

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, Walter Lynch #1 Well, Unit Letter K (NE/4, SW/4), Section 1, 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 K ("NE/4, SW/4"), Section 1, Township 22 South, Range 37 East in Lea County, New Mexico. The leak was discovered on August 30, 2005, and immediately reported to OCD. Form C-141 was submitted to OCD by JHHC on August 30, 2005. The leak occurred approximately 400 feet southwest of the Walter Lynch #1 well, involved approximately 2 barrels of crude oil and no product was recovered. The latitude and longitude for the leak is North 32° 25' 08.2" and West 103° 07' 09.7". Figure 1 presents a location and topographic map. Appendix A presents Form C-141.

#### **Current Investigation**

On September 9 and 12, 2005, LA personnel collected soil samples from six (6) locations (SP-1 through SP-6) 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.) to total depth and depending on sample recovery. 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. The 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 eleven (11) feet below ground surface ("bgs") at location SP-3. The borings were plugged with

Mr. Paul Sheeley December 6, 2005 Page 2

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

The laboratory analyzed samples for benzene, toluene, ethyl benzene and xylene ("BTEX") using method SW-846-8021B, if PID readings exceeded 100 ppm. The laboratory analyzed samples for 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 C presents the laboratory report. Appendix D presents photographs.

#### Setting

The leak occurred approximately 3 miles southeast of Eunice, New Mexico, at an elevation of approximately 3350 feet above mean sea level ("AMSL"). Monument Draw is located about 2,800 feet 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 54 feet bgs, which is close to the cut-off for consideration of a higher ranking score. 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
<b>Total BTEX</b>	50 mg/kg
TPH	100 mg/kg

#### **Conclusions**

Benzene exceeded the RRAL in sample SP-3, 1 to 3 feet (8.45 mg/Kg). Total BTEX (sum of benzene, toluene, ethyl benzene and xylene) exceeded the RRAL in samples SP-3, 0 to 1 feet (85.15 mg/Kg) and SP-3, 1 to 3 feet (136.46 mg/Kg). TPH exceeded the RRAL in samples SP-2, 0 to 1 feet (18,386 mg/Kg), SP-2, 1 to 2.8 feet (244.04 mg/Kg), SP-3, 0 to 1 feet (27,770 mg/Kg), SP-3, 1 to 3 feet (5,970 mg/Kg), SP-4, 0 to 1 feet (15,150 mg/Kg), SP-5, 0 to 1 feet (19,400 mg/Kg), SP-6, 0 to 1 feet (5,902 mg/Kg) and SP-6, 1 to 2.5 feet (979 mg/Kg). There is no RRAL for chloride, but soil will be excavated to reduce chloride below 1,000 mg/Kg.



# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON Governor Joanna Prukop

Cabinet Secretary

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

Janurary 5, 2006

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

Re: Walter Lynch #1 Well - Investigation Work Plan Approval Site Location: UL-K, Sec 1-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: <u>psheeeley@state.nm.us</u>

Sincerely,

Paul Sheeley-Environmental Engineer Cc: Roger Anderson - Environmental Bureau Chief Chris Williams - District I Supervisor Larry Johnson - Environmental Engineer Mark Larson - Larson & Associates Mr. Paul Sheeley December 6, 2005 Page 3

Additional investigation will 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 to an approximate depth of three (3) feet bgs to reduce BTEX and TPH below the RRAL and chloride below 1,000 mg/Kg. Additional soil will be removed to approximately ten (1) feet bgs near the leak (SP-3) to reduce BTEX and TPH below the RRAL and chloride below 1,000 mg/Kg. Additional investigation will be performed in the vicinity of sample locations SP-3, SP-4, SP-5and SP-6 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) 394-2649, myself at (432) 687-0901 or email <u>mburrows@valornet.com</u> or <u>Mark@LAEnvironmental.com</u>.

