April 22, 2003

Mark Larson Larson & Associates, Inc. 507 North Marienfeld, Suite 202 Midland, TX 79701

Re: Texaco McKinley Lease Site Location: UL-A, Sec 30-T18S-R38E Dated: April 7, 2003

Dear Mr. Larson,

New Mexico Oil Conservation Division (OCD) received the closure proposal and request to backfill. The proposal is denied \mathbb{P}

There is insufficient data presented as follows:

The borehole investigation data between 31ft and 50 ft. are required and the drilling log between 31 and 50 ft. is incomplete.

Sincerely,

Con Clenk

Paul Sheeley-Environmental Engineer Cc: Roger Anderson - Environmental Bureau Chief Chris Williams - District I Supervisor William Olson - OCD Hydrologist Larry Johnson - Environmental Engineer



7#132

April 7, 2003

VIA FACSIMILE: (505) 393-0720

Mr. Paul R. Sheeley New Mexico Oil Conservation Division 1625 N. French Drive Hobbs, New Mexico 88240

Re: Soil Sample Results, Former M^cKinley Lease Production Facility, UL A, Section 30, Township 18 South, Range 38 East, Lea County, New Mexico

Dear Mr. Sheeley:

ChevronTexaco Exploration and Production Company (ChevronTexaco), as successor to Texaco Exploration and Production Inc. (Texaco), has retained Larson and Associates, Inc. (LA) to supervise remediation of soil at a former oilfield production facility (Site) once operated by Texaco on the McKinley Lease in Unit Letter A (NE/4 NE/4), Section 30, Township 18 South, Range 38 East, Lea County, New Mexico. Figure 1 presents a location and topographic map.

A remediation work plan was submitted to the New Mexico Oil Conservation Division (NMOCD) on January 28, 2002, and proposed to excavate soil at three locations to achieve the NMOCD Recommended Remediation Action Level (RRAL) of 100 milligrams per kilogram (mg/kg) total petroleum hydrocarbon (TPH). Following excavation of approximately 7,288 cubic yards of soil from the three locations (Hole #1, Hole #2 and Hole #3), a Final Remediation Report was submitted to the NMOCD on June 11, 2002. The NMOCD denied closure since a soil sample from the bottom of Hole #3 was above the NMOCD recommended remediation action level (RRAL) of 100 mg/kg. The NMOCD also requested that Texaco investigate an area between the excavations (Hole #2 and Hole #3) since a sample from BH-3 from 20 to 21 feet below ground surface (BGS) reported TPH at 82 mg/kg (below the RRAL).

Results of additional sampling of Hole #3, which showed that TPH was below the RRAL of 100 mg/kg, were presented to the NMOCD in a letter dated September 20, 2002. The letter also stated that Holes #1, #2 and #3 would be filled with clean soil, and a soil boring would be drilled between BH-3 and BH-4, to a depth of approximately 25 feet below ground surface (bgs). The NMOCD approved the work plan in a letter dated T_{29} . October 9, 2002, with two requests as follows:

- The proposed boring depth be extended from 25 feet bgs, to a depth approximately 40 45 feet bgs,
- The OCD be notified 48 hours in advance of any sampling event.

Mr. Paul R. Sheeley April 7, 2003 Page 2

Appendix A provides copies of NMOCD correspondence.

Environmental Plus, Inc. (EPI) was retained to fill the excavations with clean soil, and began backfilling Hole #1 and Hole #2 on October 14, 2002. Backfilling was also stopped on that date, when NMOCD personnel visited the Site and observed additional soil staining at the north end of Hole #2. ChevronTexaco was required to investigate and remediate as necessary the soil staining north of Hole #2.

The NMOCD has established remediation action levels (RRAL) for benzene, total BTEX and TPH in soil ("Guidelines for Remediation of Leaks, Spills and Releases, August 13, 1993"). Remediation levels for benzene, total BTEX and TPH were calculated for the Site using the following NMOCD criteria:

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

Based on the total ranking score above, the following RRALs were assigned to the Site based on NMOCD criteria:

Benzene	10 mg/kg
Total BTEX	50 mg/kg
TPH	100 mg/kg

Remediation Activities

On December 5, 2003, soil boring BH-13 was drilled between the two excavations (Hole #2 and Hole #3) and south of BH-3 and BH-4. The boring was drilled by Scarborough Drilling, Inc. of Lamesa, Texas, utilizing an air rotary drilling rig. Figure 2 shows the location of excavations (Holes #1, 2 and 3) and soil borings BH-1 through BH-13. BH-12 is located north of the Site and is not shown on Figure 2.

Soil samples were collected at ground surface, and approximately every five (5) feet bgs, thereafter, using a split-spoon sampler. The split-spoon sampler was thoroughly washed between sample events. Drill cuttings were placed on the ground adjacent to the boring. The soil samples were placed in clean glass sample jars, labeled, chilled in an ice chest, and delivered under chain-of-custody control to Environmental Lab of Texas I, Ltd., located in Odessa, Texas. A portion of each sample was also placed in a clean glass sample jar for headspace analysis. The headspace jars were filled approximately ³/₄ full,

Mr. Paul R. Sheeley April 7, 2003 Page 3

and a layer of aluminum foil was placed over the opening of the jar before replacing the cap. The headspace samples were allowed to reach ambient temperature before a RAE Instruments, Model 2000 photoionization detector (PID) was used to measure the concentration of organic vapors in the headspace of the sample jars. The PID probe was inserted into the headspace of the sample jars (through the aluminum foil), and the concentration of organic vapors was displayed by the instrument in parts per million (ppm). The NMOCD allows a PID measurement of less than 100 ppm to be used as a substitute for laboratory analysis of benzene and total benzene, toluene, ethylbenzene and xylenes (collectively referred to as BTEX). However, the PID measurement cannot be used as a substitute for total petroleum hydrocarbon (TPH) analysis by a laboratory. Samples from the surface and approximately every ten (10) feet bgs were analyzed for TPH by EPA method SW-846-8015 for gasoline range organics (GRO) and diesel range organics (DRO).

On October 15, 2002, EPI began to excavate soil from the north end of Hole #2. As remediation activities progressed to the north, soil samples were taken from the bottom and sides of the excavation. Soil samples were collected on December 30, 2002, January 2, 2003, February 7, 2003, February 13, 2003 and March 31, 2003, until laboratory analyses of soil samples from the sides and bottom of the excavation reported TPH values below 100 mg/kg. The final excavation, extending from the north boundary of Hole #2, measured approximately 130 x 70 feet, and was excavated to a maximum depth of 29 feet bgs. The impacted soil was transported to ChevronTexaco's centralized waste management facility (landfarm) located northwest of Jal, New Mexico. The final soil samples from the bottom and sides of the excavation reported TPH (DRO and GRO) levels below 100 mg/kg. The sample results are presented on Table 2. Figures 3, 4 and 5 present Site drawings showing the excavation boundary, sample locations and TPH concentrations from each sampling event.

Soil Boring Results

All samples collected from BH-13 exhibited a total TPH of less than ten (<10.0) mg/kg except the sample from approximately 20-21 feet bgs, which resulted in a DRO concentration of 190 mg/kg. Table 1 presents a summary of headspace and TPH analyses of soil samples from BH-13. Figure 2 shows the location of BH-13. Appendix B provides the boring log. Appendix C provides laboratory and chain-of-custody documentation. Appendix D presents photographs of the soil boring installation. The boring was filled with bentonite chips and hydrated with potable water upon completion of drilling.

Remediation Results

Only one sample (SS-9, North Bottom, 9') exhibited PID readings above 100 ppm (381.0 ppm) and was analyzed for BTEX using EPA method SW-846-8021B. Referring to Table 2, benzene was reported below the detection limit of 0.025 mg/kg and total BTEX was reported at 8.864 mg/kg. The results were below the RRAL for benzene (10 mg/kg)

Mr. Paul R. Sheeley April 7, 2003 Page 4

and total BTEX (50 mg/kg). All samples were analyzed for TPH by EPA method SW-846-8015 for gasoline range organics (GRO) and diesel range organics (DRO). The concentrations of TPH in the final samples from the bottom and sides of the excavation were below the RRAL for TPH of 100 mg/kg. Table 2 provides a summary of headspace and laboratory results following excavation. Figures 3, 4 and 5 present Site drawings showing the excavation boundary, sample locations and TPH concentrations from each sampling event. Appendix C provides laboratory and chain-of-custody documentation. Appendix D presents photographs of the excavation.

