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REPORTS

DATE: 2007



RECEIVEL

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Oll Conservation Division 1220 S. St. Francis Drive Santa Fe, NM 87505

January 9, 2007

VIA: HAND DELIVERY

Mr. Wayne Price, Chief Environmental Bureau State of New Mexico Oil Conservation Division 1220 South St. Francis Drive Santa Fe, New Mexico 87505

Re: 1R0483, Investigation Report of Historic Contamination and Remediation Plan, John H. Hendrix Corporation, Elliott B-9 Lease, Battery #1, #4 and #5, Unit C (NE/4, NW/4), Section 9, Township 22 South, Range 37 East, Lea County, New Mexico

Dear Mr. Price:

This letter is submitted to the State of New Mexico, Oil Conservation Division ("OCD") on behalf of John H. Hendrix Corporation ("JHHC") by Larson and Associates, Inc. ("LA"), its consultant, to convey the results of an investigation to delineate the vertical and horizontal extent of historic contamination at the Elliott B-9 Lease, Battery #1, #4 and #5 ("Site"), as well as a former pit that was located west of the battery. The Site is located in unit C (NE/4, NW/4), Section 9, Township 22 South, Range 37 East in Lea County, New Mexico. The latitude and longitude for the Site is north 32° 24' 39.3" and west 103° 10' 12.4", respectively. Figure 1 presents a location and topographic map. Contact information for JHHC is as follows:

Name:	Marvin Burrows
Title:	Production Superintendent
Mailing Address:	1310 18 th Street
-	Eunice, New Mexico 88321
Telephone:	(505) 394-2649
Fax:	(505) 394-2653
Email Address:	mburrows@valornet.com

Setting

The Site is situated at an elevation of approximately 3420 feet above mean sea level ("MSL"). No surface water or wells are located within 1,000 horizontal feet of the Site, which is covered by wind blown sand (Recent). The Ogallala formation (Tertiary) underlies the sand and consists of unconsolidated to well-cemented sand and sandstone that is interstratified with clay, silt and gravel. The Chinle formation (Dockum group) Mr. Wayne Price January 9, 2007 Page 2

underlies the Ogallala formation and consists of mudstone, siltstone and sandstone. Ground water occurs at approximately 75 feet below ground surface ("bgs").

<u>Current Investigation</u>

The current investigation was conducted between June 28, 2006 and October 30, 2006, in accordance with a work plan that was approved by the OCD on March 29, 2006. Soil samples were collected from ten (10) borings (BH-11 through BH-20), which were drilled by Scarborough Drilling, Inc., located in Lamesa, Texas, using a truck-mounted rig. The borings were advanced from approximately eleven (11) to eighty-one (81) feet bgs and soil samples were collected using split-spoon and jam tube samplers. The samplers were decontaminated between uses by washing with a solution of laboratory grade detergent and water and rinsed with distilled water. The rig and down-hole tools (i.e., rods, bit, etc.) were cleaned between locations using a high-pressure washer.

The soil samples were placed in 4-ounce glass jars, labeled, chilled in an ice chest and delivered to Environmental Lab of Texas, Inc., located in Odessa, Texas. Duplicate sample were collected for headspace analysis using the ambient temperature headspace method and analyzed using a RAE Systems, Model 2000 photoionization detector, which was calibrated to 100 parts per million ("ppm") isobutylene. The laboratory analyzed samples that exhibited headspace readings above 100 ppm for benzene, toluene, ethylbenzene and xylene (collectively referred to as BTEX) using method SW-846-8021B. Samples were also analyzed for total petroleum hydrocarbons ("TPH") and chloride using methods SW-846-8015B and 300, respectively. Table 1 presents a summary of the laboratory analysis. Figure 2 presents a Site drawing and boring locations. Appendix A presents the OCD approval. Appendix B presents the boring logs. Appendix C presents the laboratory reports. Appendix D presents photographs.

The OCD has developed recommended remediation action levels ("RRAL") for benzene, BTEX and TPH based on the following ranking criteria:

Criteria	Result	Score
Depth-to-Groundwater	50 - 100 feet	10
Wellhead Protection Area	No	0
Distance to Surface Water Body	>1000 Horizontal Feet	0
	Total:	10

The following RRAL would apply to a recent spill assuming a ranking score of 10:

Benzene	10 mg/kg
BTEX	50 mg/kg
ТРН	1,000 mg/kg

No samples exhibited benzene or BTEX concentrations above the RRAL. TPH exceeded the RRAL in the following samples:

Mr. Wayne Price January 9, 2007 Page 3

Boring	Sample (Feet)	TPH (mg/Kg)
BH-11	0-2	19,480
BH-14	0-2	13,831
BH-16	0-2	10,560
BH-18	0-2	5,278
BH-19	0-2	1,914
BH-19	0-2	12,198

Remediation Plan

JHHC will excavate soil from areas where TPH exceeds the RRAL. Soil will be excavated from the pit (BH-14) to approximately seven (7) feet bgs. A 20-mil thickness high-density polyethylene liner will be placed near the bottom of the pit excavation and the remainder of the excavation will be filled with clean soil and crowned at the surface to limit rainwater percolation into the subsurface. The contaminated soil will be hauled to the JHHC centralized landfarm. A final report will be submitted to the OCD upon completion of the project. Please call Mr. Marvin Burrows with JHHC at (505) 394-2649 or email <u>mburrows@jhhc.org</u>, if you have questions. I may be reached with questions at (432) 687-0901 or email mark@laenvironmental.com.

Larson and Associates, Inc.

Mark J. Larson, P.G., C.P.G., C.G.W.P. Senior Project Manager/President

Encl

cc: Larry Johnson/OCD District 1 – Hobbs Marvin Burrows/JHHC Ronnie Westbrook/JHC Tables

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Table 1

Summary of Field and Laboratory Analysis of Soil Samples John H. Hendrix Corporation, Elliott B-9 Tank Battery #1, #4 and #5

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		Unit	Letter C (N	E/4,NW/4),	Section 9,	7 diusund 7	2 South, Ki	ange 3/ Easi	t, Lea Coun	iy, New Me	XICO		Page I of 2
Boring	Sample	Sample	PID (ppm)	Benzene	BTEX	GRO	GRO	DRO	DRO	DRO	TPH	HdT	Chloride
Number	Date	Depth		(mg/Kg)	(mg/Kg)	C6-C10	C6-C12	C10 - C28	C12 - C28	C28-C35	C6-C28	C6-C35	(mg/Kg)
		(Feet				(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	
BH-11	06/28/2006	0-2	511	0.218	5.138	1	810	1	15,900	2,770	ł	19,480	316
	06/28/2006	5 - 6	53	1	;	ł	<10	ł	<10	<10	1	<30	635
	06/28/2006	10 - 11	1.3		;	ł	1	1	1	1	1	1	;
BH-12	06/28/2006	0 - 2	0.6		1	1	<10	1	<10	<10	1	<30	312
	06/28/2006	5 - 6	0.6	1	;	1	ł	ł	;	1	1	1	ł
	06/28/2006	10 - 11	0.6		;	-		1	:	1	;	1	;
BH-13	06/28/2006	0 - 2	0.4	1	;	1	<10	1	<10	<10	1	<30	19.1
	06/28/2006	5 - 6	0.9		;	1	ł	ł	1	1	ł	ł	;
	06/28/2006	10 -11	0.7	1	;	ł	-	1	ł	ł	1	ł	}
BH-14	06/28/2006	0 - 2	632	1.61	15.09	1	951	1	11,600	1,280	1	13,831	813
	06/28/2006	5 - 6	45.3	;	1	ł	<10	ł	29.5	<10	1	29.5	2,630
	06/28/2006	10 - 11	97.1	1	1	1	21.5	ł	165	33.9	ł	220.4	5,290
	07/05/2006	15 - 16	43.9	1	;	1	6.13	ł	70.8	<10	ł	76.93	6,590
	07/05/2006	20 - 21	7.6	1	1	1	<10	ł	<10	<10	1	<30	5,320
	10/04/2006	25 - 26	26	1	;	<10	1	<10	-	1	<20	1	2,980
	10/04/2006	30 - 31	47.8	1	;	<10	1	57	ł		57	1	2,230
	10/04/2006	35 - 36	36.1	1	;	<10	1	53.4	1	1	53.4	;	1,700
	10/04/2006	40 - 41	2.2	ł	;	<10	1	<10	;	ł	<20	1	1,600
	10/30/2006	45 - 46	0.3	1	1	<10	1	<10	I	ł	<20	1	662
	10/30/2006	50 - 51	0.3	1	ł	1	1	I	-		1	ł	1,400
	10/30/2006	55 - 56	0.2	1	;	ł	1	ł		1	ł	ł	442
	10/30/2006	60 - 61	0.4	1	J	1	1	ł	1	ł	1	ł	1,800
	10/30/2006	65 - 66	0.6	1	ł	ł	1	I	1	ł	ł	ł	;
	10/30/2006	70 - 71	0.5	ł	}	1	1	1	-	1	1	ł	ł
	10/30/2006	75 - 76	0.5	ł	;	ł	ł	ł	-	1	1	ł	;
	10/30/2006	80 - 81	0.5	1	;	1	1	1		;	1	1	;
BH-15	06/28/2006	0 - 2	1.6	ł	;	1	<50	ł	506	427	1	933	17.5
	06/28/2006	5 - 6	2.4	1	;	1	1	1		1	1	ł	;

Table 1 Summary of Field and Laboratory Analysis of Soil Samples

John H. Hendrix Corporation, Elliott B-9 Tank Battery #1, #4 and #5

Unit Letter C (NE/4,NW/4), Section 9, Township 22 South, Range 37 East, Lea County, New Mexico

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oring	Sample	Sample	PID (ppm)	Benzene	BTEX	GRO	GRO	DRO	DRO	DRO	HdT	НЧТ	Chloride	
		Depth		(mg/Kg)		(mg/Kg)								
15	06/28/2006	10 - 11	6.0	ł	1	-	1		1	1	-	:	;	
-16	06/28/2006	0 - 2	1.4	1	1	1	<50	ł	9,360	1,200	1	10,560	666	
	06/28/2006	5 - 6	0.5	ł	ł	ł	<10	ł	<10	<10	ł	<30	99.1	
	06/28/2006	10 - 11	0.5	1	1	1	<10	1	<10	<10	1	<30	544	
-17	06/28/2006	0 - 2	1.1	1	1	-	<50	ł	216	102	1	318	<20	
	06/28/2006	5 - 7	1.0	1	1	ł	1		1	ł	۱	ł	J	
	06/28/2006	10 - 11	2.9	f	1	1	1	ł	1	1	1	1	;	
-18	06/28/2006	0 - 2	31.4	1	-	:	<50	;	4,440	838	•	5,278	64.8	
	06/28/2006	5 - 6	22.5	1	ł	ł	<10	ł	65.4	<10	ł	64.5	34.7	
	06/28/2006	10 - 11	46	1	-		1		1	-		1	;	
-19	06/28/2006	0 - 2	12.2	1	-		<50		1,480	434		1,914	51.8	
	06/28/2006	5 - 6	2.2	1	-		<10		<10	<10		<30	15.2	
-20	06/28/2006	0-2	68.2	1	1	-	218		10,700	1,280		12,198	108	
		5 - 7	4.2	ł	;		<10		<10	<10		<30	142	

Notes: Analysis performed by Environmental Lab of Texas, I. Ltd., Odessa, Texas

1. BGS: Sample depth in feet below ground surface

2. TPH: Total petroleum hydrocarbons (Sum of C6 to C35)

3. mg/kg: Milligrams per kilogram

4. <: Below method detection limit

5. PID: Photoionization detector

6. ppm: Parts per million7. ---: No data available

8. BTEX: Sum of benzene, tolulene, ethylbenzene and xylene

9. GRO: Gasoline - range organics

10. DRO: Diesel - range organics

Figures

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507 North Marienfeld, Suite 202 ♦ Midland, Texas 79701 ♦ Ph. (432) 687-0901 ♦ Fax (432) 687-0456

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Appendix A

Investigation Plan Approval

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Mark Larson

From:	Price, Wayne, EMNRD [wayne.price@state.nm.us]
Sent:	Wednesday, March 29, 2006 9:30 AM
To:	Cassie Hobbs
Cc:	Mark Larson
Subject:	RE: JHHC Revised Proposal for Elliott B-9

Approved!

Please be advised that NMOCD approval of this plan does not relieve the owner/operator of Responsibility should their operations fail to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD approval does not relieve the owner/operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

From: Cassie Hobbs [mailto:cassie@laenvironmental.com] Sent: Tuesday, March 28, 2006 9:11 AM To: Price, Wayne, EMNRD Cc: Mark Larson Subject: JHHC Revised Proposal for Elliott B-9

Dear Wayne,

Per Mark attached please find a revised proposal to investigate historic hydrocarbons for John H. Hendrix Corporation. The original will be mailed today.

Thank you,

Cassie Hobbs

Larson & Associates, Inc. 507 N. Marienfeld, Ste. 202 Midland, TX 79701

Office: (432) 687-0901 Fax: (432) 687-0456

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Appendix B

Boring Logs

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The Mark

Project: Elliot B-9, Sites 1,4,5

Project No: 6-0104-01

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Location: Lea county, New Mexico

Log: BH-11

Page: 1 of 1

	:	SUBSURFACE PROFILE	S		E		
Depth	Symbol	Description	Number	Type	Recovery	PID ppm 200 600	Notes
0		Ground Surface Silty Sand 10 YR 3/2 to 3/3, Dark brown to grayish brown, very fine grained quartz sand, hydrocarbon stain Silty Clayey Sand 2.5 YR 4/6, Red, very fine grained quartz sand, stiff, dry, no odor Caliche 7.5 YR 7/2 to 8/2, Pinkish gray to pinkish while sandy very fine grained quartz sand	1			511.0	Depth: 0.00' - 2.00' BGS Benzene: 03218 mg/kg BTEX: 5.138mg/kg: Chloride: 316.0 mg/kg
5-		TD: 11.00'	2			1.3	Depth: 5.00' - 6.00' BGS Chioride: 635.0 mg/kg
D	rill Meth rill Date ole Size	od: Air Rotery Larson and 507 N. Ma : 6/28/06 Midland, T : 5" (432) 687-	i Assoc rienfelo exas 7 0901	ciates, 1, Suit 9701	Inc e 202		Elevation: N/A Checked by: MJL Drilled by: Scarborough Drilling

Project: Elliot B-9, Sites 1,4,5

Project No: 6-0104-01

Location: Lea county, New Mexico

Log: BH-12

Page: 1 of 1

		SUBSURFACE PROFILE	S	AMP	E		
Depth	Symbol	Description	Number	Type	Recovery	PID ppm 0.5 1 1.5	Notes
0-		Ground Surface					
		Silty Sand 7.5 YR 4/6, Strong brown, very fine grained quartz sand, hydrocarbon stain from 0.0' to 1.0' BGS	1			0.6	Depth: 0.00' - 2.00' BGS Chloride: 312.0 mg/kg
	1.1						
		Caliche					
5		7.5 YR 8/2, Pinkish white, sandy, very fine grained guartz sand, soft to moderately hard			n.		
			2			0.6	
		Sandstone 5 YR 6/4 to 6/6, Light reddish brown to reddish yellow, very fine to fine grained quartz sand, moderatly cemented and interbedded with caliche					
10-			3			0.6	
	-	TD: 11.00'					
15-	-						
	rill Moth	od: Air Potery	1	later	Inc		Elevation: N/A
р	Drill Date	: 6/28/06 Larson and / 507 N. Marie Midland, Tex (432) 687-09	Assoc enfelo xas 7 901	ates, I, Suit 9701	e 202		Checked by: MJL Drilled by: Scarborough Drilling

Project: Elliot B-9, Sites 1,4,5

Project No: 6-0104-01

Location: Lea county, New Mexico

Log: BH-13

Page: 1 of 1

		SUBSURFACE PROFILE	S	AMPI	E		
Depth	Symbol	Description	Number	Type	Recovery	PID ppm 0.5 1 1.5	Notes
0		Ground Surface					
		Silty Sand 7.5 YR 3/2, Darkish reddish brown to 2.5 YR 4/6, red, very fine grained quartz sand, hydrocarbon stain from 0.0' to 1.0' BGS	1			0.4	Depth: 0.00' - 2.00' BGS Chloride: 19.1 mg/kg
5-		Caliche 7.5 YR 8/2, Pinkish white, sandy, very fine grained quartz sand, soft to moderately hard					
			2			0.9	
	日本日		_				
10-			3			0.7	
15-		TD: 11.00'					
			1				
	Drill Meth Drill Date Hole Size	od: Air Rotery Larson and a 507 N. Marie : 6/28/06 Midland, Te: : 5"	Assoc enfelo xas 7 901	iates, I, Suit 9701	Inc e 202		Elevation: N/A Checked by: MJL Drilled by: Scarborough Drilling