Larson and Associates, Inc.

assie Hobbs for

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

Encl

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

Table 1:	Summary of Field and Laboratory Analysis of Soil Samples
	John H. Hendrix Corporation, Walter Lynch #1
	Unit Letter K (NE/4,SW/4), Section 1, Township 22 South, Range 37 East
	Lea County, New Mexico

Page 1 of 2

Boring	Sample	Sample	PID	Benzene	BTEX	GRO C6	DRO	TPH	Chloride
Number	Date	Depth	(ppm)	(mg/kg)	(mg/kg)	C12	>C12-C35	C6-C35	(mg/kg)
		(Feet BGS)				(шұ/құ)	(IIIB/KB)	100	
	RR	AL		10	50		-10	-20	21.0
SP-1	9/9/2005	0 - 1	15.4			<10	<10	<20	51.9 120
	9/9/2005	1 - 2.8	2.0			<10	<10	<20	138
	9/9/2005	4 - 6	0.1			<10	<10	<20	159
	9/9/2005	6 - 7.8	0.1		·				
SP-2	9/12/2005	0 - 1	120.0	<0.025	0.0882	986	17,400	18,386	1,440
	9/12/2005	1 - 2.8	20.5			5.04	239	244.04	159
	9/12/2005	4 - 5	7.0			<10	28.2	28.2	31.9
	9/12/2005	5 - 6	23.4						
	9/12/2005	6 - 8	4.0						
SP-3	9/12/2005	0 - 1	750.0	1.75	85.15	6,370	21,400	27,770	5,640
	9/12/2005	1 - 3	1450.0	8.45	136.46	136.46 2,430		5,970	9,250
	9/12/2005	4 - 5	402.0	0.0105	0.5	10.3	82.4	92.7	5,420
	9/12/2005	5 - 6	708.0			<10	<10	<20	6,810
	9/12/2005	6 - 7	3.0						7,530
	9/12/2005	<b>8 - 9</b> <sup>-</sup>	47.4						4,140
	9/12/2005	9 - 11	15.2						622
SP-4	9/12/2005	0 - 1	220.0	0.0584	25.6684	2,750	12,400	15,150	2,450
	9/12/2005	1 - 2.8	51.6			<10	9.64	9.6	298
	9/12/2005	4 - 5	142.0	<0.025	0.2898	8.77	18.6	27.37	670
	9/12/2005	5-6	0.1			<10	<10	<20	308
	9/12/2005	6 - 8	0.1					·	292
SP-5	9/12/2005	0 - 1	68.7			1,300	18,100	19,400	681
	9/12/2005	1 - 2.8	20.8			<10	<10	<20	1,000
	9/12/2005	4 - 5	2.8			<10	<10	<20	989
	9/12/2005	5 - 6	0.1						750

Table 1:	Summary of Field and Laboratory Analysis of Soil Samples
	John H. Hendrix Corporation, Walter Lynch #1
	Unit Letter K (NE/4,SW/4), Section 1, Township 22 South, Range 37 East
	Les County New Mexico

Page 2 of 2

Boring Number	Sample Date	Sample Depth (Feet BGS)	PID (ppm)	Benzene (mg/kg)	BTEX (mg/kg)	GRO C6 C12 (mg/kg)	DRO >C12-C35 (mg/kg)	TPH C6-C35 (mg/kg)	Chloride (mg/kg)
	RR	AL		10	50			100	
SP-5	9/12/2005	6 - 7.8	0.1						1,460
SP-6	9/12/2005	0 - 1	95.7			762	5,140	5,902	1,030
	9/12/2005	1 - 2.5	53.6			115	864	979	1,540
	9/12/2005	4 - 5	9.2			<10	<10	<20	915
	9/12/2005	5 - 6	0.4					·	389
	9/12/2005	6 - 8	0.2						709

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 DRO + GRO)

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

**FIGURES** 





**APPENDIX A** 

Form C-141

AUG-30-2005	03:13P FROM: John	Hendrix	Corp	505-394-2649	TC
	· · · · · · · · · · · · · · · · · · ·				

