res LCS Rec.	Ana g Rec. 86 sult. Rec. Limit 7.4 - 133.4 sult. LCSD Rec.	lyzed By pared By R Li 57.4 RPD 5	RL 4 7: kg 7: kg ec. mit - 133.4 RPD Limit 20 Rec. Limit

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Report Date: July 20, 2010	Work Order: 10071917	Page Number: 10 of 15
114-6400599	LPU #87	Lea County, NM

Laboratory Control Spike (LCS-1)

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QC Batch:	71883	Date Analyzed:	2010-07-19	Analyzed By:	AG
Prep Batch:	61608	QC Preparation:	2010-07-19	Prepared By:	AG⊾

	LCS			Spike	Matrix		$\operatorname{Rec.}$
Param	Result	$\mathbf{U}\mathbf{n}\mathbf{i}\mathbf{t}\mathbf{s}$	Dil.	Amount	\mathbf{Result}	Rec.	Limit
Benzene	2.06	mg/Kg	1	2.00	< 0.0150	103	81.9 - 108
Toluene	2.09	mg/Kg	1	2.00	< 0.00950	104	81.9 - 107
Ethylbenzene	2.06	mg/Kg	1	2.00	< 0.0106	103	78.4 - 107
Xylene	6.23	mg/Kg	1	6.00	< 0.00930	104	79.1 - 107

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

Tercent recovery is base	LCSD			Spike	Matrix	pricate	Rec.		RPD
Param	Result	Units	Dil.	Amount	\mathbf{Result}	Rec.	Limit	RPD	Limit
Benzene	2.00	mg/Kg	1	2.00	< 0.0150	100	81.9 - 108	3	20
Toluene	2.02	mg/Kg	1	2.00	< 0.00950	101	81.9 - 107	3	20
Ethylbenzene	1.99	mg/Kg	1	2.00	< 0.0106	100	78.4 - 107	3	20
Xylene	6.02	mg/Kg	1	6.00	< 0.00930	100	79.1 - 107	3	20
Percent recovery is base	d on the spike result	RPD is l	nased o	n the spike	and spike du	plicate	result		

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

	LCS	LCSD			Spike	LCS	LCSD	Rec.
Surrogate	Result	\mathbf{Result}	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	2.27	2.06	mg/Kg	1	2.00	114	103	70.2 - 114
4-Bromofluorobenzene (4-BFB)	2.32	2.06	mg/Kg	1	2.00	116	103	69.8 - 121

Laboratory Control Spike (LCS-1)

QC Batch:	71884	Date Analyzed:	2010-07-19	Analyzed By:	\mathbf{AG}
Prep Batch:	61608	QC Preparation:	2010-07-19	Prepared By:	\mathbf{AG}

	LCS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	\mathbf{Result}	Rec.	Limit
GRO	15.8	mg/Kg	1	20.0	<1.65	79	69.9 - 95.4

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

	LCSD			Spike	Matrix		Rec.		RPD
Param	\mathbf{Result}	Units	Dil.	Amount	\mathbf{Result}	Rec.	Limit	RPD	Limit
GRO	16.2	mg/Kg	1	20.0	<1.65	81	69.9 - 95.4	2	20

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

	\mathbf{LCS}	LCSD			Spike	LCS	LCSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	2.52	2.59	mg/Kg	1	2.00	126	130	61.9 - 142
4-Bromofluorobenzene (4-BFB)	2.39	2.51	mg/Kg	1	2.00	120	126	68.2 - 132