Project: Elliot B-9, Sites 1,4,5

Project No: 6-0104-01

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Location: Lea county, New Mexico

Log: BH-14

Page: 1 of 1

	1	SUBSURFACE PROFILE	S	AMPI	E		
Depth	Symbol	Description	Number	Type	Recovery	PID ppm 200 600	Notes
0 5 10 15 20 30 35 40 45 50 60 65 70 75 80		Ground Surface Silty Sand 7.5 YR 3/2, Darkish reddish brown to 2.5/1, black, very fine grained quartz sand, very poorly sorted, loose, very strong hydrocarbon odor Caliche 7.5 YR 7/3 to 8/3, Pink, sandy, very fine grained quartz sand, soft to moderately hard, slight odor Silty Sand 5 YR 5/6 to 6/6, Reddish yellow to yellowish red, very fine grained quartz sand, loose to moderately hard, poorly sorted Silty Sand 5 YR 5/6 to 6/6, Reddish yellow to yellowish red, very fine grained quartz sand, loose to moderately hard, poorly sorted SYR 5/6 to 6/6, Reddish yellow to yellowish red, very fine grained quartz sand, loose to well cemented, poorly sorted 5 YR 7/4 to 6/4, Pink to light reddish brown below 40.0' Sand 5 YR 5/6. Yellowish red, very fine grained quartz sand, poorly sorted, round, weakly cemented to loose 2.5 Y 7/3 to 8/3, Pale yellow below 58.0' TD: 75.0'	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16			632.0 45.8 97.1 26.0 47.8 36.1 2.2 0.3 0.3 0.2 0.4 0.4 0.6 0.5	Depth: 0.00' - 2.00' BGS Benzene: 1.61 mg/kg BTEX: 15.09 mg/kg: Chloride: 813.0 mg/kg Depth: 5.00' - 6.00' BGS Chloride: 2,630.0 mg/kg Depth: 10.00' - 11.00' BGS Chloride: 6,590.0 mg/kg Depth: 20.00' - 21.00' BGS Chloride: 5,320.0 mg/kg
Di Di He	rill Meth rill Date ole Size	od: Air Rotery : 6/28/06,10/4/06,10/13/06 : 5" Larson and / 507 N. Marie Midland, Tex (432) 687-09	Assoc enfeld xas 79 901	iates, I, Suite 9701	Inc e 202		Elevation: N/A Checked by: MJL Drilled by: Scarborough Drilling

Project: Elliot B-9, Sites 1,4,5

Project No: 6-0104-01

Location: Lea county, New Mexico

Log: BH-15

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	5	SUBSURFACE PROFILE	S	AMP	LE		
Depth	Symbol	Description	Number	Type	Recovery	PID ppm 1 3 5 7 9	Notes
0-		Ground Surface					
-		Silty Sand 10 YR 3/3, Darkish brown to 5 YR 4/6, yellowish red, dry, very fine grained quartz sand	1			1.6	Depth: 0.00' - 2.00' BGS Chloride: 17.5 mg/kg
		Caliche 7.5 YR 8/2 to 8/3, Pink to pinkish white, sandy, very fine grained quartz sand, soft to moderately hard					
5-			2			2.4	
			3			0.9	
- - - -		TD: 11.00'					
15-				-			
D D H	rill Metherill Date: ole Size	od: Air Rotery Larson and 507 N. Mar 6/28/06 Midland, Te 5" (432) 687-0	Associenfelo exas 7 901	ciates, 1, Suit 9701	Inc e 202		Elevation: N/A Checked by: MJL Drilled by: Scarborough Drilling

Project: Elliot B-9, Sites 1,4,5

Project No: 6-0104-01

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Location: Lea county, New Mexico

Log: BH-16

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		SUBSURFACE PROFILE	s	AMPI	E		
Depth	Symbol	Description	Number	Type	Recovery	PID ppm 0.5 1 1.5	Notes
-0		Ground Surface Silty Sand 5 YR 4/4, reddish brown, very fine grained quartz sand, loose, hydrocarbon, stainfrom 0.0' to 1.0' BGS	1			1.4	Depth: 0.00' - 2.00' BGS Chloride: 999.0 mg/kg
		Sandstone 5 YR 8/2 to 8/3, Pink to pinkish white, sandy, very fine grained quartz sand, interbedded with caliche	2	11		0.5	
		TD: 11.00'	3			0.5	
15- D D H	rill Meth rill Date ole Size	Inod: Air Rotery Larson and J 507 N. Marie 507 N. Marie Midland, Te: 5' 5'	Assoc enfelo xas 7 901	iates, I, Suite 9701	Inc e 202		Elevation: N/A Checked by: MJL Drilled by: Scarborough Drilling

Project: Elliot B-9, Sites 1,4,5

Project No: 6-0104-01

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Location: Lea county, New Mexico

Log: BH-17

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1	1	SUBSURFACE PROFILE	S	AMPI	E		
Depth	Symbol	Description	Number	Type	Recovery	PID ppm 1 3 5 7 9	Notes
0-		Ground Surface					
-		Silty Sand 5 YR 3/4 to 4/6, Dark reddish brown to yellowish red, very fine grained quartz sand, loose, hydrocarbon stain from 0.0' - 1.0' BGS	1			11	Depth: 0.00' - 2.00' BGS Chloride: <20.0 mg/kg
5-						10	
			2				
10	1.1.1		3			2.9	
15-		TD: 11.00'					
D D H	Drill Method: Air RoteryLarson and 507 N. MariDrill Date: 6/28/06Midland, Te (432) 687-0				Inc e 202		Elevation: N/A Checked by: MJL Drilled by: Scarborough Drilling

Project: Elliot B-9, Sites 1,4,5

Project No: 6-0104-01

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Location: Lea county, New Mexico

Log: BH-18

Page: 1 of 1

	SUBSURFACE PROFILE			AMPI	E		
Depth	Symbol	Description	Number	Type	Recovery	PID ppm 10 20 30 40	Notes
0-		Ground Surface					
-		Silty Sand 5 YR 3/2, Dark reddish brown to 5/4, reddish brown, very fine grained quartz sand, loose	1			31.4	Depth: 0.00' - 2.00' BGS Chloride: 64.8 mg/kg
			2			27.5	
		Caliche 7.5 YR 8/11, White, sandy, very fine grained quartz sand, very hard	_				
	時時		3			•	
		TD: 11.00'					
D	Drill Method: Air Rotery			iatos	Inc	the second s	Elevation: N/A
D H	Drill Method: Air RoteryLarson and ADrill Date: 6/28/06507 N. MarieHole Size: 5"(432) 687-09			9701	e 202		Checked by: MJL Drilled by: Scarborough Drilling

Project: Elliot B-9, Sites 1,4,5

Project No: 6-0104-01

Location: Lea county, New Mexico

Log: BH-19

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Project: Elliot B-9, Sites 1,4,5

Project No: 6-0104-01

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Location: Lea county, New Mexico

Log: BH-20

Page: 1 of 1

	3	SUBSURFACE PROFILE	S	AMPI	E		
Depth	Symbol	Description	Number	Type	Recovery	PID ppm 50 100 150	Notes
0-		Ground Surface Sifty Sand 5 YR 3/2, Dark reddish brown to yellowish red, very fine grained quartz sand, poorly sorted, hydrocarbon stain from 0.0' to 1.0', clayey below 1.5', slightly stiff 5 YR 6/4, Light reddish brown below 3.0' 5 YR 8/3, Pinkish white below 8.0', clayey	1			69.2	Depth: 0.00' - 2.00' BGS Chloride: 108.0 mg/kg
5-		TD: 7.00'	2			4.2	Depth: 5.00' - 7.00' BGS Chloride: 142.0 mg/kg
D D H	Drill Method: Air Rotery Drill Date: 6/28/06 Hole Size: 5" Larson and 507 N. Mari Midland, Te (432) 687-05				Inc e 202		Elevation: N/A Checked by: MJL Drilled by: Scarborough Drilling

Appendix C

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i Viritara Laboratory Reports

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Analytical Report

Prepared for:

Mark Larson Larson & Associates, Inc. P.O. Box 50685 Midland, TX 79710

Project: John Hendrix/ Elliott B-9 #1, #4, & #5 Project Number: 6-0104-01 Location: None Given

Lab Order Number: 6F30012

Report Date: 07/11/06

Larson & Associates, Inc. P.O. Box 50685 Midland TX, 79710

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Project: John Hendrix/ Elliott B-9 #1, #4, & #5 Project Number: 6-0104-01 Project Manager: Mark Larson

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH-11 0-2'	6F30012-01	Soil	06/28/06 09:56	06/30/06 11:12
BH-11 5-6'	6F30012-02	Soil	06/28/06 10:00	06/30/06 11:12
BH-12 0-2'	6F30012-04	Soil	06/28/06 10:17	06/30/06 11:12
BH-13 0-2'	6F30012-07	Soil	06/28/06 10:38	06/30/06 11:12
BH-14 0-2'	6F30012-10	Soil	06/28/06 10:54	06/30/06 11:12
BH-14 5-6'	6F30012-11	Soil	06/28/06 10:58	06/30/06 11:12
BH-14 10-11'	6F30012-12	Soil	06/28/06 11:00	06/30/06 11:12
BH-15 0-2'	6F30012-13	Soil	06/28/06 11:18	06/30/06 11:12
BH-16 0-2'	6F30012-16	Soil	06/28/06 12:58	06/30/06 11:12
BH-17 0-2'	6F30012-19	Soil	06/28/06 13:17	06/30/06 11:12
BH-18 0-2'	6F30012-22	Soil	06/28/06 14:16	06/30/06 11:12
BH-19 0-2'	6F30012-25	Soil	06/28/06 14:52	06/30/06 11:12
BH-20 0-2'	6F30012-28	Soil	06/28/06 15:10	06/30/06 11:12
BH-20 5-7'	6F30012-29	Soil	06/28/06 15:15	06/30/06 11:12

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Project: John Hendrix/ Elliott B-9 #1, #4, & #5 Project Number: 6-0104-01 Project Manager: Mark Larson

Organics by GC Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dílution	Batch	Prepared	Analyzed	Method	Notes
BH-11 0-2' (6F30012-01) Soil	·····							······································	
Benzene	0.218	0.0250	mg/kg dry	25	EG60519	07/05/06	07/06/06	EPA 8021B	
Toluene	0.641	0.0250	н	н	n		я	n	
Ethylbenzene	1.84	0.0250	н	"		11	н	"	
Xylene (p/m)	1.67	0.0250	n	n	**	и	н	11	
Xylene (o)	0.769	0.0250	и	11	"	n	"	"	
Surrogate: a,a,a-Trifluorotoluene		226 %	80	120	"	"	"	н	S-04
Surrogate: 4-Bromofluorobenzene		160 %	80	120	"	"	"	"	S-04
Carbon Ranges C6-C12	810	50.0	mg/kg dry	5	EF62711	06/30/06	07/03/06	EPA 8015M	
Carbon Ranges C12-C28	15900	50.0	19	и	**	11	"	n	
Carbon Ranges C28-C35	2770	50.0	17	Ħ	"	n	"	n	
Total Hydrocarbon nC6-nC35	19500	50.0		11	ti	tı	11	11	
Surrogate: 1-Chlorooctane		18.4 %	70-	130	"	"	"	"	S-06
Surrogate: 1-Chlorooctadecane		40.6 %	70-	130	"	"	"	"	S-06
BH-11 5-6' (6F30012-02) Soil									
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EF62711	06/30/06	07/03/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	н.	"	"	"	· 11	n .	
Carbon Ranges C28-C35	ND	10.0	11	14		17		n	
Total Hydrocarbon nC6-nC35	ND	10.0	11	"	"	11	н	u .	
Surrogate: 1-Chlorooctane		90.4 %	70-	130	"	"	"	"	
Surrogate: 1-Chlorooctadecane		86.4 %	70-	130	"		"	"	
BH-12 0-2' (6F30012-04) Soil									
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EF62711	06/30/06	07/03/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	н	"	11	н	n	11	
Carbon Ranges C28-C35	ND	10.0		ч	٩r	11	11	"	
Total Hydrocarbon nC6-nC35	ND	10.0		н	. "	n	н	11	
Surrogate: 1-Chlorooctane		89.0 %	70-	130	"	"	"	"	
Surrogate: 1-Chlorooctadecane		83.6 %	70-	130	"	"	"	"	

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Project: John Hendrix/ Elliott B-9 #1, #4, & #5 Project Number: 6-0104-01 Project Manager: Mark Larson

-		Or	ganics b	oy GC					
		Environn	nental L	ab of T.	Texas				
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH-13 0-2' (6F30012-07) Soil									
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EF62711	06/30/06	07/03/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	"	11	"	11	n	и	
Carbon Ranges C28-C35	ND	10.0	"	17	11	n	"	**	
Total Hydrocarbon nC6-nC35	ND	10.0	u	и		"	"	11	
Surrogate: 1-Chlorooctane		95.8 %	70	130	"	n	"	"	
Surrogate: 1-Chlorooctadecane		92.6 %	70	130	"	"	"	"	
BH-14 0-2' (6F30012-10) Soil									
Benzene	1.61	0.0500	mg/kg dry	50	EG60519	07/05/06	07/06/06	EPA 8021B	
Toluene	1.78	0.0500	"		"	н	н	н	
Ethylbenzene	3.02	0.0500	"	11	11	н	11	**	
Xylene (p/m)	6.21	0.0500	"	"	Ħ	8	11	14	
Xylene (0)	2.47	0.0500	N	u	"	11		u 	
Surrogate: a,a,a-Trifluorotoluene		242 %	80-	120	"	"	"	"	S-04
Surrogate: 4-Bromofluorobenzene		136 %	80-	120	"	"	"	"	S-04
Carbon Ranges C6-C12	951	50.0	mg/kg dry	5	EF62711	06/30/06	07/03/06	EPA 8015M	
Carbon Ranges C12-C28	11600	50.0	н	**	н -	11	*1	U	
Carbon Ranges C28-C35	1280	50.0	н	n	11	n	11	"	
Total Hydrocarbon nC6-nC35	13800	50.0	11	11	и	n	ti	н	
Surrogate: 1-Chlorooctane		18.8 %	70-	130	"	"	"	"	S-06
Surrogate: 1-Chlorooctadecane		35.8 %	70-	130	"	"	<i>11</i> .	"	S-06
BH-14 5-6' (6F30012-11) Soil									
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EF62711	06/30/06	07/03/06	EPA 8015M	
Carbon Ranges C12-C28	29.5	10.0	"	н	n	n	н	11	
Carbon Ranges C28-C35	ND	10.0	D.	"	н	н	11	n	
Total Hydrocarbon nC6-nC35	29.5	10.0	11	н	11	11	11	11	
Surrogate: 1-Chlorooctane		90.4 %	5 70-	130	"	"		"	
Surrogate: 1-Chlorooctadecane		84.8 %	70-	130	"	"	"	"	

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Project: John Hendrix/ Elliott B-9 #1, #4, & #5 Project Number: 6-0104-01 Project Manager: Mark Larson

Notes

	Org	ganics	by GC				
 	Environm	ental l	Lab of T	exas			
	Reporting						
Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method

BH-14 10-11' (6F30012-12) Soil								
Carbon Ranges C6-C12	21.5	10.0	mg/kg dry	1	EF62711	06/30/06	07/03/06	EPA 8015M
Carbon Ranges C12-C28	165	10.0	9	н	υ		11	п
Carbon Ranges C28-C35	33.9	10.0	11	н	"	"	"	n
Total Hydrocarbon nC6-nC35	220	10.0	н	11	**	11	н	11
Surrogate: 1-Chlorooctane		87.8 %	70-13	0	"	"	и	"
Surrogate: 1-Chlorooctadecane		84.8 %	70-13	0	"	"	"	"
BH-15 0-2' (6F30012-13) Soil								

Carbon Ranges C6-C12	ND	50.0 r	ng/kg dry	5	EF62711	06/30/06	07/04/06	EPA 8015M	
Carbon Ranges C12-C28	506	50.0	"	н	17	11	II.	"	
Carbon Ranges C28-C35	427	50.0	n	u	н	н	н	м	
Total Hydrocarbon nC6-nC35	933	50.0	N	n	н	н	4	11	
Surrogate: 1-Chlorooctane		16.7 %	70-13	0	"	<i>u</i>	"	"	S-06
Surrogate: 1-Chlorooctadecane		16.0 %	70-13	0	11	"	"	<i>"</i> .	S-06

BH-16 0-2' (6F30012-16) Soil

Carbon Ranges C6-C12	ND	50.0 m	ng/kg dry	5	EF62711	06/30/06	07/04/06	EPA 8015M	
Carbon Ranges C12-C28	9360	50.0	u	н	"	n	**	н	
Carbon Ranges C28-C35	1200	50.0		0	"	11	0	"	
Total Hydrocarbon nC6-nC35	10600	50.0	11	n	11	n	"	н	
Surrogate: 1-Chlorooctane		18.6 %	70-13	30	"	"	"	"	S-06
Surrogate: 1-Chlorooctadecane		20.6 %	70-13	80	"	"	"	"	S-06