TD:14326870456

P:4/5

District 1 1625 N. French Dr., (Jobbs, NM 88240 State of New Mexico Form C-141 **Energy Minerals and Natural Resources** Revised October 10, 2003 District II 1301 W Grand Avenue, Artesia, NM 88210 Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back District III **Oil Conservation Division** 1000 Rio Brazos Road, Azter, NM 87410 1220 South St. Francis Dr. District IV 1220 S. St. Francis Dr., Sunta Fe, NM X7505 side of form Santa Fe, NM 87505 **Release Notification and Corrective Action OPERATOR** Initial Report Final Report Name of Company Oh eno Contact MAn BURROWS VIN Telephone No. 505 Address Rox 910 E Funice NM 8 94-264 Facility Type Facility Name WAL En Lynch FLOWLINE Lease No. Surface Owner Mineral Owner Ann Ann APT 30-025-09942-0 **LOCATION OF RELEASE** Unit Letter Section Township Range Feel from the North/South Line Feel from the East/West Line | County K 37E 80 980 h)e.57 outh Latitude Longitude NATURE OF RELEASE Volume of Release 21381.5 Volume Recovered D Date and Hour of Occurrence 74+ Date and Hour of Discovery If XES, To Whom? \$130105 Type of Release との Source of Release BWLINE Was Immediate Notice Given? 50/2 Yes D No D Not Required つこり Date and Hour 3:08 Pm MARVIN Bunnows By Whom? 8/30/05 Was a Watercourse Reached? If YES, Volume Impacting the Watercourse, Yes No If a Watercourse was Impacted, Describe Fully \* Describe Cause of Problem and Remedial Action Taken.\* ELOWLINE hole m Describe Area Affected and Cleanup Action Taken. 6'×20', 2'×20' hone I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMUCD rules and regulations all operators are required to report and/or file centain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws aud/or regulations. **OIL CONSERVATION DIVISION** Inin Burrows Signature Andin Bunnows Approved by District Supervisor Printed Name: mon. Title: Approval Date: Expiration Date mBunnows @ Valon er & Conditions of Approval E-mail Address: Attached 🔲 \_\_\_\_\_Phone: 5.05-\_\_\_\_ 0/05 Date Attach Additional Sheets If Necessary 394-2649

### **APPENDIX B**

**Boring Logs** 

Project: Walter Lynch # 1

Project No: 5-0124

Location: Lea County , New Mexico

# Log: SP - 1

Page: 1 of 1

SUBSURFACE PROFILE			s	AMP	LE		
Depth	Symbol	Description	Number	Type	Recovery	PID ppm 2 6 10 14 18	Notes
0-		Ground Surface		11			
_		7.5 YR 6/3, Very fine grained sand, poorly sorted, sub round, loose to weakly conpacted, dry	1			15.4 Ø	
			2			2.0	
5-			3			0.1	
			4			0.1	
-		<i>Caliche</i> 7.5 YR 7/1 to 5/3, Light gray to brown, sandy very fine grained quartz sand, friable, dry <i>TD: 8'</i>	1				
10-							
D D H	rill Methorill Date: ole Size	od: Direct Push Larson and 507 N. Ma 9/9/05 Midland, T 0.25' (432) 687-	l Assoc ienfeld exas 79 0901	iates, , Suite 9701	Inc 202		Elevation: N/A Checked by: MJL Drilled by: LA

Project: Walter Lynch # 1

Project No: 5-0124

Location: Lea County , New Mexico

# Log: SP - 2

Page: 1 of 1

		SUBSURFACE PROFILE		S	AMPL	.E		
Depth	Symbol	Description		Number	Type	Recovery	PID ppm 50 150	Notes
0-		Ground Surface					· · · · · · · · · · · · · · · · · · ·	
0 - - 5-		Ground Surface Slity Sand 7.5 YR 3/2 TO 5/2, Very browr very fine grained sand, poorly round, very stong hydrocarbon stain from 0.0' - 1.0'	to brown, sorted, sub odor and	1 2 3 4			120.0 20.5 7.0 23.4	·
-	~	Silty Clayey Sand 7.5 YR 3/2, Brown, very fine g	rained quartz	5			4.0	
		sand						
-		TD: 8'	/					
10-								
Drill Method: Direct Push Drill Date: 9/12/05 Hole Size: 0.25' Larson and A 507 N. Marie Midland, Tex (432) 687-09				associ nfeld, as 79 01	iates, Suite 701	Inc 202		Elevation: N/A Checked by: MJL Drilled by: LA