Laboratory Control S				LI U	#87		·····				
	Spike (LC	S-1)									
QC Batch: 71894			Date An	nalyzed:	2010-07	-20			Anal	yzed B	y: AR
Prep Batch: 61618			QC Pre	paration:	2010-07	-20			Prep	ared By	y: AR
		LC	S			Spike	Ma	trix			Rec.
Param		Resu	ılt	Units	Dil.	Amount	Re	sult	Rec		Limit
Chloride		97.9	9 1	mg/Kg	1	100	<2	2.18	98		85 - 11
Percent recovery is base	d on the sp	oike result.	RPD is l	based on	the spike	and spike d	uplicate r	esult.			
		LCSD			Spike	Matrix		\mathbf{Re}	ec.		RPL
Param		Result	Units	Dil.	Amoun	t Result	Rec.	Lin	nit	RPD	Limi
Chloride		101	mg/Kg	; 1	100	<2.18	101	85 -	115	3	20
QC Batch: 71872 Prep Batch: 61591			Date Ar QC Pre	nalyzed: paration:	2010-07 2010-07	-19 -19			Ana Prep	lyzed E bared E	By: kg By: kg
QC Batch: 71872 Prep Batch: 61591		MS	Date Ar QC Pre	nalyzed: paration:	2010-07 2010-07	7-19 7-19 Spike	Matrix	x	Ana Prep	lyzed E bared E	By: kg By: kg Rec.
QC Batch: 71872 Prep Batch: 61591 Param		MS Resul	Date An QC Pre	nalyzed: paration: Units	2010-07 2010-07 Dil.	7-19 7-19 Spike Amount	Matriz Result	x t	Ana Prep Rec.	lyzed H bared E	3y: kg 3y: kg Rec. Limit
QC Batch: 71872 Prep Batch: 61591 Param DRO		MS Resul 224	Date Ar QC Pre t U	nalyzed: paration: Units g/Kg	2010-07 2010-07 Dil. 1	7-19 7-19 Spike <u>Amount</u> 250	Matriz Result <14.5	x t	Ana Prep <u>Rec.</u> 90	lyzed E bared E 1 35.2	By: kg By: kg Rec. Limit 2 - 167.
QC Batch: 71872 Prep Batch: 61591 Param DRO Percent recovery is base	d on the sp	MS Resul 224 Dike result.	Date An QC Pre t U m RPD is b	nalyzed: eparation: <u>Units</u> g/Kg based on	2010-07 2010-07 Dil. 1 the spike	2-19 2-19 Amount 250 and spike du	Matriz Result <14.5 uplicate re	x t esult.	Ana Prep Rec. 90	lyzed E bared F 1 35.2	By: kg By: kg Rec. Limit 2 - 167.
QC Batch: 71872 Prep Batch: 61591 Param DRO Percent recovery is base	d on the sp	MS Resul 224 Dike result. MSD	Date An QC Pre t U RPD is b	nalyzed: eparation: Units g/Kg based on	2010-07 2010-07 Dil. 1 the spike Spike	2-19 Spike <u>Amount</u> 250 and spike du Matrix	Matriz Result <14.5 uplicate re	x t esult. Rec	Ana Prep <u>Rec.</u> 90	lyzed E bared E 1 35.2	By: kg By: kg Rec. Limit 2 - 167. RPI
QC Batch: 71872 Prep Batch: 61591 Param DRO Percent recovery is base Param	d on the sp	MS Resul 224 Dike result. MSD Result	Date An QC Pre t U m RPD is t Units	nalyzed: eparation: <u>Units</u> <u>g/Kg</u> based on Dil.	2010-07 2010-07 Dil. 1 the spike Spike Amount	-19 -19 <u>Spike</u> <u>Amount</u> 250 and spike du Matrix Result	Matrix Result <14.5 uplicate re Rec.	k t esult. Rec Limi	Ana Prep <u>Rec.</u> 90	lyzed H pared E 1 35.2 RPD	By: kg By: kg Rec. Limit 2 - 167. RPI Limi
QC Batch: 71872 Prep Batch: 61591 Param DRO Percent recovery is base Param DRO	d on the sp	MS Resul 224 Dike result. MSD Result 232	Date An QC Pre t U RPD is b Units mg/Kg	nalyzed: eparation: <u>Units</u> <u>g/Kg</u> based on <u>Dil.</u> 1	2010-07 2010-07 Dil. 1 the spike Amount 250	2-19 2-19 Spike Amount 250 and spike du Matrix Result <14.5 and spike du	Matriz Result <14.5 uplicate re Rec. 93 3	x t esult. Rec Limi 5.2 - 1	Ana Prep Rec. 90 it 	lyzed H bared E 1 35.2 RPD 4	By: kg By: kg Limit 2 - 167. RPI Limi 20
QC Batch: 71872 Prep Batch: 61591 Param DRO Percent recovery is base Param DRO Percent recovery is base	d on the sp d on the sp	MS Resul 224 Dike result. MSD Result 232 Dike result.	Date An QC Pre t U RPD is b Units mg/Kg RPD is b	nalyzed: eparation: Units g/Kg based on Dil. 1 based on	2010-07 $2010-07$ Dil. 1 the spike Spike Amount 250 the spike	-19 Spike Amount 250 and spike du Matrix Result <14.5 and spike du	Matriz Result <14.5 uplicate re Rec. 93 3 uplicate re	x esult. Rec Limi 5.2 - 1 esult.	Ana Prep Rec. 90 it 67.1	lyzed E bared E 1 35.2 RPD 4	By: kg By: kg Limit 2 - 167. RPI Limi 20
QC Batch: 71872 Prep Batch: 61591 Param DRO Percent recovery is base Param DRO Percent recovery is base	d on the sp d on the sp MS	MS Resul 224 Dike result. MSD Result 232 Dike result. MSD	Date An QC Pre t U m RPD is b Units mg/Kg RPD is b	nalyzed: eparation: <u>Units</u> <u>g/Kg</u> based on <u>Dil.</u> <u>1</u> based on	2010-07 2010-07 Dil. 1 the spike Spike Amount 250 the spike	-19 -19 Spike Amount 250 and spike du Matrix Result <14.5 and spike du Spike	Matrix Result <14.5 uplicate re Rec. 93 3 uplicate re MS	x t esult. Rec Limi 5.2 - 1 esult.	Ana Prep Rec. 90 it 67.1	lyzed H bared E 1 35.2 RPD 4	By: kg By: kg Rec. Limit 2 - 167. RPI Limi 20 Rec.