BH-17 0-2' (6F30012-19) Soil

Carbon Ranges C6-C12	ND	50.0 1	mg/kg dry	5	EF62711	06/30/06	07/04/06	EPA 8015M	
Carbon Ranges C12-C28	216	50.0	н	"	"		"	"	
Carbon Ranges C28-C35	102	50.0	н	н	"	"	n	11	
Total Hydrocarbon nC6-nC35	318	50.0	и	"	"	11	n	и	
Surrogate: 1-Chlorooctane		17.6 %	70-1	30	"	"	"	"	S-06
Surrogate: 1-Chlorooctadecane		17.1 %	70-1	30	"	"	"	"	S-06

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Project: John Hendrix/ Elliott B-9 #1, #4, & #5 Project Number: 6-0104-01 Project Manager: Mark Larson

		Or	ganics ł	oy GC					
		Environn	nental I	lab of I	exas				
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH-18 0-2' (6F30012-22) Soil									
Carbon Ranges C6-C12	ND	50.0	mg/kg dry	5	EF62711	06/30/06	07/03/06	EPA 8015M	
Carbon Ranges C12-C28	4440	50.0	n	н	11	u.	11	u .	
Carbon Ranges C28-C35	838	50.0	"	11	"	н	н	11	
Total Hydrocarbon nC6-nC35	5280	50.0	11	н	11	11	11	"	
Surrogate: 1-Chlorooctane		16.2 %	70-	130	"	"	"	"	S-06
Surrogate: 1-Chlorooctadecane		17.0 %	70-	130	"	"	"	"	S-06
BH-19 0-2' (6F30012-25) Soil									`
Carbon Ranges C6-C12	ND	50.0	mg/kg dry	5	EF62626	07/03/06	07/04/06	EPA 8015M	
Carbon Ranges C12-C28	1480	50.0	II.	0	н	IT	Ħ	11	
Carbon Ranges C28-C35	434	50.0	н	"	11		и	11	
Total Hydrocarbon nC6-nC35	<u>1910</u>	50.0	11 .	11	н	"	11	и	
Surrogate: 1-Chlorooctane		16.7 %	70-	130	"	"	"	"	S-06
Surrogate: 1-Chlorooctadecane		19.2 %	70-	130	"	"	11	"	S-00
BH-20 0-2' (6F30012-28) Soil									
Carbon Ranges C6-C12	218	50.0	mg/kg dry	5	EF62626	07/03/06	07/04/06	EPA 8015M	
Carbon Ranges C12-C28	10700	50.0	"	"	"	н	"	11	
Carbon Ranges C28-C35	1280	50.0	"	۳				11	
Total Hydrocarbon nC6-nC35	12200	50.0	11		11	11	11 .	"	
Surrogate: 1-Chlorooctane		20.8 %	70-	130	"	н	"	и .	S-00
Surrogate: 1-Chlorooctadecane		26.0 %	70-	130	11	"	"	"	S-00
BH-20 5-7' (6F30012-29) Soil									
Carbon Ranges C6-C12	ND	10.0) mg/kg dry	1	EF62626	07/03/06	07/04/06	EPA 8015M	

Carbon Ranges C12-C28 ND 10.0 Carbon Ranges C28-C35 ND 10.0 Total Hydrocarbon nC6-nC35 ND 10.0 ,, ... " Surrogate: 1-Chlorooctane 99.0 % 70-130 " " " 97.2 % 70-130 " " " Surrogate: 1-Chlorooctadecane .,

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Ger	ieral Chemi	istry Paran Environm	neters l ental I	oy EPA Jab of T	/ Stand Texas	ard Met	hods		
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH-11 0-2' (6F30012-01) Soil		·····					<u></u>		
Chloride	316	20.0	mg/kg	40	EG60518	07/05/06	07/05/06	EPA 300.0	
% Moisture	6.0	0.1	%	1	EG60301	06/30/06	07/03/06	% calculation	
BH-11 5-6' (6F30012-02) Soil					_				
Chloride	635	10.0	mg/kg	20	EG60518	07/05/06	07/05/06	EPA 300.0	
% Moisture	21.8	0.1	%	1	EG60301	06/30/06	07/03/06	% calculation	
BH-12 0-2' (6F30012-04) Soil									
Chloride	312	5.00	mg/kg	10	EG60518	07/05/06	07/05/06	EPA 300.0	
% Moisture	1.9	0.1	%	1	EG60301	06/30/06	07/03/06	% calculation	
BH-13 0-2' (6F30012-07) Soil									
Chloride	19.1	5.00	mg/kg	10	EG60518	07/05/06	07/05/06	EPA 300.0	
% Moisture	7.6	0.1	%	1	EG60301	06/30/06	07/03/06	% calculation	
BH-14 0-2' (6F30012-10) Soil									
Chloride	813	20.0	mg/kg	40	EG60518	07/05/06	07/05/06	EPA 300.0	
% Moisture	6.6	0.1	%	1	EG60301	06/30/06	07/03/06	% calculation	
BH-14 5-6' (6F30012-11) Soil						<i>,</i>			
Chloride	2630	50.0	mg/kg	100	EG60518	07/05/06	07/05/06	EPA 300.0	
% Moisture	25.3	0.1	%	1	EG60301	06/30/06	07/03/06	% calculation	
BH-14 10-11' (6F30012-12) Soil									
Chloride	5290	50.0	mg/kg	100	EG60518	07/05/06	07/05/06	EPA 300.0	
⁸ % Moisture	5.8	0.1	%	1	EG60301	06/30/06	07/03/06	% calculation	
BH-15 0-2' (6F30012-13) Soil								,	
Chloride	17.5	5.00	mg/kg	10	EG60518	07/05/06	07/05/06	EPA 300.0	
% Moisture	1.6	0,1	%	1	EG60301	06/30/06	07/03/06	% calculation	

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Larson & Associates, Inc. P.O. Box 50685 Midland TX, 79710

Project: John Hendrix/ Elliott B-9 #1, #4, & #5 Project Number: 6-0104-01 Project Manager: Mark Larson

Ge	eneral Chem	istry Parai	neters b	y EPA	/ Stand	ard Metl	hods		
		Environn	nental L	ab of]	lexas				
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH-16 0-2' (6F30012-16) Soil									
Chloride	999	25.0	mg/kg	50	EG60511	07/05/06	07/05/06	EPA 300.0	
% Moisture	0.8	0.1	%	1	EG60301	06/30/06	07/03/06	% calculation	
BH-17 0-2' (6F30012-19) Soil									
Chloride	ND	20.0	mg/kg Wet	2	EG61001	07/10/06	07/10/06	SW 846 9253	
% Moisture	2.0	0.1	%	1	EG60301	06/30/06	07/03/06	% calculation	
BH-18 0-2' (6F30012-22) Soil									
Chloride	64.8	10.0	mg/kg	20	EG60511	07/05/06	07/05/06	EPA 300.0	
% Moisture	3.2	0.1	%	1	EG60301	06/30/06	07/03/06	% calculation	
BH-19 0-2' (6F30012-25) Soil			_						
Chloride	51.8	5.00	mg/kg	10	EG60511	07/05/06	07/05/06	EPA 300.0	
% Moisture	1.3	0.1	%	1	EG60301	06/30/06	07/03/06	% calculation	
BH-20 0-2' (6F30012-28) Soil									
Chloride	108	5.00	mg/kg	10	EG60511	07/05/06	07/05/06	EPA 300.0	
% Moisture	2.6	0.1	%	1	EG60301	06/30/06	07/03/06	% calculation	
BH-20 5-7' (6F30012-29) Soil									
Chloride	142	10.0	mg/kg	20	EG60511	07/05/06	07/05/06	EPA 300.0	
% Moisture	11.8	0.1	%	1	EG60301	06/30/06	07/03/06	% calculation	

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Project: John Hendrix/ Elliott B-9 #1, #4, & #5 Project Number: 6-0104-01 Project Manager: Mark Larson

Organics by GC - Quality Control

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		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EF62626 - Solvent Extraction ((GC)									
Blank (EF62626-BLK1)				Prepared:	07/03/06	Analyzed	1: 07/04/06			
Carbon Ranges C6-C12	ND	10.0	mg/kg wet							
Carbon Ranges C12-C28	ND	10.0	н							
Carbon Ranges C28-C35	ND	10.0	11							
Total Hydrocarbon nC6-nC35	ND	10.0	"							
Surrogate: 1-Chlorooctane	49.7		mg/kg	50.0		99.4	70-130			
Surrogate: 1-Chlorooctadecane	48.3		"	50.0		96.6	70-130			
LCS (EF62626-BS1)				Prepared:	07/03/06	Analyzed	1: 07/04/06			
Carbon Ranges C6-C12	448	10.0	mg/kg wet	500		89.6	75-125			
Carbon Ranges C12-C28	440	10.0	17	500		88.0	75-125			
Carbon Ranges C28-C35	ND	10.0	"	0.00			75-125			
Total Hydrocarbon nC6-nC35	888	10.0	11	1000		88.8	75-125			
Surrogate: 1-Chlorooctane	54.7		mg/kg	50.0		109	70-130			
Surrogate: 1-Chlorooctadecane	47.7		"	50.0		95.4	70-130			
Calibration Check (EF62626-CCV1)				Prepared	07/03/06	Analyzed	i: 07/04/06			
Carbon Ranges C6-C12	212		mg/kg	250		84.8	80-120			
Carbon Ranges C12-C28	268		н	250		107	80-120			
Total Hydrocarbon nC6-nC35	480		u .	500		96.0	80-120			
Surrogate: 1-Chlorooctane	56.8		"	50.0		114	70-130			
Surrogate: 1-Chlorooctadecane	53.3		"	50.0		107	70-130			
Matrix Spike (EF62626-MS1)	So	ource: 6F300	12-29	Prepared	: 07/03/06	Analyzed	d: 07/04/06			
Carbon Ranges C6-C12	480	10.0	mg/kg dry	567	ND	84.7	75-125			
Carbon Ranges C12-C28	480	10.0	н	567	ND	84.7	75-125			
Carbon Ranges C28-C35	ND	10.0	n	0.00	ND		75-125			
Total Hydrocarbon nC6-nC35	960	10.0	н	1130	ND	85.0	75-125			
Surrogate: 1-Chlorooctane	48.9		mg/kg	50.0		97.8	70-130			
Surrogate: 1-Chlorooctadecane	42.9		"	50.0		85.8	70-130			

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Organics by GC - Quality Control

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		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EF62626 - Solvent Extraction (GC)									
Matrix Spike Dup (EF62626-MSD1)	So	urce: 6F300	12-29	Prepared:	07/03/06	Analyzed	: 07/04/06			
Carbon Ranges C6-C12	472	10.0	mg/kg dry	567	ND	83.2	75-125	1.68	20	
Carbon Ranges C12-C28	468	10.0	"	567	ND	82.5	75-125	2.53	20	
Carbon Ranges C28-C35	ND .	10.0		0.00	ND		75-125		20	
Total Hydrocarbon nC6-nC35	941	10.0	ч	1130	ND	83.3	75-125	2.00	20	
Surrogate: 1-Chlorooctane	43.8		mg/kg	50.0		87.6	70-130			
Surrogate: 1-Chlorooctadecane	39.7		"	50.0		79.4	70-130			
Batch EF62711 - Solvent Extraction (GC)									
Blank (EF62711-BLK1)				Prepared:	06/30/06	Analyzed	: 07/03/06			
Carbon Ranges C6-C12	ND	10.0	mg/kg wet							
Carbon Ranges C12-C28	ND	10.0	"							
Carbon Ranges C28-C35	ND	10.0	11							
Total Hydrocarbon nC6-nC35	ND	10.0	"							
Surrogate: 1-Chlorooctane	58.4		mg/kg	50.0		117	70-130			
Surrogate: 1-Chlorooctadecane	51.9		"	50.0		104	70-130			
LCS (EF62711-BS1)				Prepared:	06/30/06	Analyzed	1: 07/03/06	¥		
Carbon Ranges C6-C12	523	10.0	mg/kg wet	500		105	75-125			
Carbon Ranges C12-C28	507	10.0	и	500		101	75-125			
Carbon Ranges C28-C35	ND	10.0	0	0.00			75-125			
Total Hydrocarbon nC6-nC35	1030	10.0	"	1000		103	75-125			
Surrogate: 1-Chlorooctane	57.9		mg/kg	50.0		116	70-130			
Surrogate: 1-Chlorooctadecane	46.3		11	50.0		92.6	70-130			
Calibration Check (EF62711-CCV1)				Prepared	: 06/30/06	Analyzed	1: 07/04/06	5		
Carbon Ranges C6-C12	212		mg/kg	250		84.8	80-120			
Carbon Ranges C12-C28	268			250		107	80-120			
Total Hydrocarbon nC6-nC35	480		"	500		96.0	80-120			
Surrogate: 1-Chlorooctane	56.8		"	50.0		114	70-130			
Surrogate: 1-Chlorooctadecane	53.3		"	50.0		107	70-130			

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

Organics by GC - Quality Control

Environmental Lab of Texas

Anałyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EF62711 - Solvent Extraction (GC)			. <u></u>	······································					
Matrix Spike (EF62711-MS1)	Sou	irce: 6F3001	12-02	Prepared:	06/30/06	Analyzed	: 07/03/06		- <u></u>	<u> </u>
Carbon Ranges C6-C12	634	10.0	mg/kg dry	639	ND	99.2	75-125			
Carbon Ranges C12-C28	625	10.0	"	639	ND	97.8	75-125			
Carbon Ranges C28-C35	ND	10.0	"	0.00	ND		75-125			
Total Hydrocarbon nC6-nC35	1260	10.0	н	1280	ND	98.4	75-125			
Surrogate: 1-Chlorooctane	61.6		mg/kg	50.0		123	70-130			
Surrogate: 1-Chlorooctadecane	55.4		"	50.0		111	70-130			
Matrix Spike Dup (EF62711-MSD1)	Sou	irce: 6F300	12-02	Prepared:	06/30/06	Analyzed	: 07/03/06			
Carbon Ranges C6-C12	598	10.0	mg/kg dry	639	ND	93.6	75-125	5.84	20	
Carbon Ranges C12-C28	594	10.0	0	639	ND	93.0	75-125	5.09	20	
Carbon Ranges C28-C35	ND	10.0	11	0.00	ND		75-125		20	
Total Hydrocarbon nC6-nC35	1190	10.0	н	1280	ND	93.0	75-125	5.71	20 ·	
Surrogate: 1-Chlorooctane	60.6		mg/kg	50.0	······	121	70-130			
Surrogate: 1-Chlorooctadecane	54.8		"	50.0		110	70-130			
Batch EG60519 - EPA 5030C (GC)										
Blank (EG60519-BLK1)				Prepared	& Analyze	ed: 07/05/0	06			
Benzene	ND	0.0250	mg/kg wet							
Toluene	ND	0.0250	н							
Ethylbenzene	ND	0.0250	и							
Xylene (p/m)	ND	0.0250	"							
Xylene (0)	ND	0.0250	"							
Surrogate: a,a,a-Trifluorotoluene	35.2		ug/kg	40.0		88.0	80-120			
Surrogate: 4-Bromofluorobenzene	35.2		"	40.0		88.0	80-120			
LCS (EG60519-BS1)			_	Prepared	& Analyze	ed: 07/05/	06			
Benzene	1.31	0.0250	mg/kg wet	1.25	·····	105	80-120			
Toluene	1.45	0.0250	и	1.25		116	80-120			
Ethylbenzene	1.42	0.0250	и	1.25		114	80-120			
Xylene (p/m)	2.78	0.0250	н	2.50		111	80-120			
Xylene (0)	1.42	0.0250	u	1.25		114	80-120			
Surrogate: a,a,a-Trifluorotoluene	36.3		ug/kg	40.0		90.8	80-120	····		
Surrogate: 4-Bromofluorobenzene	45.5		"	40.0		114	80-120			

