

November 4, 2005

VIA EMAIL: paul.sheeley@state.nm.us

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



Re: Soil Remediation Report for Robert Cueto Property, Unit Letter C (NE/4, NW/4), Section 15, Township 22 South, Range 37 East, Lea County, New Mexico

Dear Mr. Sheeley:

This report is submitted to the 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 soil cleanup on property ("Site") owned by Robert Cueto located south of the E. W. Walden tank battery in unit C. (NE/4, NW/4), Section 15, Township 22 South, Range 37 East in Lea County, New Mexico. The soil cleanup was performed in accordance with a work plan submitted to OCD on February 21, 2005, as a condition for approval of a plan to investigate an unlined pit at the Will Cary Lease in unit F (SE/4, NW/4), Section 22, Township 22 South, Range 37 East. A global positioning system ("GPS") coordinate for the Site is North 32° 23.837' and West 103° 09.288'. Figure 1 presents a location and topographic map. Figure 2 presents a Site drawing.

Remediation Activity

The cleanup was performed between October 13 and 17, 2005, and involved using a backhoe to excavate approximately 250 cubic yards of hydrocarbon (asphalt) and soil from an area measuring approximately 15 x 230 feet. Soil was excavated to a maximum depth of 3 feet below ground surface ("bgs"), and piled near the west end of the excavation.

Soil samples were collected from the sides and bottom of the excavation on October 18, 2005, using a stainless steel sample trowel. The sample trowel was thoroughly washed between uses with a solution of water and laboratory-grade (Alconox®) detergent and rinsed with distilled water. Laboratory samples were collected in clean 4-ounce glass sample jars, sealed, labeled, chilled in an ice chest and hand-delivered under chain-of-custody control to Environmental Lab of Texas, Inc. ("ELTI") located in Odessa, Texas. Field samples were collected in clean 8-ounce glass sample

1

application pPACOG03726619

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

Mr. Paul Sheeley November 4, 2005 Page 2

jars, sealed with a layer of aluminum foil before replacing the cap and allowed to reach ambient temperature. A RAE Instruments, Model 2000 photoioization detector ("PID") was calibrated to isobutylene and used to record the highest concentration of organic vapors in the field samples after probe was inserted into the headspace through the aluminum foil. The PID readings are summarized on Table 1.

Referring to Table 1, the highest headspace reading was recorded in sample SS-7 (1.8 ppm), which was analyzed by the laboratory for benzene, toluene, ethyl benzene and xylene (commonly referred to as BTEX) using method SW-846-8021B. The laboratory analyzed all samples for total petroleum hydrocarbons ("TPH"), including gasoline range organics ("GRO") and diesel range organics ("DRO"), using method SW-846-8015, and chloride using method SW-846-9253. Table 1 presents a summary of the laboratory. Appendix A presents the laboratory report and chain-of-custody documentation. Appendix B presents photographs.

Recommended remediation action levels ("RRAL") for benzene, BTEX and TPH were calculated using the following OCD ranking criteria:

Ranking Criteria	Result	Ranking Score
Depth-to-Groundwater	50 – 99 Feet	10
Wellhead Protection Area	>200 Feet (Private)	0
Distance to Surface Water	>1000 Feet	0
	Total Ranking	10
	Score:	

Based on the total ranking score (10), the following RRAL are assigned to the Site:

\triangleright	Benzene	10 mg/Kg
\triangleright	Total BTEX	50 mg/Kg
\triangleright	TPH	1,000 mg/Kg

Referring to Table 1, the laboratory reported no BTEX in sample SS-7 above the method reporting limits of 0.025 milligrams per kilogram ("mg/Kg"), respectively. The laboratory also reported the highest TPH concentration in sample SS-7 (498 mg/Kg). The laboratory reported the highest chloride value in sample SS-6 (338 mg/Kg). Based on the laboratory results, JHHC respectfully requests the following:

- Permission to haul the excavated soil for treatment at its OCD permitted surface waste management facility (Permit Number NM-02-0021);
- Permission to fill the excavation with clean soil and seed area with range grasses; and
- A letter from OCD requiring no further action.

Mr. Paul Sheeley November 4, 2005 Page 3

Please call Mr. Ron Westbrook at (432) 684-6631, myself at (432) 687-0901 or email: <u>ronniew@jhhc.org</u> or mark@laenvironmental.com. Sincerely, *Larson and Associates, Inc.*

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

Encl.

cc: Ronnie Westbrook/JHHC Marvin Burrows/JHHC Chris Williams/OCD District 1 Larry Johnson/OCD District 1



NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON Governor Joanna Prukop Cabinet Secretary Mark E. Fesmire, P.E. Director Oil Conservation Division

February 2, 2006

Ronnie Westbrook John H. Hendrix Corp., (JHC) 110 N. Marienfeld St., Ste. 400 Midland, TX 79701

Re: EW Walden/Robert Cuerto Property-surface clean-up approval Site Location: UL-C, Sec 15-T22S-R37E Dated: November 4, 2005

Dear Mr. Westbrook,

New Mexico Oil Conservation Division (OCD) reviewed the plan prepared by Larson & Associates for JHC and referenced above. The plan is **hereby approved** according to the information provided.

