

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON

Governor

Joanna Prukop

Cabinet Secretary

Mark E. Fesmire, P.E.
Director
Oil Conservation Division

January 6, 2006

Marvin Burrows/JHHC John H. Hendrix Corp., (JHHC) 110 N. Marienfeld St., Ste. 400 Midland, TX 79701

Re:

Thomas Long A #3 Well - Investigation Work Plan Approval

Site Location: UL-L, Sec 11-T22S-R37E

Dated: December 6, 2005

Dear Mr. Burrows,

New Mexico Oil Conservation Division (OCD) received an investigation work plan prepared by Larson & Associates for JHHC and referenced above. The plan is **hereby approved** with the following additional requirements:

- 1. JHHC shall dispose of contaminated material according to OCD protocol.
- 2. JHHC shall propose a soil remediation level demonstrating that remaining chloride contamination will not cause an exceedance of the New Mexico Water Quality Control Commission (WQCC) groundwater standard of 250 mg/L [Chloride].

Please be advised that OCD approval of this plan does not relieve JHHC of liability should their operations fail to adequately investigate and remediate contaminants that threaten ground water, surface water, human health or the environment. In addition, OCD approval does not relieve JHHC of responsibility for compliance with any other federal, state, or local laws and/or regulations.

If you have any questions or need assistance please write or call: (505) 393-6161, ext. 113, or e-mail: psheeeley@state.nm.us

Sincerely,

Paul Sheeley-Environmental Engineer

Cc: Roger Anderson - Environmental Bureau Chief

Chris Williams - District I Supervisor Larry Johnson - Environmental Engineer Mark Larson - Larson & Associates



30-025-34035

December 6, 2005

VIA EMAIL: <u>paul.sheeley@state.nm.us</u> VIA CERTIFIED MAIL

Mr. Paul Sheeley Environmental Engineer State of New Mexico Oil Conservation Division 1625 North French Drive Hobbs, New Mexico 88240



Re: Revised Flow Line Leak Investigation Report and Remediation Plan, John H. Hendrix Corporation, Thomas Long A #3 Well, Unit Letter L (NW/4, SW/4), Section 11, Township 22 South, Range 37 East, Lea County, New Mexico

Dear Mr. Sheeley:

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 agent, and presents the results of an investigation of a crude oil leak from a flow line in unit letter L ("NW/4, SW/4"), Section 11, Township 22 South, Range 37 East in Lea County, New Mexico. The leak was discovered on September 19, 2005, and immediately reported to OCD. Form C-141 was also submitted to OCD on September 19, 2005. The leak occurred from a flow line approximately 800 feet northeast of the Thomas Long A #3 well, involved an unknown volume of crude oil and no product was recovered. LA submitted an investigation work plan to OCD on October 3, 2005, which included a copy of Form C-141. The latitude and longitude for the leak is North 32° 24' 12.2" and West 103° 08' 26.5". Figure 1 presents a location and topographic map.

Current Investigation

On October 5, 2005, LA personnel collected soil samples from five (5) locations (SP-1 through SP-5) using a Terraprobe® direct-push system. The Terraprobe® hydraulically pushes or percussion hammers a stainless steel core barrel into the subsurface and collects a soil core sample about four (4) feet long. Two (2) composite samples were generally collected from each core sample (i.e., 0 to 1', 1 to 3', 4 to 5', 5 to 6' etc.), depending on sample recovery. Duplicate samples were collected for laboratory and headspace analysis. The laboratory samples were placed in 4-ounce glass sample jars filled to near zero headspace, labeled, chilled in an ice chest, and delivered under chain of custody control to Environmental Lab of Texas, Inc. ("ELTI"), located in Odessa, Texas. The headspace samples were collected in 8-ounce jars that were partially filled to leave an open headspace near the top of the container before sealing the container opening with a layer of aluminum foil and securely tightening the lid. concentration of organic vapors in the headspace samples was measured using a calibrated photoionization detector ("PID") after the samples had warmed to near ambient temperature (approximately 30 minutes), at which time the PID probe was inserted into the container headspace, through the aluminum foil and the concentration of organic vapors was measured in parts per million ("ppm"). The maximum depth of Terraprobe® penetration was approximately five (5) feet below ground surface ("bgs") at locations SP-1 and SP-2. The borings were plugged

Mr. Paul Sheeley December 6, 2005 Page 2

with bentonite and samples were visually examined using the Unified Soil Classification System ("USCS"). Figure 2 presents a Site drawing. Appendix A presents the boring logs.

The laboratory analyzed samples for benzene, toluene, ethyl benzene and xylene ("BTEX") using method SW-846-8021B, total petroleum hydrocarbons ("TPH") using method SW-846 8015 for gasoline range organics ("GRO") and diesel range organics ("DRO"), and chloride by method SW-846-300. Table 1 presents a summary of the PID and laboratory analysis. Appendix B presents the laboratory report. Appendix C presents photographs.

Setting

The leak occurred approximately 3 miles southeast of Eunice, New Mexico, at an elevation of approximately 3360 feet above mean sea level ("AMSL"). Monument Draw is located approximately 2 miles east of the leak and is an intermittent stream that flows southeast. The area is covered with wind blown sand that overlies the Ogallala formation (Tertiary). The Ogallala formation consists of unconsolidated to well-cemented sand and sandstone that is interstratified with clay, silt and gravel. The Ogallala formation overlies the Chinle formation (Triassic), which is known as "red bed". The red bed consists of mudstone, siltstone and sandstone.

The Office of the New Mexico State Engineer ("OSE") in Roswell, New Mexico, indicates that groundwater occurs at approximately 40 feet bgs. No wells were identified within 1,000 feet of the location. Recommended remediation action levels ("RRAL") were calculated using the following criteria published by OCD ("Guidelines for Remediation of Leaks, Spills and Releases, August 13, 1993"):

Ranking Criteria	Result	Ranking Score
Depth-to-Groundwater	<50 feet	20
Wellhead Protection Area	No	0
Distance to Surface Water Body	>1000 Horizontal Feet	0
	Total Score:	20

The following RRAL are assigned to the leak based on the total ranking score (20):

Benzene

10 mg/kg

Total BTEX

50 mg/kg

TPH

100 mg/kg

Conclusions

Benzene exceeded the RRAL in samples SP-2, 1 to 2 feet (10.4 mg/Kg) and SP-3, 2 to 3 feet (20.8 mg/Kg). Total BTEX (sum of benzene, toluene, ethyl benzene and xylene) exceeded the RRAL in samples SP-2, 1 to 2 feet (155.8 mg/Kg), SP-2, 4 to 5 feet (160.96 mg/Kg), SP-3, 0 to 1 feet (211.06 mg/Kg), SP-3, 1 to 2 feet (112.02 mg/Kg), SP-3, 2 to 3 feet (345.7 mg/Kg) and Sp-5, 0 to 1 feet (92.367 mg/Kg). TPH exceeded the RRAL in all samples and ranged from 366.9 mg/Kg (SP-1, 4 to 5 feet) to 26,860 mg/Kg (SP-5, 0 to 1 feet). There is no RRAL for chloride, but soil will be excavated to reduce chloride below 1,000 mg/Kg. Additional investigation will

Mr. Paul Sheeley December 6, 2005 Page 2

be performed during remediation to delineate chloride to 250 mg/Kg or background, whichever is greater.

Remediation Plan

Soil will be removed from the area of the leak until BTEX and TPH are below the RRAL and chloride below 1,000 mg/Kg. Additional investigation will be performed to delineate the lateral and vertical extent of chloride to near 250 mg/Kg or background, whichever is greater. Soil samples will be collected from the bottom and sides of the excavation and analyzed by a qualified laboratory for BTEX, TPH and chloride. The excavated soil will be hauled to the JHHC permitted landfarm (NM-02-0021) located northwest of Jal, New Mexico. Clean soil will be placed in the excavation and seeded to range grasses. A final report will be submitted to OCD within 45 days following receipt of the laboratory report. Your approval of the remediation plan is requested. If you have questions, please call Mr. Marvin Burrows with JHHC at (505) 394-687-0901 myself (432)email mburrows@valornet.com 2649, Mark@LAEnvironmental.com.