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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 EG60519 - EPA 5030C (GC)										
Calibration Check (EG60519-CCV1)				Prepared	: 07/05/06	Analyzed	: 07/06/06	_		
Benzene	52.1		ug/kg	50.0		104	80-120			
Toluene	56.1		0	50.0		112	80-120			
Ethylbenzene	56.6		и	50.0		113	80-120			
Xylene (p/m)	113			100		113	80-120			
Xylene (o)	56.5		14	50.0		113	80-120			
Surrogate: a,a,a-Trifluorotoluene	36.2		"	40.0		90.5	80-120			
Surrogate: 4-Bromofluorobenzene	39.3		"	40.0		98.2	80-120			
Matrix Spike (EG60519-MS1)	So	ource: 6F3002	23-04	Prepared	: 07/05/06	Analyzed	l: 07/06/06			
Benzene	1.48	0.0250	mg/kg dry	1.36	0.0328	106	80-120			
Toluene	1.89	0.0250	"	1.36	0.386	111	80-120			
Ethylbenzene	2.18	0.0250	*	1.36	0.599	116	80-120			
Xylene (p/m)	3.74	0.0250	"	2.71	0.853	107	80-120			
Xylene (o)	2.05	0.0250	"	1.36	0.550	110	80-120			
Surrogate: a,a,a-Trifluorotoluene	61.4		ug/kg	40.0		154	80-120			S-0
Surrogate: 4-Bromofluorobenzene	56.6		"	40.0		142	80-120			S-0
Matrix Spike Dup (EG60519-MSD1)	Se	ource: 6F300	23-04	Prepared	: 07/05/06	Analyzed	1: 07/06/06			
Benzene	1.47	0.0250	mg/kg dry	1.36	0.0328	106	80-120	0.00	20	
Toluene	1.95	0.0250	н	1.36	0.386	115	80-120	3.54	20	
Ethylbenzene	2.09	0.0250	IF.	1.36	0.599	110	80-120	5.31	20	
Xylene (p/m)	3.85	0.0250	н	2.71	0.853	111	80-120	3.67	20	
Xylene (0)	2.14	0.0250	"	1.36	0.550	117	80-120	6.17	20	
Surrogate: a,a,a-Trifluorotoluene	50.9		ug/kg	40.0		127	80-120			S-0
Surrogate: A-Bromofluorobenzene	66 3		"	40.0		166	80-120			S-0

Environmental Lab of Texas

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General Chemis	uality C	Contro	1							
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EG60301 - General Preparatio	n (Prep)									
Blank (EG60301-BLK1)				Prepared:	06/30/06	Analyzed	: 07/03/06			
% Solids	100		%							
Duplicate (EG60301-DUP1)	Sou	irce: 6F3000	1-01	Prepared:	06/30/06	Analyzed	: 07/03/06			
% Solids	97.9		%		97.5			0.409	20	
Duplicate (EG60301-DUP2)	Sou	irce: 6F3001	0-09	Prepared	06/30/06	Analyzed	: 07/03/06			
% Solids	96.5		%		98.6			2.15	20	
Duplicate (EG60301-DUP3)	Sou	irce: 6F3001	1-18	Prepared	06/30/06	Analyzed	: 07/03/06			
% Solids	90.1		%		90.0			0.111	20	
Duplicate (EG60301-DUP4)	Sou	urce: 6F3001	2-11	Prepared	06/30/06	Analyzed	: 07/03/06			
% Solids	73.9		%		74.7			1.08	20	
Duplicate (EG60301-DUP5)	So	urce: 6F3001	8-01	Prepared	06/3.0/06	Analyzed	: 07/03/06			
% Solids	99.9		%		100			0.100	20	
Batch EG60511 - General Preparatio	on (WetChen	n)								
Blank (EG60511-BLK1)				Prepared	& Analyz	ed: 07/05/	06			
Chloride	ND	0.500	mg/kg							
LCS (EG60511-BS1)				Prepared	& Analyz	ed: 07/05/	06			
Chloride	10.3	0.500	mg/kg	10.0		103	80-120			
Calibration Check (EG60511-CCV1)				Prepared	& Analyz	ed: 07/05/	06			
Chloride	10.1		mg/L	10.0		101	80-120			

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General Chemis	istry Parameters by EPA / Standard Methods - Quality Control												
	F	Environm	ental I	Lab of T	exas								
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes			
Batch EG60511 - General Preparatio	n (WetChen	ı)											
Duplicate (EG60511-DUP1)	Sou	irce: 6F3001	2-29	Prepared	& Analyze	ed: 07/06/	06						
Chloride	146	10.0	mg/kg		142			2.78	20				
Matrix Spike (EG60511-MS1)	Sou	urce: 6F3001	2-29	Prepared	& Analyze	ed: 07/05/							
Chloride	358	10.0	mg/kg	200	142	108	80-120						
Batch EG60518 - General Preparatio	n (WetChen	1)											
Blank (EG60518-BLK1)				Prepared	& Analyze	ed: 07/05/	06						
Chloride	ND	0.500	mg/kg										
LCS (EG60518-BS1)				Prepared	& Analyz	ed: 07/05/	06						
Chloride	10.5	0.500	mg/kg	10.0	· .	105	80-120						
Calibration Check (EG60518-CCV1)				Prepared	& Analyz	ed: 07/05/	06						
Chloride	10.5		mg/L	10.0	*	105	80-120						
Duplicate (EG60518-DUP1)	So	urce: 6F300	11-23	Prepared	& Analyz	ed: 07/05/	06						
Chloride	10200	200	mg/kg		10500			2.90	20				
Duplicate (EG60518-DUP2)	So	urce: 6F300	12-02	Prepared	& Analyz	ed: 07/05/	06						
Chloride	632	10.0	mg/kg	·····	635			0.474	20				
Matrix Spike (EG60518-MS1)	So	urce: 6F300	11-23	Prepared	& Analyz	ed: 07/05/	06						
Chloride	15600	200	mg/kg	4000	10500	128	80-120			S-07			
Matrix Spike (EG60518-MS2)	So	urce: 6F300	12-02	Prepared	& Analyz	ed: 07/05/	'06						
Chloride	895	10.0	mg/kg	200	635	130	80-120			S-07			

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Larson & Associates, Inc. P.O. Box 50685 Midland TX, 79710

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 EG61001 - General Preparation	n (WetChem	ı)								
Blank (EG61001-BLK1)				Prepared	& Analyze	ed: 07/10/0	06			
Chloride	ND	20.0 m	g/kg Wet							
LCS (EG61001-BS1)				Prepared	& Analyze	ed: 07/10/0	06			
Chloride	83.0		mg/kg	100		83.0	80-120			
Matrix Spike (EG61001-MS1)	Sou	irce: 6G07004	1-08	Prepared	& Analyze	ed: 07/10/	06			
Chloride	1730	20.0 m	g/kg Wet	500	1280	90.0	80-120			
Matrix Spike Dup (EG61001-MSD1)	Sou	ırce: 6G07004	4-08	Prepared	& Analyze	ed: 07/10/	06			
Chloride	1720	20.0 m	g/kg Wet	500	1280	88.0	80-120	0.580	20	
Reference (EG61001-SRM1)				Prepared	& Analyze	ed: 07/10/	06			
Chloride	51.0	10.0 m	ig/kg Wet	50.0		102	80-120			

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Notes and Definitions

S-07 Recovery outside Laboratory historical or method prescribed limits. S-06 The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.

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

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

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

Report Approved By:

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

Jeanne Mc Murrey, Inorg. Tech Director LaTasha Cornish, Chemist Sandra Sanchez, Lab Tech.

7-11-06

Date:

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

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

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Environmental Lab of Texas

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

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

■ <u>O</u> lient:	Larson
Date/Time:	6/30/00 11:12
rder #:	10F30012
- itials:	Cle

Sample Receipt Checklist

emperature of container/cooler?	Yes	No	(.O C	
hipping container/cooler in good condition?	1000	No		
Sustody Seals intact on shipping container/cooler?	Yes	No	NCLDresent	
ustody Seals intact on sample bottles?	Yes	No	Net present	1
hain of custody present?	XS	No		
sample Instructions complete on Chain of Custody?	6	No		-
Chain of Custody signed when relinquished and received?	B	No		
hain of custody agrees with sample labe!(s)	1 2005	No	Donley	*
Container labels legible and intact?	Yas	I No		
Sample Matrix and properties same as on chain of custody?	TES	l No		-
Bamples in proper container/bottle?	1 700	No	· ·	
Samples procerly preserved?	180	No		-
Sample bottles intact?	1 255	I No		
Preservations documented on Chain of Custody?	1 700	I No]	:
Containers documented on Chain of Custody?	1 800	I No		-
Sufficient sample amount for indicated test?	1 Yes	No		_
All samples received within sufficient hold time?	1Ya	No	1	
VOC samples have zero headspace?	INES	No	Not Applicable	-

Other observations:

* see a tached e-mail for discrepancy

Variance Documentation:

Contact Person: - Marklarson Date/Time: 07-04-06 Cog28 Contacted by: Came Kelly Regarding: Field Code discrepancy.

Corrective Action Taken:

Client wants to reference label information.

See attached e-mail.

Jeanne McMurrey

From: To: Sent: Subject:	"Mark Larson" <mark@la "Jeanne McMurrey''' <je Tuesday, July 04, 2006 RE: COC's Received on</je </mark@la 	aenvironmental.com> anne@elabtexas.com 9:28 PM 6/30/06	>	
Or From Sent: To: M Subje Hello	riginal Message : Jeanne McMurrey [mailt Monday, July 03, 2006 8 ark Larson ect: RE: COC's Received c Mark,	:o:jeanne@elabtexas.c :39 AM on 6/30/06	om]	
There reply	e were a few sample nam to this e-mail and let me	e and/or time discrep e know which times or	pancies on the COC's r name you would like f	eceived on Friday. Please or us to use. Thank you.
Proje JH/ E JH/ E Penro Penro 6/29/0	<u>ct Name</u> Ell. B-9 #1,4, 5 Ell. B-9 #2, 3 se Federal #1 se Federal #1 06	<u>Labels</u> BH-19 10-11' BH-5 0-2' 10:24 BH-30 10-11' Dated all 6/29/06	<u>COC</u> BH-19 10-18' BH-5 0-2' 10:42 BH-30 10-12' Front page all 6/28/0	<u>Correct</u> BH-19, 10-11' BH-5, 0-2' 10:42 BH-30, 10-12' D6 Front page should be
Jean Envir 12600 Odes 432-	ne McMurrey onmental Lab of Texas] 0 West I-20 East sa, Texas 79765 563-1800	C, Ltd.		

This message has been scanned for viruses and dangerous content by <u>BasinBroadband</u>, and is believed to be clean.

This message has been scanned for viruses and dangerous content by <u>BasinBroadband</u>, and is believed to be clean.

	BER CHAIN-OF-CUSTODY RECOR		A GISON & SSOCICITES, INC. Fax: 432-687-0456 Environmental Consultants 432-687-0901	507 N. Marienfeld, Ste. 202 • Midland, TX 79701	LAB. I.D. REMARKS NUMBER (I.E., FILTERED, UNFILTERED, RESERVED, UNPRESERVED, (LAB USE ONLY) GRAB COMPOSITE)	200020	20.	60	70		2	ho.	×	6	0		lot lot	a		4	96			RECEIVED BY: (Signature) DAIE:	SAMPLE SHIPPED BY: (Circle)	FEDEX BUS AIRBILL #:	ED HAND/DELIVERED UPS OTHER: WHITE - RECEIVING LAB	YELLOW - RECEIVING LAB (TO BE RETURNED TO	PINK - PROJECT MANAGER GOLD - QA/QC COORDINATOR	SAMPLE TYPE:	
	PARAMETERS/METHOD NUM		NTAINERS	y (gal2	14D BTPH(MUMBER (× > > -))) /		> > }			> > } -			2 2 2 2 2))) -)))	> > -			> > }			ED BY: (Signature) DATE: TIME:	(Signature) DATE:	TIME	TURNAROUND TIME NEED	ECEIVED BY: JSignature) _ /	Uper 1000 miles 11.100		
	SITE MANAGER:	Mark Lawson	PROJECT NAME: B-9 #1, 44 5	PO#	SAMPLE IDENTIFICATION	BH-11, G-L'	BH-11, 5-61	814-11 10-11'	BH-12, 0-21	B14-12, 5-61	(514-12, 10-11'	614-13, 0-21	B14-13, 5-61	811-13, 10-111	BI4-14, 0-Z1	614-14, 5-61	814-14, 10-111	B1+-15, G-21	814-15, 5-61	814-15, 10-11'	1514-16, 0-21	1514-16, 5-61	BH- 17 10-111	DATE: 424 RELINQUISHE	りょくいく DATE:ひをからいRECEIVED BY	ILLY TIME: 1545		T /	<u>1-20 E</u> STATE: <u>1 X _ ZIP 769</u> [MULCOR TOCHY ANDHA	Ac. 2.00
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CLIENT NAME:	SITE MANAGER:	PARAMETERS/METHOD NUMBE	R CHAIN-OF-CUSTODY RECORD
John H. Hendrux		(9) (9) S	
PROJECT NO: 6-0104-01	ELLIGH B-9 2 #5	итаімек 12-11 СС-11 СС-11	SSOCIATES, INC. Fax: 432-687-0456 Environmental Consultants 432-687-0901
PAGE Z OF Z LAB. I	P0#	ا مرا ({ { { { } } }	507 N. Marienfeld, Ste. 202 • Midland, TX 79701
OFTHER NOS NUTER DATE	SAMPLE IDENTIFICATION	NUMBER C	LAB. I.D. REMARKS NUMBER I.E., FILTERED, UNFILTERED, RESERVED, UNPRESERVED, (LAB USE ONLY) CRAB COMPOSITE
(4/23/00) [] : (]	B4-17, 0-Z'	<i>}</i>	-19 10 826012-
1 13:22	B11-17, 5-71		- 26
1 (3:59	BH-17, 10-11'		2.
11 [4:16	BH-18, 0-Z')) <u>}</u>	101
11 [Ĥ:18	614-18 5 . 61		a
11 [H:Z	611-18, 10-11		-74
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D	TIME	TIME:	TIME
RELINDUISHED BY: Signatural	DATE: 430/04 RECEIVED BY:	(Signature) DATE:	SAMPLE SHIPPED BY: (Circle)
Þ		TIME:	FEDEX BUS AIRBILL #:
COMMENTS:		TURNAROUND TIME NEEDED	HANDJDELIVERED UPS OTHER: WHITE - RECEIVING LAB
			- YELLOW - RECEIVING LAB (TO BE RETURNED TO
ADDRESS: 12655	ו 1-26 <u>ב</u> נזאד זיי זיי זיי	ECEIVED PY: (Signature)	LA AFTER RECEIPT) PINK – PROJECT MANAGER
CONTACT. Delland INILe	PHONE: (432) 5(3-1800 D	ATE: LOL DOLOCION TIME: VUILOR	
I SAMPLE CONDITION WHEN RECEIVED:		LA CONTACT PERSON:	SAMPLE TYPE:
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Analytical Report

Prepared for:

Mark Larson Larson & Associates, Inc. P.O. Box 50685 Midland, TX 79710

Project: John Hendrix/ Elliott B-9 #1, #4, & #5 Project Number: 6-0104-01 Location: None Given

Lab Order Number: 6G07010

Report Date: 07/12/06

Larson & Associates, Inc. P.O. Box 50685 Midland TX, 79710

Project: John Hendrix/ Elliott B-9 #1, #4, & #5 Project Number: 6-0104-01 Project Manager: Mark Larson

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH-14 15-16	6G07010-01	Soil	07/05/06 09:28	07/07/06 11:10
BH-14 20-21'	6G07010-02	Soil	07/05/06 09:34	07/07/06 11:10

Project: John Hendrix/ Elliott B-9 #1, #4, & #5 Project Number: 6-0104-01 Project Manager: Mark Larson

Organics by GC Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH-14 15-16 (6G07010-01) Soil			_			··· •• ••	<u> </u>		
Carbon Ranges C6-C12	J [6.13]	10.0	mg/kg dry	1	EF62601	07/07/06	07/08/06	ÉPA 8015M	j
Carbon Ranges C12-C28	70.8	10.0	"	н	"	"	п	n	
Carbon Ranges C28-C35	ND	10.0	н	"	"	N	**	"	
Total Hydrocarbon nC6-nC35	70.8	10.0	n	11	u	н	"	н	
Surrogate: 1-Chlorooctane		94.0 %	70-1	130	"	"	"	"	
Surrogate: 1-Chlorooctadecane		95.6 %	70-1	130	"	"	"	"	
BH-14 20-21' (6G07010-02) Soil									

Carbon Ranges C6-C12	ND	10.0 m	ng/kg dry	1	EF62601	07/07/06	07/08/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	н	11	"	u	"		
Carbon Ranges C28-C35	ND	10.0	n	11	11	II.	11		
Total Hydrocarbon nC6-nC35	ND	10.0	"	11	n 	0	11	n 	
Surrogate: 1-Chlorooctane		98.0 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		98.2 %	70-130		"	"	"	"	

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Larson & Associates, Inc. P.O. Box 50685 Midland TX, 79710

Project: John Hendrix/ Elliott B-9 #1, #4, & #5 Project Number: 6-0104-01 Project Manager: Mark Larson