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matrix spikes continued	М	S			Spike	Mat	triv			Rec
Param	Res	ult.	Units	Dil.	Amount	Res	sult	Rec.		Limit
Ethylbenzene	2.1	16	mg/Kg	1	2.00	<0.0	0106	108	8	3.9 - 1
Xylene	6.4	19	mg/Kg	1	6.00	< 0.0	0930	108	8	84 - 11
Percent recovery is based on the s	pike result	. RPD i	s based	on the spike	and spike	duplicate	result.			
	MSD			Spike	Matrix	Ξ.	Re	ec.		\mathbf{RP}
Param	Result	Units	Dil.	Amount	Result	Rec.	Lir	mit	RPD	Lin
Benzene	2.21	mg/Kg	g 1	2.00	< 0.015	0 110	80.5	- 112	8	20
Toluene	2.27	mg/K	g 1	2.00	< 0.0095	50 114	82.4	- 113	8	20
Ethylbenzene ²	2.35	mg/K	g 1	2.00	< 0.010	6 118	83.9	- 114	8	20
Xylene ³	7.08	mg/K	g 1	6.00	<0.0093	30 118	- 84	114	9	20
Percent recovery is based on the s	pike result	. RPD is	s based o	on the spike	and spike	duplicate	result.			
	Μ	IS I	MSD			Spike	MS	MSD		Rec.
		alt F	Result	Units	Dil. A	mount	Rec.	Rec.		Limit
Surrogate	· Res			1	1	0	01	0.4	4-	13-1
Surrogate Trifluorotoluene (TFT)	Res 1.2	22	1.67	mg/Kg	T	Z	61	84	4.	1.0 - 1
Surrogate Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BFB) Matrix Spike (MS-1) Spiked QC Batch: 71884 Bron Potch: 61608	Res 1.2 1.2 I Sample: 2	22 28 238016 Date A	1.67 1.74 Analyzed	mg/Kg mg/Kg l: 2010-07	1 1 	2	64 	87 Analy	zed B	y: A(
Surrogate Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BFB) Matrix Spike (MS-1) Spiked QC Batch: 71884 Prep Batch: 61608	Res 1.2 1.2 I Sample: 2	22 28 238016 Date A QC Pr	1.67 1.74 Analyzed reparatio	mg/Kg mg/Kg l: 2010-07 on: 2010-07	1 1 19 19	2	61 64	84 87 Analy Prepa	zed B red B	y: A(y: A(
Surrogate Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BFB) Matrix Spike (MS-1) Spiked QC Batch: 71884 Prep Batch: 61608	Res 1.2 1.2 I Sample: 2	22 28 238016 Date A QC Pr IS	1.67 1.74 Analyzec reparatio	mg/Kg mg/Kg d: 2010-07 on: 2010-07	1 1 7-19 7-19 Spike	2 2 	61 64	84 87 Analy Prepa	zed B red B	y: AC y: AC y: AC
Surrogate Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BFB) Matrix Spike (MS-1) Spiked QC Batch: 71884 Prep Batch: 61608 Param	Res 1.2 1.2 I Sample: 2 M Res	22 28 238016 Date A QC P1 IS sult	1.67 1.74 Analyzed reparatio Units	mg/Kg mg/Kg l: 2010-07 on: 2010-07 Dil.	1 1 2-19 2-19 Spike Amoun	2 2 Ma t Re	61 64 atrix sult	84 87 Analy Prepa Rec.	zed B	y: A(y: A(y: A(Rec. Limit
Surrogate Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BFB) Matrix Spike (MS-1) Spiked QC Batch: 71884 Prep Batch: 61608 Param GRO	Res 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1.2	22 28 238016 Date A QC Pr IS sult 5.3	1.67 1.74 Analyzed reparatio Units mg/Kg	mg/Kg mg/Kg l: 2010-07 on: 2010-07 Dil. 1	1 2-19 2-19 Spike Amoun 20.0	2 2 Ma t Re	61 64 atrix sult 1.65	84 87 Analy Prepa Rec. 76	zed B rzed B red B	y: AC y: AC y: AC Rec. Limit 1.8 - 1
Surrogate Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BFB) Matrix Spike (MS-1) Spiked QC Batch: 71884 Prep Batch: 61608 Param GRO Percent recovery is based on the s	Res 1.2 1.2 I Sample: 2 M Res 15 pike result	22 22 28 238016 Date A QC Pr IS sult 5.3 . RPD is	1.67 1.74 Analyzed reparatio Units mg/Kg s based o	mg/Kg mg/Kg l: 2010-07 on: 2010-07 Dil. 1 on the spike	2-19 2-19 2-19 Amoun 20.0 and spike	2 2 Ma t Re <1 duplicate	61 64 atrix sult 1.65 result.	84 87 Analy Prepa Rec. 76	zed B rzed B red B	y: AC y: AC y: AC Rec. Limit 1.8 - 1
Surrogate Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BFB) Matrix Spike (MS-1) Spiked QC Batch: 71884 Prep Batch: 61608 Param GRO Percent recovery is based on the s	Res 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1.2	22 22 28 238016 Date <i>A</i> QC Pr IS sult 5.3 . RPD is	1.67 1.74 Analyzed reparation Units mg/Kg s based of	mg/Kg mg/Kg l: 2010-07 on: 2010-07 Dil. 1 on the spike Spike	2-19 2-19 2-19 Amoun 20.0 and spike Matrix	2 2 t Re <1 duplicate	61 64 atrix sult 1.65 result. Re	84 87 Analy Prepa Rec. 76	zed B red B	y: A(y: A(y: A(<u>Limit</u> <u>1.8 - 1</u>
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Matrix Spi	ike (MS	5-1)	Spiked Sample:	238013							
QC Batch:	71894			Date 4	Analyzed:	2010-07-2	20		An	alvzed B	v: A
Prep Batch:	61618			QC P	reparation:	2010-07-2	20		Pr€	pared B	у: А
				MS			Spike	Ma	trix		Rec
Param			R	esult	Units	Dil.	Amount	Rea	sult R	ec.	Limi
Chloride			1	0000	mg/Kg	100	10000	<2	218 1	00	85 - 1
Percent reco	overy is l	based o	n the spike resul	lt. RPD i	s based on	the spike a	and spike dup	olicate r	esult.		
			MSD			Spike	Matrix		Rec.		RF
Param			Result	Unit	s Dil.	Amount	Result	Rec.	Limit	RPD	Lin
Chloride			10400	mg/F	Kg 100	10000	<218	_104	85 - 115	4	2
Percent reco	very is l	cased o	n the spike resul	lt. RPD i	s based on	the spike a	und spike dup	olicate r	esult.		
Standard (CCV-2)									
QC Batch:	71872			Date	Analyzed:	2010-07-1	9		Aı	nalyzed	By: 1
				CCVs	CC	Vs	CCVs		Percent		
				True	Foi	ınd	Percent	F	Recovery		Date
Param	Flag		Units	Conc.	Co	nc.	Recovery		Limits	A	nalyze
DRO		··········	mg/Kg	250	24	18	99		30 - 120	20	10-07-
Standard (CCV-3)									
QC Batch:	71872			Date	Analyzed:	2010-07-1	9		Ar	alyzed l	By: k
				CCVs	CC	Vs	CCVs]	Percent		
5	T 1		TT	True	For	ind	Percent	F	lecovery		Date
Param	Flag		Units	Conc.		nc.	Recovery		Limits	A	nalyze
DRO			mg/Kg	250	2č)3	101		30 - 120	20	10-07-
Standard (CCV-2)									
QC Batch:	71883			Date A	Analyzed:	2010-07-19)		Ana	lyzed B	y: A
				CC	Vs	CCVs	CCVs		Percent		_
D		ירד	T T .	Tru	ie I	Found	Percent		Recovery		Date
Faram		rlag	Units	Cor	1C.	Uonc.	Kecovery		Limits	A	nalyze
Benzene Tolucro			mg/Kg	0.10	00 00	0.102	102		80 - 120	20	10-07-
TOIHEUG	9		mg/Kg	0.10	50 10	0.100	103 109		00 ~ 120 20 120	20	10-07- 10 07
Ethylhongon	5		mg/Kg	0.10	50 10	0.102	102		00 - 120 80 - 190	20	10-07- 10 07
Ethylbenzen Xylone					18.1	11.13111	1112		ON - 170	201	111 <u>-</u> [[[_