Approximately 8,156 cubic yards (yd^{3}) of impacted soil was transferred to ChevronTexaco's landfarm since October 31, 2002. Approximately 9,892 yd³ of clean soil was transported to the Site, and has been stockpiled. ChevronTexaco requests the NMOCD allow it to fill the excavations. The excavations will be filled with clean soil, and a final letter will be submitted to the NMOCD upon completion. Please call Mr. Scott Toner with ChevronTexaco at (915) 687-7318 or myself at (915) 687-0901 if you have questions.

Sincerely, Larson and Associates, Inc.

inig K. Crain

Cindy K Crain Geologist

Encl.

cc: Scott Toner, ChevronTexaco William Olson, OCD Hydrologist



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Table 1:Summary of Headspace and Laboratory Analysis of Soil Samples
Texaco Exploration and Production Inc., McKinley Lease
NE/4, NE/4, Section 30, Township 18 South, Range 38 East
Lea County, New Mexico

Borehole Number	Sample Date	Sample Depth (feet BGS)	PID (ppm)	GRO C6-C12 mg/kg	DRO >C12-C35 mg/kg	TPH (C6-C35) mg/kg
RRAL			:			100
BH-13	12/5/2002	0-1	1	<10.0	<10.0	<10.0
		10-11	1	<10.0	<10.0	<10.0
		20-21	6.1	<10.0	190.0	190.0
		30-31	5.5	<10.0	<10.0	<10.0
		50-5 1	3.1	<10.0	<10.0	<10.0

Notes: All analyses performed by Environmental Lab of Texas, Inc., Midland, Texas

- 1. BGS: Depth in feet below ground surface
- 2. PID: Photoionization detector
- 3. ppm: Parts per million

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- 4. GRO: Gasoline-range organics
- 5. DRO: Diesel-range organics
- 6. TPH: Total petroleum hydrocarbons (Sum of GRO + DRO)
- 7. mg/kg Milligrams per kilogram
- 8. ---: No data available
- 9. <: Below method detection limit
- 10. RRAL: NMOCD Recommended Remediation

Summary of Headspace and Laboratory Analysis of Soil Samples Following Excavation NE/4, NE/4, Section 30, Township 18 South, Range 38 East **Fexaco Exploration and Production Inc., McKinley Lease** Lea County, New Mexico Table 2:

Chloride (mg/kg) 250 1 Page 1 of 2 4,178.0 14,330.0 1,740.0 (C6-C35) mg/kg 3,970.0 <10.0 900.0 <10.0 146.0 <10.0 <10.0 234.6 199.0 113.0 <10.0 176.0 <10.0 <10.0 <10.0 <10.0 316.3 <10.0 <10.0 HdT 49.3 100 >C12-C35 4,050.0 12,800.0 1,740.0 3,970.0 mg/kg 216.0 <10.0 <10.0 <10.0 199.0 113.0 <10.0 900.0 <10.0 176.0 <10.0 <10.0 <10.0 146.0 <10.0 264.0 <10.0 DRO <10.0 49.3 C6-C12 <10.0 128.0 1,530.0 mg/kg <10.0 <10.0 GRO <10.0 <10.0 <10.0 18.6 <100 <10.0 <100 <10.0 <10.0 52.3 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <100 mg/kg BTEX 8.864 Total ß 1 1 I 1 Benzene mg/kg <0.025 9 I 1 1 1 (mqq) 381.0 17.4 12.2 DId 6.6 0.9 0.4 0.0 0.0 0.0 0.0 3.8 . 1.5 2.1 15.4 1. <u>6</u>.9 <u>0</u> 5 0.1 5 I Depth (feet Sample BGS) 20 16 17 15 10 10 യത œ ŝ ~ თ ത σ 01/02/03 01/02/03 Sample 12/30/02 01/02/03 Date Location of Sample **Bottom Center** Vorth Bottom **North Bottom** Vorth Bottom **Vorth Bottom** North Wall South Wall South Wall West Wall West Wall East Wall West Wall East Wall West Wall East Wall East Wall East Wall East Wall West Wall West Wall Bottom Bottom Bottom RRAL Number Sample SS-12 SS-18 SS-10 SS-11 **SS-13** SS-14 **SS-15** SS-16 SS-17 SS-19 SS-20 SS-1 SS-5 SS-6 SS-8 8-SS SS-21 SS-22 SS-23 SS-3 SS-4 SS-7 **SS-2**

Summary of Headspace and Laboratory Analysis of Soil Samples Following Excavation NE/4, NE/4, Section 30, Township 18 South, Range 38 East **Texaco Exploration and Production Inc., McKinley Lease** Lea County, New Mexico Table 2:

Chloride (mg/kg) 20.088.659.1 <20.0 <20.0 177 **250** 44.3 73.8 88.6 324 103 295 59.1 118 Page 2 of 2 (C6-C35) mg/kg <10.0 <10.0 <10.0 <10.0 <10.0 430.0 <10.0 159.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 Hdī 85.1 100 >C12-C35 mg/kg <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 DRO <10.0 430.0 <10.0 159.0 <10.0 <10.0 <10.0 85.1 C6-C12 mg/kg <10.0 GRO <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 mg/kg BTEX Total 50 | | 1 I 1 1 Benzene mg/kg 9 ł 1 1 | | (mqq) Q 16.3 3.8 2.0 0.3 1.5 1.4 5.7 4 2 1.7 0.0 0.1 Depth (feet Sample BGS) 9.5 7 7 7 18 0 <u>6</u> 15 ω , α ი ი ω 02/13/03 03/31/03 02/07/03 02/13/03 Sample 02/07/03 02/07/03 02/07/03 02/07/03 02/07/03 02/07/03 02/07/03 02/07/03 02/07/03 02/13/03 02/07/03 Date Location of Sample Northeast Side North Bottom North Side West Wall West Wall North Wall West Wal West Wall East Wall East Wall Bottom Bottom Bottom Bottom Bottom RRAL Number Sample SS-25 SS-26 SS-27 **SS-28** SS-29 SS-30 SS-31 SS-32 SS-33 SS-34 SS-35 SS-36 SS-37 SS-38 SS-24

All analyses performed by Environmental Lab of Texas, Inc., Midland, Texas Notes:

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Depth in feet below ground surface 1. BGS:

Photoionization detector Ö

Parts per million ppm: n ė

Gasoline-range organics GRO

Diesel-range organics DRO: Fotal petroleum hydrocarbons (Sum of GRO + DRO) ΗdΗ

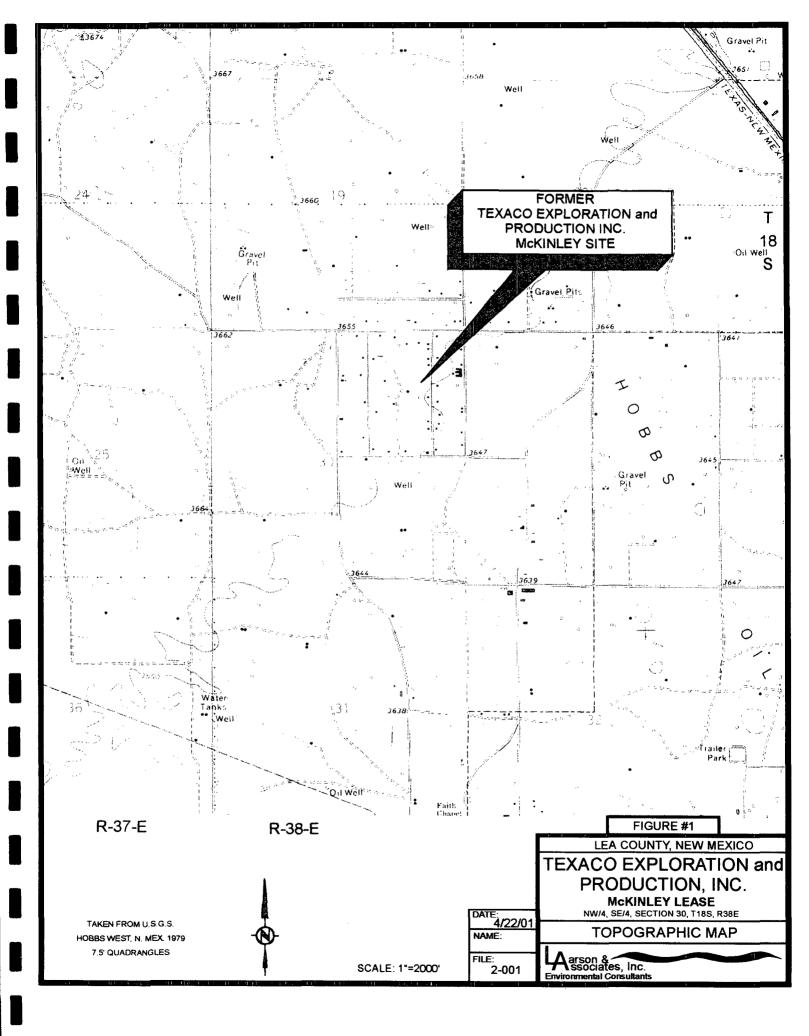
Milligrams per kilogram mg/kg: 4.50.60.60