Please be advised that OCD approval of this plan does not relieve JHC 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 JHC 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: paul.sheeeley@state.nm.us

Sincerely,

Paul Sheeley-Environmental Engineer Cc: Robert Cuerto Wayne Price - Environmental Bureau Chief Chris Williams - District I Supervisor Larry Johnson - Environmental Engineer Mark Larson - Larson & Associates **TABLES**

Table 1
Summary of Field and Laboratory Analysis of Soil Samples
John H. Hendrix Corporation, E.W. Walden Tank Battery
Unit Letter C (NE/4, NW/4), Section 15, Township 22 South, Range 37 East
Lea County, New Mexico

Sample	Sample	Sample	Location	PID	Benzene	Total BTEX	GRO	DRO	TPH	Chloride
Number	Date	Depth (feet BGS)		(ppm)	(mg/kg)	(mg/kg)	(C6-C12) (mg/kg)	(>C12-C35) (mg/kg)	(C6-C35) (mg/kg)	(mg/kg)
NMOCD - R	RAL	(1001 1005)			. 10	50	(mg/ng/		1000	
SS-1	10/18/05	0 - 0.5	Bottom	0.1			<10	<10	<20	394
SS-2	10/18/05	0 - 0.5	Bottom	0.1			<10	<10	<20	137
SS-3	10/18/05	0 - 0,5	Bottom	0.1			<10	<10	<20	30.5
SS-4	10/18/05	0 - 0.5	Bottom	0.1			<10	6.60	6.60	64.9
SS-5	10/18/05	0 - 0.5	Bottom	0.1			6.42	148	154.42	87.9
SS-6	10/18/05	0 - 0.5	Bottom	0.1			<10	<10	<20	338
SS-7	10/18/05	0 - 0.5	Bottom	1.8	<0.025	<0.125	<10	498	498	57
SS-8	10/18/05	0 - 0.5	Bottom	1.7			<10	189	189	220
SS-9	10/18/05	0 - 0.5	Bottom	0.3			<10	<10	<20	51.7
SS-10	10/18/05	0 - 0.5	Side	0.1			<10	<10	<20	21.5
SS-11	10/18/05	0 - 0.5	Side	0.1			<10	8.33	8.33	18.6
SS-12	10/18/05	0 - 0.5	Side	0.1			<10	<10	<20	26.9
SS-13	10/18/05	0 - 0.5	Side	0.1			<10	<10	<20	17.6
SS-14	10/18/05	0 - 0.5	Side	0.1			<10	<10	<20	17.3
SS-15	10/18/05	0 - 0.5	Side	0.1			<10	<10	<20	38.8
SS-16	10/18/05	0 - 1	South	0.1			<10	<10	<20	18.4
SS-17	10/18/05	0 - 1	South	0.1			<10	<10	<20	181

All analyses performed by Environmental Lab of Texas, Odessa, Texas Notes:

Depth in feet below ground surface Photoionization detector 1. BGS:

2. PID:

Parts per million 3. ppm:

Gasoline-range organics Diesel-range organics 4. GRO:

5. DRO:

Total petroleum hydrocarbons (Sum of GRO + DRO) Milligrams per kilogram No data available 6. TPH:

7. mg/kg:

8. ---:

Below method detection limit 9. <:

10. RRAL: NMOCD Recommended Remediation Action Level

FIGURES





APPENDIX A

Laboratory Report

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/ E.W. Walden Project Number: 5-0101 Location: None Given

Lab Order Number: 5J19002

Report Date: 10/26/05

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Larson & Associates, Inc.	Project: John	n H. Hendrix/ E.W. Walden	Fax: (432) 687-0456
P.O. Box 50685	Project Number: 5-01	101	Reported:
Midland TX, 79710	Project Manager: Mar	rk Larson	10/26/05 14:59