Ger	neral Chem	istry Para Environi	meters h mental L	oy EPA ab of T	/ Stand Texas	ard Met	hods		
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH-14 15-16 (6G07010-01) Soil									····
Chloride	6590	20.0	mg/kg Wet	2	EG61003	07/10/06	07/11/06	SW 846 9253	
% Moisture	7.4	0.1	%	1	EG61010	07/07/06	07/10/06	% calculation	
BH-14 20-21' (6G07010-02) Soil									_
Chloride	5320	20.0	mg/kg Wet	2	EG61003	07/10/06	07/11/06	SW 846 9253	
% Moisture	7.5	0.1	%	1	EG61010	07/07/06	07/10/06	% calculation	

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Project: John Hendrix/ Elliott B-9 #1, #4, & #5 Project Number: 6-0104-01 Project Manager: Mark Larson

Organics by GC - Quality Control

Analyte	Result	Reporting Limit	Unite	Spike Level	Source Result	%REC	%REC	RPD	RPD Limit	Notes
						/01/20				
Batch EF62601 - Solvent Extraction ((GC)						— <u> </u>		<u></u>	
Blank (EF62601-BLK1)				Prepared:	07/07/06	Analyzed	1: 07/08/06		·	<u></u>
Carbon Ranges C6-C12	ND	10.0	mg/kg wet							
Carbon Ranges C12-C28	ND	10.0	14							
Carbon Ranges C28-C35	ND	10.0	H							
Total Hydrocarbon nC6-nC35	ND	10.0	и							
Surrogate: 1-Chlorooctane	47.9		mg/kg	50.0		95.8	70-130		··	
Surrogate: 1-Chlorooctadecane	47.0		"	50.0		94.0	70-130			
LCS (EF62601-BS1)				Prepared:	07/07/06	Analyzed	1: 07/08/06			
Carbon Ranges C6-C12	511	10.0	mg/kg wet	500		102	75-125			
Carbon Ranges C12-C28	517	10.0		500		103 .	75-125			
Carbon Ranges C28-C35	ND	10.0	н	0.00			75-125			
Total Hydrocarbon nC6-nC35	1030	10.0	**	1000		103	75-125			
Surrogate: 1-Chlorooctane	56.8		mg/kg	50.0		114	70-130			
Surrogate: 1-Chlorooctadecane	48.1		"	50.0		96.2	70-130			
Calibration Check (EF62601-CCV1)				Prepared:	07/07/06	Analyzed	1: 07/10/06			
Carbon Ranges C6-C12	272		mg/kg	250		109	80-120			
Carbon Ranges C12-C28	277		"	250		111	80-120			
Total Hydrocarbon nC6-nC35	549		11	500		110	80-120			
Surrogate: 1-Chlorooctane	46.9		"	50.0		93.8	70-130			
Surrogate: 1-Chlorooctadecane	44.9		"	50.0		89.8	70-130			
Matrix Spike (EF62601-MS1)	So	urce: 6G070)10-02	Prepared:	: 07/07/06	Analyzed	1: 07/08/06			
Carbon Ranges C6-C12	509	. 10.0	mg/kg dry	541	ND	94.1	75-125			
Carbon Ranges C12-C28	521	10.0	11	541	ND	96.3	75-125			
Carbon Ranges C28-C35	ND	10.0	0	0.00	ND		75-125			
Total Hydrocarbon nC6-nC35	1030	10.0		1080	ND	95.4	75-125			
Surrogate: 1-Chlorooctane	55.8		mg/kg	50.0		112	70-130			
Surrogate: I-Chlorooctadecane	48.6		"	50.0		97.2	70-130			

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Larson & Associates, Inc. P.O. Box 50685 Midland TX, 79710

Project: John Hendrix/ Elliott B-9 #1, #4, & #5 Project Number: 6-0104-01 Project Manager: Mark Larson

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 EF62601 - Solvent Extraction (GC)

Matrix Spike Dup (EF62601-MSD1)	Sour	ce: 6G070	10-02	Prepared:	07/07/06	Analyzed	07/08/06		
Carbon Ranges C6-C12	513	10.0	mg/kg dry	541	ND	94.8	75-125	0.783	20
Carbon Ranges C12-C28	522	10.0	11	541	ND	96.5	75-125	0.192	20
Carbon Ranges C28-C35	ND	10.0	н	0.00	ND		75-125		20
Total Hydrocarbon nC6-nC35	1040	10.0		1080	ND	96.3	75-125	0.966	20
Surrogate: 1-Chlorooctane	58.7		mg/kg	50.0		117	70-130		
Surrogate: 1-Chlorooctadecane	49.6		"	50.0		<i>99.2</i>	70-130		

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General Chemis	stry Param E	eters by EPA / S nvironmental L	Standar ab of To	d Meth exas	ods - Q	Quality (Contro	l	
Analyte	Result	Reporting Limit Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EG61003 - General Preparatio	n (WetChem)		<u> </u>	• • •				
Biank (EG61003-BLK1)	<u>`</u>		Prepared:	07/10/06	Analyzed	: 07/11/06			
Chloride	ND	20.0 mg/kg Wet	•						
LCS (EG61003-BS1)			Prepared	& Analyz	ed: 07/11/	06			
Chloride	83.0	mg/kg	100	······	83.0	80-120			
Matrix Spike (EG61003-MS1)	Sou	rce: 6G07006-01	Prepared:	07/10/06	Analyzed	l: 07/11/06			
Chloride	17800	20.0 mg/kg Wet	500	17200	120	80-120			
Matrix Spike Dup (EG61003-MSD1)	Sou	rce: 6G07006-01	Prepared:	07/10/06	Analyzed	1: 07/11/06			
Chloride	17800	20.0 mg/kg Wet	500	17200	120	80-120	0.00	20	
Reference (EG61003-SRM1)			Prepared	& Analyz	ed: 07/11/	06			
Chloride	50.0	mg/kg	50.0	<i>`</i>	100	80-120			
Batch EG61010 - General Preparatio	on (Prep)				·				
Blank (EG61010-BLK1)			Prepared	07/07/06	Analyzed	1: 07/11/06			
% Moisture	ND	0.1 %							
Duplicate (EG61010-DUP1)	Sou	irce: 6G07002-01	Prepared	: 07/07/06	Analyzed	1: 07/10/06			
% Solids	92.8	%		94.6			1.92	20 ·	
Duplicate (EG61010-DUP2)	Sou	irce: 6G07004-12	Prepared	: 07/07/06	Analyzed	i: 07/10/06			
% Solids	86.8	%		87.8			1.15	20	
Duplicate (EG61010-DUP3)	Sou	irce: 6G07007-03	Prepared	: 07/07/06	Analyzed	d: 07/10/06			
% Solids	90.1	%		89.0			1.23	20	

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Midland TX, 79710		Project Man	ager: M	ark Larson					·	
General Che	emistry Param F.	eters by nvironm	EPA / ental l	Standar Jab of T	[.] d Meth exas	ods - Q	Quality (Contro	l	
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Not
Batch EG61010 - General Prepar	ation (Prep)									
Duplicate (EG61010-DUP4)	Sou	rce: 6G0701	12-03	Prepared:	07/07/06	Analyzed	1: 07/10/06	<u>-</u>	•	
% Solids	95.2		%		94.0			1.27	20	
									×	
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12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Project: John Hendrix/ Elliott B-9 #1, #4, & #5 Project Number: 6-0104-01 Project Manager: Mark Larson

Notes and Definitions

J Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).

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

dry Sample results reported on a dry weight basis

- RPD Relative Percent Difference
- LCS Laboratory Control Spike
- MS Matrix Spike

Dup Duplicate

Report Approved By: Kalandk Juli 7-12-06 Date:

Raland K. Tuttle, Lab Manager Celey D. Keene, Lab Director, Org. Tech Director Peggy Allen, QA Officer Jeanne Mc Murrey, Inorg. Tech Director LaTasha Cornish, Chemist Sandra Sanchez, Lab Tech.

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

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Page 8 of 8

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

Dirent.	Larson	
Sate/Time:	7/7/06	11:10
rder #:	6407010	
	rk_	

Sample Receipt Checklist

Temperature of container/cooler?	Yes	No	4.0 CI
hipping container/cooler in good condition?	1 XES	No	
Custody Seals intact on shipping container/cooler?	Yes	No	Not present
Custody Seals intact on sample bottles?	Yes	No	Not present
hain of custody present?	Xes	No	
ample Instructions complete on Chain of Custody?	2005	No	
Chain of Custody signed when relinquished and received?	Yes	No	
hain of custody agrees with sample label(s)	Fes	No	ED on lid
Container labels legible and intact?	Yes	No No	
Sample Matrix and properties same as on chain of custody?	200	No No	
Samples in proper container/bottle?	1 235	I No	
amples properly preserved?	155	No	
Sample bottles intact?	Yes	No	
Preservations documented on Chain of Custody?	1 C	I No	
Containers documented on Chain of Custody?	YES	No	1
Sufficient sample amount for indicated test?	Yes	No	
All samples received within sufficient hold time?	125	I No	
NOC samples have zero headspace?	Yes	No	Nct Applicable

Other observations:

 Variance Documentation:

 Contact Person: -_____Date/Time: _____Contacted by: _____

 Regarding:

 ______Corrective Action Taken:

-OFCUSTODY RECORD	1 & 10 & 10 & 10 & 10 & 10 & 10 & 10 &	enteld, Ste. 202 • Midland, IX 79/01	Remarks (I.E., Filtered, Unfiltered, Preserved, Unipreserved, Grab Composite)	-01	2 2							ature) DAIE:	V: (Circle)	BUS AIRBILL #:	UPS OTHER: NG LAB	NG LAB (I'U BE KETUKNEU TO ER RECEIPT) ET MANAGER COORDINATOR	1
CHAIN-		507 N. Marie	Lab. I.D. Number (Lab Use only)	iegonao	.							RECEIVED BY: (Signo	SAMPLE SHIPPED B	FEDEX	WHITE - RECEIVIT	TELLOW - RECEIVII LA AFTE PINK PROJEC GOLD - QA/QC	SAMPLE TYPE:
PARAMETERS/METHOD NUMBEI	оитыиекs 502.1 в 15660 161	0FC (8 (3 (8)	C H LL M PLEX	77	> >) BY: (Signature) DATE: TIME:	Signature) DATE:	TIME	TURNAROUND TIME NEEDED	CEIVED BY: (Signature) CULLU KULL ATE: 7/17/0/1 TIME: 11:10	LA CONTACT PERSON:
SITE MANAGER: Mark Lander	PROJECT NAME: Elicti B-9, "1, "5;	B. PO #	SAMPLE IDENTIFICATION	BH- 14, 15-16	BH-14, Zo-Zu:						././.	DATE: Y 3/06 RELINQUISHEE	DATE: 11/04 RECEIVED BY:			-ZOE -ZOE RE	
NAME: NAME: Hendrus Gry	ECT NO: 6 - 0 104 - 0 1	I OF Î LAB	23440 1105 2017 2017 31111	X 828	X Key							PLED BY: (Signature)	NaUISHED BY: (Signature)	Þ	MMENTS:	RESS. 12600 LT. 1	PLE CONDITION WHEN RECEIVED:

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Analytical Report

Prepared for:

Mark Larson Larson & Associates, Inc. P.O. Box 50685 Midland, TX 79710

Project: John Hendrix/ Elliott B-9 #1, #4, & #5 Project Number: 6-0104-01 Location: None Given

Lab Order Number: 6G14012

Report Date: 07/20/06

Larson & Associates, Inc. P.O. Box 50685 Midland TX, 79710

Project: John Hendrix/ Elliott B-9 #1, #4, & #5 Project Number: 6-0104-01 Project Manager: Mark Larson

Fax: (432) 687-0456

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH-16 5-6'	6G14012-01	Soil	06/28/06 13:01	06/30/06 11:12
BH-16 10-11'	6G14012-02	Soil	06/28/06 13:05	06/30/06 11:12
BH-18 5-6'	6G14012-03	Soil	06/28/06 14:18	06/30/06 11:12
BH-19 5-6'	6G14012-04	Soil	06/28/06 14:57	06/30/06 11:12

Organics by GC Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH-16 5-6' (6G14012-01) Soil						······································	· · · · ·	······································	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EG61714	07/17/06	07/17/06	EPA 8015M	O-04
Carbon Ranges C12-C28	ND	10.0	U.	н	Ħ	n	и	"	O-04
Carbon Ranges C28-C35	ND	10.0	"	11	н	17	н	it i	O-04
Total Hydrocarbon nC6-nC35	ND	10.0	и	H	"	н	"		O-04
Surrogate: 1-Chlorooctane		91.2 %	70-1	30	n	"	u u	"	<i>O-04</i>
Surrogate: 1-Chlorooctadecane		86.4 %	70-1	30	n	"	"	"	<i>O-04</i>
BH-16 10-11' (6G14012-02) Soil									
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EG61714	07/17/06	07/17/06	EPA 8015M	O-04
Carbon Ranges C12-C28	ND	10.0	11	**	"		u	"	O-04
Carbon Ranges C28-C35	ND	10.0	**		н		н	"	O-04
Total Hydrocarbon nC6-nC35	ND	10.0	и	"	u	н	19	11	O-04
Surrogate: 1-Chlorooctane		70.8 %	70-1	30	"	"	"	"	<i>O-04</i>
Surrogate: 1-Chlorooctadecane		71.2 %	70-1	30	"	"	"	"	<i>O-04</i>
BH-18 5-6' (6G14012-03) Soil									
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EG61714	07/17/06	07/17/06	EPA 8015M	O-04
Carbon Ranges C12-C28	65.4	10.0	u				n	H 1	O-04
Carbon Ranges C28-C35	ND	10.0	н	n	**	н	"	n	O-04
Total Hydrocarbon nC6-nC35	65.4	10.0	11		11	н	11	"	O-04
Surrogate: 1-Chlorooctane		86.8 %	70-1	30	"	"	"	"	<i>O-04</i>
Surrogate: 1-Chlorooctadecane		88.2 %	70-1	30	"	"	"	"	<i>O-04</i>
BH-19 5-6' (6G14012-04) Soil									
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EG61714	07/17/06	07/17/06	EPA 8015M	O-04
Carbon Ranges C12-C28	ND	10.0		н	u	n.	17	U.	O-04
Carbon Ranges C28-C35	ND	10.0			u	"	"	u	O-04
Total Hydrocarbon nC6-nC35	ND	10.0	n	"	łł	"	и	11	O-04
Surrogate: 1-Chlorooctane		91.4 %	70-1	130	"	"	"	"	0-04
Surrogate: 1-Chlorooctadecane		88.4 %	70	130	"	"	"	"	<i>O-04</i>

Environmental Lab of Texas

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Larson & Associates, Inc. P.O. Box 50685 Midland TX, 79710 Project: John Hendrix/ Elliott B-9 #1, #4, & #5 Project Number: 6-0104-01 Project Manager: Mark Larson

Ger	ieral Chem	istry Parar	neters	by EPA	/ Stand	ard Metl	hods		
		Environm	iental I	Lab of]	fexas				
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
BH-16 5-6' (6G14012-01) Soil									
Chloride	99.1	10.0	mg/kg	20	EG61910	07/19/06	07/19/06	EPA 300.0	
% Moisture	11.2	0.1	%	1	EG61801	07/17/06	07/18/06	% calculation	
BH-16 10-11' (6G14012-02) Soil									
Chloride	544	10.0	mg/kg	20	EG61910	07/19/06	07/19/06	EPA 300.0	
% Moisture	9.3	0.1	%	1	EG61801	07/17/06	07/18/06	% calculation	
BH-18 5-6' (6G14012-03) Soil									
Chloride	34.7	5.00	mg/kg	10	EG61910	07/19/06	07/19/06	EPA 300.0	
% Moisture	22.8	0.1	%	1	EG61801	07/17/06	07/18/06	% calculation	
BH-19 5-6' (6G14012-04) Soil									
Chloride	15.2	5.00	mg/kg	10	EG61910	07/19/06	07/19/06	EPA 300.0	
% Moisture	12.9	0.1	%	1	EG61801	07/17/06	07/18/06	% calculation	

Environmental Lab of Texas

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Project: John Hendrix/ Elliott B-9 #1, #4, & #5 Project Number: 6-0104-01 Project Manager: Mark Larson