Report Date: 114-6400599	July 20, 201	0	Worl	k Order: 100719 LPU #87	917	Page N I	umber: 14 of 1 Lea County, NN
Standard (C	CV-3)						
QC Batch: 7	1883		Date Analy	yzed: 2010-07-	19	Anal	yzed By: AG
			CCVs	CCVs	CCVs	Percent	*
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Benzene	<u>~</u> _	mg/Kg	0.100	0.0997	100	80 - 120	2010-07-1
Toluene		mg/Kg	0.100	0.100	100	80 - 120	2010-07-19
Ethylbenzene		mg/Kg	0.100	0.0992	99	80 - 120	2010-07-19
Xylene		mg/Kg	0.300	0.300	100	80 - 120	2010-07-1
Standard (C	CV-2)						
QC Batch: 7	1884		Date Analy	yzed: 2010-07-	19	Anal	yzed By: AG
			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc	Conc	Recovery	Limits	Analyzed
	T tag		1.00	0.003		80 120	2010-07-1
Standard (C	CV-3)						
QC Batch: 7	1884		Date Analy	vzed: 2010-07-	19	Anal	yzed By: AG
			\mathbf{CCVs}	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
GRO		mg/Kg	1.00	0.980	98	80 - 120	2010-07-1
Standard (I(CV-1)						
QC Batch: 7	1894		Date Analy	/zed: 2010-07-	20	Anal	yzed By: AR
			ICVs	ICVs	ICVs	Percent	
			True	Found	Percent	Recoverv	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride		mg/Kg	100	98.9	99	85 - 115	2010-07-2
Standard (C	CV-1)						