Project: Walter Lynch # 1

Project No: 5-0124

Location: Lea County , New Mexico

# Log: SP - 3

Page: 1 of 1

Depth Symbol	Description	nber		Z		
		Nun	Type	Recove	PID ppm 500 1500	Notes
0	Ground Surface					
	Slity Sand 7.5 YR 3/2 TO 5/2, Very brown to brown, very fine grained sand, poorly sorted, sub round, very stong hydrocarbon odor and stain Slity Clayey Sand 7.5 YR 3/2 TO 5/6, Brown to strong brown, very fine grained quartz sand, very poorly sorted, firm Caliche 7.5 YR 7/2 to 6/3, pinkish gray to light brown seardy. very fine grained quartz sand	1 2 3 4 5 6 7			750.0 1450.0 402.0 708.0 3.0 47.4	
Drill Metho Drill Date: Hole Size:	Direct Push     Larson and A       9/12/05     Midland, Tex       0.25'     (432) 687-09	Assoc Infeld as 79	iates, Suite 701	Inc 202		Elevation: N/A Checked by: MJL Drilled by: LA

Project: Walter Lynch # 1

Project No: 5-0124

Location: Lea County, New Mexico

# Log: SP - 4

Page: 1 of 1

		SUBSURFACE PROFILE	S	AMPI	E		
Depth	Symbol	Description	Number	Type	Recovery	PID ppm 100 300	Notes
	Syr	Ground Surface Slity Sand 7.5 YR 3/2, Light brown, very fine grained sand, poorly sorted, stong hydrocarbon odor and stain from 0.0' - 1.0'	1 2 3	1 <sub>y</sub>	Rec	220.0 51.6 142.0	
5 - - - -		Silty Clayey Sand 7.5 YR 3/2, Light brown, very fine grained quartz sand, very poorly sorted, firm TD: 8'	4			0.1	
Di D He	rill Meth rill Date: ole Size	od: Direct Push Larson and 7 507 N. Marie 9/12/05 Midland, Tex : 0.25' (432) 687-09	Assoc Infeld Ias 79 101	iates, , Suite 9701	Inc 202		Elevation: N/A Checked by: MJL Drilled by: LA

Project: Walter Lynch # 1

Project No: 5-0124

Location: Lea County, New Mexico

# Log: SP - 5

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Page: 1 of 1

		SUBSURFACE PROFILE		S	AMPL	.E		
Depth	Symbol	Description		Number	Type	Recovery	PID ppm 50 150	Notes
0-		Ground Surface Slity Sand 7.5 YR 3/2, Light brown, very fin sand, very poorly sorted, subrou dry	e grained ind, loose,	2			68.7	
5		Silty Clayey Sand 7.5 YR 3/2 to 5/6, Light brown to	o strong	4		<	0.1	
- - 10-		poorly sorted, firm TD: 8'						
Drill Method: Direct PushLarson and ADrill Date: 9/12/05Midland, TexHole Size: 0.25'(432) 687-094				assoc nfeld, as 79 01	iates, Suite 701	Inc 202		Elevation: N/A Checked by: MJL Drilled by: LA

. .