Sincerely,

Larson and Associates, Inc.

Mark J. Larson, P.G., C.P.G., C.G.W.P.

assiallobors for

Senior Project Manager/President

Encl

cc:

Marvin Burrows/JHHC Ron Westbrook/JHHC Chris Williams/OCD – Hobbs Ed Martin/OCD – Santa Fe

TABLES

Unit Letter L (NW/4,SW/4), Section 11, Township 22 South, Range 37 East John H. Hendrix Corporation, Thomas Long A, Well #3 Flowline Leak Summary of Field and Laboratory Analysis of Soil Samples Table 1:

	Lea County, 1	New Mexico				D		Page 1 of 1	
Boring Number	Sample Date	Sample Depth	(mdd)	Benzene (mg/kg)	BTEX (mg/kg)	GRO C6 C12	Λ_{ij}	7PH C6-C35	Chloride (mg/kg)
	RR	(Teel Dos) AL		10	. 20	(mg/kg)	(Ev/am)	100 I	
SP-1	10/5/2005	0 - 1	1,106	0.0408	16.73	2,490	6,620	9,110	2,530
	10/5/2005	1 - 2	1,270	0.882	42.74	1,590	3,880	5,470	1,670
	10/5/2005	2 - 3.5	1,386	0.455	27.245	1,420	3,180	4,600	668
	10/5/2005	4 - 5	0/9	<0.025	1.0421	6.9/	290	366.9	1,480
SP-2	10/5/2005	0 - 1	1,282	0.381	16.421	2,310	082'9	060'6	2,760
	10/5/2005	1-2	1,194	10.4	155.8	3,210	6,290	9,500	2,730
	10/5/2005	2 - 3.2	1,241	0.0143	6909.0	236	695	805	221
	10/5/2005	4 - 5	1,289	4.06	160.96	5,810	12,700	18,510	4,670
SP-3	10/5/2005	0-1	1,231	96.7	211.06	5,200	11,300	16,500	4,190
	10/5/2005	1-2	1,107	5.52	122.02	2,250	4,870	7,120	4,340
	10/5/2005	2-3	1,341	20.8	345.70	7,890	17,000	24,890	4,350
SP-4	10/5/2005	0 - 1	666	0.268	21.288	4,660	16,300	20,960	3,520
SP-5	10/5/2005	0-1	676	<i>L</i> 96.0	92.367	6,360	20,500	26,860	3,270
Mater. Am.	A 1 A	. J. L T	T J - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	1 1 1.5-	,	1			

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

Sample depth in feet below ground surface 1. BGS:

Total petroleum hydrocarbons (Sum of DRO + GRO) 2. TPH:

Milligrams per kilogram 3. mg/kg:

Below method detection limit

Photoionization detector 5. PID:

Parts per million

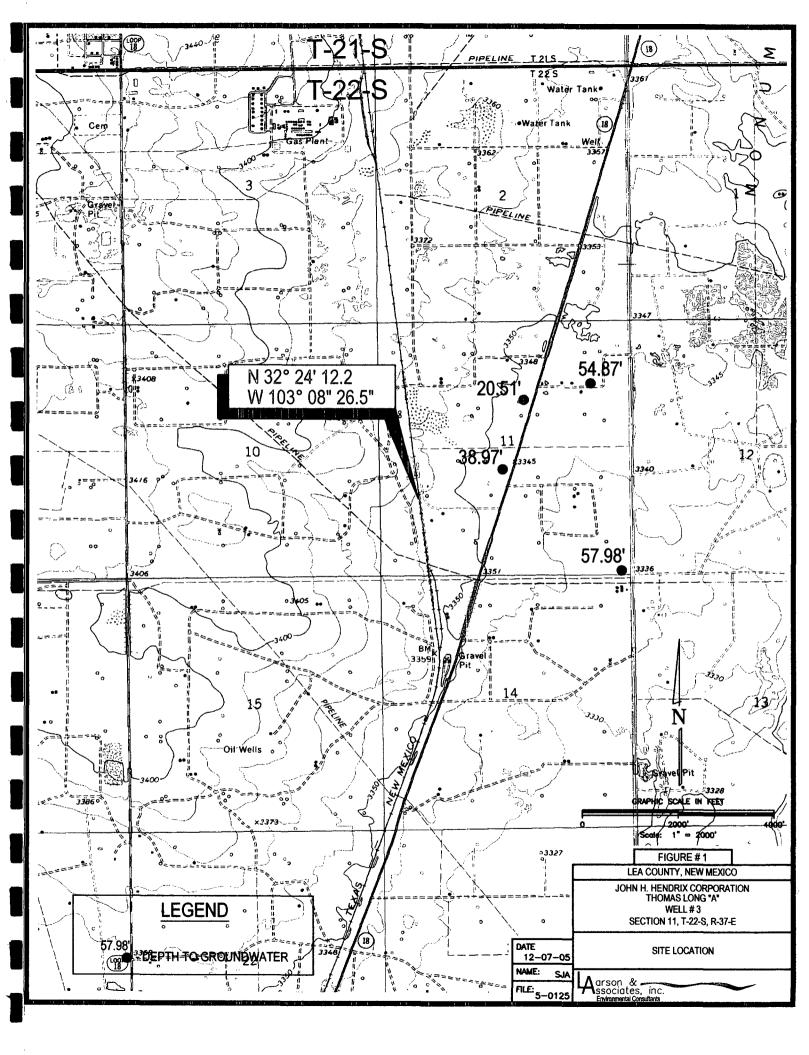
No data available 6. ppm: 7. --:

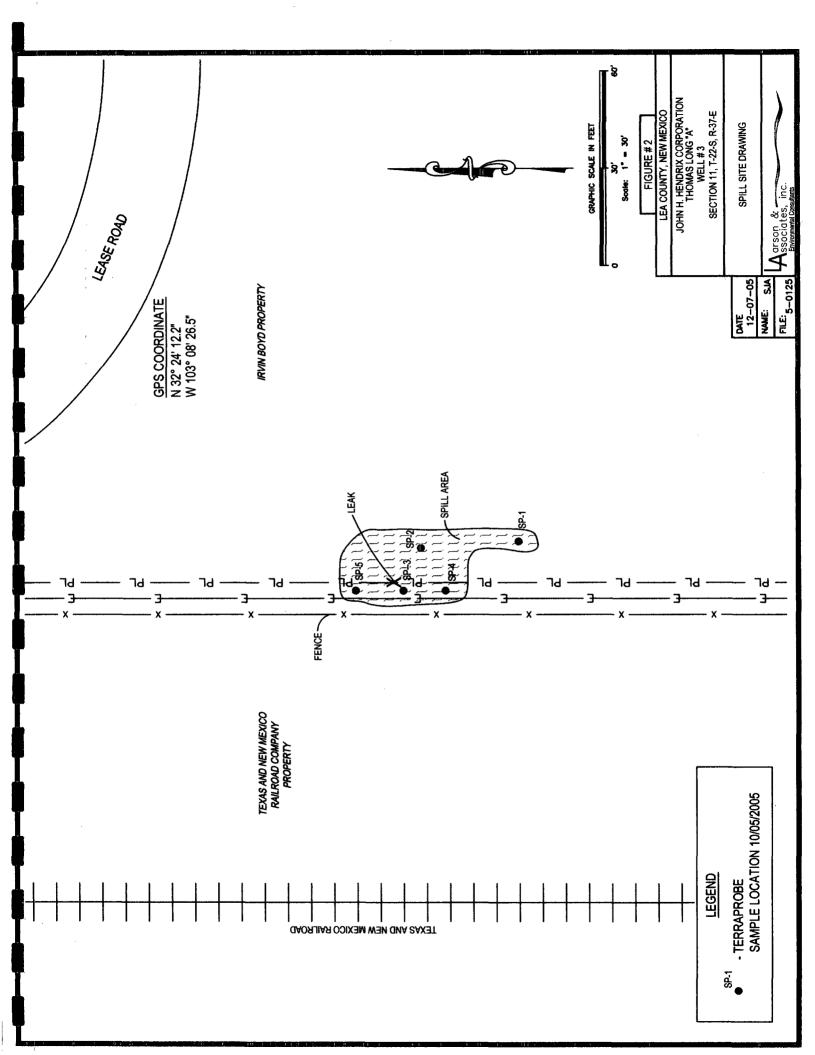
Sum of benzene, tolulene, ethylbenzene and xylene 8. BTEX:

Gasoline - range organics 9. GRO:

Diesel - range organics 10. DRO:

FIGURES





APPENDIX A

Boring Logs

Project: Thomas Long A #3

Project No: 5-0125

Location: Lea County, New Mexico

Log: SP - 1

Page: 1 of 1

Geologist: MJL

		SUBSURFACE PROFILE	S	AMPL	.E		
Depth	Symbol	Description	Number	Туре	Recovery	PID ppm 500 1500	Notes
-		Ground Surface Silty Sand 7.5 YR 4/4, Brown, very find grained quartz sand, very poorly sorted, sub-round, strong hydrocarbon odor and stain Caliche 10 YR 8/2, Sandy, very fine grained qurartz sand, moderatly hard	2			1106.0	Benzene: 0.0408 mg/kg BTEX: 16.73 mg/kg TPH: 9,110 mg/kg Chloride: 2,530 mg/kg Benzene: 0.882 mg/kg BTEX: 42.74 mg/kg TPH: 5,470 mg/kg Chloride: 1,670 mg/kg
		Silty Sand 7.5 YR 7/4 to 7/3, Pink, very find grained quartz sand, very poorly sorted	3			1386.0	Benzene : 0.455 mg/kg BTEX: 27.245 mg/kg TPH: 4,600 mg/kg Chloride: 899 mg/kg
5-		TD: 5' (Refusel)	4			670.0 d	Benzene : <0.025 mg/kg BTEX: 1.0421 mg/kg TPH: 366.9 mg/kg Chloride: 1,480 mg/kg

Drill Method: Direct Push

Drill Date: 10/05/05

Hole Size: 2"

Larson and Associates, Inc 507 N. Marienfeld, Suite 202 Midland, Texas 79701

(432) 687-0901

Elevation: N/A

Checked by: MJL

Project: Thomas Long A #3

Project No: 5-0125

Location: Lea County, New Mexico

Log: SP - 2

Page: 1 of 1

Geologist: MJL

		SUBSURFACE PROFILE	S	AMPL	.E		
Depth	Symbol	Description	Number	Туре	Recovery	PID ppm 500 1500	Notes
0-		Ground Surface Silty Sand 7.5 YR 4/4, Brown, very find grained quartz sand, very poorly sorted, sub-round, strong hydrocarbon odor and stain Caliche 10 YR 8/2, Very pale brown, sandy, very fine grained qurartz sand, hard	1			1282.0 P 1194.0	Benzene: 0.381 mg/kg BTEX: 16.421 mg/kg TPH: 9.090 mg/kg Chloride: 2,760 mg/kg Benzene: 10.4 mg/kg BTEX: 155.8 mg/kg TPH: 9,500 mg/kg
		Silty Sand 7.5 YR 7/4 to 7/3, Pink, very find grained quartz sand, very poorly sorted, hard at 5.0', hydrocarbon odor	3			1241.0	Chloride: 2,730 mg/kg Benzene: 0.0143 mg/kg BTEX: 0.6069 mg/kg TPH: 805 mg/kg Chloride: 221 mg/kg
5-		TD: 5' (Refusel)	4			1289.0 8	Benzene : 4.06 mg/kg BTEX: 160.96 mg/kg TPH: 18,510 mg/kg Chloride: 4,670 mg/kg

Drill Method: Direct Push

Drill Date: 10/05/05

Hole Size: 2"

Larson and Associates, Inc 507 N. Marienfeld, Suite 202 Midland, Texas 79701

(432) 687-0901

Elevation: N/A

Checked by: MJL

Project: Thomas Long A #3

Project No: 5-0125

Location: Lea County, New Mexico

Log: SP - 3

Page: 1 of 1

Geologist: MJL

		SUBSURFACE PROFILE	S	AMPI	.E		
Depth	Symbol	Description	Number	Type	Recovery	PID ppm 500 1500	Notes
0-		Silty Sand 7.5 YR 4/4, Brown, very find grained quartz sand, very poorly sorted, sub-round, strong hydrocarbon odor and stain Caliche 10 YR 8/2, Very pale brown, sandy, very fine grained quartz sand, hard Silty Sand 7.5 YR 7/4, Pink, very find grained quartz sand, poorly sorted, hard below 5.0'	2			1231.0	Benzene: 7.96 mg/kg BTEX: 211.06 mg/kg TPH: 16,500 mg/kg Chloride: 4,190 mg/kg Benzene: 5.52 mg/kg BTEX: 112.02 mg/kg TPH: 2,250 mg/kg Chloride: 4,190 mg/kg Benzene: 20.8 mg/kg BTEX: 345.7 mg/kg TPH: 24,890 mg/kg Chloride: 4,350 mg/kg

Drill Method: Direct Push

Drill Date: 10/05/05

Hole Size: 2"

Larson and Associates, Inc 507 N. Marienfeld, Suite 202 Midland, Texas 79701

(432) 687-0901

Elevation: N/A

Checked by: MJL

Project: Thomas Long A #3

Project No: 5-0125

Location: Lea County, New Mexico

Log: SP - 4

Page: 1 of 1

Geologist: MJL

		SUBSURFACE PROFILE	s	AMPL	.E		
Depth	Symbol	Description	Number	Туре	Recovery	PID ppm 500 1500	Notes
0-		Ground Surface Silty Sand 7.5 YR 4/4, Brown, very find grained quartz sand, very poorly sorted, sub-round, strong hydrocarbon odor and stain Caliche 10 YR 8/2, Very pale brown, sandy, very fine grained qurartz sand, hard TD: 1' (Refusel)	1			999.0 °	Benzene : 0.268 mg/kg BTEX: 21.288 mg/kg TPH: 20,960 mg/kg Chloride: 3,520 mg/kg
•							
-							
5-		·				·	

Drill Method: Direct Push

Drill Date: 10/05/05

Hole Size: 2"

Larson and Associates, Inc 507 N. Marienfeld, Suite 202 Midland, Texas 79701

(432) 687-0901

Elevation: N/A

Checked by: MJL

Project: Thomas Long A #3

Project No: 5-0125

Location: Lea County, New Mexico

Log: SP - 5

Page: 1 of 1

Geologist: MJL

		SUBSURFACE PROFILE	s	AMPL	E		
Depth	Symbol	Description	Number	Туре	Recovery	PID ppm 500 1500	Notes
0-		Ground Surface					
		Silty Sand 7.5 YR 4/4, Brown, very find grained quartz sand, very poorly sorted, sub-round, strong hydrocarbon odor and stain Caliche 10 YR 8/2, Very pale brown, sandy, very fine	1			929.0 °	Benzene : 0.967 mg/kg BTEX: 92.367 mg/kg TPH: 26,860 mg/kg Chloride: 3,270 mg/kg
		grained qurartz sand, hard					
		TD: 1' (Refusel)					
	-						
5-	-						

Drill Method: Direct Push

Drill Date: 10/05/05

Hole Size: 2"