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Report Dat 114-6400599	e: July 20, 201 9	0	Work Order: 100719 LPU #87			Page N I	umber: 15 of 15 Lea County, NM
Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Becovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	101	101	85 - 115	2010-07-20-

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OU			S_	k		AH·2		0	·6"					1			X			X									X					
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Summary Report

Ike Tavarez Tetra Tech 1910 N. Big Spring Street Midland, TX 79705

Report Date: August 30, 2010

Work Order: 10082310

Project Location:Lea County, NMProject Name:LPU #87Project Number:114-6400599

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
$\overline{242110}$	T-1 0.5-1'	soil	2010-08-18	00:00	2010-08-20
242111	T-2 0.5-1'	soil	2010-08-18	00:00	2010-08-20
242112	T-3 1-1.5'	soil	2010-08-18	00:00	2010-08-20

Sample: 242110 - T-1 0.5-1'

Param	Flag	Result	Units	\mathbf{RL}
Chloride		<200	mg/Kg	4.00

Sample: 242111 - T-2 0.5-1'

Param	Flag	\mathbf{Result}	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 242112 - T-3 1-1.5'

Param	Flag	Result	Units	\mathbf{RL}
Chloride		<200	mg/Kg	4.00

TraceAnalysis, Inc. • 6701 Aberdeen Ave., Suite 9 • Lubbock, TX 79424-1515 • (806) 794-1296 This is only a summary. Please, refer to the complete report package for quality control data.