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS-1	5J19002-01	Soil	10/18/05 08:30	10/19/05 08:30
SS-2	5J19002-02	Soil	10/18/05 08:35	10/19/05 08:30
SS-3	5J19002-03	Soil	10/18/05 08:40	10/19/05 08:30
SS-4	5J19002-04	Soil	10/18/05 08:45	10/19/05 08:30
SS-4 SS-5	5J19002-05	Soil	10/18/05 08:50	10/19/05 08:30
SS-6	5J19002-06	Soil	10/18/05 09:00	10/19/05 08:30
SS-7	5J19002-07	Soil	10/18/05 09:05	10/19/05 08:30
SS-8	5J19002-08	Soil	10/18/05 09:10	10/19/05 08:30
SS-9	5J19002-09	Soil	10/18/05 09:15	10/19/05 08:30
SS-10	5J19002-10	Soil	10/18/05 09:25	10/19/05 08:30
SS-11	5J19002-11	Soil	10/18/05 09:30	10/19/05 08:30
SS-12	5J19002-12	Soil	10/18/05 09:35	10/19/05 08:30
SS-13	5J19002-13	Soil	10/18/05 09:40	10/19/05 08:30
SS-14	5J19002-14	Soil	10/18/05 09:45	10/19/05 08:30
SS-15	5J19002-15	Soil	10/18/05 09:50	10/19/05 08:30
SS-16	5J19002-16	Soil	10/18/05 10:45	10/19/05 08:30
SS-17	5J19002-17	Soil	10/18/05 10:50	10/19/05 08:30

Larson & Associates, Inc. P.O. Box 50685 Midland TX, 79710		Project: John H. Hendrix/ E.W. Walden Project Number: 5-0101 Project Manager: Mark Larson							Fax: (432) 687-0456 Reported: 10/26/05 14:59	
		Or	ganics b	y GC						
		Environn	nental L	ab of T	exas					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note	
SS-1 (5J19002-01) Soil										
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EJ51908	10/19/05	10/19/05	EPA 8015M		
Diesel Range Organics >C12-C35	ND	10.0	\$*	н	и.	*	Ħ	м		
Total Hydrocarbon C6-C35	ND	10.0	"	17	"	· n	11	17	<u> </u>	
Surrogate: 1-Chlorooctane		88.2 %	70-1	30	"	"	"	"		
Surrogate: 1-Chlorooctadecane		78.8 %	70-1	30	"	"	"	"		
SS-2 (5J19002-02) Soil										
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EJ51908	10/19/05	10/19/05	EPA 8015M		
Diesel Range Organics >C12-C35	ND	10.0	11	u	"	N	11			
Total Hydrocarbon C6-C35	ND	10.0	u	11	"	11	H	и		
Surrogate: 1-Chlorooctane		101 %	70-1	130	"	"	"	"		
Surrogate: 1-Chlorooctadecane		89.4 %	70-1	130	"	"	"	"		
SS-3 (5J19002-03) Soil						_				
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EJ51908	10/19/05	10/19/05	EPA 8015M		
Diesel Range Organics >C12-C35	ND	10.0	н 1	u	"	n	"			
Total Hydrocarbon C6-C35	ND	10.0	"	"	17	н	"	11		
Surrogate: 1-Chlorooctane		90.4 %	70-	130	"	, "	"	"		
Surrogate: 1-Chlorooctadecane		79.6 %	70-	130	"	"	"	"		
SS-4 (5J19002-04) Soil										
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EJ51908	10/19/05	10/19/05	EPA 8015M		
Diesel Range Organics >C12-C35	J [6.60]	10.0		"	n	"	n	u		
Total Hydrocarbon C6-C35	ND	10.0			n 	¥	и	"		
Surrogate: 1-Chlorooctane		96.8 %		130	"	"	"	"		
Surrogate: 1-Chlorooctadecane		91.6 %	70-	130	"	n	"	"		
SS-5 (5J19002-05) Soil										
Gasoline Range Organics C6-C12	J [6.42]	10.0) mg/kg dry	1	EJ51908	10/19/05	10/19/05	EPA 8015M		
Diesel Range Organics >C12-C35	148	10.0) "	".	11	"	*			
Total Hydrocarbon C6-C35	148	10.0		n	#	#	**	11 		
Surrogate: 1-Chlorooctane		93.0 %		130	"	"	"	"		
Surrogate: 1-Chlorooctadecane		95.2 %	6 70-	130	"	"	"	"		