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 EG61714 - Solvent Extraction ((GC)									
Blank (EG61714-BLK1)				Prepared a	& Analyze	:d: 07/17/0)6			
Carbon Ranges C6-C12	ND	10.0	mg/kg wet							
Carbon Ranges C12-C28	ND	10.0	11							
Carbon Ranges C28-C35	ND	10.0	"							
Total Hydrocarbon nC6-nC35	ND	10.0	н							
Surrogate: 1-Chlorooctane	54.7		mg/kg	50.0		109	70-130			
Surrogate: 1-Chlorooctadecane	54.9		n	50.0		110	70-130			
LCS (EG61714-BS1)				Prepared	& Analyze	:d: 07/17/0	06			
Carbon Ranges C6-C12	517	10.0	mg/kg wet	500	*	103	75-125			
Carbon Ranges C12-C28	501	10.0	"	500		100	75-125			
Carbon Ranges C28-C35	ND	10.0	"	0.00			75-125			
Total Hydrocarbon nC6-nC35	1020	10.0	н	1000		102	75-125			
Surrogate: 1-Chlorooctane	61.5		mg/kg	50.0		123	70-130			
Surrogate: 1-Chlorooctadecane	61.6		"	50.0		123	70-130			
Calibration Check (EG61714-CCV1)		_		Prepared:	07/17/06	Analyzed	1: 07/18/06			
Carbon Ranges C6-C12	230		mg/kg	250		92.0	80-120		·····	
Carbon Ranges C12-C28	270		"	250		108	80-120			
Total Hydrocarbon nC6-nC35	500		11	500		100	80-120		;	
Surrogate: 1-Chlorooctane	39.1		"	50.0		78.2	70-130			
Surrogate: 1-Chlorooctadecane	40.7		"	50.0		81.4	70-130			
Matrix Spike (EG61714-MS1)	So	urce: 6G14()12-01	Prepared:	07/17/06	Analyzed	1: 07/18/06	I		
Carbon Ranges C6-C12	532	10.0	mg/kg dry	563	ND	94.5	75-125			
Carbon Ranges C12-C28	527	10.0	"	563	ND	93.6	75-125			
Carbon Ranges C28-C35	ND	10.0	"	0.00	ND		75-125			
Total Hydrocarbon nC6-nC35	1060	10.0	. н	1130	ND	93.8	75-125			
Surrogate: 1-Chlorooctane	58.1		mg/kg	50.0		116	70-130			
Surrogate: 1-Chlorooctadecane	52.5		"	50.0		105	70-130			

Environmental Lab of Texas

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Larson & Associates, Inc. P.O. Box 50685 Midland TX, 79710 Project: John Hendrix/ Elliott B-9 #1, #4, & #5 Project Number: 6-0104-01 Project Manager: Mark Larson

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 EG61714 - Solvent Extraction (GC)									
Matrix Spike Dup (EG61714-MSD1)	Sour	rce: 6G140	12-01	Prepared:	07/17/06	Analyzed	: 07/18/06			
Carbon Ranges C6-C12	515	10.0	mg/kg dry	563	ND	91.5	75-125	3.25	20	
Carbon Ranges C12-C28	522	10.0	"	563	ND	92.7	75-125	0.953	20	
Carbon Ranges C28-C35	ND	10.0		0.00	ND		75-125		20	
Total Hydrocarbon nC6-nC35	1040	10.0	н	1130	ND	92.0	75-125	1.90	20	
Surrogate: 1-Chlorooctane	55.3		mg/kg	50.0		111	70-130			
Surrogate: 1-Chlorooctadecane	51.2		"	50.0		102	70-130			

Environmental Lab of Texas

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Page 5 of 8

General Chemis	stry Param	eters by	EPA /	Standar	d Meth	ods - Q	uality (Control	l	
	Ε	nvironm	ental I	Lab of T	exas					
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EG61801 - General Preparation	n (Prep)									
Blank (EG61801-BLK1)				Prepared:	07/17/06	Analyzed	: 07/ 18 /06			
% Solids	98.8		%						· · · · ·	
Duplicate (EG61801-DUP1)	Sou	rce: 6G170	02-01	Prepared:	07/17/06	Analyzed	l: 07/18/06			
% Solids	94.2		%		94.4			0.212	20	
Duplicate (EG61801-DUP2)	Sou	rce: 6G140	12-01	Prepared:	07/17/06	Analyzed	I: 07/18/06			
% Solids	90.2		%		88.8			1.56	20	
Batch EG61910 - General Preparatio	n (WetChem)								
Blank (EG61910-BLK1)				Prepared	& Analyz	ed: 07/19/	06			
Chloride	ND	0.500	mg/kg							
LCS (EG61910-BS1)				Prepared	& Analyz	ed: 07/19/	06			
Chloride	10.2	0.500	mg/kg	10.0		102	80-120			
Calibration Check (EG61910-CCV1)				Prepared	& Analyz	ed: 07/19/	06			
Chloride	10.2		mg/L	10.0		102	80-120			·····
Duplicate (EG61910-DUP1)	Sou	rce: 6G140	12-02	Prepared	& Analyz	ed: 07/19/	06			
Chloride	542	10.0	mg/kg		544			0.368	20	
Duplicate (EG61910-DUP2)	Sou	rce: 6G140	08-03	Prepared	& Analyz	ed: 07/19/	06		·	
Chloride	63.5	5.00	mg/kg		67.2			5.66	20	
Matrix Spike (EG61910-MS1)	Sou	rce: 6G140	12-02	Prepared	& Analyz	ed: 07/19/	'06			
Chloride	796	10.0	mg/kg	200	544	126	80-120		4 4.7	S-0

Environmental Lab of Texas

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1.18

Midland TX, 79710 Project Manager: Mark Larson General Chemistry Parameters by EPA / Standard Methods - Quality Control **Environmental Lab of Texas** Spike Reporting Source %REC RPD RPD Result Limit Units Level Result %REC Limits Limit Notes Analyte Batch EG61910 - General Preparation (WetChem) Prepared & Analyzed: 07/19/06 Matrix Spike (EG61910-MS2) Source: 6G14008-03 5.00 100 67.2 101 80-120 168 mg/kg Chloride

Environmental Lab of Texas

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Notes and Definitions

S-07	Recovery outside Laboratory historical or method prescribed limits.
O-04	This sample was analyzed outside the EPA recommended holding time.
DET .	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit

- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference
- LCS Laboratory Control Spike
- MS Matrix Spike
- Dup Duplicate

Report Approved By:

Raland K. Tuttle, Lab Manager Celey D. Keene, Lab Director, Org. Tech Director Peggy Allen, QA Officer Jeanne Mc Murrey, Inorg. Tech Director LaTasha Cornish, Chemist Sandra Sanchez, Lab Tech.

Date:

7-20-06

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.

Kalandk tur

Environmental Lab of Texas

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NAME:	SITE MANAGER:	PARAMETERS/METHOD NUMB	ER CHAIN-OF-CUSTODY RECOR
A. H. H. Hendux TNO: OTUTA OT	FIGNIR LONDON PROJECT NAME 4 1, 44 Ellivet B-9 2 45	VITAINERS	A arson & A32-687-0456 Environmental Consultants 432-687-0901
C OF C IA	(B. PO #	1 «1 3) X 3(51 %)	507 N. Marienfeld, Ste. 202 • Midland, TX 7970
105 105 30112 30112	SAMPLE IDENTIFICATION	С Г 17 17 17 17 17 17 17 17 17 17 17 17 17	LAB. I.D. REMARKS NUMBER I.E., FILTERED, UNFILTERED, FRESERVED, UNPRESERVED, (LAB. USE ONLY) GRAB COMPOSITE)
	<u>Bu-17, 0-2'</u>	7 7 -	-41 164 2012-
	BH-17, 5-7'	£	22
13.7	BH-17, 10-11'		
14 iC	17-0 'AI-19	>X ,X	14 (50 HOLZ -03
11 11	6H - 18 10 - 11'		
	811-19 0-Z'	7	76
	611-19 5-0	X	- 74 -04
	PH-10 10-18, 11. 250		
1510	BH - 20, 9-21 4	· · · · · · · · · · · · · · · · · · ·	
+	11-5° 5-11	<i>, , , , , , , , , ,</i>	
ED BY: (Signature)	DATE 15/2 RELINQUISHE	D BY: (Signature) DATE: DATE: TIME:	RECEIVED BY: (Signature) DATE: TIME:
JUISHED BY: (Signature)	DATE 1 2 0 00 RECEIVED BY:	(Signature) DATE:	SAMPLE SHIPPED BY: (Circle)
	TIME	TIME	FEDEX BUS AIRBILL #:
AENTS:			V (HAND DELIVERED UPS VI HEK: WHITE - RECEIVING LAB YFILOW - RECEIVING LAB (TO BE RETLIRNED TO
ING LABORATORY: 1-1	T1 1-26 51ATE: T2 51ATE: T2 219:75 72 7, 2, 3, 1966 0	ECEIVED BY: (Signature)	LA AFTER RECEIPT) PINK – PROJECT MANAGER GOLD – QA/QC COORDINATOR
CONDITION WHEN RECEIVED:	100 TAT T 100 1 T	LA CONTACT PERSON:	SAMPLE TYPE:
hickory 1.0			

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ETTE <u>UF360(2</u> / <u>UG11/2</u> EIS <u>UF360(2</u> / <u>UG11/2</u>) EIS <u>Sample Receipt Checklist</u> Derature of container/cooler? Yes I coing container/cooler? Yes I tody Seals intact on shipping container/cooler? Yes I tody Seals intact on sample bottles? Yes I in of custody present? nole Instructions complete on Chain of Custody? an of custody agrees with sample label(s) ntainer labels legible and intact? Tole Matrix and properties same as on chain of custody? Toles in proper container/bottle? Toles in proper container/bottle? Toles in proper container/bottle? Toles coperty preserved? Tole bottles intact? Toles bottles intact? Toles coperty preserved? Toles bottles intact? Toles coperty preserved? Toles bottles intact? Toles bottles bottles bottles Toles bottles inta			· · · · · · · · · · · · · · · · · · ·
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nole Matrix and procerties same as on chain of custody?		<u>LOONIA</u>	_ *
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	No .		-
ntainers documented on Chain of Custody?	No		-
ficient sample amount for indicated test?	No	}	
samples received within sufficient hold time?	No		_
C samples have zero headspace?	Nc	Not Applicable	_
Variance Decumentation			
Contact Person <u>Mark Larson</u> Date: Time: 67-64-66-06928	· · · 2	Contacted by	Carne Kel
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	<u> zup</u>	دار	

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Jeanne McMurrey

From: To: Sent: Subject:

"Mark Larson" <mark@laenvironmental.com> "Jeanne McMurrey" <jeanne@elabtexas.com> Tuesday, July 04, 2006 9:28 PM RE: COC's Received on 6/30/06



-----Original Message-----From: Jeanne McMurrey [mailto:jeanne@elabtexas.com] Sent: Monday, July 03, 2006 8:39 AM To: Mark Larson Subject: RE: COC's Received on 6/30/06

Hello Mark,

There were a few sample name and/or time discrepancies on the COC's received on Friday. Please reply to this e-mail and let me know which times or name you would like for us to use. Thank you.

Project Name	Labels	COC	Correct
JH/ Ell. B-9 #1,4, 5	BH-19 10-11'	BH-19 10-18	BH-19, 10-11'
JH/ Ell. B-9 #2, 3	BH-5 0-2' 10:24	BH-5 0-2' 10:42	BH-5, 0-2' 10:42
Penrose Federal #1	BH-30 10-11	BH-30 10-12'	BH-30, 10-12'
Penrose Federal #1 6/29/06	Dated all 6/29/06	Front page all 6/28/0	6 Front page should be

Jeanne McMurrey Environmental Lab of Texas I, Ltd. 12600 West I-20 East Odessa, Texas 79765 432-563-1800

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This message has been scanned for viruses and dangerous content by **BasinBroadband**, and is believed to be clean.

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Jeanne McMurrey

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From:	"Mark Larson" <mark@laenvironmental.com></mark@laenvironmental.com>
To:	"Jeanne McMurrey" <jeanne@elabtexas.com></jeanne@elabtexas.com>
Sent:	Friday, July 14, 2006 3:53 PM
Subject:	RE: Additional Analysis, Report #6F30012 and #6G07010
Jeanne: f Mark	Please run the TPH and chloride.
Origi	nal Message
From: Jea	anne McMurrey [mailto:jeanne@elabtexas.com]
Sent: Fria	day, July 14, 2006 12:30 PM
To: Mark	Larson
Subject:	Re: Additional Analysis, Report #6F30012 and #6G07010
Hi Mark, The TPH on 06/28 Let me kr Thanks, Jeanne	8015 Have gone beyond the 14 day hold time for Lab #6F30012 sampled . The chlorides are fine. Do you still want to run the TPH 8015? how.
Jeanne N	AcMurrey
Environm	ental Lab of Texas I, Ltd.
12600 W	est I-20 East
Odessa,	Texas 79765
432-563	-1800
Orig	ginal Message
From: "M	hark Larson" < <u>mark@laenvironmental.com</u> >
To: <jean< td=""><td><u>ne@elabtexas.com</u>></td></jean<>	<u>ne@elabtexas.com</u> >
Sent: Fri	day, July 14, 2006 11:28 AM
Subject:	Re: Additional Analysis, Report #6F30012 and #6G07010
> Jeanne	Please run the following samples for TPH (8015) and chloride:
> BH-16,	5 to 6'

a inter to had to a

11

> BH-16, 10 - 11'

- > BH-18, 5 6'
- > BH-19, 5 6'
- > Please call me if you have questions.

anne McMurrey 10

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Jeannei	nemarcy			· · · · · · · · · · · · · · · · · · ·
From: To: Sent: Subject:	"Mark Larson" <mark@ "'Jeanne McMurrey'' Tuesday, July 04, 200 RE: COC's Received</mark@ 	©laenvironmental.com> ≤jeanne@elabtexas.com≥ 6 9:28 PM on 6/30/06	>	
C From Sent To: N Subj	Driginal Message 1: Jeanne McMurrey [ma 1: Monday, July 03, 2006 Mark Larson 1: RE: COC's Receive	ailto:jeanne@elabtexas.c 8:39 AM d on 6/30/06	om]	PY
Hello	o Mark,			
Ther	e were a few sample n to this e-mail and let	ame and/or time discrep me know which times or	pancies on the COC's r name you would like	received on Friday. Please for us to use. Thank you.
Proju JH/ JH/ Penr 6/29	<u>ect Name</u> Ell. B-9 #1,4, 5 Ell. B-9 #2, 3 ose Federal #1 ose Federal #1 /06	<u>Labels</u> BH-19 10-11' BH-5 0-2' 10:24 BH-30 10-11' Dated all 6/29/06	<u>COC</u> BH-19 10-18' BH-5 0-2' 10:42 BH-30 10-12' Front page all 6/28/	<u>Correct</u> BH-19, 10-11' BH-5, 0-2' 10:42 BH-30, 10-12' '06 Front page should be
Jean Envi 1260 Ode 432	nne McMurrey ironmental Lab of Texc 00 West I-20 East essa, Texas 79765 1-563-1800	ns I, Ltd.		
 Thi dar bel	is message has bee ngerous content by lieved to be clean.	n scanned for viruse BasinBroadband , ar	es and nd is	
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Jeanne McMurrey

From:	"Mark Larson" <mark@laenvironmental.com></mark@laenvironmental.com>
To:	"Jeanne McMurrey" <jeanne@elabtexas.com></jeanne@elabtexas.com>
Sent:	Friday, July 14, 2006 12:24 PM
Subject:	RE: Additional Analysis, Report 6F30010 and6G07009

Jeanne, Let's run the TPH and chloride. Mark

-----Original Message-----

From: Jeanne McMurrey [mailto:jeanne@elabtexas.com] Sent: Friday, July 14, 2006 12:05 PM To: Mark Larson Subject: Re: Additional Analysis, Report 6F30010 and6G07009

Hi Mark,

The additional analysis request for TPH 8015 for Lab #6F30010 are beyond the 14 day hold time. The samples were taken 06/26 & 06/27. The chlorides are fine. Do you still want to analyze for TPH 8015? Please let me know. Thanks, Jeanne

Jeanne McMurrey Environmental Lab of Texas I, Ltd. 12600 West I-20 East Odessa, Texas 79765 432-563-1800 ----- Original Message -----From: "Mark Larson" <<u>mark@laenvironmental.com</u>> To: <jeanne@elabtexas.com> Sent: Friday, July 14, 2006 11:25 AM Subject: Re: Additional Analysis, Report 6F30010 and6607009

> Jeanne: Please run the additional samples for TPH (DRO and GRO) and
 > chloride:

> Chionae

- > BH-1, 5 7'
- > BH-2, 5 6'
- > BH-3, 5 6'
- > BH-5, 5 7'

> BH-6, 5 - 7'
> Please call me if you have questions.
> Mark
>
> -> This message has been scanned for viruses and
> dangerous content by Basin Broadband, and is
> believed to be clean.

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This message has been scanned for viruses and dangerous content by Basin Broadband, and is believed to be clean.