Larson and Associates, Inc 507 N. Marienfeld, Suite 202 Midland, Texas 79701

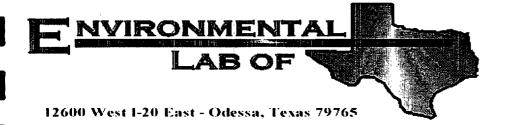
(432) 687-0901

Elevation: N/A

Checked by: MJL

APPENDIX B

Laboratory Reports



Analytical Report

Prepared for:

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

Project: John Hendrix/ Thomas Long A #3

Project Number: 5-0125 Location: None Given

Lab Order Number: 5J06003

Report Date: 10/13/05

Project: John Hendrix/ Thomas Long A #3

Fax: (432) 687-0456

P.O. Box 50685 Midland TX, 79710 Project Number: 5-0125
Project Manager: Mark Larson

Reported: 10/13/05 14:25

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SP-1, 0-1'	5J06003-01	Soil	10/05/05 11:22	10/06/05 08:00
SP-1, 1-2'	5J06003-02	Soil	10/05/05 11:22	10/06/05 08:00
SP-1, 2-3.5'	5J06003-03	Soil	10/05/05 11:22	10/06/05 08:00
SP-1, 4-5'	5J06003-04	Soil	10/05/05 11:45	10/06/05 08:00
SP-2, 0-1'	5J06003-05	Soil	10/05/05 12:00	10/06/05 08:00
SP-2, 1-2'	5J06003-06	Soil	10/05/05 12:00	10/06/05 08:00
SP-2, 2-3.2'	5J06003-07	Soil	10/05/05 12:00	10/06/05 08:00
SP-2, 4-5'	5J06003-08	Soil	10/05/05 12:15	10/06/05 08:00
SP-3, 0-1'	5J06003-09	Soil	10/05/05 12:40	10/06/05 08:00
SP-3, 1-2'	5J06003-10	Soil	10/05/05 12:40	10/06/05 08:00
SP-3, 2-3'	5J06003-11	Soil	10/05/05 12:40	10/06/05 08:00
SP-4, 0-1'	5J06003-12	Soil	10/05/05 13:00	10/06/05 08:00
SP-5, 0-1'	5J06003-13	Soil	10/05/05 13:18	10/06/05 08:00

Larson & Associates, Inc. P.O. Box 50685

Project: John Hendrix/ Thomas Long A #3

Fax: (432) 687-0456

Reported:

Midland TX, 79710

Project Number: 5-0125
Project Manager: Mark Larson

10/13/05 14:25

Organics by GC Environmental Lab of Texas

			inental L	ab 01 10					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SP-1, 0-1' (5J06003-01) Soil									
Benzene	0.0408	0.0250	mg/kg dry	25	EJ50614	10/06/05	10/07/05	EPA 8021B	
Toluene	1.28	0.0250	,	*	"	"	*	и	
Ethylbenzene	5.00	0.0250	,,		"	*		н	
Xylene (p/m)	6.31	0.0250	•	*	,,	*	"	n	
Xylene (o)	4.10	0.0250	*	*	**	*	#	н	
Surrogate: a,a,a-Trifluorotoluene		102 %	80-1	120	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		88.0 %	80-1	120	"	"	"	"	
Gasoline Range Organics C6-C12	2490	50.0	mg/kg dry	5	EJ50602	10/06/05	10/11/05	EPA 8015M	
Diesel Range Organics >C12-C35	6620	50.0	11	*	*	н	"	**	
Total Hydrocarbon C6-C35	9110	50.0	"	•	**	**	**	н	
Surrogate: 1-Chlorooctane		26.0 %	70-	130	,,	r	"	"	S-06
Surrogate: 1-Chlorooctadecane		18.2 %	70-1	130	"	"	"	"	S-06
SP-1, 1-2' (5J06003-02) Soil									
Benzene	0.882	0.100	mg/kg dry	100	EJ50614	10/06/05	10/12/05	EPA 8021B	
Toluene	8.48	0.100	*	н	•	"	н	Ħ	
Ethylbenzene	10.2	0.100	**	"	"	**	"		
Xylene (p/m)	14.2	0.100	**	#	**	"	**		
Xylene (o)	8.98	0.100	n	н	**	•	**	"	
Surrogate: a,a,a-Trifluorotoluene		. 112 %	80-	120	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		116%	80-	120	"	"	"	"	
Gasoline Range Organics C6-C12	1590	50.0	mg/kg dry	5	EJ50602	10/06/05	10/11/05	EPA 8015M	
Diesel Range Organics >C12-C35	3880	50.0	н	н	"	ч	n	**	
Total Hydrocarbon C6-C35	5470	50.0	u	н	"	и	"	**	
Surrogate: 1-Chlorooctane		17.1 %	70-	130	"	,,	"	n	S-06
Surrogate: 1-Chlorooctadecane		17.1 %	70-	130	"	,,	"	,	S-06
SP-1, 2-3.5' (5J06003-03) Soil									
Benzene	0.455	0.100	mg/kg dry	100	EJ50614	10/06/05	10/12/05	EPA 8021B	-
Toluene	5.29	0.100	*	"	"	"	•	н	
Ethylbenzene	6.88	0.100	*	**	"	**	u	"	
Xylene (p/m)	9.49	0.100	**	ч	"	**	"	"	
Xylene (o)	5.13	0.100	"	ч	**	**	"	**	
Surrogate: a,a,a-Trifluorotoluene		102 %	80-	120	*	"	"	"	
Surrogate: 4-Bromofluorobenzene		107 %	80-	120	"	"	"	n	
Gasoline Range Organics C6-C12	1420	50.0	mg/kg dry	5	EJ50602	10/06/05	10/11/05	EPA 8015M	
Diesel Range Organics >C12-C35	3180	50.0	п		н	"		н	
Total Hydrocarbon C6-C35	4600	50.0	**	**	**	"	"	н	

Environmental Lab of Texas

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

Project: John Hendrix/ Thomas Long A #3

Fax: (432) 687-0456

P.O. Box 50685 Midland TX, 79710 Project Number: 5-0125
Project Manager: Mark Larson

Reported: 10/13/05 14:25

Organics by GC Environmental Lab of Texas

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SP-1, 2-3.5' (5J06003-03) Soil									
Surrogate: 1-Chlorooctane		17.3 %	70-	130	EJ50602	10/06/05	10/11/05	EPA 8015M	S-06
Surrogate: 1-Chlorooctadecane		18.1 %	70-	130	n	"	n	"	S-0
SP-1, 4-5' (5J06003-04) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EJ50614	10/06/05	10/07/05	EPA 8021B	
Toluene	0.0951	0.0250	**	"	Ħ	n		"	
Ethylbenzene	0.261	0.0250	n	"	11	n	**	и	
Xylene (p/m)	0.466	0.0250	н		H	II .	"	"	
Xylene (o)	0.220	0.0250	н	"		**	**	"	
Surrogate: a,a,a-Trifluorotoluene		112 %	80-	120	"	н	"	н	
Surrogate: 4-Bromofluorobenzene		115 %	<i>80</i>	120	"	"	"	**	
Gasoline Range Organics C6-C12	76.9	10.0	mg/kg dry	i	EJ50602	10/06/05	10/11/05	EPA 8015M	
Diesel Range Organics >C12-C35	290	10.0	"	*	**	н	**	и	
Total Hydrocarbon C6-C35	367	10.0	*	**	"	u	"	u	
Surrogate: 1-Chlorooctane		94.0 %	70-	130	"	"	n	н	
Surrogate: 1-Chlorooctadecane		90.6 %	70-	130	"	"	"	n	
SP-2, 0-1' (5J06003-05) Soil						.,			
Benzene	0.381	0.0250	mg/kg dry	25	EJ51009	10/10/05	10/10/05	EPA 8021B	
Toluene	1.45	0.0250		н	н	н	"	•	
Ethylbenzene	4.36	0.0250	"	п	**	*	н	*	
Xylene (p/m)	6.44	0.0250	"	ır	".	#	ıı	**	
Xylene (o)	3.79	0.0250	•	н	#	#	и	н	
Surrogate: a,a,a-Trifluorotoluene		129 %	80-	120	"	"	"	"	S-04
Surrogate: 4-Bromofluorobenzene		99.5 %	80-	120	"	"	"	"	
Gasoline Range Organics C6-C12	2310	50.0	mg/kg dry	5	EJ50602	10/06/05	10/11/05	EPA 8015M	
Diesel Range Organics >C12-C35	6780	50.0	"	**	#	"	"	"	
Total Hydrocarbon C6-C35	9090	50.0	**	н	"	"	"	"	
Surrogate: 1-Chlorooctane		21.6 %	70-	130	"	"	"	"	S-06
Surrogate: 1-Chlorooctadecane		16.5 %	70-	130	"	"	#	"	S-06