Environmental Lab of Texas

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Larson & Associates, Inc. P.O. Box 50685 Midland TX, 79710		Project: John H. Hendrix/ E.W. Walden Project Number: 5-0101 Project Manager: Mark Larson								
		Or Environn	ganics b nental I	•	eras					
		Reporting			<u> </u>					
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note	
SS-6 (5J19002-06) Soil		<u>.</u>								
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EJ51908	10/19/05	10/20/05	EPA 8015M		
Diesel Range Organics >C12-C35	ND	10.0	н	"	"	11	n	н		
Total Hydrocarbon C6-C35	ND	10.0	ħ	n	"		11	Ħ		
Surrogate: I-Chlorooctane		95.8 %	70-	130	"	"	"	"		
Surrogate: 1-Chlorooctadecane		92.0 %	70-	130	"	"	"	"		
SS-7 (5J19002-07) Soil										
Benzene	ND	0.0250	mg/kg dry	25	EJ51903	10/19/05	10/19/05	EPA 8021B		
Toluene	ND	0.0250	n	и		n		n		
Ethylbenzene	ND	0.0250	u	n	"	11	"	M		
Xylene (p/m)	ND	0.0250	"	n	н	11 *	"	u		
Xylene (o)	ND	0.0250	н	H	H	11	u .	"		
Surrogate: a,a,a-Trifluorotoluene		91.8 %	80-	120	**	"	"	"		
Surrogate: 4-Bromofluorobenzene		93.8 %	80-	120	"	"	"	"		
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EJ51908	10/19/05	10/20/05	EPA 8015M		
Diesel Range Organics >C12-C35	498	10. <u>0</u>	*	H		н	"	\$1		
Total Hydrocarbon C6-C35	498	10.0	"	H	11	n	"	¥1		
Surrogate: 1-Chlorooctane		102 %	5 70-	130	"	"	"	"		
Surrogate: 1-Chlorooctadecane		110 %	5 70-	130	"	"	"	"		
SS-8 (5J19002-08) Soil										
Gasoline Range Organics C6-C12	ND	10.0) mg/kg dry	1	EJ51908	10/19/05	10/19/05	EPA 8015M		
Diesel Range Organics >C12-C35	189	10.0) "	"	"	"	"	\$1		
Total Hydrocarbon C6-C35	189	10.0) "	11	"	n		II		
Surrogate: 1-Chlorooctane		97.8 %	6 70-	-130	"	"	"	"		
Surrogate: 1-Chlorooctadecane		102 %	6 70	-130	"	"	"	"		
SS-9 (5J19002-09) Soil										
Gasoline Range Organics C6-C12	ND	10.0) mg/kg dry	/ 1	EJ51908	10/19/05	10/19/05	EPA 8015M		
Diesel Range Organics >C12-C35	ND	10.0) "	11	и	n	11	"		
Total Hydrocarbon C6-C35	ND	10.0) "	**	n	и	H	11		
Surrogate: 1-Chlorooctane		96.8 %	6 70	-130	"	"	"	"		
Surrogate: 1-Chlorooctadecane		105 %	6 70	-130	"	"	n	"		

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Larson & Associates, Inc. P.O. Box 50685 Midland TX, 79710		P Project Nu Project Ma	Fax: (432) 687-0456 Reported: 10/26/05 14:59						
		Or	ganics b	y GC					
		Environn	nental L	ab of T	'exas				
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
SS-10 (5J19002-10) Soil									
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EJ51908	10/19/05	10/19/05	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	n	н	ri -	н	и	"	
Total Hydrocarbon C6-C35	ND	10.0	*1	"	n	11	n		
Surrogate: 1-Chlorooctane		96.4 %	70-1	30	"	"	"	"	
Surrogate: 1-Chlorooctadecane		106 %	70-1	30	"	"	"	"	
SS-11 (5J19002-11) Soil									
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1 -	EJ51908	10/19/05	10/19/05	EPA 8015M	
Diesel Range Organics >C12-C35	J [8.33]	10.0	**	"	n	u	и	н	
Total Hydrocarbon C6-C35	ND	10.0	"	11	11	"	"	H	
Surrogate: 1-Chlorooctane		94.2 %	70	130	"	"	"	"	
Surrogate: 1-Chlorooctadecane		96.8 %	70	130	"	"	11	"	
SS-12 (5J19002-12) Soil									
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EJ51908	10/19/05	10/19/05	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	n	11	н	n	n		
Total Hydrocarbon C6-C35	ND	10.0	N	"	"		łł	H	
Surrogate: 1-Chlorooctane		83.2 %	70-	130	"	"	"	"	
Surrogate: 1-Chlorooctadecane		85.0 %	70-	130	n	"	"	"	
SS-13 (5J19002-13) Soil									
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EJ51908	10/19/05	10/19/05	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0		"	"	и	м	"	
Total Hydrocarbon C6-C35	ND	10.0	11	"	*	H	"	11	
Surrogate: 1-Chlorooctane		91:8 %	70-	130	"	"	"	"	
Surrogate: 1-Chlorooctadecane		93.0 %	70-	130	"	"	"	"	
SS-14 (5J19002-14) Soil		<u></u>							
Gasoline Range Organics C6-C12	ND	10.0) mg/kg dry	1	EJ51908	10/19/05	10/19/05	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0) "	н	· •	n	H	*	
Total Hydrocarbon C6-C35	ND	10.0) "	14	W	11	11	11	
Surrogate: 1-Chlorooctane		85.4 %	5 70-	130	"	"	"	"	
Surrogate: 1-Chlorooctadecane		87.8 %	. 70	-130	"	"	"	и	