Project: Walter Lynch # 1

Project No: 5-0124

Location: Lea County, New Mexico

# Log: SP - 6

Page: 1 of 1

		SUBSURFACE PROFILE	s	AMPL	.E		
Depth	Symbol	Description	Number	Type	Recovery	PID ppm 50 150	Notes
0- - - - - - - - - - - - - - - - - - -		Ground Surface Slity Sand 7.5 YR 3/2, Light brown, very fine grained sand, very poorly sorted, subround, loose, strong hydrocarbon odor Silty Clayey Sand 7.5 YR 3/2, Light brown to strong brown, very fine grained quartz sand, very poorly sorted, firm TD: 8'	1 2 3 4 5			95.7 53.6 9.2 0.4	
D D H	rill Meth rill Date ole Size	od: Direct Push Larson and 2 507 N. Marie 9/12/05 Midland, Tex : 0.25' (432) 687-09	Assoc enfeld (as 79 901	iates, , Suite 9701	Inc 202		Elevation: N/A Checked by: MJL Drilled by: LA

### **APPENDIX C**

# Laboratory Reports

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



# **Analytical Report**

## **Prepared for:**

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

Project: John H. Hendrix/ Walter Lynch #1 Project Number: 5-0124 Location: None Given

Lab Order Number: 5I29001

Report Date: 10/06/05

Larson & Associates, Inc.	Project:	John H. Hendrix/ Walter Lynch #1	Fax: (432) 687-0456
P.O. Box 50685	Project Number:	5-0124	Reported:
Midland TX, 79710	Project Manager:	Mark Larson	10/06/05 14:36

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SP-3, 6-7'	5129001-01	Soil	09/12/05 12:00	09/13/05 08:45
SP-3, 8-9'	5129001-02	Soil	09/12/05 12:15	09/13/05 08:45
SP-3, 9-11'	5129001-03	Soil	.09/12/05 12:15	09/13/05 08:45
SP-4, 6-8'	5129001-04	Soil	09/12/05 13:15	09/13/05 08:45
SP-5, 5-6'	5129001-05	Soil	09/12/05 12:44	09/13/05 08:45
SP-5, 6-7.8'	5129001-06	Soil	09/12/05 12:44	09/13/05 08:45
SP-6, 5-6'	5129001-07	Soil	09/12/05 13:37	09/13/05 08:45
SP-6, 6-8'	5129001-08	Soil	09/12/05 13:37	09/13/05 08:45

Larson & Associates, Inc.	Project:	John H. Hendrix/ Walter Lynch #1	Fax: (432) 687-0456
P.O. Box 50685	Project Number:	5-0124	Reported:
Midland TX, 79710	Project Manager:	Mark Larson	10/06/05 14:36

### General Chemistry Parameters by EPA / Standard Methods

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SP-3, 6-7' (5129001-01) Soil	· · · · · · · · · · · · · · · · · · ·								
Chloride	7530	100	mg/kg	200	EJ50402	09/30/05	10/04/05	EPA 300.0	
SP-3, 8-9' (5129001-02) Soil									
Chloride	4140	50.0	mg/kg	100	EJ50402	09/30/05	10/04/05	EPA 300.0	
SP-3, 9-11' (5129001-03) Soil									
Chloride	622	10.0	mg/kg	20	EJ50402	09/30/05	10/04/05	EPA 300.0	
SP-4, 6-8' (5129001-04) Soil									
Chloride	292	10.0	mg/kg	20	EJ50402	09/30/05	10/04/05	EPA 300.0	<i>"</i>
SP-5, 5-6' (5129001-05) Soil									
Chloride	450	10.0	mg/kg	20	EJ50402	09/30/05	10/04/05	EPA 300.0	
SP-5, 6-7.8' (5129001-06) Soil									
Chloride	1460	20.0	mg/kg	40	EJ50402	09/30/05	10/04/05	EPA 300.0	
SP-6, 5-6' (5129001-07) Soil									
Chloride	389	10.0	mg/kg	20	EJ50402	09/30/05	10/04/05	EPA 300.0	
SP-6, 6-8' (5129001-08) Soil									
Chloride	709	10.0	mg/kg	20	EJ50402	09/30/05	10/04/05	EPA 300.0	

Environmental Lab of Texas

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

Larson & Associates, Inc.	Project:	John H. Hendrix/ Walter Lynch #1	Fax: (432) 687-0456
P.O. Box 50685	Project Number:	5-0124	Reported:
Midland TX, 79710	Project Manager:	Mark Larson	10/06/05 14:36