Project: John Hendrix/ Thomas Long A #3

Fax: (432) 687-0456

P.O. Box 50685 Midland TX, 79710 Project Number: 5-0125
Project Manager: Mark Larson

Reported: 10/13/05 14:25

Organics by GC Environmental Lab of Texas

			mentai L						
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
SP-2, 1-2' (5J06003-06) Soil	<u></u> -		-						
Benzene	10.4	0.200	mg/kg dry	200	EJ51009	10/10/05	10/12/05	EPA 8021B	
Toluene	38.4	0.200	**	**	"	и	"	n	
Ethylbenzene	36.1	0.200		**	*	*	**	и	
Xylene (p/m)	49.2	0.200	"	**	10	*	**	и	
Xylene (o)	21.7	0.200	"	**	*	н	"	ıı.	
Surrogate: a,a,a-Trifluorotoluene		115 %	80-1	20	"	"	,,	"	
Surrogate: 4-Bromofluorobenzene		110 %	80-1	20	"	"	"	"	
Gasoline Range Organics C6-C12	3210	50.0	mg/kg dry	5	EJ50602	10/06/05	10/11/05	EPA 8015M	
Diesel Range Organics >C12-C35	6290	50.0	н		**	•		H	
Total Hydrocarbon C6-C35	9500	50.0		**	н	и	**	**	
Surrogate: 1-Chlorooctane		26.0 %	70-1	30	n	"	"	"	S-0
Surrogate: 1-Chlorooctadecane		16.9 %	70-1	30	"	"	"	"	S-0
SP-2, 2-3.2' (5J06003-07) Soil									
Benzene	J [0.0143]	0.0250	mg/kg dry	25	EJ51009	10/10/05	10/10/05	EPA 8021B	
Toluene	0.138	0.0250	**	"	"	"		*	
Ethylbenzene	0.118	0.0250	Ħ	"	ч	н	"	n	
Xylene (p/m)	0.241	0.0250	**	*	"	Ħ	11	н	
Xylene (o)	0.0956	0.0250	11	**	"	*		#	
Surrogate: a,a,a-Trifluorotoluene		102 %	80-1	120	,,	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.0 %	80-1	120	"	"	"	"	
Gasoline Range Organics C6-C12	236	10.0	mg/kg dry	1	EJ50602	10/06/05	10/11/05	EPA 8015M	
Diesel Range Organics >C12-C35	569	10.0	n	*	**	"	Ħ	н	
Total Hydrocarbon C6-C35	805	10.0	•	**	**	"	**	н	
Surrogate: 1-Chlorooctane		104 %	70-1	130	"	"	"	"	
Surrogate: 1-Chlorooctadecane		106 %	70-1	130	"	"	"	"	
SP-2, 4-5' (5J06003-08) Soil									
Benzene	4.06	0.200	mg/kg dry	200	EJ51009	10/10/05	10/12/05	EPA 8021B	
Toluene	31.7	0.200	"	н	**	11	п	н	
Ethylbenzene	42.1	0.200	H	n	"	*	н	н	
Xylene (p/m)	56.7	0.200	11	"	**	*	**	"	
Xylene (o)	26.4	0.200			"	н	n	"	
Surrogate: a,a,a-Trifluorotoluene		113 %	80-1	120	"	п	n	**	
Surrogate: 4-Bromofluorobenzene		104 %	80-1	120	"	"	"	"	
Gasoline Range Organics C6-C12	5810	50.0	mg/kg dry	5	EJ50602	10/06/05	10/11/05	EPA 8015M	
Diesel Range Organics >C12-C35	12700	50.0	"	"		н	н	Ħ	
Total Hydrocarbon C6-C35	18500	50.0	**	п	н		n	н .	

Environmental Lab of Texas

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Project: John Hendrix/ Thomas Long A #3

Fax: (432) 687-0456

P.O. Box 50685 Midland TX, 79710 Project Number: 5-0125
Project Manager: Mark Larson

Reported: 10/13/05 14:25

Organics by GC Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SP-2, 4-5' (5J06003-08) Soil									
Surrogate: 1-Chlorooctane		40.2 %	70-1	30	EJ50602	10/06/05	10/11/05	EPA 8015M	S-06
Surrogate: 1-Chlorooctadecane		21.8 %	70-1	30	н	"	"	#	S-06
SP-3, 0-1' (5J06003-09) Soil									
Benzene	7.96	0.500	mg/kg dry	500	EJ51009	10/10/05	10/12/05	EPA 8021B	
Toluene	48.5	0.500	*	н	•	"	•		
Ethylbenzene	48.7	0.500	n	•	•	*	"	"	
Xylene (p/m)	69.8	0.500	**	•	4	n	"	н	
Xylene (o)	36.1	0.500	**	•	н	H	ıı	"	
Surrogate: a,a,a-Trifluorotoluene		110 %	80-	120	"	"	,,	"	
Surrogate: 4-Bromofluorobenzene		111 %	80-	120	"	"	n	"	
Gasoline Range Organics C6-C12	5200	50.0	mg/kg dry	5	EJ50602	10/06/05	10/11/05	EPA 8015M	
Diesel Range Organics >C12-C35	11300	50.0	11	"	н	ч	n	н	
Total Hydrocarbon C6-C35	16500	50.0	#	"	"	Ħ	н	**	
Surrogate: 1-Chlorooctane		36.4 %	70-	130	"	"	"	"	S-06
Surrogate: 1-Chlorooctadecane		19.1 %	70-	130	'n	"	"	#	S-06
SP-3, 1-2' (5J06003-10) Soil									
Benzene	5.52	0.200	mg/kg dry	200	EJ51009	10/10/05	10/12/05	EPA 8021B	-
Toluene	27.1	0.200	n	*	"	#	n	н	
Ethylbenzene	26.8	0.200	n	"	•	н	n	n	
Xylene (p/m)	37.6	0.200	н	**		"	n	H	
Xylene (o)	15.0	0.200	ч	"		п	н	0	
Surrogate: a,a,a-Trifluorotoluene		136 %	80	120	п	"	"	"	S-04
Surrogate: 4-Bromofluorobenzene		122 %	80-	120	17	#	"	"	S-04
Gasoline Range Organics C6-C12	2250	50.0	mg/kg dry	5	EJ50602	10/06/05	10/11/05	EPA 8015M	
Diesel Range Organics >C12-C35	4870	50.0	n	"	"	п	n	**	
Total Hydrocarbon C6-C35	7120	50.0	"	"	п	и	"		
Surrogate: 1-Chlorooctane		21.4 %	70-	130	"	"	,,	"	S-06

Surrogate: 1-Chlorooctadecane

S-06

70-130

17.0%

Project: John Hendrix/ Thomas Long A #3

Fax: (432) 687-0456

P.O. Box 50685 Midland TX, 79710 Project Number: 5-0125 Project Manager: Mark Larson **Reported:** 10/13/05 14:25