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Larson & Associates, Inc. P.O. Box 50685 Midland TX, 79710	Project: John H. Hendrix/ E.W. Walden Project Number: 5-0101 Project Manager: Mark Larson						Report	Fax: (432) 687-0456 Reported: 10/26/05 14:59				
		Or	ganics b	y GC								
Environmental Lab of Texas												
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note			
SS-15 (5J19002-15) Soil												
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EJ51908	10/19/05	10/19/05	EPA 8015M				
Diesel Range Organics >C12-C35	ND	10.0	n		"	11	н	"				
Total Hydrocarbon C6-C35	ND	10.0	"	и	"	n		u				
Surrogate: 1-Chlorooctane		89.2 %	70-1	130	"	"	"	n				
Surrogate: 1-Chlorooctadecane		88.6 %	70-130		"	"	"	"				
SS-16 (5J19002-16) Soil												
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EJ51908	10/19/05	10/19/05	EPA 8015M				
Diesel Range Organics >C12-C35	ND	10.0	**	н	17	"	и	н				
Total Hydrocarbon C6-C35	ND	10.0	11	н	**	H	н	11				
Surrogate: 1-Chlorooctane		92.2 %	70-	130	"	"	"	"				
Surrogate: I-Chlorooctadecane		99.4 %	70	130	"	"	"	"				
SS-17 (5J19002-17) Soil												
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EJ51908	10/19/05	10/19/05	EPA 8015M				
Diesel Range Organics >C12-C35	ND	10.0	н	"	"	"	"	"				
Total Hydrocarbon C6-C35	ND	10.0	"	**		n	n	n				
Surrogate: 1-Chlorooctane		92.0 %	70-	130	"	"	"	"				
Surrogate: 1-Chlorooctadecane		98.4 %	70-	130	"	"	"	"				

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

General Chemistry Parameters by EPA / Standard Methods Environmental Lab of Texas										
	· · ·	Reporting								
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes	
SS-1 (5J19002-01) Soil										
Chloride	394	10.0	mg/kg	20	EJ52616	10/25/05	10/26/05	EPA 300.0		
% Moisture	19.9	0.1	%	1	EJ51912	10/19/05	10/20/05	% calculation		
SS-2 (5J19002-02) Soil					•					
Chloride	137	10.0	mg/kg	20	EJ52616	10/25/05	10/26/05	EPA 300.0		
% Moisture	17.8	0.1	%	1	EJ51912	10/19/05	10/20/05	% calculation		
SS-3 (5J19002-03) Soil										
Chloride	30.5	5.00	mg/kg	10	EJ52616	10/25/05	10/26/05	EPA 300.0		
% Moisture	9.7	0.1	%	1	EJ51912	10/19/05	10/20/05	% calculation		
SS-4 (5J19002-04) Soil										
Chloride	64.9	10.0	mg/kg	20	EJ52616	10/25/05	10/26/05	EPA 300.0		
% Moisture	9.2	0.1	%	1	EJ51912	10/19/05	10/20/05	% calculation		
SS-5 (5J19002-05) Soil										
Chloride	87.9	5.00	mg/kg	10	EJ52616	10/25/05	10/26/05	EPA 300.0		
% Moisture	5.1	0.1	%	1	EJ51912	10/19/05	10/20/05	% calculation		
SS-6 (5J19002-06) Soil										
Chloride	338	10.0	mg/kg	20	EJ52616	10/25/05	10/26/05	EPA 300.0		
% Moisture	14.0	0.1	%	1	EJ51912	10/19/05	10/20/05	% calculation		
SS-7 (5J19002-07) Soil										
Chloride	57.0	10.0	mg/kg	20	EJ52616	10/25/05	10/26/05	EPA 300.0		
% Moisture	3.8	0.1	%	1	EJ51912	10/19/05	10/20/05	% calculation		
SS-8 (5J19002-08) Soil										
Chloride	220	10.0	mg/kg	20	EJ52616	10/25/05	10/26/05	EPA 300.0		
% Moisture	2.8	0.1	%	1	EJ51912	10/19/05	10/20/05	% calculation		

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

Project: John H. Hendrix/ E.W. Walden Project Number: 5-0101 Project Manager: Mark Larson