		RACEAN	ALYSIS.	, Inc.M			*
	6701 Aberdeen Avenue, Suite 9 200 East Sunset Road, Suite E 5002 Basin Street, Suite A1 6015 Harris Parkway, Suite 110	Lubbock, Texas 79424 Ei Paso, Texas 79922 Midland, Texas 79703 Ft. Worth, Texas 76132 E-Mail: Tab@	800 • 378 • 1296 868 • 588 • 3443 traceanalysis.com	806•794•1296 915•585•3443 432•689•6301 817•201•5260	FAX 806•794•1298 FAX 915•585•4944 FAX 432•689•6313		
×		\mathbf{Cer}	tificatio	ons			
WE	BENC: 237019	HUB: NCTRCA	175243974 WFWB384	3100-86536 444Y0909	DBE:	VN 20657	
		NELAP	Certifi	cations	5		
Lubbock:	T104704219-08-TX LELAP-02003 Kansas E-10317	El Paso	: T104704 LELAP-	221-08-TX 02002	Midlar	nd: T1047043	92-08-TX

Analytical and Quality Control Report

Ike Tavarez Tetra Tech 1910 N. Big Spring Street Midland, TX, 79705

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Report Date: August 30, 2010

Work Order: 10082310

Project Location:Lea County, NMProject Name:LPU #87Project Number:114-6400599

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

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
242110	T-1 0.5-1'	soil	2010-08-18	00:00	2010-08-20
242111	T-2 0.5-1'	soil	2010-08-18	00:00	2010-08-20
242112	T-3 1-1.5'	soil	2010-08-18	00:00	2010-08-20

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

This report consists of a total of 6 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Michael April

Dr. Blair Leftwich, Director Dr. Michael Abel, Project Manager

Standard Flags

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 ${\bf B}\,$ - The sample contains less than ten times the concentration found in the method blank.

Case Narrative

Samples for project LPU #87 were received by TraceAnalysis, Inc. on 2010-08-20 and assigned to work order 10082310. Samples for work order 10082310 were received intact at a temperature of 4.0 C.

Samples were analyzed for the following tests using their respective methods.

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		Prep	Prep	\mathbf{QC}	Analysis
Test	Method	Batch	Date	Batch	Date
Chloride (Titration)	SM 4500-Cl B	62587	2010-08-26 at 09:39	73010	2010-08-27 at 15:08

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 10082310 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Page 3 of 6

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Analytical Report

Sample: 242110 - T-1 0.5-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	73010	Date Analyzed:	2010-08-27	Analyzed By:	\mathbf{AR}
Prep Batch:	62587	Sample Preparation	: 2010-08-26	Prepared By:	\mathbf{AR}
		\mathbf{RL}			
Parameter	Flag	Result	Units	Dilution	\mathbf{RL}
Chloride		<200	mg/Kg	50	4.00

Sample: 242111 - T-2 0.5-1'

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 73010 62587	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-Cl B 2010-08-27 2010-08-26	Prep Method: Analyzed By: Prepared By:	N/A AR AR
		RL			
Parameter	\mathbf{Flag}	Result	Units	Dilution	\mathbf{RL}
Chloride		<200	mg/Kg	50	4.00

Sample: 242112 - T-3 1-1.5'

Laboratory:	Midland					
Analysis:	Chloride	(Titration)	Analytical Me	thod: SM 4500-Cl l	B Prep Method:	N/A
QC Batch:	73010		Date Analyzed	l: 2010-08-27	Analyzed By:	AR
Prep Batch:	62587		Sample Prepar	ration: 2010-08-26	Prepared By:	AR
			RL			
Parameter		Flag	Result	Units	Dilution	\mathbf{RL}
Chloride			<200	mg/Kg	50	4.00
Method Bla	ank (1)	QC Batch: 73010				
QC Batch:	73010		Date Analyzed:	2010-08-27	Analyzed By:	AR
40	00505		ogp			1 ALO
Prep Batch:	62587		QC Preparation:	2010-08-26	Prepared By:	AR
Prep Batch:	62587		QC Preparation:	2010-08-26 DL	Prepared By:	AR
Prep Batch: Parameter	62587	Flag	QC Preparation: MI Res	2010-08-26 DL ult	Prepared By: Units	AR RL