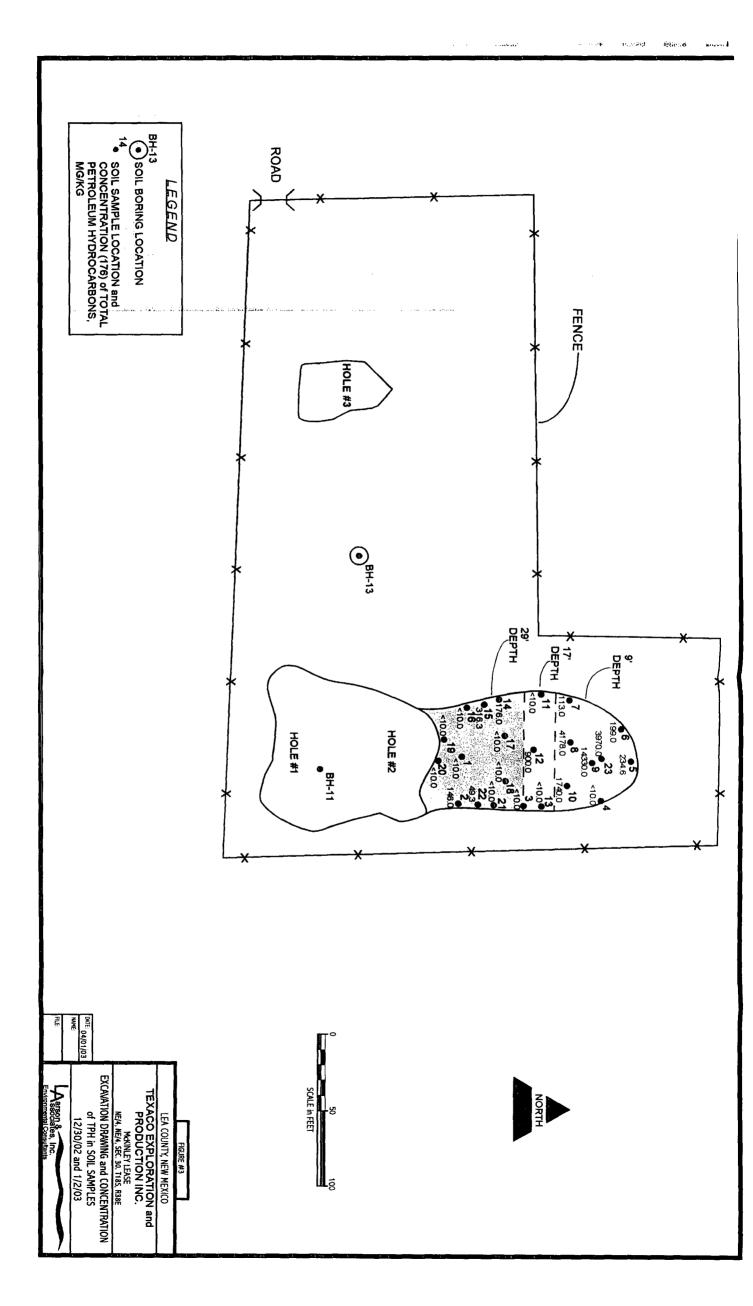
No data available Ϊ

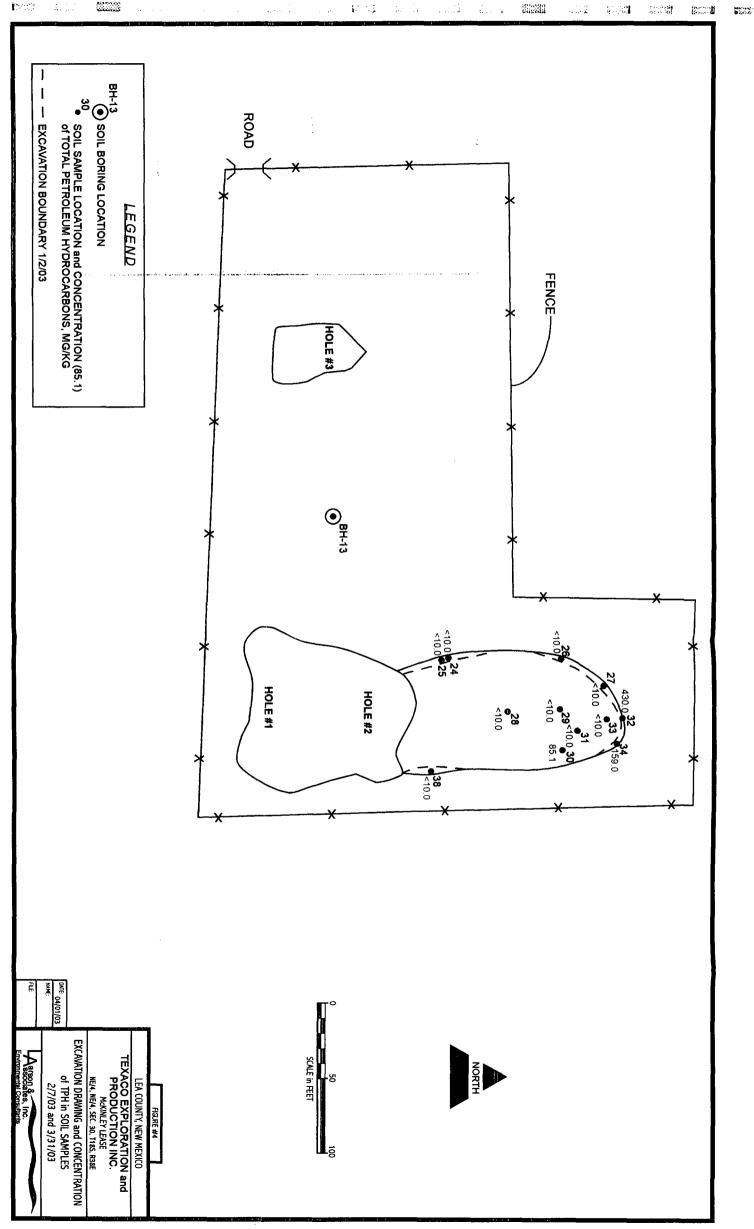
Below method detection limit ∵ ດ

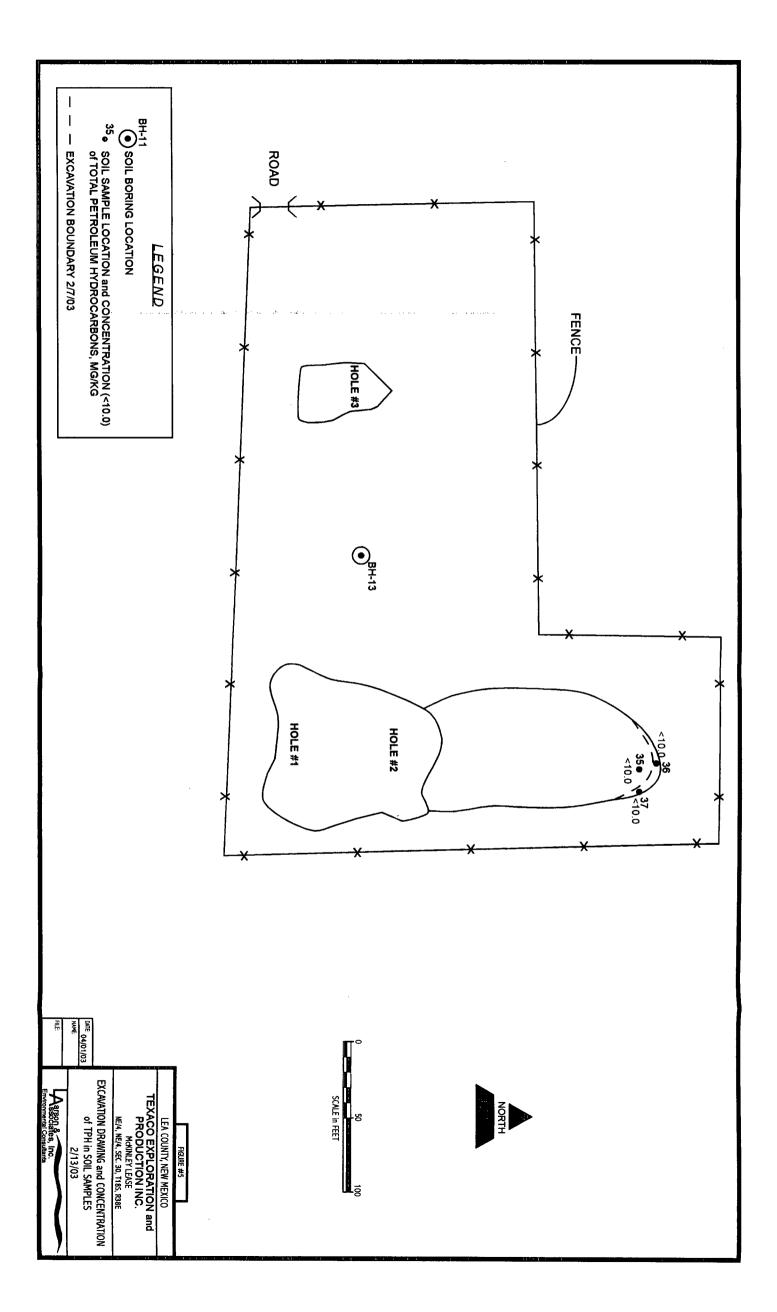
NMOCD Recommended Remediation Action Level 10. RRAL:











APPPENDIX A

NMOCD CORRESPONDENCE

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NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON Governor Betty Rivera Cabinet Secretary Lori Wrotenbery Director Oil Conservation Division

September 6, 2002

Mark Larson Larson & Associates, Inc. 507 North Marienfeld, Suite 202 Midland, TX 79701

Re: Closure Proposal Texaco McKinley Lease-(Jim Davis) Site Location: UL-A, Sec 30-T18S-R38E Dated: June 11, 2002, Supplement July 19, 2002

Dear Mr. Larson,

The New Mexico Oil Conservation Division (OCD) hereby denies your closure plan proposal referenced above. Samples from excavation hole #3 exceed OCD criteria of 100 ppm TPH.

Borchole #3 and #4 are located alone between excavations. #3 indicates TPH contamination, (Work Plan dated January 28, 2002). The lab sample for borchole #3 at 21 feet shows contamination. OCD requires Texaco to investigate in between excavation holes.

If you have any questions or need any assistance please feel free to contact me at (505) 393-6161 x113 or email: psheeeley@state.nm.us

Sincerely

 Paul Sheeley-Environmental Engineer
 Cc: Roger Anderson - Environmental Bureau Chief Chris Williams - District I Supervisor
 William Olson - OCD Hydrologist Larry Johnson - Environmental Engineer



NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON Governor Betty Rivera Cabinet Secretary Lori Wrotenbery Director Oil Conservation Division

October 9, 2002

Mark Larson Larson & Associates, Inc. 507 North Marienfeld, Suite 202 Midland, TX 79701

Re: Texaco McKinley Lease-(Jim Davis) Site Location: UL-A, Sec 30-T18S-R38E Dated: September 20, 2002

Dear Mr. Larson,

New Mexico Oil Conservation Division (OCD) received your modified work plan letter including the August 27, 2002 bottom hole sample analysis data for the site referenced above. The OCD hereby approves the plan and includes the following:

- 1. ChevronTexaco shall extend the proposed 25 foot boring to approximately 40-45 feet below ground surface, to investigate the vadose zone between the existing excavations at the site and demonstrate that contaminants have not reached the groundwater.
- 2. ChevronTexaco shall notify the OCD 48 hours in advance of any sampling event to allow OCD the option to split samples and witness activities.

Please be advised that OCD approval of this plan does not relieve ChevronTexaco 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 ChevronTexaco 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 William Olson - OCD Hydrologist Larry Johnson - Environmental Engineer

APPENDIX B

BORING LOG

Client: Texaco E&P

Project: Davis Property (McKinley Lease)

Project No: 2-0100

Location: SW/4, NE/4, Section 30, T18S, R38E, Lea Co., NM

Log of Borehole: BH-13

Geologist: Cindy K. Crain

Page: 1 of 1

	SI	JBSURFACE PROFILE	S	AMP	LE				
Depth	Symbol	Description	Number	Type	Recovery	PID Measurement (PPM) 2 4 6	Lab Analysis		
0-		Ground Surface				1.0	0 - 1' bgs		
5-		Sandy, Clayey Silt 7.5 YR 7/4, pink quartz sand, very fine grained, very poorty sorted, medium density.	1			1.3	GRO: <10.0 mg/kg DRO: <10.0 mg/kg		
,			2			l Ť	Total TPH: <10.0 mg/kg		
10-		Silty Sand 5 YR 7/4 to 7/6, pink to reddish yellow quartz sand, very fine grained, poorly sorted, loose.	3			1.0	10 - 11' bgs GRO: <10.0 mg/kg		
-		Caliche	-{				DRO: <10.0 mg/kg		
15- - -		10 YR 8/2, very pale brown quartz sand, very fine grained, very poorly sorted, indurated. Contains some quartzite.	4			0.8	Total TPH: <10.0 mg/kg		
20-						6.1	20 - 21' bgs		
-			5	<mark>│ ▋</mark> ▋		1 1	GRO: <10.0 mg/kg		
25-							DRO: 190 mg/kg		
							Total TPH: 190 mg/kg		
30-		Silty Sand				5.5	30 - 31' bgs		
-		7.5 YR 6/3, light brown quartz sand, very fine grained, poorly sorted, moderately loose.	6			I	GRO: <10.0 mg/kg		
 35							DRO: <10.0 mg/kg		
-							Total TPH: <10.0 mg/kg		
40			7			5.1			
45									
-					r				
50-		· · · · · · · · · · · · · · · · · · ·	- 8		·	3.1	50 - 51' bgs		
-		End of Borehole at 51 ft					GRO: <10.0 mg/kg		
- 55							DRO: <10.0 mg/kg		
-							Total TPH: <10.0 mg/kg		
60-									
יח	rillina M	lethod: Air Rotary		_	_				
	_	507 Nor				nc. Che Ste. 202	cked by: CKC		
Da	ate Dril	led: 12/5/02 Sur Nor Midland					ed by: Scarborough Drilling, Inc.		
H	ole Size	e: 5 5/8" (915) 68					Drilled by: Scarborough Drilling, Inc.		