Organics by GC Environmental Lab of Texas

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SP-3, 2-3' (5J06003-11) Soil	· · · · · · · · · · · · · · · · · · ·								
Benzene	20.8	0.500	mg/kg dry	500	EJ51009	10/10/05	10/12/05	EPA 8021B	
Toluene	82.3	0.500	N	"	и	"	"	n	
Ethylbenzene	80.9	0.500		"	•	u	**	u	
Xylene (p/m)	113	0.500		•	**	ч	"	**	
Xylene (o)	48.7	0.500	н	"	н	•	"	•	
Surrogate: a,a,a-Trifluorotoluene		136 %	80-	120	"	"	"	n	S-0-
Surrogate: 4-Bromofluorobenzene		122 %	80-	120	4	"	"	"	S-04
Gasoline Range Organics C6-C12	7890	50.0	mg/kg dry	5	EJ50602	10/06/05	10/11/05	EPA 8015M	
Diesel Range Organics >C12-C35	17000	50.0	"	**	**	**	**	10	
Total Hydrocarbon C6-C35	24900	50.0	п	•	n	п	**	11	
Surrogate: 1-Chlorooctane		45.2 %	70-	130	п	n	"	"	S-06
Surrogate: 1-Chlorooctadecane		18.0 %	70-	130	"	"	"	"	S-06
SP-4, 0-1' (5J06003-12) Soil									
Benzene	0.268	0.0250	mg/kg dry	25	EJ51009	10/10/05	10/10/05	EPA 8021B	
Toluene	1.63	0.0250	"	"		n		**	
Ethylbenzene	3.54	0.0250	**	н	"	**	"	*	
Xylene (p/m)	10.6	0.0250	*	н	**	ii	"	"	
Xylene (o)	5.25	0.0250	*	**	**		"	и	
Surrogate: a,a,a-Trifluorotoluene		108 %	80-	120	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		83.5 %	80-	120	"	"	*	"	
Gasoline Range Organics C6-C12	4660	50.0	mg/kg dry	5	EJ50602	10/06/05	10/11/05	EPA 8015M	
Diesel Range Organics >C12-C35	16300	50.0	**		п	н	н	"	
Total Hydrocarbon C6-C35	21000	50.0	**		"	"	"	"	
Surrogate: 1-Chlorooctane		33.6 %	70-	130	"	"	"	"	S-06
Surrogate: 1-Chlorooctadecane		18.4 %	70	130	"	"	"	n	S-0
SP-5, 0-1' (5J06003-13) Soil			•						
Benzene	0.967	0.200	mg/kg dry	200	EJ51009	10/10/05	10/12/05	EPA 8021B	
Toluene	13.5	0.200	*1	"	**	"	ч	**	
Ethylbenzene	20.3	0.200	**	"	*	u	u	"	
Xylene (p/m)	37.7	0.200	**	"	•	**	"	•	
Xylene (o)	19.9	0.200	н	•	**	н	*	" .	
Surrogate: a,a,a-Trifluorotoluene		119%	80	120	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	80-	120	"	,,	"	"	
Gasoline Range Organics C6-C12	6360	50.0	mg/kg dry	5	EJ50602	10/06/05	10/11/05	EPA 8015M	
Diesel Range Organics >C12-C35	20500	50.0	н	"	"	"	н	*	
Total Hydrocarbon C6-C35	26900	50.0	*		"	"	n		

Environmental Lab of Texas

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Project: John Hendrix/ Thomas Long A #3

Fax: (432) 687-0456

P.O. Box 50685 Midland TX, 79710 Project Number: 5-0125 Project Manager: Mark Larson Reported: 10/13/05 14:25

Organics by GC Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SP-5, 0-1' (5J06003-13) Soil									
Surrogate: 1-Chlorooctane		40.8 %	70-	130	EJ50602	10/06/05	10/11/05	EPA 8015M	S-06
Surrogate: 1-Chlorooctadecane		17.9 %	70-	130	"	"	н	"	S-06

Project: John Hendrix/ Thomas Long A #3

Fax: (432) 687-0456

P.O. Box 50685 Midland TX, 79710

Project Number: 5-0125 Project Manager: Mark Larson

Reported: 10/13/05 14:25

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
SP-1, 0-1' (5J06003-01) Soil				Ditution	Daten	ricpared	Analyzed	Memod	Note
Chloride	2530	25.0	mg/kg	50	EJ50703	10/07/05	10/07/05	EPA 300.0	
% Moisture	9.9	0.1	%	1	EJ50701	10/06/05	10/07/05	% calculation	
SP-1, 1-2' (5J06003-02) Soil									
Chloride	1670	25.0	mg/kg	50	EJ50703	10/07/05	10/07/05	EPA 300.0	
% Moisture	10.2	0.1	%	1	EJ50701	10/06/05	10/07/05	% calculation	
SP-1, 2-3.5' (5J06003-03) Soil									
Chloride	899	12.5	mg/kg	25	EJ50703	10/07/05	10/07/05	EPA 300.0	
% Moisture	11.1	0.1	%	1	EJ50701	10/06/05	10/07/05	% calculation	
SP-1, 4-5' (5J06003-04) Soil									
Chloride	1480	25.0	mg/kg	50	EJ50703	10/07/05	10/07/05	EPA 300.0	
% Moisture	9.4	0.1	%	1	EJ50701	10/06/05	10/07/05	% calculation	
SP-2, 0-1' (5J06003-05) Soil									
Chloride	2760	50.0	mg/kg	100	EJ50703	10/07/05	10/07/05	EPA 300.0	
% Moisture	10.2	0.1	%	1	EJ50701	10/06/05	10/07/05	% calculation	
SP-2, 1-2' (5J06003-06) Soil									
Chloride	2730	50.0	mg/kg	100	EJ50703	10/07/05	10/07/05	EPA 300.0	
% Moisture	13.7	0.1	%	I	EJ50701	10/06/05	10/07/05	% calculation	
SP-2, 2-3.2' (5J06003-07) Soil									
Chloride	221	5.00	mg/kg	10	EJ50703	10/07/05	10/07/05	EPA 300.0	
% Moisture	10.4	0.1	%	1	EJ50701	10/06/05	10/07/05	% calculation	
SP-2, 4-5' (5J06003-08) Soil									
Chloride	4670	50.0	mg/kg	100	EJ50703	10/07/05	10/07/05	EPA 300.0	
% Moisture	7.7	0.1	%	1	EJ50701	10/06/05	10/07/05	% calculation	

Project: John Hendrix/ Thomas Long A #3

P.O. Box 50685

Midland TX, 79710

Project Number: 5-0125
Project Manager: Mark Larson

Fax: (432) 687-0456

Reported: 10/13/05 14:25

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

Analyte	Result	Reporting Limit	Units	Dil.di	D 1	D	A	Markad	N
	Vezaut	Lulli	Omis	Dilution	Batch	Prepared	Analyzed	Method	Notes
SP-3, 0-1' (5J06003-09) Soil									
Chloride	4190	50.0	mg/kg	100	EJ50703	10/07/05	10/07/05	EPA 300.0	
% Moisture	12.2	0.1	%	1	EJ50701	10/06/05	10/07/05	% calculation	
SP-3, 1-2' (5J06003-10) Soil									
Chloride	4340	50.0	mg/kg	100	EJ50703	10/07/05	10/07/05	EPA 300.0	
% Moisture	13.2	0.1	%	1	EJ50701	10/06/05	10/07/05	% calculation	
SP-3, 2-3' (5J06003-11) Soil									
Chloride	4350	50.0	mg/kg	100	EJ50703	10/07/05	10/07/05	EPA 300.0	
% Moisture	13.3	0.1	%	1	EJ50701	10/06/05	10/07/05	% calculation	
SP-4, 0-1' (5J06003-12) Soil									
Chloride	3520	50.0	mg/kg	100	EJ50703	10/07/05	10/07/05	EPA 300.0	
% Moisture	12.5	0.1	%	1	EJ50701	10/06/05	10/07/05	% calculation	
SP-5, 0-1' (5J06003-13) Soil									
Chloride	3270	50.0	mg/kg	100	EJ50703	10/07/05	10/07/05	EPA 300.0	
% Moisture	11.1	0.1	%	1	EJ50701	10/06/05	10/07/05	% calculation	