Analytical Report

Prepared for:

Mark Larson Larson & Associates, Inc. P.O. Box 50685 Midland, TX 79710

Project: John Hendrix/ Elliott B-9 #1, #4, & #5 Project Number: 6-0102-01 Location: None Given

Lab Order Number: 6J06021

Report Date: 10/12/06

Larson & Associates, Inc. P.O. Box 50685 Midland TX, 79710 Project: John Hendrix/ Elliott B-9 #1, #4, & #5 Project Number: 6-0102-01 Project Manager: Mark Larson

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH-14, 25'	6J06021-01	Soil	10/04/06 15:44	10-06-2006 16:45
BH-14, 30'	6J06021-02	Soil	10/04/06 15:50	10-06-2006 16:45
BH-14, 35'	6J06021-03	Soil	10/04/06 16:00	10-06-2006 16:45
BH-14, 40'	6J060 21- 04	Soil	10/04/06 16:10	10-06-2006 16:45

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Project: John Hendrix/ Elliott B-9 #1, #4, & #5 Project Number: 6-0102-01 Project Manager: Mark Larson

		Or	ganics b	y GC					
		Environn	nental L	ab of T	exas				
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH-14, 25' (6J06021-01) Soil									
Carbon Ranges C6-C10	ND	10.0	mg/kg dry	1	EJ60902	10/09/06	10/09/06	EPA 8015B	
Carbon Ranges >C10-C28	ND	10.0		"	"	н		11	
Total Carbon Range C6-C28	ND	10.0	u	u	u	n	**	U	
Surrogate: 1-Chlorooctane		116 %	70	130	"	"	"	"	
Surrogate: 1-Chlorooctadecane		102 %	70	130	"	"	"	"	
BH-14, 30' (6J06021-02) Soil									
Carbon Ranges C6-C10	ND	10.0	mg/kg dry	1	EJ60902	10/09/06	10/09/06	EPA 8015B	
Carbon Ranges >C10-C28	57.0	10.0		0	н	"	"	н	
Total Carbon Range C6-C28	57.0	10.0	н	н	11	H	11	n	
Surrogate: 1-Chlorooctane		123 %	70-	130	"	"	"	"	
Surrogate: 1-Chlorooctadecane		112 %	70-	130	"	"	"	"	
BH-14, 35' (6J06021-03) Soil									
Carbon Ranges C6-C10	ND	10.0	mg/kg dry	1	EJ60902	10/09/06	10/09/06	EPA 8015B	
Carbon Ranges >C10-C28	53.4	10.0		"	11	"	"		
Total Carbon Range C6-C28	53.4	10.0	0	If		11	u.	'n	
Surrogate: 1-Chlorooctane		90.4 %	70-	130	"	"	"	"	
Surrogate: 1-Chlorooctadecane		81.6 %	70-	130	"	"	"	"	
BH-14, 40' (6J06021-04) Soil									
Carbon Ranges C6-C10	ND	10.0	mg/kg dry	1	EJ60902	10/09/06	10/10/06	EPA 8015B	
Carbon Ranges >C10-C28	ND	10.0	я	н		и	n	11	
Total Carbon Range C6-C28	ND	10.0	U	"	Ħ	н	и	н	
Surrogate: 1-Chlorooctane	· · · · · · · · · · · · · · · · · · ·	94.8 %	70-	130	"	"	"	"	

84.0 %

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Surrogate: 1-Chlorooctadecane

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
BH-14, 25' (6J06021-01) Soil									
Chloride	2980	20.0	mg/kg Wet	2	EJ60903	10/09/06	10/09/06	SW 846 9253	
% Moisture	2.9	0.1	%	1	EJ60612	10/06/06	10/08/06	% calculation	
BH-14, 30' (6J06021-02) Soil	·····								
Chloride	2230	20.0	mg/kg Wet	2	EJ60903	10/09/06	10/09/06	SW 846 9253	
% Moisture	1.2	0.1	%	1	EJ60612	10/06/06	10/08/06	% calculation	
BH-14, 35' (6J06021-03) Soil					-				
Chloride	1700	20.0	mg/kg Wet	2	EJ60904	10/09/06	10/09/06	SW 846 9253	
% Moisture	1.2	0.1	%	1	EJ60612	10/06/06	10/08/06	% calculation	
BH-14, 40' (6J06021-04) Soil									
Chloride	1600	20.0	mg/kg Wet	2	EJ60904	10/09/06	10/09/06	SW 846 9253	
% Moisture	0.7	0.1	%	1	EJ60612	10/06/06	10/08/06	% calculation	

Environmental Lab of Texas

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Organics by GC - Quality Control -

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EJ60902 - Solvent Extraction (GC)		<u></u>							
Blank (EJ60902-BLK1)				Prepared a	& Analyze	ed: 10/09/()6			
Carbon Ranges C6-C10	ND	10.0	mg/kg wet		i					
Carbon Ranges >C10-C28	ND	10.0	н							
Total Carbon Range C6-C28	ND	10.0	n							
Surrogate: 1-Chlorooctane	48.9		mg/kg	50.0		97.8	70-130			
Surrogate: 1-Chlorooctadecane	44.1		"	50.0		88.2	70-130			
LCS (EJ60902-BS1)				Prepared a	& Analyz	ed: 10/09/0	06			
Carbon Ranges C6-C10	522	10.0	mg/kg wet	500		104	75-125			
Carbon Ranges >C10-C28	432	10.0	11	500		86.4	75-125			
Total Carbon Range C6-C28	954	10.0	14	1000		95.4	75-125			
Surrogate: 1-Chlorooctane	56.3		mg/kg	50.0		113	70-130			
Surrogate: 1-Chlorooctadecane	42.8		"	50.0		85.6	70-130			
Calibration Check (EJ60902-CCV1)				Prepared:	10/09/06	Analyzed	1: 10/10/06			
Carbon Ranges C6-C10	201		mg/kg	250		80.4	80-120			
Carbon Ranges >C10-C28	249		11	250		99.6	80-120			
Total Carbon Range C6-C28	450		"	500		90.0	80-120			
Surrogate: 1-Chlorooctane	52.8		"	50.0		106	70-130			
Surrogate: 1-Chlorooctadecane	46.0	•	"	50.0		. 92.0	70-130			
Matrix Spike (EJ60902-MS1)	Soi	ırce: 6J060	21-04	Prepared:	10/09/06	Analyzed	1: 10/10/06			
Carbon Ranges C6-C10	602	10.0	mg/kg dry	504	ND	119	75-125			
Carbon Ranges >C10-C28	537	10.0	11	504	ND	107	75-125			
Total Carbon Range C6-C28	1140	10.0	11	1010	ND	113	75-125			
Surrogate: 1-Chlorooctane	63.0		mg/kg	50.0		126	70-130			
Surrogate: 1-Chlorooctadecane	51.3		"	50.0		103	70-130			
Matrix Spike Dup (EJ60902-MSD1)	So	urce: 6J060	21-04	Prepared:	10/09/06	Analyzed	1: 10/10/06			
Carbon Ranges C6-C10	523	10.0	mg/kg dry	504	ND	104	75-125	14.0	20	
Carbon Ranges >C10-C28	466	10.0	"	504	ND	92.5	75-125	14.2	20	
Total Carbon Range C6-C28	989	10.0		1010	ND	97.9	75-125	14.2	20	
Surrogate: 1-Chlorooctane	55.9		mg/kg	50.0		112	70-130			anti
Surrogate: 1-Chlorooctadecane	41.0		"	50.0		82.0	70-130			

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

General Chemis	try Paran I	neters by Environm	EPA / ental l	Standar Lab of T	[.] d Meth exas	ods - Q	Quality (Contro	l	
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EJ60612 - General Preparation	(Prep)									
Blank (EJ60612-BLK1)				Prepared	& Analyze	ed: 10/06/0	06			
% Solids	99.8		%		······					
% Moisture	0.2	0.1	11							
Duplicate (EJ60612-DUP1)	So	urce: 6J0600	1-01	Prepared	& Analyze	ed: 10/06/0	06			
% Solids	89.6		%		90.0			0.445	20	
Duplicate (EJ60612-DUP2)	So	urce: 6J0502	1-03	Prepared	10/06/06	Analyzed	l: 10/10/06	5		
% Solids	76.1		%		76.1			0.00	20	
Duplicate (EJ60612-DUP3)	So	urce: 6J060(7-02	Prepared	10/06/06	Analyzed	1: 10/10/06			
% Solids	91.5		%		91.0			0.548	20	
Duplicate (EJ60612-DUP4)	So	urce: 6J050(8-12	Prepared	: 10/06/06	Analyzed	1: 10/10/06	5		
% Solids	92.7		%		91.7			1.08	20	
Duplicate (EJ60612-DUP5)	So	urce: 6J0602	20-02	Prepared	: 10/06/06	Analyzed	1: 10/10/06	5		
% Solids	94.1	*****	%		94.4			0.318	20	
Duplicate (EJ60612-DUP6)	So	urce: 6J0601	6-02	Prepared	: 10/06/06	Analyzed	1: 10/10/06	5		
% Solids	97.6		%		98.8			1.22	20	
Batch EJ60903 - Water Extraction										
Blank (EJ60903-BLK1)				Prepared	& Analyz	ed: 10/09/	06			
Chloride	ND	20.0	mg/kg W	et						
LCS (EJ60903-BS1)				Prepared	& Analvz	ed: 10/09/	'06			
Chloride	91.5	5.00	mg/kg W	et 100		91.5	80-120	· · · · ·		

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General Chemis	try Param	eters by EPA /	Standar	d Meth	ods - Q	Quality (Contro	1	
	E	nvironmental L	ab of T	exas					
Analyte	Result	Reporting Limit Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EJ60903 - Water Extraction									
Matrix Spike (EJ60903-MS1)	Sou	rce: 6J07001-01	Prepared	& Analyz	ed: 10/09/	06			
Chloride	510	20.0 mg/kg Wet	500	0.00	102	80-120			
Matrix Spike Dup (EJ60903-MSD1)	Sou	rce: 6J07001-01	Prepared	& Analyz	ed: 10/09/	06			
Chloride	510	20.0 mg/kg Wet	500	0.00	102	80-120	0.00	20	
Reference (EJ60903-SRM1)			Prepared	& Analyz	ed: 10/09/	06			
Chloride	51.0	mg/kg	50.0		102	80-120			
Batch EJ60904 - Water Extraction									
Blank (EJ60904-BLK1)			Prepared	& Analyz	ed: 10/09/	06			
Chloride	ND	20.0 mg/kg We	t						
LCS (EJ60904-BS1)			Prepared	& Analyz	ed: 10/09/	06			
Chloride	91.5	5.00 mg/kg We	t 100	·	91.5	80-120			
Matrix Spike (EJ60904-MS1)	Sou	rce: 6J06021-03	Prepared	& Analyz	ed: 10/09/	'06			
Chloride	2210	20.0 mg/kg We	t 500	1700	102	80-120			
Matrix Spike Dup (EJ60904-MSD1)	Sou	rce: 6J06021-03	Prepared	& Analyz	ed: 10/09/	′06			
Chloride	2190	20.0 mg/kg We	t 500	1700	98.0	80-120	0.909	20	
Reference (EJ60904-SRM1)			Prepared	& Analyz	ed: 10/09/	/06			
Chloride	51.0	mg/kg	50.0		102	80-120			

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Project: John Hendrix/ Elliott B-9 #1, #4, & #5 Project Number: 6-0102-01 Project Manager: Mark Larson

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 basis
RPD	Relative Percent Difference
LCS	Laboratory Control Spike
MS	Matrix Spike
Dup	Duplicate

Report Approved By:

Raland K. Tuttle, Lab Manager Celey D. Keene, Lab Director, Org. Tech Director Peggy Allen, QA Officer Jeanne Mc Murrey, Inorg. Tech Director LaTasha Cornish, Chemist Sandra Sanchez, Lab Tech.

Date:

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Page 7 of 7

CLIENT NAME:	Site Manager:	PARAMETERS/METHOD NUMBE	CHAIN-OF-CUSTODY RECORD
U FI HC	J. Lover	(
PROJECT NO.: (FROJECT NAME: 81, 84	тычек 17 8 16 С.	Aurson A Ssociates, Inc. Fax: 432-687-0456 Environmental Consultants App. 687, 0001
PAGE 1 OF 1 LAB	P0#	[ετον]	507 N. Marienfeld, Ste. 202 • Midland, TX 79701
43		J LJ	LAB. I.D. REMARKS NUMBER I.E., FILTERED, UNHLTERED,
1410 1105 144M 144M	SAMPLE IDENTIFICATION		ILAB USE ONLY) PRESERVED, UNPRESERVED, GRAB COMPOSITE)
0/2 12:44 V	611-14, 25'		6-Jacon-1-1)
15 50 V	BH 14. 301		<u>√</u> −02
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1 1619	B1-14, 402		
(
SAMPLED BY ISONOTULE	TIME: 16 by	ED BY: (Signature) DATE:	RECEIVED BY: (Signature) DATE: DATE: TIME:
RELINQUISHED BY ISIGNATURE	DATE: 12 4 4 4 RECEIVED BY	: (Signature) DATE:	SAMPLE SHIPPED BY: (Circle)
A	TIME: 16:45	TIME	FEDEX BUS AIRBILL #:
COMMENTS.		TURNAROUND TIME NEEDED	HAND DELIVERED UPS OTHER:
Ī			WHITE - RECEIVING LAB YEILOW - RECEIVING LAB (TO BE RETLIRNED TO
RECEIVING LABORATORY: C. L.	<u>- - 20 E - R</u>	(ECEIVED BY: (Signature)	LA AFTER RECEIPT)
CITY: Calence for the full to	STATE: TX ZIP 14 765	DATE: Dip-directo TIME: louit	GOLD - QA/QC COORDINATOR
SAMPLE CONDITION WHEN RECEIVED:	10,C	LA CONTACT PERSON:	SAMPLE TYPE:
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Environmental Lab of Texas Variance/ Corrective Action Report- Sample Log-In

Client:	Larson + Associates
Date/ Time:	10-06-06 (11045
Lab ID # :	6 J06021
Initials:	JMM

Sample Receipt Checklist

,				C	lient Initials
#1	Temperature of container/ cooler?	Yes	No	4.0 °C	·
#2	Shipping container in good condition?	(Yes)	No		
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present	
#4	Custody Seals intact on sample bottles/ container?	Yes	No	Not Present	
#5	Chain of Custody present?	(es)	No		
#6	Sample instructions complete of Chain of Custody?	(res)	No		
#7	Chain of Custody signed when relinquished/ received?	(res)	No		
#8	Chain of Custody agrees with sample label(s)?	Yes	No	IQ written on Cont./(Lid)	
#9	Container label(s) legible and intact?	Yes	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	(Yes)	No		
#11	Containers supplied by ELOT?	Yes	No		
#12	Samples in proper container/ bottle?	(es)	No	See Below	<u></u>
#13	Samples properly preserved?	(res)	No	See Below	
#14	Sample bottles intact?	Yes	No		
#15	Preservations documented on Chain of Custody?	res	No		
#16	Containers documented on Chain of Custody?	res	No		
#17	Sufficient sample amount for indicated test(s)?	(es	No	See Below	
#18	All samples received within sufficient hold time?	Ves	No	See Below	
#19	VOC samples have zero headspace?	(Yes)	No	Not Applicable	
	Variance Docu	mentation			

l Contact.

Contacted by:

Date/ Time:

Regarding:

Corrective Action Taken:

Check all that Apply:

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See attached e-mail/ fax

Client understands and would like to proceed with analysis

.