APPENDIX C

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LABORATORY REPORT

ANALYTICAL REPORT

Prepared for:

CINDY CRAIN LARSON AND ASSOCIATES, INC. P.O. BOX 50685 MIDLAND, TX 79710

Project:Texaco/ McKinley LeasePO#:G0205195

Report Date: 12/10/2002

<u>Certificates</u> US EPA Laboratory Code TX00158

LARSON AND ASSOCIATES, INC. P.O. BOX 50685 MIDLAND, TX 79710 915-687-0456 Order#:G0205195Project:2-0100Project Name:Texaco/ McKinley LeaseLocation:None Given

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas, unless otherwise noted.

				Date / Tim	e I	Date / Time		
Lab ID:	Sample :	Matrix:		Collected	L .	Received	<u>Container</u>	Preservative
0205195-01	BH-13 (0-1')	SOIL		12/5/02		12/6/02	4 oz glass	Ice
				10:25		16:50		
La	<u>b Testing:</u>	Rejected:	No	·	Temp:	4.0 C		
	8015M							
0205195-03	BH-13 (10-11')	SOIL		12/5/02		12/6/02	4 oz glass	Ice
				10:35		16:50		
La	b Testing:	Rejected:	No		Temp:	4.0 C		
	8015M							·
0205195-05	BH-13 (20-21')	SOIL		12/5/02		12/6/02	4 oz glass	Ice
				10:51		16:50		
La	b Testing:	Rejected:	No		Temp:	4.0 C		
	8015M							
0205195-06	BH-13 (30-31')	SOIL		12/5/02		12/6/02	4 oz glass	Ice
				11:00		16:50		
La	<u>b Testing:</u>	Rejected:	No		Temp:	4.0 C		
	8015M							
0205195-08	BH-13 (50-51')	SOIL		12/5/02		12/6/02	4 oz glass	Ice
0200190 00				11:36		16:50		
La	b Testing:	Rejected:	No		Temp:	4.0 C		
	8015M							

CINDY CRAIN ARSON AND A C.O. BOX 50685 MIDLAND, TX	SSOCIATES, INC. 79710			Order#: Project: Project Name Location:	2-01(: Texa	5195 10 co/ McKinley L : Given	ease
Lab ID:	0205195-01						
Sample ID:	BH-13 (0-1')						
				8015M			
	Method	Date	Date	Sample	Dilution		
	<u>Blank</u>	Prepared	<u>Analyzed</u>	Amount	Factor	<u>Analyst</u>	Method
			12/9/02	1	1	СК	8015M
					J		
		Parameter		Result		RL	
		GRO, C6-C12		mg/kg		10.0	
		DRO, >C12-C35		<10.0		10.0	
		TOTAL, C6-C35		<10.0		10.0	
		L			l		
		Surrogat	tes	% Recovered	QC Lin	nits (%)	
		1-Chloroocta		86%	70	130	
		1-Chloroocta	Idecane	92%	70	130	
Lab ID:	0205195-03						
Sample ID:	BH-13 (10-11')						
				8015M			
	Method	Date	Date	Sample	Dilution	1	
	Blank	Prepared	Analyzed	Amount	Factor		Method
			12/9/02	1	1	СК	8015M
			·····	Result]	
		Parameter		mg/kg		RL	
		GRO, C6-C12		<10.0		10.0	
		DRO, >C12-C35		<10.0		10.0	
		TOTAL, C6-C35		<10.0			

Surrogates	% Recovered	QC Limits (%)		
1-Chlorooctane	79%	70	130	
1-Chlorooctadecane	81%	70	130	

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

ENVIRONMENTAL LAB OF TEXAS I, LTD.

12600 West I-20 East, Odessa, TX 79765 Ph: 915-563-1800

CINDY CRAIN Order#: G0205195 LARSON AND ASSOCIATES, INC. Project: 2-0100	
P.O. BOX 50685 Project Name: Texaco/ McKin MIDLAND, TX 79710 Location: None Given	ley Lease
Lab ID: 0205195-05 Sample ID: BH-13 (20-21')	
8015M	
Method Date Date Sample Dilution <u>Blank Prepared Analyzed Amount Factor Analy</u>	yst Method
12/9/02 1 1 CK	8015M
Parameter Result RL mg/kg	
GRO, C6-C12 <10.0 10.0	
DRO, >C12-C35 190 10.0	
TOTAL, C6-C35 190 10.0	
Surrogates % Recovered QC Limits (%)	
1-Chlorooctane 89% 70 130 1-Chlorooctadecane 101% 70 130	
1-Chlorooctadecane 101% 70 130	
Lab ID: 0205195-06	
Sample ID: BH-13 (30-31')	
8015M	
0015//1	
Method Date Sample Dilution	
Method Date Date Sample Dilution <u>Blank Prepared Analyzed Amount Factor Analy</u>	
Method Date Date Sample Dilution	
Method Date Date Sample Dilution <u>Blank Prepared Analyzed Amount Factor Analy</u>	
Method Date Date Sample Dilution <u>Blank Prepared Analyzed Amount Factor Analy</u> 12/9/02 1 1 CK Parameter Result RL	
Method Date Date Sample Dilution Blank Prepared Analyzed Amount Factor Analyzed 12/9/02 1 1 CK	

Surrogates	% Recovered	QC Limits (%)		
1-Chlorooctane	87%	70	130	
1-Chlorooctadecane	93%	70	130	

ENVIRONMENTAL LAB OF TEXAS I, LTD. 12600 West I-20 East, Odessa, TX 79765 Ph: 915-563-1800

CINDY CRAIN LARSON AND ASSOCIATES, INC.	Order#: Project:	G0205195 2-0100
P.O. BOX 50685	Project Name:	Texaco/ McKinley Lease
MIDLAND, TX 79710	Location:	None Given

Lab ID: Sample ID: 0205195-08

ole ID:

:

BH-13 (50-51')

			8015M			
Method <u>Blank</u>	Date <u>Prepared</u>	Date <u>Analyzed</u> 12/9/02	Sample <u>Amount</u> 1	Dilution <u>Factor</u> 1	<u>Analyst</u> CK	<u>Method</u> 8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

Surrogates	% Recovered	QC Li	mits (%)
1-Chlorooctane	84%	70	130
1-Chlorooctadecane	90%	70	130

12-10-02 Approval: Jeane McMury Raland K. Tuttle, Lab Director, QA Officer Date Celey D. Keene, Org. Tech. Director Jeanne McMurrey, Inorg. Tech. Director Sandra Biezugbe, Lab Tech. Sara Molina, Lab Tech.

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

ENVIRONMENTAL LAB OF TEXAS I, LTD.