Project: John Hendrix/ Thomas Long A #3

Fax: (432) 687-0456

P.O. Box 50685 Midland TX, 79710 Project Number: 5-0125
Project Manager: Mark Larson

Reported: 10/13/05 14:25

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 EJ50602 - Solvent Extraction (GC)										
Blank (EJ50602-BLK1)				Prepared: 1	10/06/05 A	nalyzed: 10				
Gasoline Range Organics C6-C12	ND	10.0	mg/kg wet							
Diesel Range Organics >C12-C35	ND	10.0	"							
Total Hydrocarbon C6-C35	ND	10.0	•							
Surrogate: 1-Chlorooctane	41.8		mg/kg	50.0		83.6	70-130			
Surrogate: 1-Chlorooctadecane	38.3		"	50.0		76.6	70-130			
LCS (EJ50602-BS1)				Prepared:	10/06/05 A	malyzed: 10	0/11/05			
Gasoline Range Organics C6-C12	408	10.0	mg/kg wet	500		81.6	75-125			
Diesel Range Organics >C12-C35	426	10.0	"	500		85.2	75-125			
Total Hydrocarbon C6-C35	834	10.0	н	1000		83.4	75-125			
Surrogate: 1-Chlorooctane	55.2		mg/kg	50.0		110	70-130			
Surrogate: 1-Chlorooctadecane	45.4		"	50.0		90.8	70-130			
Calibration Check (EJ50602-CCV1)				Prepared:	10/06/05 A	nalyzed: 10)/11/05			
Gasoline Range Organics C6-C12	568		mg/kg	500		114	80-120			
Diesel Range Organics >C12-C35	589		**	500		118	80-120			
Total Hydrocarbon C6-C35	1160		" ,	1000		116	80-120			
Surrogate: 1-Chlorooctane	49.2		"	50.0		98.4	0-200			
Surrogate: 1-Chlorooctadecane	44.0		"	50.0		88.0	0-200			
Matrix Spike (EJ50602-MS1)	Sou	rce: 5J05014	-07	Prepared:	10/06/05 A	analyzed: 10)/11/05			
Gasoline Range Organics C6-C12	465	10.0	mg/kg dry	539	ND	86.3	75-125			
Diesel Range Organics >C12-C35	526	10.0	п	539	50.3	88.3	75-125			
Total Hydrocarbon C6-C35	991	10.0	н	1080	50.3	87.1	75-125			
Surrogate: 1-Chlorooctane	59.4		mg/kg	50.0		119	70-130			
Surrogate: 1-Chlorooctadecane	37.0		"	50.0		74.0	70-130			
Matrix Spike Dup (EJ50602-MSD1)	Sou	rce: 5J05014	-07	Prepared:	10/06/05 A	nalyzed: 10)/11/05			
Gasoline Range Organics C6-C12	449	10.0	mg/kg dry	539	ND	83.3	75-125	3.50	20	
Diesel Range Organics >C12-C35	519	10.0	n	539	50.3	87.0	75-125	1.34	20	
Total Hydrocarbon C6-C35	968	10.0	Ħ	1080	50.3	85.0	75-125	2.35	20	
Surrogate: 1-Chlorooctane	44.2		mg/kg	50.0		88.4	70-130			
Surrogate: 1-Chlorooctadecane	36.7		rr .	50.0		73.4	70-130			

Project: John Hendrix/ Thomas Long A #3

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P.O. Box 50685 Midland TX, 79710 Project Number: 5-0125
Project Manager: Mark Larson

Reported: 10/13/05 14:25

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 EJ50614 - EPA 5030C (GC)										
Blank (EJ50614-BLK1)				Prepared: 1	10/06/05 A	nalyzed: 10	0/07/05			
Benzene	ND	0.0250	mg/kg wet			-				
Toluene	ND	0.0250	ч							
Ethylbenzene	ND	0.0250	"							
Xylene (p/m)	ND	0.0250	"							
Xylene (o)	ND	0.0250	"							
Surrogate: a,a,a-Trifluorotoluene	45.8		ug/kg	40.0		114	80-120			
Surrogate: 4-Bromofluorobenzene	43.7		"	40.0		109	80-120			
LCS (EJ50614-BS1)				Prepared &	Analyzed	: 10/06/05				
Benzene	0.0534	0.00100	mg/kg wet	0.0500		107	80-120			
Toluene	0.0555	0.00100	**	0.0500		111	80-120			
Ethylbenzene	0.0578	0.00100	"	0.0500		116	80-120			
Xylene (p/m)	0.109	0.00100	**	0.100		109	80-120			
Xylene (o)	0.0594	0.00100	"	0.0500		119	80-120			
Surrogate: a,a,a-Trifluorotoluene	44.9		ug/kg	40.0		112	80-120			
Surrogate: 4-Bromofluorobenzene	43.5		"	40.0		109	80-120			
Calibration Check (EJ50614-CCV1)				Prepared: 1	10/06/05 A	nalyzed: 10	0/07/05			
Benzene	44.1		ug/kg	50.0		88.2	80-120		· · · · ·	-
Toluene	43.5		**	50.0		87.0	80-120			
Ethylbenzene	46.1		•	50.0		92.2	80-120			
Xylene (p/m)	85.6		"	100		85.6	80-120			
Xylene (o)	48.8		"	50.0		97.6	80-120			
Surrogate: a,a,a-Trifluorotoluene	33.1		"	40.0		82.8	0-200			
Surrogate: 4-Bromofluorobenzene	32.5		"	40.0		81.2	0-200			
Matrix Spike (EJ50614-MS1)	Sou	ırce: 5J05011	-01	Prepared: 1	10/06/05 A	nalyzed: 10	0/07/05			
Benzene	1.23	0.0250	mg/kg dry	1.27	ND	96.9	80-120			
Toluene	1.27	0.0250	"	1.27	ND	100	80-120			
Ethylbenzene	1.34	0.0250	**	1.27	ND	106	80-120			
Xylene (p/m)	2.45	0.0250	**	2.54	ND	96.5	80-120			
Xylene (o)	1.32	0.0250	n	1.27	ND	104	80-120			
Surrogate: a,a,a-Trifluorotoluene	36.9		ug/kg	40.0		92.2	80-120			
Surrogate: 4-Bromofluorobenzene	34.6		•	40.0		86.5	80-120			

Project: John Hendrix/ Thomas Long A #3

Fax: (432) 687-0456

P.O. Box 50685 Midland TX, 79710 Project Number: 5-0125
Project Manager: Mark Larson

Reported: 10/13/05 14:25

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

Matrix Spike Dup (EJ50614-MSD1)	Source: 5J05011-01			Prepared: 10/06/05 Analyzed			0/12/05		
Benzene	1.26	0.0250	mg/kg dry	1.27	ND	99.2	80-120	2.35	20
Toluene	1.32	0.0250	"	1.27	ND	104	80-120	3.92	20
Ethylbenzene	1.48	0.0250	"	1.27	ND	117	80-120	9.87	20
Xylene (p/m)	2.78	0.0250	n	2.54	ND	109	80-120	12.2	20
Xylene (o)	1.45	0.0250	"	1.27	ND	114	80-120	9.17	20
Surrogate: a,a,a-Trifluorotoluene	40.6		ug/kg	40.0		102	80-120		
Surrogate: 4-Bromofluorobenzene	36.7		"	40.0		91.8	80-120		