### General Chemistry Parameters by EPA / Standard Methods - Quality Control

**Environmental Lab of Texas** 

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EJ50402 - Water Extraction						_				
Blank (EJ50402-BLK1)				Prepared: (	)9/30/05 A	nalyzed: 10	)/04/05			
Chloride	ND	0.500	mg/kg							
LCS (EJ50402-BS1)				Prepared: (	09/30/05 A	nalyzed: 10	0/04/05			
Chloride	8.09		mg/L	10.0		80.9	80-120			
Calibration Check (EJ50402-CCV1)				Prepared: (	09/30/05 A	nalyzed: 16	0/04/05		•	
Chloride	8.60		mg/L	10.0		86.0	80-120		•	
Duplicate (EJ50402-DUP1)	Sou	rce: 5129004-	07	Prepared: (	09/30/05 A	nalyzed: 10	)/04/05			
Chloride	217	10.0	mg/kg		206			5.20	20	

Environmental Lab of Texas

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

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

Larson &	Associates, Inc.	Project:	John H. Hendrix/ Walter Lynch #1	Fax: (432) 687-0456
P.O. Box	50685	Project Number:	5-0124	Reported:
Midland	TX, 79710	Project Manager:	Mark Larson	10/06/05 14:36
		Notes and De	efinitions	
DET	Analyte DETECTED			
ND	Analyte NOT DETECTED at or above the reporting limit	t		
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 Junits

10/6/2005

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:

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

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

Environmental Lab of Texas

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

Client:	arson	
Date/Time:	a/13/05 8	45
Order #:	5713002	512900
Initials.	CK	

COPY

## Sample Receipt Checklist

Temperature of container/cooler?	Yes	No	1.0 C
Shipping container/cooler in good condition?	1 Cress 1	No	
Custody Seals intact on shipping container/cooler?	Yes	No	NOL DIESEAN
Custody Seals intact on sample bottles?	Yes	No	NOT present
Chain of custody present?	Xes	No	
Sample Instructions complete on Chain of Custody?	Yas	No	
Chain of Custody signed when relinquished and received?	Yes	No	
Chain of custody agrees with sample label(s)	Yes	No	IIDon ar
Container labels legible and intact?	Yes	No	1 n/a
Sample Matrix and properties same as on chain of custody?	YES:	No	
Samples in procer container/bottle?	(es	No	
Samples properly preserved?	1 200	No	
Sample bottles intact?	1 Yes	No	
Preservations documented on Chain of Custody?	1 Yes	No	
Containers documented on Chain of Custody?	1 400	No	1
Sufficient sample amount for indicated test?	1 YOS	No	
Ail samples received within sufficient hold time?	YES	No	
VOC samples have zero headspace?	Xes	I No	Not Applicable

Other observations:

Variance Documentation:

Contact Person: -\_\_\_\_ Date/Time: \_\_\_\_\_ Contacted by: \_\_\_\_\_ Regarding: Corrective Action Taken: · ·· .

### **Jeanne McMurrey**

From:"Mark Larson" <mark@laenvironmental.com>To:<jeanne@elabtexas.com>Sent:Thursday, September 29, 2005 8:17 AMSubject:Re: Additional Analysis for Lab Order Number 5113002

Jeanne: Per our conversation, please analyze the following samples for

chloride:

SP-3, 6 - 7' SP-3, 8 - 9' SP-3, 9 - 11' SP-4, 6 - 8' SP-5, 5 - 6' SP-5, 6 - 7.8' SP-6, 5 - 6' SP-6, 6 - 8' Thanks,

Mark

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

### **APPENDIX D**

# Photographs

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

# UL K, SECTION 1, T-22-S, R-37-E, LEA COUNTY, NEW MEXICO WALTER LYNCH TANK BATTERY WELL # 1



1. Direct push sampling at line



2. Flowline spill, looking northeast



3. Flowline spill, looking southwest

# UL K, SECTION 1, T-22-S, R-37-E, LEA COUNTY, NEW MEXICO WALTER LYNCH TANK BATTERY WELL # 1



4. Location sign