12600 West I-20 East, Odessa, TX 79765 Ph: 915-563-1800

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

8015M

Order#: G0205195

BLANK	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg		0004010-02			<10.0		
MS	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg		0205195-01	0	952	956	100.4%	
MSD	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg		0205195-01	0	952	1005	105.6%	5.%
SRM	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg		0004010-05		1000	900	90.%	

ENVIRONMENTAL LAB OF TEXAS I, LTD. 12600 West I-20 East, Odessa, TX 79765 Ph: 915-563-1800

CLIENT NAME:	AME:			SITE MA			PARAMETERS/I	PARAMETERS/METHOD NUMBER	CHAIN-	CHAIN—OF—CUSTODY RECORD
¥	lexaco			Cir	indy Lrain					
PROJECT NO.:	CT NO .: 2. 0100	~		PROJEC	PROJECT NAME: MCKinley Lease	atainers	00/N 9			Grson & ssociates,-IncFax: 915-687-0456 Environmental consultants a15-487-0901
PAGE	/ of	-	<u> </u>	LAB. PO #			108		507 N. Marie	507 N. Marienfeld, Ste. 202 • Midland, TX 79701
₹1¥Q	<i>INII</i>	ATION	105 NOS	SAMPLE	SAMPLE IDENTIFICATION	NOWBER	HdL		LAB. I.D. NUMBER (LAB USE ONLY)	Remarks (I.E., Filtered, UNPRESERVED, PRESERVED, UNPRESERVED, GRAB COMPOSITE)
12/5/02	1025			BH-13	13 (0-1')	<u> </u>			10-50/5020	
"	1028	-	~	11	75-6)				i 02	
"	1035	-	~	"	(10 - 11)				50	
"	1042		7	11	(12.16.)	/				
"	1051	-	7	"	(-10-02)				05	
"	0011	7		"	(30-31')				ير م	-
11	acli	-	1	4	(-1104-)	/			10	
	11360			:	(20-21')	>			- 3	
RECEIVING L	SAMPLEDASY: (Signagure) SAMPLEDASY: (Signagure) RELINUQUISTIED BY: (Signature) COMMENTS: COMMENTS:	TORY:	שו ובישו שו		Date: <u>(1/5/62</u> Rel TIME: <u>/1/40</u> Rel Date: <u>/6.50</u> Rec	RELINQUISHED BY: (Signature) RECEIVED BY: (Signature) RECEIVED BY: (Signature)		TIME: DATE: DATE: DATE: TIME: TIME: TIME: TURNAROUND TIME NEEDED	RECEIVED BY: (Signature) RECEIVED BY: (Signature) SAMPLE SHIPPED BY: (Circle) SAMPLE SHIPPED BY: (Circle) FEDEX BI FEDEX BI FEDEX BI FEDEX BI FEDEX BI FEDEX BI FEDEX BI FEDEX CIRCLONG LAB FEDEX CIRCLONG LAB FEDEX FEDEX CIRCLENCE LAB FEDEX CIRCLENCE LAB FEDEX FIDEX CIRCLENCE LAB FIDEX CIRCLENCE LAB FIDEX CIRCLENCE LAB FIDEX CIRCLENCE LAB FIDEX CIRCLENCE LAB FIDEX CIRCLENCE LAB FIDEX	BY: (Signature) BY: (Signature) BY: (Signature) BY: (Circle) BUS AIRBILL #: ITME: TI
AUUKES CITY: <u>(</u> CONTAC	ADUKESS: 12600 W CITY: Odessa CONTACT:	5 2		STATE: PHONE:	Ty ZIP:	79-765 DARE 12	12-06-02 TIME	Wy 11.50	PINK - PROJECT GOLD - QA/QC (PROJECT MANAGER QA/QC COORDINATOR
SAMPLE CC	SAMPLE CONDITION WHEN RECEIVED	EN RECEIV	ä	4,0't	, c	LA CONT	LA CONTACT PERSON:		SAMPLE TYPE:	11

I

ANALYTICAL REPORT

Prepared for:

CINDY CRAIN LARSON AND ASSOCIATES, INC. P.O. BOX 50685 MIDLAND, TX 79710

Project:Texaco / McKinley LeasePO#:G0205350

Report Date: 12/31/2002

<u>Certificates</u> US EPA Laboratory Code TX00158

12600 West I-20 East, Odessa, TX 79765 Ph: 915-563-1800

LARSON AND ASSOCIATES, INC.

P.O. BOX 50685

MIDLAND, TX 79710

915-687-0456

Order#:G0205350Project:0-0100Project Name:Texaco / McKinley LeaseLocation:None Given

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas, unless otherwise noted.

Lab ID:	Sample :	<u>Matrix:</u>	Date / Time <u>Collected</u>	Date / Time <u>Received</u>	Container	Preservative
0205350-01	SS-1 (Hole D) 29'	SOIL	12/30/02 10:50	12/30/02 15:15	4 oz Glass	Ice
Lai	<u>b Testing:</u> 8015M	Rejected: No	Tem	ıр: 5 С		

CINDY CRAIN LARSON AND A P.O. BOX 50685 MIDLAND, TX				Order#: Project: Project Nam Location:	G0205 0-0100 e: Texac None (o / McKinley I	Lease	
Lab ID: Sample ID:	0205350-01 SS-1 (Hole D) 29'							
				8015M	ĝ			
	Method <u>Blank</u>	Date <u>Prepared</u>	Date <u>Analyzed</u> 12/30/02	Sample <u>Amount</u> 1	Dilution <u>Factor</u> 1	<u>Analyst</u> CK	Method 8015M	
		Parameter		Resu mg/k		RL		
		GRO, C6-C12		<10.	0	10.0		
		DRO, >C12-C35		<10.	0	10.0		
		TOTAL, C6-C35		<10.	0	10.0		

Surrogates	% Recovered	QC Li	mits (%)
1-Chlorooctane	70%	70	130
1-Chlorooctadecane	73%	70	130

31-02 Kalano Approval: Date

Raland K. Tuttle, Lab Director, QA Officer Celey D. Keene, Org. Tech. Director Jeanne McMurrey, Inorg. Tech. Director Sandra Biezugbe, Lab Tech. Sara Molina, Lab Tech.

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

ENVIRONMENTAL LAB OF TEXAS I, LTD.

ENVIRONMENTAL LAB OF TEXAS QUALITY CONTROL REPORT

8015M

Order#: G0205350

BLANK SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg	0004217-02			<10.0		
CONTROL SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg	0004217-03	······································	952	909	95.5%	
CONTROL DUP	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg	0004217-04		952	823	86.4%	9.9%
SRM SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg	0004217-05		1000	809	80.9%	

-CUSTODY RECORD	arson & Ssociates, IncFax: 915-687-0456 Environmental Consultants 915-687-0901	507 N. Marienfeld, Ste. 202 • Midland, TX 79701	REMARKS (I.E., FILTERED, UNFILTERED, PRESERVED, UNPRESERVED, GRAB COMPOSITE)	ish							DATE: TIME:		∢	D BE BETI IRNED TO	er Er	ATOR	
CHAIN-OF-	A arson & ssociates, In Environmental Consult	507 N. Marienfeld, St	LAB. I.D. NUMBER (LAB USE ONLY)								RECEIVED BY: (Signature)	SAMPLE SHIPPED BY: (Circle)	(WHITE - RECEIVING LAB WHITE - RECEIVING LAB YEILOW - PECEIVING LAB (TO BE PETI IRNED TO		_	SAMPLE TYPE.
PARAMETERS/METHOD NUMBER											Date: Time:	DATE:	TIME:	TURNAROUND TIME NEEDED	1,00	1515-	
PARAMETERS/N	W 510	28	HdL	7							ED BY: (Signature)	iture)		556-9	(ED BY: (Signature)	12/20/02-JAME -	LA CONTACT PERSON:
2.	Lease		<u></u>	1 0,60 (0							RELINQUISHED BY: (RECEIVED BY: (Signature)		verbal resutts			LA CO
SITE MANAGER:	PROJECT NÁME: Mê Kinley	#0	02073550 SAMPLE IDENTIFICATION	55-1 (Hale							Date: <u>22/27/03</u> relinquishi Time: <u>//0/0</u>	1 201 1	TIME: 15/3	1 C. CRIN W/		STATE: ZIP: PHONE: ZIP:	the Gurss
0		/ LAB. PO #	OTHER SOIL	7							fajdre).	(Signature)	saer	Please Call	H I		Hen received:
CLIENT NAME: /EXAC O	PROJECT NO.: 0 - 0100	PAGE / OF	JUNI JUNI	1050						2	SAMPLED BY: (Signature)	RELINGUISHED BY: BIGINATURE)	(when (computs: Kush - 1	RECEIVING LABORATORY: C	CITY: CONTACT:	SAMPLE CONDITION WHEN RECEIVED

. .