Batch EJ51009 - EPA 5030C (GC)

Xylene (p/m)

Surrogate: a,a,a-Trifluorotoluene

Surrogate: 4-Bromofluorobenzene

Xylene (o)

Blank (EJ51009-BLK1)				Prepared & Ana	lvzed: 10/10/05		
Benzene	ND	0.0250	mg/kg wet		<u></u>		
Toluene	ND	0.0250	"			•	
Ethylbenzene	ND	0.0250	"				
Xylene (p/m)	ND	0.0250	н				
Xylene (o)	ND	0.0250	п				
Surrogate: a,a,a-Trifluorotoluene	36.0		ug/kg	40.0	90.0	80-120	
Surrogate: 4-Bromofluorobenzene	33.6		"	40.0	84.0	80-120	
LCS (EJ51009-BS1)				Prepared & Ana	lyzed: 10/10/05		
Benzene	0.0504	0.00100	mg/kg wet	0.0500	101	80-120	
Toluene	0.0505	0.00100	ŧŧ	0.0500	101	80-120	
Ethylbenzene	0.0565	0.00100	**	0.0500	113	80-120	

ug/kg

0.100

0.0500

40.0

40.0

0.105

0.0595

42.0

41.3

0.00100

0.00100

105

119

105

103

80-120

80-120

80-120

80-120

Project: John Hendrix/ Thomas Long A #3

Fax: (432) 687-0456

P.O. Box 50685 Midland TX, 79710

Project Number: 5-0125 Project Manager: Mark Larson

Reported: 10/13/05 14:25

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 EJ51009 - EPA 5030C (GC)										
Calibration Check (EJ51009-CCV1)				Prepared &	. Analyzed	: 10/10/05				
Benzene	54.8		ug/kg	50.0		110	80-120			
Toluene	55.7		"	50.0		111	80-120			
Ethylbenzene	58.8		•	50.0		118	80-120			
Xylene (p/m)	114			100		114	80-120			
Xylene (o)	59.1		"	50.0		118	80-120			
Surrogate: a,a,a-Trifluorotoluene	43.6		"	40.0		109	0-200			
Surrogate: 4-Bromofluorobenzene	46.0		"	40.0		115	0-200			
Matrix Spike (EJ51009-MS1)	Sou	rce: 5J07002	-03	Prepared: 1	10/10/05 A	Analyzed: 10	/12/05			
Benzene	0.0537	0.00100	mg/kg dry	0.0515	ND	104	80-120			
Toluene	0.0579	0.00100	**	0.0515	ND	112	80-120			
Ethylbenzene	0.0618	0.00100	н	0.0515	ND	120	80-120			
Xylene (p/m)	0.119	0.00100	**	0.103	ND	116	80-120			
Xylene (o)	0.0604	0.00100	"	0.0515	ND	117	80-120			
Surrogate: a,a,a-Trifluorotoluene	45.1		ug/kg	40.0		113	80-120			
Surrogate: 4-Bromofluorobenzene	42.8		"	40.0		107	80-120			
Matrix Spike Dup (EJ51009-MSD1)	Sou	rce: 5J07002	-03	Prepared: 1	10/10/05 A	Analyzed: 10	/12/05			
Benzene	0.0459	0.00100	mg/kg dry	0.0515	ND	89.1	80-120	15.4	20	
Toluene	0.0482	0.00100	"	0.0515	ND	93.6	80-120	17.9	20	
Ethylbenzene	0.0537	0.00100		0.0515	ND	104	80-120	14.3	20	
Xylene (p/m)	0.106	0.00100	11	0.103	ND	103	80-120	11.9	20	
Xylene (o)	0.0553	0.00100		0.0515	ND	107	80-120	8.93	20	
Surrogate: a,a,a-Trifluorotoluene	34.6		ug/kg	40.0		. 86.5	80-120			
Surrogate: 4-Bromofluorobenzene	34.3		"	40.0		85.8	80-120			

Project: John Hendrix/ Thomas Long A #3

Fax: (432) 687-0456

P.O. Box 50685

Project Number: 5-0125

Reported:

Midland TX, 79710

Project Manager: Mark Larson

10/13/05 14:25

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 EJ50701 - General Preparation (Prep)										
Blank (EJ50701-BLK1)				Prepared:	10/06/05 A	Analyzed: 10	/07/05			
% Solids	100		%							
Duplicate (EJ50701-DUP1)	Sour	ce: 5J06001-	01	Prepared:	10/06/05 A	Analyzed: 10	/07/05			
% Solids	97.0		%		96.8			0.206	20	
Batch EJ50703 - Water Extraction										
Blank (EJ50703-BLK1)				Prepared &	k Analyzed	l: 10/07/05				
Chloride	ND	0.500	mg/kg						•	
LCS (EJ50703-BS1)				Prepared &	k Analyzed	1: 10/07/05				
Chloride	8.13		mg/L	10.0		81.3	80-120			
Calibration Check (EJ50703-CCV1)				Prepared &	k Analyzed	l: 10/07/05				
Chloride	8.18		mg/L	10.0		81.8	80-120			
Duplicate (EJ50703-DUP1)	Sour	ce: 5J06003-	01	Prepared &	k Analyzed	l: 10/07/05				
Chloride	2540	25.0	mg/kg		2530			0.394	20	

Larson & Associates, Inc.Project:John Hendrix/ Thomas Long A #3Fax: (432) 687-0456P.O. Box 50685Project Number:5-0125Reported:Midland TX, 79710Project Manager:Mark Larson10/13/05 14:25

Notes and Definitions

S-06 S-04 J DET Analyte DETECTED ND Analyte NOT DETECTED at or above the reporting limit NR Not ReportedDetected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag). Sample results reported on a dry weight basis dry RPD Relative Percent Difference LCS Laboratory Control Spike MS Matrix Spike Dup Duplicate

ort 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 James L. Hawkins, Chemist/Geologist Sandra Sanchez, Lab Tech.

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

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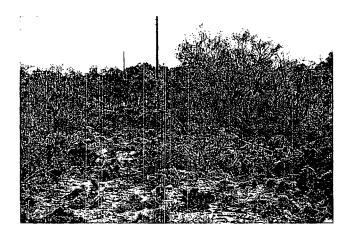
Environmental Lab of Texas Variance / Corrective Action Report – Sample Log-In

Client: Larson			
			•
Date/Time: 10/16/05 8:00			
Order#: 5706003			
51del #			
Initials:			
1111(03)			
Sample Receipt	Checkli	st	
Temperature of container/cooler?	Yes	No	2,5 C
Shipping container/cooler in good condition?	(TES)	No	
Custody Seals intact on shipping container/cooler?	Yes	No	Not present
Custody Seals intact on sample bottles?	Yes	No	Not present
Chain of custody present?	XES	No	
Sample Instructions complete on Chain of Custody?	Xes	No	
Chain of Custody signed when relinquished and received?	O'CES	No	
Chain of custody agrees with sample label(s)	Yes	No	ID on lids
Container labels legible and intact?	Yes	No	ula
Sample Matrix and properties same as on chain of custody?	YES	No	
Samples in proper container/bottle?	Yes	No	
Samples properly preserved?	Yes	No	
Sample bottles intact?	Y#5	No	
Preservations documented on Chain of Custody?	YES	No	
Containers documented on Chain of Custody?	Yes	No_	
Sufficient sample amount for indicated test?	Yes	No	
All samples received within sufficient hold time?	Yes	No	
			T
VOC samples have zero headspace?	Yes	No	Not Applicable
			Not Applicable
VOC samples have zero headspace? Other observations: Variance Documents	ves	No n:	Not Applicable Contacted by:
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APPENDIX C

Photographs

SECTION 11, T-22-S, R-37-E, LEA COUNTY, NEW MEXICO THOMAS LONG "A" WELL # 3



1. Flowline leak, looking south



2. Flowline leak, looking north