Analyte SS-9 (5J19002-09) Soil	Result	Reporting Limit	Units						
SS-9 (5J19002-09) Soil	51 7			Dilution	Batch	Prepared	Analyzed	Method	Note
	51.7								
Chloride	51.7	5.00	mg/kg	10	EJ52616	10/25/05	10/26/05	EPA 300.0	
% Moisture	4.4	0.1	%	1	EJ51912	10/19/05	10/20/05	% calculation	
SS-10 (5J19002-10) Soil									
Chloride	21.5	5.00	mg/kg	10	EJ52616	10/25/05	10/26/05	EPA 300.0	
% Moisture	4.5	0.1	%	1	EJ51912	10/19/05	10/20/05	% calculation	
SS-11 (5J19002-11) Soil								. —	
Chloride	18.6	5.00	mg/kg	10	EJ52616	10/25/05	10/26/05	EPA 300.0	
% Moisture	4.4	0.1	%	1	EJ51912	10/19/05	10/20/05	% calculation	
SS-12 (5J19002-12) Soil						<u></u>			
Chloride	26.9	5.00	mg/kg	10	EJ52616	10/25/05	10/26/05	EPA 300.0	
% Moisture	4.3	0.1	%	1	EJ51912	10/19/05	`10/20/05	% calculation	
SS-13 (5J19002-13) Soil									
Chloride	17.6	5.00	mg/kg	10	EJ52616	10/25/05	10/26/05	EPA 300.0	
% Moisture	4.8	0.1	%	1	EJ51912	10/19/05	10/20/05	% calculation	
SS-14 (5J19002-14) Soil									
Chloride	17.3	5.00	mg/kg	10	EJ52616	10/25/05	10/26/05	EPA 300.0	
% Moisture	12.3	0.1	%	1	EJ51912	10/19/05	10/20/05	% calculation	
SS-15 (5J19002-15) Soil									
Chloride	38.8	5.00	mg/kg	10	EJ52616	10/25/05	10/26/05	EPA 300.0	
% Moisture	12.8	0.1	%	1	EJ51912	10/19/05	10/20/05	% calculation	
<u>SS-16 (5J19002-16) Soil</u>									
Chloride	18.4	5.00	mg/kg	10	EJ52616	10/25/05	10/26/05	EPA 300.0	
% Moisture	9.2	0.1	%	1	EJ51912	10/19/05	10/20/05	% calculation	

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

Project: John H. Hendrix/ E.W. Walden Project Number: 5-0101 Project Manager: Mark Larson

	General Chem	istry Paran Environm		•		ard Meti	iods		
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SS-17 (5J19002-17) Soil	·····								
Chloride	181	5.00	mg/kg	10	EJ52616	10/25/05	10/26/05	EPA 300.0	
% Moisture	8.6	0.1	%	1	EJ51912	10/19/05	10/20/05	% calculation	

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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 EJ51903 - EPA 5030C (GC)										
Blank (EJ51903-BLK1)				Prepared a	& Analyze	ed: 10/19/0	05			
Benzene	ND	0.0250	mg/kg wet						\ \ \ \ \ \	
Toluene	ND	0.0250								
Ethylbenzene	ND	0.0250	"							
Xylene (p/m)	ND	0.0250	Ħ							
Xylene (0)	ND	0.0250	n							
Surrogate: a,a,a-Trifluorotoluene	37.0		ug/kg	40.0		92.5	80-120			
Surrogate: 4-Bromofluorobenzene	35.9		"	40.0		89.8	80-120			
LCS (EJ51903-BS1)				Prepared	& Analyz	ed: 10/19/	05			
Benzene	0.0423	0.00100	mg/kg wet	0.0500		84.6	80-120			
Toluene	0.0476	0.00100	"	0.0500		95.2	80-120			
Ethylbenzene	0.0539	0.00100	H	0.0500		108	80-120			
Xylene (p/m)	0.0997	0.00100	"	0.100		99.7	80-120			
Xylene (o)	0.0544	0.00100		0.0500		109	80-120			
Surrogate: a,a,a-Trifluorotoluene	38.1		ug/kg	40.0		95.2	80-120			
Surrogate: 4-Bromofluorobenzene	35.9		"	40.0		<i>89.8</i>	80-120			
Calibration Check (EJ51903-CCV1)				Prepared:	10/19/05	Analyzed	d: 10/20/05	5		
Benzene	42.0		ug/kg	50.0		84.0	80-120			
Toluene	48.4		"	50.0		96.8	80-120			
Ethylbenzene	59.3		n	50.0		119	80-120			
Xyiene (p/m)	109			100		109	80-120			
Xylene (o)	59.7		۳.	50.0		119	80-120			
Surrogate: a,a,a-Trifluorotoluene	38.2		"	40.0		95.5	0-200			
Surrogate: 4-Bromofluorobenzene	38.8		"	40.0		97.0	0-200			
Matrix Spike (EJ51903-MS1)	So	urce: 5J190	02-07	Prepared	& Analyz	zed: 10/19	/05			
Benzene	1.11	0.0250	mg/kg dry	1.30	ND	85.4	80-120			
Toluene	1.27	0.0250	"	1.30	ND	97.7	80-120			
Ethylbenzene	1.48	0.0250) "	1.30	ND	114	80-120			
Xylene (p/m)	2.73	0.0250		2.60	ND	105	80-120			
Xylene (o)	1.44	0.0250) "	1.30	ND	111	80-120			
Surrogate: a,a,a-Trifluorotoluene	40.5		ug/kg	40.0		101	80-120			
Surrogate: 4-Bromofluorobenzene	39.9		"	40.0		99.8	80-120			