ANALYTICAL REPORT

Prepared for:

CINDY CRAIN LARSON AND ASSOCIATES, INC. P.O. BOX 50685 MIDLAND, TX 79710

Project:Texaco/ McKinley LeasePO#:G0305383Report Date:01/07/2003

Certificates

US EPA Laboratory Code TX00158

LARSON AND ASSOCIATES, INC. P.O. BOX 50685 MIDLAND, TX 79710

915-687-0456

Order#:G0305383Project:0-0100Project Name:Texaco/ McKinley LeaseLocation:None Given

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas, unless otherwise noted.

				Date / Tin	ne]	Date / Time		
<u>Lab ID:</u>	Sample :	<u>Matrix:</u>		_Collected	<u>1</u>	Received	Container	Preservative
0305383-01	SS-2 (8')	SOIL		1/2/03		1/3/03	4 oz glass	Ice
-		D	No	10:40		8:25		
	<u>b Testing:</u>	Rejected:	INU		Temp:	-1.5 C		
· · · · · · · · · · · · · · · · · · ·	8015M							
0305383-02	SS-3 (9')	SOIL		1/2/03		1/3/03	4 oz glass	Ice
				10:42		8:25		
La	b Testing:	Rejected:	No		Temp	-1.5 C		
	8015M						······································	
0305383-03	SS-4 (8')	SOIL		1/2/03		1/3/03	4 oz glass	Ice
0303303-03	~ /			10:44		8:25	C C	
La	<u>b'Testing:</u>	Rejected:	No		Temp	-1.5 C		
	8015M							
0305383-04	SS-5 (8')	SOIL		1/2/03		1/3/03	4 oz glass	Ice
0303303-04				10:57		8:25		
La	<u>b Testing:</u>	Rejected:	No		Temp	-1.5 C		
·	8015M							
0305383-05	SS-6 (7')	SOIL		1/2/03		1/3/03	4 oz glass	Ice
				10:59		8:25		
La	<u>b Testing:</u>	Rejected:	No		Temp	-1.5 C		
	8015M							
0305383-06	SS-7 (7')	SOIL		1/2/03		1/3/03	4 oz glass	Ice
				11:02		8:25		
La	<u>b Testing:</u>	Rejected:	No		Temp	-1.5 C		
<u> </u>	8015M							
0305383-07	SS-8 (9')	SOIL		1/2/03		1/3/03	4 oz glass	lce
0302303-07				11:05		8:25	-	
<u>La</u>	b Testing:	Rejected:	No		Temp	-1.5 C		
	8015M							
0305383-08	SS-9 (9')	SOIL		1/2/03		1/3/03	4 oz glass	Ice
0000000-00	,			11:07		8:25	÷	
La	b Testing:	Rejected:	No		Temp	: -1.5 C		
	8015M							
	8021B/5030 BTEX							

LARSON AND ASSOCIATES, INC. P.O. BOX 50685

1.0. DOX 50005

MIDLAND, TX 79710

915-687-0456

Order#:G0305383Project:0-0100Project Name:Texaco/ McKinley LeaseLocation:None Given

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas, unless otherwise noted.

				Date / Time	D	ate / Time		
Lab ID:	<u>Sample :</u>	<u>Matrix:</u>		Collected	_	Received	<u>Container</u>	<u>Preservativ</u>
0305383-09	SS-10 (9')	SOIL		1/2/03		1/3/03	4 oz glass	Ice
0303303-07	. ,			11:10		8:25	-	
La	b Testing:	Rejected:	No	Т	emp:	-1.5 C		
	8015M							
0305383-10	SS-11 (16')	SOIL		1/2/03		1/3/03	4 oz glass	Ice
				11:30		8:25		
La	<u>b Testing:</u>	Rejected:	No	T	emp:	-1.5 C		
•	8015M							
0305383-11	SS-12 (17')	SOIL		1/2/03		1/3/03	4 oz glass	Ice
				11:35		8:25		
La	<u>b Testing:</u>	Rejected:	No	Т	emp:	-1.5 C		
	8015M							·
0305383-12	SS-13 (16')	SOIL		1/2/03		1/3/03	4 oz glass	Ice
0000000 12				11:38		8:25		
La	b Testing:	Rejected:	No	Т	emp:	-1.5 C		
	8015M							
0305383-13	SS-14 (10')	SOIL		1/2/03		1/3/03	4 oz glass	Ice
000000000000				11:40		8:25		
La	<u>b Testing:</u>	Rejected:	No	Т	emp:	-1.5 C		
	8015M							
0305383-14	SS-15 (19')	SOIL		1/2/03		1/3/03	4 oz glass	Ice
				11:42		8:25		
La	b Testing:	Rejected:	No	Т	emp:	-1.5 C		
, <u></u>	8015M							
0305383-15	SS-16 (27')	SOIL		1/2/03		1/3/03	4 oz glass	Ice
				11:45		8:25		
<u>La</u>	<u>b. Testing:</u>	Rejected:	No	Т	emp:	-1.5 C		
·	8015M							
0305383-16	SS-17 (29')	SOIL		1/2/03		1/3/03	4 oz glass	Ice
				12:40		8:25		
La	<u>b Testing:</u>	Rejected:	No	T	emp:	-1.5 C		
	8015M							

ENVIRONMENTAL LAB OF TEXAS I, LTD. 12600 West I-20 East, Odessa, TX 79765 Ph: 915-563-1800

LARSON AND ASSOCIATES, INC.

P.O. BOX 50685

MIDLAND, TX 79710

915-687-0456

Order#:G0305383Project:0-0100Project Name:Texaco/ McKinley LeaseLocation:None Given

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas, unless otherwise noted.

	a 1			Date / Time		ate / Time	~	-
<u>Lab ID:</u>	Sample :	<u>Matrix:</u>		Collected		Received	Container	Preservativ
0305383-17	SS-18 (29')	ŞOIL		1/2/03		1/3/03	4 oz glass	Ice
				12:45		8:25		
Lat	<u>b Testing:</u>	Rejected:	No	1	lemp:	-1.5 C		
	8015M							
0305383-18	SS-19 (20')	SOIL		1/2/03		1/3/03	4 oz glass	Ice
				12:15		8:25		
Lat	b. Testing:	Rejected:	No	1	ſemp:	-1.5 C		
	8015M							
0305383-19	SS-20 (26')	SOIL		1/2/03		1/3/03	4 oz glass	Ice
				12:20		8:25	-	
La	<u>b Testing:</u>	Rejected:	No	1	lemp:	-1.5 C		
	8015M							
0305383-20	SS-21 (15')	SOIL		1/2/03		1/3/03	4 oz glass	Ice
				12:00		8:25		
La	<u>b Testing:</u>	Rejected:	No	1	Temp:	-1.5 C		
	8015M							
0305383-21	SS-22 (27')	SOIL		1/2/03		1/3/03	4 oz glass	Ice
				12:10		8:25		
La	b Testing:	Rejected:	No	1	Femp:	-1.5 C		
	8015M							
0305383-22	SS-23 (10')	SOIL		1/2/03		1/3/03	4 oz glass	Ice
				13:15		8:25		
La	b Testing:	Rejected:	No	-	Гетр:	-1.5 C		
	8015M							

CINDY CRAIN				Order#:	G0305		
P.O. BOX 50685				Project: Project Name		o/ McKinley I	ease
MIDLAND, TX	. 79710			Location:	None	Given	
Lab ID: Sample ID:	0305383-01 SS-2 (8')						
				8015M			
	Method <u>Blank</u>	Date Prepared	Date <u>Analyzed</u>	Sample Amount	Dilution Factor	Analyst	Method
			1/4/03	1	1	RKT	8015M
		Parameter		Result mg/kg	1	RL	
		GRO, C6-C12		<10.0		10.0	
		DRO, >C12-C35	; ;	146		10.0	
•		TOTAL, C6-C3	5	146		10.0	
		Surrog	ates	% Recovered	QC Limi	ts (%)	
		1-Chlorooc		98%	70	130	
		1-Chlorooc	tadecane	98%	70	130	
Lab ID:	0305383-02						
Sample ID:	SS-3 (9')						
				8015M			
	Method	Date	Date	Sample	Dilution		
	Blank	Prepared	Analyzed	<u>Amount</u>	Factor	<u>Analyst</u>	Method

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

1

1/4/03

Surrogates	% Recovered	QC Limits (%)		
1-Chlorooctane	92%	70 130		
1-Chlorooctadecane	91%	70	130	

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

ENVIRONMENTAL LAB OF TEXAS I, LTD.