Cooling process had begun shortly after sampling event



Analytical Report

Prepared for:

Mark Larson Larson & Associates, Inc. P.O. Box 50685 Midland, TX 79710

Project: John Hendrix/ Elliott B-9 #1, #4, & #5 Project Number: 6-0104-01 Location: None Given

Lab Order Number: 6K01010

Report Date: 11/08/06

Project: John Hendrix/ Elliott B-9 #1, #4, & #5 Project Number: 6-0104-01 Project Manager: Mark Larson

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH-14 45'-46'	6K01010-01	Soil	10/31/06 09:57	11-01-2006 08:30
BH-14 50'-51'	6K01010-02	Soil	10/31/06 10:15	11-01-2006 08:30
BH-14 55'-56'	6K01010-03	Soil	10/31/06 10:27	11-01-2006 08:30
BH-14 60'-61'	6K01010-04	Soil	10/31/06 10:40	11-01-2006 08:30

Project: John Hendrix/ Elliott B-9 #1, #4, & #5 Project Number: 6-0104-01 Project Manager: Mark Larson

Organics by GC Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH-14 45'-46' (6K01010-01) Soil	<u> </u>	· · · ·							
Carbon Ranges C6-C10	ND	10.0	mg/kg dry	1	EK60112	11/01/06	11/02/06	EPA 8015B	
Carbon Ranges >C10-C28	ND	10.0	н	11	"	n	"	"	
Total Carbon Range C6-C28	ND	10.0	11	п	"	"	n	**	
Surrogate: 1-Chlorooctane		85.2 %	70-1	30	"	"	"	"	
Surrogate: 1-Chlorooctadecane		85.4 %	70-1	30	"	"	"	"	

Environmental Lab of Texas

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Page 2 of 6

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

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH-14 45'-46' (6K01010-01) Soil									
Chloride	799	20.0	mg/kg	40	EK60501	11/05/06	11/05/06	EPA 300.0	
% Moisture	17.3	0.1	%	1	EK60230	11/01/06	11/02/06	% calculation	
BH-14 50'-51' (6K01010-02) Soil									
Chloride	1400	20.0	mg/kg	40	EK60501	11/05/06	11/05/06	EPA 300.0	
BH-14 55'-56' (6K01010-03) Soil									
Chloride	442	100	mg/kg	200	EK60501	11/05/06	11/05/06	EPA 300.0	
BH-14 60'-61' (6K01010-04) Soil									
Chloride	1800	500	mg/kg	1000	EK60501	11/05/06	11/05/06	EPA 300.0	

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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 EK60112 - Solvent Extraction	(GC)									
Blank (EK60112-BLK1)				Prepared:	11/01/06	Analyzed:	11/02/06			
Carbon Ranges C6-C10	ND	10.0	mg/kg wet			·				
Carbon Ranges >C10-C28	ND	10.0	н							
Total Carbon Range C6-C28	ND	10.0	n							
Surrogate: 1-Chlorooctane	49.7		mg/kg	50.0		99.4	70-130			
Surrogate: 1-Chlorooctadecane	52.9		"	50.0		106	70-130			
LCS (EK60112-BS1)				Prepared:	11/01/06	Analyzed:	11/02/06			
Carbon Ranges C6-C10	539	10.0	mg/kg wet	500		108	75-125			
Carbon Ranges >C10-C28	438	10.0	"	500		87.6	75-125			
Total Carbon Range C6-C28	977	10.0	"	1000		97.7	75-125			
Surrogate: 1-Chlorooctane	64.1		mg/kg	50.0		128	70-130			
Surrogate: 1-Chlorooctadecane	56.1		"	50.0		112	70-130			
Calibration Check (EK60112-CCV1)				Prepared:	11/01/06	Analyzed	11/02/06			
Carbon Ranges C6-C10	201		mg/kg	250		80.4	80-120			
Carbon Ranges >C10-C28	252		17	250		101	80-120			
Total Carbon Range C6-C28	453		11	500		90.6	80-120			
Surrogate: 1-Chlorooctane	50.1		"	50.0	······································	100	70-130		· · · · ·	
Surrogate: 1-Chlorooctadecane	47.2		"	50.0		94.4	70-130			
Matrix Spike (EK60112-MS1)	So	urce: 6K01()10-01	Prepared:	11/01/06	Analyzed	: 11/02/06			
Carbon Ranges C6-C10	703	10.0	mg/kg dry	605	ND	116	75-125			
Carbon Ranges >C10-C28	587	10.0	11	605	ND	97.0	75-125			
Total Carbon Range C6-C28	1290	10.0	н	1210	ND	107	75-125			
Surrogate: 1-Chlorooctane	63.3		mg/kg	50.0		127	70-130			
Surrogate: 1-Chlorooctadecane	54.0		"	50.0		108	70-130			
Matrix Spike Dup (EK60112-MSD1)	So	urce: 6K01()10-01	Prepared:	11/01/06	Analyzed	: 11/02/06			
Carbon Ranges C6-C10	659	10.0	mg/kg dry	605	ND	109	75-125	6.46	20	
Carbon Ranges >C10-C28	529	10.0	"	605	ND	87.4	75-125	10.4	20	
Total Carbon Range C6-C28	1190	10.0	"	1210	ND	98.3	75-125	8.06	20	
Surrogate: 1-Chlorooctane	56.7		mg/kg	50.0		113	70-130			
Surrogate: 1-Chlorooctadecane	47.2		"	50.0		94.4	70-130			

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General Chemis	try Param E	eters by nvironm	EPA / ental I	Standar Lab of T	∙d Meth exas	ods - Q	Quality (Contro	1	
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EK60230 - General Preparation	n (Prep)									
Blank (EK60230-BLK1)			-	Prepared:	11/01/06	Analyzed	1: 11/02/06			
% Moisture	0.2	0.1	%							
Duplicate (EK60230-DUP1)	Sou	rce: 6K010	01-01	Prepared:	11/01/06	Analyzed	l: 11/02/06			
% Moisture	5.9	0.1	%	· · · · · ·	6.2			4.96	20	
Batch EK60501 - Water Extraction										
Blank (EK60501-BLK1)				Prepared	& Analyze	ed: 11/05/	06			
Chloride	ND	0.500	mg/kg							
LCS (EK60501-BS1)				Prepared	& Analyze	ed: 11/05/	06			
Chloride	10.2	0.500	mg/kg	10.0	· · ·	102	80-120			
Calibration Check (EK60501-CCV1)				Prepared	& Analyze	ed: 11/05/	06			
Chloride	11.1		mg/L	10.0	·	111	80-120			
Duplicate (EK60501-DUP1)	Sou	rce: 6J3101	1-06	Prepared	& Analyze	ed: 11/05/	06			
Chloride	23.3	5.00	mg/kg		22.6			3.05	20	
Duplicate (EK60501-DUP2)	Sou	rce: 6K010	10-04	Prepared	& Analyze	ed: 11/05/	06			
Chloride	1700	500	mg/kg		1800			5.71	20	
Matrix Spike (EK60501-MS1)	Sou	rce: 6J3101	11-06	Prepared	& Analyz	ed: 11/05/	/06			
Chloride	122	5.00	mg/kg	100	22.6	99.4	80-120			

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Larson & Associates, Inc. P.O. Box 50685 Midland TX, 79710

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 basis
RPD	Relative Percent Difference
LCS	Laboratory Control Spike
MS	Matrix Spike

Dup Duplicate

Report Approved By:

Kaland K theil

Raland K. Tuttle, Lab Manager Celey D. Keene, Lab Director, Org. Tech Director Peggy Allen, QA Officer Jeanne Mc Murrey, Inorg. Tech Director LaTasha Cornish, Chemist Sandra Sanchez, Lab Tech.

Date: 1/-09-06

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PAGE I OF LAB. PO # AF M M M M	10 10	TSSOCICITES, INC. Fax: 432-687-0456 Environmental Consultants 432-687-0901
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RELINOUNS EN BY SUDNITURE DATE 1 / / / RECE	VED BY: (Signature) DATE:	SAMPLE SHIPPED BY: (Circle)
TIME	TIME	FEDEX
COMMENTS:		ED HANU ULUVEREU UPO UTHER: WHITE - RECEIVING LAB
RECEIVING LABORATORY. ENV. 1-20 6 122	RECEIVED BY: (Signature)	PINK - PROJECT MANAGER
CONTACT: A JOY WALLS PHONE: 4323 SCAST	15 DATE: 11 11 CU TIME: CY 3CO	GOLD - QA/QC COORDINATOR
SAMPLE CONDITION WHEN RECEIVED:	LA CONTACT PERSON:	SAMPLE TYPE,
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Environmental Lab of Texas Variance/ Corrective Action Report- Sample Log-In

Client:	arson
Date/ Time:	1101/04 8.30
ab ID # :	6501010
nitials:	Ck

Sample Receipt Checklist

				Ci	lient Initials
#1	Temperature of container/ cooler?	Yes	No	2.0 °C	
#2	Shipping container in good condition?	Tes	No		
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present	
#4	Custody Seals intact on sample bottles/ container?	Yes	No	Not Present	
#5	Chain of Custody present?	Yes	No		
#6	Sample instructions complete of Chain of Custody?	Øes	No		
#7	Chain of Custody signed when relinquished/ received?	Wes	No		
#8	Chain of Custody agrees with sample label(s)?	Yes	No	ID written on Cont. Ttd	
#9	Container label(s) legible and intact?	Yes	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	Če s	No		
#11	Containers supplied by ELOT?	Yas	No		
#12	Samples in proper container/ bottle?	Yes	No	See Below	
#13	Samples properly preserved?	Yes	No	See Below	
#14	Sample bottles intact?	Yes	No		
#15	Preservations documented on Chain of Custody?	Yes	No		
#16	Containers documented on Chain of Custody?	Yes	No		
#17	Sufficient sample amount for indicated test(s)?	(es	No	See Below	
#18	All samples received within sufficient hold time?	Yes	No	See Below	
#19	VOC samples have zero headspace?	Yes	No	Not Applicable	

Variance Documentation

• ...

4

Contact:	Contacted by:	Date/ Time:
Regarding: <u>BH-(4</u> <u>a bacygie</u>	45' sample was sata The lid was loose c	rated with water inside
Corrective Action Taken:		
Check all that Apply:	 See attached e-mail/ fax Client understands and would like Cooling process had begun short 	to proceed with analysis y after sampling event
		ь. Р.

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Appendix D

Photographs

507 North Marienfeld, Suite 202 Midland, Texas 79701 Ph. (432) 687-0901 Fax (432) 687-0456

U.L. C, SECTION 9, T-22-S, R-37-E, LEA COUNTY, NEW MEXICO ELLIOT B-9 LEASE



1. Elliott B-9 Lease, Battery #1 (Site #2) - Location Sign



2. Elliott B-9 Lease, Battery #4 and #5 (Site #2) - Location Signs



3. Elliott B-9 Lease, Battey #1, #4 and #5 (Site #2) - Historic Hydrocarbons

U.L. C, SECTION 9, T-22-S, R-37-E, LEA COUNTY, NEW MEXICO ELLIOT B-9 LEASE



4. Elliott B-9 Lease, Battery #1,#4 and #5 (Site #2) - HistoricHydrocarbons



5. Elliott B-9 Lease, Battery #1, #4 and #5 (Site #2) - Historic Hydrocarbons



6. Elliott B-9 Lease, Battery #1, #4 and #5 (Site #2) - Historic Hydrocarbons .1

LARSON & ASSOCIATES, INC.

P.O. Box 50685 Midland, Texas 79710-0685 Ph. (432) 687-0901



pose replaced 1-31-07

RECEIVED

JAH 1 N 2007 Environmental Bureau Oil Conservation Division

January 9, 2007

VIA: HAND DELIVERY

Mr. Wayne Price, Chief Environmental Bureau State of New Mexico Oil Conservation Division 1220 South St. Francis Drive Santa Fe, New Mexico 87505

Re: Investigation Report of Historic Contamination and Remediation Plan, John H. Hendrix Corporation, Elliott B-9 Lease, Battery #1, #4 and #5, Unit C (NE/4, NW/4), Section 9, Township 22 South, Range 37 East, Lea County, New Mexico

Dear Mr. Price:

This letter is submitted to the State of New Mexico, Oil Conservation Division ("OCD") on behalf of John H. Hendrix Corporation ("JHHC") by Larson and Associates, Inc. ("LA"), its consultant, to convey the results of an investigation to delineate the vertical and horizontal extent of historic contamination at the Elliott B-9 Lease, Battery #1, #4 and #5 ("Site"), as well as a former pit that was located west of the battery. The Site is located in unit C (NE/4, NW/4), Section 9, Township 22 South, Range 37 East in Lea County, New Mexico. The latitude and longitude for the Site is north 32° 24' 32.2" and west 103° 10' 16.1", respectively. Figure 1 presents a location and topographic map. Contact information for JHHC is as follows:

Name:	Marvin Burrows
Title:	Production Superintendent
Mailing Address:	1310 18 th Street
	Eunice, New Mexico 88321
Telephone:	(505) 394-2649
Fax:	(505) 394-2653
Email Address:	mburrows@valornet.com

Setting

The Site is situated at an elevation of approximately 3420 feet above mean sea level ("MSL"). No surface water or wells are located within 1,000 horizontal feet of the Site, which is covered by wind blown sand (Recent). The Ogallala formation (Tertiary) underlies the sand and consists of unconsolidated to well-cemented sand and sandstone that is interstratified with clay, silt and gravel. The Chinle formation (Dockum group)



pays replaced 1-31-07



Table 1 1R0483

Summary of Field and Laboratory Analysis of Soil Samples John H. Hendrix Corporation, Elliott B-9 Tank Battery #1, #4 and #5

Boring	Sample	Sample	PID	Benzene	BTEX	GRO C6-	DRO C12-	DRO C28	DRO C6-	Chloride
Number	Date	Depth (Feet BGS)	(mqq)	(mg/kg)	(mg/kg)	C12 (mg/kg)	C28 (mg/kg)	C35 (mg/kg)	C35 (mg/kg)	(mg/kg)
BH-11	06/28/2006	0-2		0.218	5.138	810	15,900	2,770	19,480	316
	06/28/2006	5-6		1	I	<10	<10	<10	<30	635
	06/28/2006	10 - 11		I	I	1	1	1	1	1
BH-12	06/28/2006	0-2			1	<10	<10	<10	⊲30	312
	06/28/2006	5-6		1	ſ	I	1	١	I	1
	06/28/2006	10 - 11		1	1	1	1	1	1	1
BH-13	06/28/2006	0-2		1	1	<10	<10	<10	<30	19.1
	06/28/2006	5 - 6		I	I	I	1	1	1	I
	06/28/2006	11-01		I	I	I	1	1	in the second se	-
BH-14	06/28/2006	0-2		1.61	15.09	951	11,600	1,280	13,831	813
	06/28/2006	5 - 6		1	I	<10	29.5	<10	29.5	2,630
	06/28/2006	10 - 11		1	1	21.5	165	33.9	220.4	5,290
	07/05/2006	15 - 16		I	I	6.13	70.8	<10	76.93	6,590
	07/05/2006	20 - 21		I	I	<10	<10	<10	<30	5,320
BH-15	06/28/2006	0-2		1	1	<50	506	427	933	17.5
	06/28/2006	5-6		,	ı	1	1	1	1	1
	06/28/2006	10 - 11		1	I	1	1	I	I	I
BH-16	06/28/2006	0-2		I	1	<50	9,360	1,200	10,560	666
	06/28/2006	5-6		1	1	1	1	1	1	1
	06/28/2006	10 - 11		1	1	1	1	1	1	I
BH-17	06/28/2006	0-2		1	1	<50	216	102	318	<20
	06/28/2006	5 - 7		ļ	I	1	1	I	I	I
	06/28/2006	10 - 11		ł		I	1	I	1	1
BH-18	06/28/2006	0-2		1	1	<50	4,440	838	5,278	64.8

Table 1 1R0483 Summary of Field and Laboratory Analysis of Soil Samples

-John H. Hendrix Corporation, Elliott B-9 Tank Battery #1, #4 and #5 27 Foot I as C. schin 77 Couth Do In C NE /A NW/A) Section 0 To Ilmit I att

	Unit Let	tter C (NE/4,N	W/4), Secti	ion 9, Town	ship 22 Sou	ith, Range 37]	East, Lea Count	y, New Mexico		Page 2 of 2
Boring	Sample	Sample	PID	Benzene	BTEX	GRO	DRO C12	DRO C28-	DRO C6-	Chloride
Number	Date	Depth	(mqq)	(mg/kg)	(mg/kg)	C6-C12	C28	C35	C35	(mg/kg)
		(Feet BGS)				(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	
	06/28/2006	5-6		I	I	I	1	I	1	1
	06/28/2006	10 - 11				ł	1	i.	Ē	ł
BH-19	06/28/2006	0-2		1	1	<50	1,480	434	1,914	51.8
	06/28/2006	5-6		1	П	1	1	1		1
BH-20	06/28/2006	0-2		L	I	218	10,700	1,280	12,198	108
		5 - 7		L	L	<10	<10	<10	<30	142

Notes: Analysis performed by Environmental Lab of Texas, I. Ltd., Odessa, Texas

1. BGS: Sample depth in feet below ground surface

2. TPH: Total petroleum hydrocarbons (Sum of C6 to C35)

3. mg/kg: Milligrams per kilogram

4. <: Below method detection limit

5. PID: Photoionization detector

6. ppm: Parts per million

7. ---: No data available

8. BTEX: Sum of benzene, tolulene, ethylbenzene and xylene

9. GRO: Gasoline - range organics

10. DRO: Diesel - range organics

U.L. D, SECTION 9, T-22-S, R-37-E, LEA COUNTY, NEW MEXICO ELLIOT B-9 LEASE



1. Elliott B-9 Lease, Battery #1 (Site #2) - Location Sign

i. Photo sign Says Unit C but Title has Unit D



2. Elliott B-9 Lease, Battery #4 and #5 (Site #2) - Location Signs



3. Elliott B-9 Lease, Battey #1, #4 and #5 (Site #2) - Historic Hydrocarbons

U.L. D, SECTION 9, T-22-S, R-37-E, LEA COUNTY, NEW MEXICO ELLIOT B-9 LEASE



4. Elliott B-9 Lease, Battery #1,#4 and #5 (Site #2) - HistoricHydrocarbons



5. Elliott B-9 Lease, Battery #1, #4 and #5 (Site #2) - Historic Hydrocarbons



6. Elliott B-9 Lease, Battery #1, #4 and #5 (Site #2) - Historic Hydrocarbons