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Project: John H. Hendrix/ E.W. Walden Project Number: 5-0101 Project Manager: Mark Larson

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Organics by GC - Quality Control

Environmental Lab of Texas

r										
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EJ51903 - EPA 5030C (GC)										
Matrix Spike Dup (EJ51903-MSD1)	So	urce: 5J190	02-07	Prepared:	10/19/05	Analyzed:	10/20/05			
Benzene	1.22	0.0250	mg/kg dry	1.30	ND	93.8	80-120	9.38	20	
Toluene	1.37	0.0250	u	1.30	ND	105	80-120	7.20	20	
Ethylbenzene	1.53	0.0250	17	1.30	ND	118	80-120	3.45	20	

Xylene (p/m)	3.12	0.0250	н	2.60	ND
Xylene (o)	1.56	0.0250	**	1.30	ND
Surrogate: a,a,a. Trifluorotoluene	37.8		ug/kg	40.0	
Surrogate: 4-Bromofluorobenzene	39.8		"	40.0	

55.7

Batch EJ51908 - Solvent Extraction (GC)

Blank (EJ51908-BLK1)				Prepared & An	alyzed: 10/19/()5		
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	11					
Surrogate: 1-Chlorooctane	46.3		mg/kg	50.0	92.6	70-130		
Surrogate: 1-Chlorooctadecane	42.3		"	50.0	84.6	70-130		
LCS (EJ51908-BS1)				Prepared & An	alyzed: 10/19/0	05		
Gasoline Range Organics C6-C12	386	10.0	mg/kg wet	500	77.2	75-125		
Diesel Range Organics >C12-C35	383	10.0	u	500	76.6	75-125 ·		
Total Hydrocarbon C6-C35	769	10.0	H	1000	76.9	75-125		
Surrogate: 1-Chlorooctane	47.4		mg/kg	50.0	94.8	70-130		
Surrogate: 1-Chlorooctadecane	48.8		"	50.0	97.6	70-130		
Calibration Check (EJ51908-CCV1)				Prepared & Ar	nalyzed: 10/19/	05		
Gasoline Range Organics C6-C12	460		mg/kg	500	92.0	80-120	· · · · · · · · · · · · · · · · · · ·	
Diesel Range Organics >C12-C35	451		n	500	90.2	80-120		
Total Hydrocarbon C6-C35	911		"	1000	91.1	80-120		
Surrogate: 1-Chlorooctane	53.0		"	50.0	106	0-200	·····	

50.0

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Surrogate: 1-Chlorooctadecane

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80-120

80-120

80-120

80-120

13.3 7.79

120

120

94.5

99.5

111

0-200

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10/26/05 14:59

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 EJ51908 - Solvent Extraction (GC)

Matrix Spike (EJ51908-MS1)	Sour	ce: 5J1900	2-01	Prepared &	& Analyze	ed: 10/19/	05			
Gasoline Range Organics C6-C12	503	10.0	mg/kg dry	624	ND	80.6	75-125			
Diesel Range Organics >C12-C35	498	10.0	14	624	ND	79.8	75-125			
Total Hydrocarbon C6-C35	1000	10.0	"	1250	ND	80.0	75-125			
Surrogate: 1-Chlorooctane	41.3		mg/kg	50.0		82.6	70-130			
Surrogate: 1-Chlorooctadecane	39.4		"	50.0		78.8	70-130			
Matrix Spike Dup (EJ51908-MSD1)	Sour	ce: 5J190(02-01	Prepared	& Analyze	ed: 10/19/	05			
Gasoline Range Organics C6-C12	508	10.0	mg/kg dry	624	ND	81.4	75-125	0.989	20	
Diesel Range Organics >C12-C35	500	10.0	11	624	ND	80.1	75-125	0.401	20	
Total Hydrocarbon C6-C35	1010	10.0	n	1250	ND	80.8	75-125	0.995	20	
Surrogate: 1-Chlorooctane	41.4		mg/kg	50.0		82.8	70-130			
Surrogate: 1-Chlorooctadecane	38.9		"	50.0		77.8	70-130			