Laboratory Control Sp QC Batch: 73010 Prep Batch: 62587	ike (LCS-1)			Work Order: 10082310 LPU #87						
QC Batch: 73010 Prep Batch: 62587										
	Date Analyzed: QC Preparation:			2010-08-2 2010-08-2	7 6		An Pre	alyzed B epared By	y: AF 7: AF	
Param	L Re	CS sult	Units	Dil.	Spike Amount	Ma Res	trix sult R	lec.	Rec. Limit	
Chloride	9	7.6	mg/Kg	1	100	<2	.18	98	85 - 11	
Percent recovery is based	on the spike result	. RPD is	based on t	the spike ar	nd spike dup	olicate r	esult.			
Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RP Lim	
Chloride	103	mg/K	<u>g 1</u>	100	<2.18	103	85 - 115	5	20	
Prep Batch: 62587	Ν	QC Pro	eparation:	2010-08-2	6 Spike	Ma	Pre	epared By	7: AI Rec.	
Param	Re	sult	Units	Dil.	Amount	Res	sult R	lec.	Limit	
Chloride	Q	320	malla	100	10000					
			mg/Kg	100	10000	<2	218 9	96	85 - 11	
Percent recovery is based	on the spike result	. RPD is	based on t	the spike ar	ıd spike dur	<2 olicate re	esult.	96	85 - 11	
Percent recovery is based	on the spike result MSD Bosult	. RPD is	based on t	the spike ar Spike	Id spike dup Matrix Becalt	<2 plicate re	esult. Rec.	96	85 - 11 RPI	
Percent recovery is based Param Chloride	on the spike result MSD Result 9950	. RPD is Units	based on t	the spike ar Spike Amount 10000	Id spike dup Matrix Result <218	<2 olicate re <u>Rec.</u> 100	218 9 esult. Rec. Limit 85 - 115	96 <u>RPD</u> 3	85 - 11 RPI Lim 20	
Percent recovery is based Param Chloride Percent recovery is based	on the spike result MSD Result 9950 on the spike result	Units mg/K	based on t Dil. g 100 based on t	100 the spike ar Spike Amount 10000 the spike ar	Matrix Result <218 ad spike dup	<2 Dicate re Rec. 100 Dicate re	218 9 esult. Rec. Limit 85 - 115 esult.	96 RPD 3	85 - 11 RPI Lim 20	
Percent recovery is based Param Chloride Percent recovery is based Standard (ICV-1) OC Batch 72010	on the spike result MSD Result 9950 on the spike result	Units mg/Ki . RPD is	Dil. g 100 based on t	100 The spike an Spike Amount 10000 The spike an	ad spike dup Matrix Result <218 ad spike dup	<2 olicate re <u>Rec.</u> 100 olicate re	218 9 esult. Rec. Limit 85 - 115 esult.	P6 RPD 3	85 - 11 RPI Lim 20	
Percent recovery is based Param Chloride Percent recovery is based Standard (ICV-1) QC Batch: 73010	on the spike result MSD Result 9950 on the spike result	Units mg/K . RPD is Date A	based on t Dil. g 100 based on t nalyzed:	100 the spike ar Spike Amount 10000 the spike ar 2010-08-27	Ad spike dup Matrix Result <218 ad spike dup	<2 olicate re <u>Rec.</u> 100 olicate re	218 9 esult. Rec. Limit 85 - 115 esult. An	96 RPD 3 alyzed B	85 - 11 RPI Lim 20 7: AF	
Percent recovery is based Param Chloride Percent recovery is based Standard (ICV-1) QC Batch: 73010 Percent Flag	on the spike result MSD Result 9950 on the spike result	. RPD is Units mg/Ki . RPD is Date A ICVs True Conc	Dil. Dil. g 100 based on t nalyzed: IC Fou	100 the spike ar Spike Amount 10000 the spike ar 2010-08-27 Vs und	ICVs Percent	<2 plicate re Rec. 100 plicate re	esult. Rec. Limit 85 - 115 esult. An Percent Recovery Limita	96 RPD 3 alyzed B	85 - 11 RPI Lim 20 7: AF Date	

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Report Date: 114-6400599	e: August 30,	2010	V	Vork Order: 10 LPU #87	082310	Page I	Number: 6 of 6 Lea County, NM
			CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride	ort Date: August 30, 2010 -6400599 		100	96.5	96	85 - 115	2010-08-27

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LIENT NAME: Chevron	SITE MANAGER	l: Vu773	NERS	1	PRESE	rvativ Hod	E	Ĕ	88	Ba			(60/62/ 070/62					ha, pH		ĺ
ROJECT NO.: PRO 114-6400599 61	DJECT NAME: hevron / LPh * 87 Lea Co, NM	······································	OF CONTAIL	(NX) C			218	015 MOD.	0 letals Ag Ai	letels Ag A	latiles ami Volatiles		/ol. 8240/82	080/608	8/608	Spec.	eta (Air)	bestos) nions/Catio		
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