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10/26/05 14:59

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 EJ51912 - General Preparation	n (Prep)									
Blank (EJ51912-BLK1)				Prepared:	10/19/05	Analyzed:	10/20/05			
% Solids	100		%							
Duplicate (EJ51912-DUP1)	Sou	urce: 5J1800	8-01	Prepared:	10/19/05	Analyzed:	10/20/05			
% Solids	89.1		%		89.2			0.112	20	
Duplicate (EJ51912-DUP2)	Sou	urce: 5J1900	8-02	Prepared:	10/19/05	Analyzed:	10/20/05			
% Solids	92.2		%		91.9			0.326	20	
Batch EJ52616 - Water Extraction										
Blank (EJ52616-BLK1)	••••			Prepared:	10/25/05	Analyzed:	10/26/05			
Chloride	ND	0.500	mg/kg							
LCS (EJ52616-BS1)				Prepared:	10/25/05	Analyzed:	10/26/05			
Chloride	8.39		mg/L	10.0		83.9	80-120			
Calibration Check (EJ52616-CCV1)				Prepared	: 10/25/05	Analyzed:	10/26/05			
Chloride	8.49		mg/L	10.0		84.9	80-120			
Duplicate (EJ52616-DUP1)	So	urce: 5J1900	02-01	Prepared	: 10/25/05	Analyzed	10/26/05			
Chloride	390	10.0	mg/kg		394			1.02	20	

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	Larson & Associates, Inc. P.O. Box 50685 Midland TX, 79710		Project: Project Number: Project Manager:		Fax: (432) 687-0456 Reported: 10/26/05 14:59
	J	Detected but below the Reporti	Notes and Do	efinitions estimated concentration (CLP J-Flag).	
	DET ND	Analyte DETECTED Analyte NOT DETECTED at or al	-		
-	NR	Not Reported			

Sample results reported on a dry weight basis dry

RPD **Relative Percent Difference**

LCS Laboratory Control Spike

MS Matrix Spike

Dup Duplicate

Report Approved By: 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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onmental Lab of Taxas Environmental Lab of Texas Variance / Corrective Action Report – Sample Log-In

Client:	Larson
Date/Time:	10/19/05 8:30
Order #:	6319002
Initials:	CK

Sample Receipt Checklist

Temperature of container/cooler?	Yes	No	3,6 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?	YED	No	
Chain of custody agrees with sample label(s)	Yes	No	FDon lik
Container labels legible and intact?	Yes	No	nfa
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/es	No	
Preservations documented on Chain of Custody?	Vès	No	
Containers documented on Chain of Custody?	Yes	No	
Sufficient sample amount for indicated test?	Yes	No	
All samples received within sufficient hold time?	¥95	No	
VOC samples have zero headspace?	Yes	No	Not Applicable

Other observations:

Variance Documentation: Contact Person: -_____ Date/Time: _____ Contacted by: _____

Regarding:

Corrective Action Taken:

and the second second

·

Jeanne McMurrey

From:	"Mark Larson" <mark@laenvironmental.com></mark@laenvironmental.com>
To:	"Jeanne McMurrey" <jeanne@elabtexas.com></jeanne@elabtexas.com>
Sent:	Friday, October 21, 2005 1:02 PM
Subject:	RE: Report #5J19002 John Hendrix/ E. W. Walden

Jeanne: Please analyze the above-referenced samples for chloride. Thanks, Mark

Face 1

-----Original Message----- **From:** Jeanne McMurrey [mailto:jeanne@elabtexas.com] **Sent:** Thursday, October 20, 2005 5:21 PM **To:** Mark Larson **Subject:** Re: Report #5J19002 John Hendrix/ E. W. Walden

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

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Page 1 of 1

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Photographs

SECTION 15, T-22-S, R-37-E, LEA COUNTY, NEW MEXICO E.W. WALDEN LEASE



1. Location sign



2. Excavation, looking west



3. Excavation, looking west

SECTION 15, T-22-S, R-37-E, LEA COUNTY, NEW MEXICO E.W. WALDEN LEASE



4. Excavation, looking west



5. Excavation, looking east



6. Sample location, SS-16

SECTION 15, T-22-S, R-37-E, LEA COUNTY, NEW MEXICO E.W. WALDEN LEASE



7. Sample location, SS-17