12600 West I-20 East, Odessa, TX 79765 Ph: 915-563-1800

RKT

1

8015M

		1		IICAL KEI	UNI		
CINDY CRAIN LARSON AND P.O. BOX 50685 MIDLAND, TX			t	Order#: Project: Project Name Location:	0-01(e: Texa	95383 90 co/ McKinley I Given	.ease
Lab ID: Sample ID:	0305383-03 SS-4 (8')						
				8015M			
	Method <u>Blank</u>	Date <u>Prepared</u>	Date <u>Analyzed</u>	Sample <u>Amount</u>	Dilution <u>Factor</u>		Method
		. `	1/4/03	1	1	RKT	8015M
		Parameter		Resul mg/kg	1	RL	
		GRO, C6-C12		<10.0		10.0	
		DRO, >C12-C35		<10.0		10.0	
		TOTAL, C6-C35	;	<10.0		10.0	
		Surroga	ates	% Recovered	QC Lin	nits (%)	
		1-Chlorooc		87%	70	130	
		1-Chlorooc	tadecane	85%	70	130	
Lab ID: Sample ID:	0305383-04 SS-5 (8')						
				8015M			
	Method <u>Blank</u>	Date <u>Prepared</u>	Date <u>Analyzed</u>	Sample <u>Amount</u>	Dilution <u>Factor</u>		Method
			1/4/03	1	1	RKT	8015M
		Parameter		Resul mg/kg		RL	
		GRO, C6-C12		18.6		10.0	

TOTAL, C6-C35	235		10.0
Surrogates	% Recovered	QC Li	mits (%)
1-Chlorooctane	96%	70	130
1-Chlorooctadecane	95%	70	130

216

10.0

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

DRO, >C12-C35

CINDY CRAIN	Order#:	G0305383
LARSON AND ASSOCIATES, INC.	Project:	0-0100
P.O. BOX 50685	Project Name:	Texaco/ McKinley Lease
MIDLAND, TX 79710	Location:	None Given

Lab ID: Sample ID: 0305383-05 SS-6 (7')

8015M							
Method <u>Blank</u>	Date <u>Prepared</u>	Date <u>Analyzed</u>	Sample <u>Amount</u>	Dilution <u>Factor</u>	<u>Analyst</u>	Method	
		1/4/03	1	1	RKT	8015M	

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	199	10.0
TOTAL, C6-C35	199	10.0

Surrogates	% Recovered	QC Limits (%)		
1-Chlorooctane	75%	70	130	
1-Chlorooctadecane	75%	70	130	

Lab ID:	:	0305383-06
Sample ID:		SS-7 (7')

			8015M			
Method	Date	Date	Sample	Dilution		
<u>Blank</u>	Prepared	<u>Analyzed</u>	Amount	Factor	<u>Analyst</u>	Method
		1/4/03	1	1	RKT	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	113	10.0
TOTAL, C6-C35	113	10.0

Surrogates	% Recovered	QC Limits (%)		
1-Chlorooctane	97%	70	130	
1-Chlorooctadecane	97%	70	130	

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

ENVIRONMENTAL LAB OF TEXAS I, LTD.

		A		ICAL REF	UNI		
CINDY CRAIN LARSON AND AS P.O. BOX 50685 MIDLAND, TX 79				Order#: Project: Project Name Location:			,ease
Lab ID:	0305383-07						
Sample ID:	SS-8 (9')						
				8015M			
	Method	Date	Date	Sample	Dilution		
	<u>Blank</u>	Prepared	Analyzed	Amount	Factor	<u>Analyst</u>	Method
			1/4/03	1	5	RKT	8015M
		Parameter		Result mg/kg	1	RL	
		GRO, C6-C12		128		50.0	
		DRO, >C12-C35		4050		50.0	
		TOTAL, C6-C35		4178		50.0	
		Surrogat	ies	% Recovered	QC Lim	iits (%)	
		1-Chloroocta		20%	70	130	
		1-Chloroocta	idecane	21%	70	130	
Lab ID: Sample ID:	0305383-08 SS-9 (9') Method	Date	Date	8015M Sample	Dilution		
	Blank	Prepared	Analyzed	Amount	Factor	<u>Analyst</u>	Method
			1/4/03	1	10	RKT	8015M
		Parameter		Result mg/kg		RL	
		GRO, C6-C12		1530		100	
		DRO, >C12-C35		12800		100	•
		TOTAL, C6-C35		14330)	100	

Surrogates	% Recovered	QC Limits (%)		
1-Chlorooctane	20%	70	130	
1-Chlorooctadecane	12%	70	130	

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

CINDY CRAIN	Order#:	G0305383
LARSON AND ASSOCIATES, INC.	Project:	0-0100
P.O. BOX 50685	Project Name:	Texaco/ McKinley Lease
MIDLAND, TX 79710	Location:	None Given

Lab ID: Sample ID: 0305383-08 SS-9 (9')

		8021B	/5030 BTEX			
Method <u>Blank</u> 0004249-02	Date <u>Prepared</u>	Date <u>Analyzed</u> 1/3/02	Sample <u>Amount</u> 1	Dilution <u>Factor</u> 100	<u>Analyst</u> RKT	Method 8021B
	Parameter		Result mg/kg		RL	
	Benzene		<0.025		0.100	
	Toluene		0.195		0.100	
	Ethylbenzene		1.24		0.100	
	p/m-Xylene		6.50		0.100	
	o-Xylene		0.929		0.100	

Surrogates	% Recovered	QC Li	mits (%)	
aaa-Toluene	101% 80		120	
Bromofluorobenzene	105%	80	120	

Lab ID: Sample ID: 0305383-09 SS-10 (9')

8015M Method Date Date Sample Dilution Blank Prepared Analyzed Amount Factor <u>Analyst</u> Method 1/4/03 1 10 RKT 8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	< 100	100
DRO, >C12-C35	1740	100
TOTAL, C6-C35	1740	100

Surrogates	% Recovered	QC Li	Limits (%)		
1-Chlorooctane	11%	70	130		
1-Chlorooctadecane	12%	70	130		

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

ENVIRONMENTAL LAB OF TEXAS I, LTD.

CINDY CRAIN LARSON AND A P.O. BOX 50685 MIDLAND, TX				Order#: Project: Project Name: Location:	G03053 0-0100 Texaco None G	/ McKinley L	ease
Lab ID: Sample ID:	0305383-10 SS-11 (16')						
•				8015M			
	Method <u>Blank</u>	Date <u>Prepared</u>	Date <u>Analyzed</u>	-	Dilution <u>Factor</u>	<u>Analyst</u>	Method
			1/4/03	1	1	RKT	8015M
		Parameter		Result mg/kg		RL.	
		GRO, C6-C12		<10.0		10.0	

Surrogates	% Recovered	QC Li	mits (%)
1-Chlorooctane	100%	70	130
1-Chlorooctadecane	101%	70	130

<10.0

<10.0

Lab ID:	0305383-11			
Sample ID:	SS-12 (17')			

		1	8015M			
Method <u>Blank</u>	Date <u>Prepared</u>	Date <u>Analyzed</u>	Sample <u>Amount</u>	Dilution <u>Factor</u>	Analyst	Method
		1/4/03	1	10	RKT	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	< 100	100
DRO, >C12-C35	900	100
TOTAL, C6-C35	900	100

Surrogates	% Recovered	QC Limits (%)			
1-Chlorooctane	9%	70	130		
1-Chlorooctadecane	9%	70	130		

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

DRO, >C12-C35

TOTAL, C6-C35

10.0

10.0

CINDY CRAIN LARSON AND ASSOCIATES, INC. P.O. BOX 50685 MIDLAND, TX 79710		Order#: Project:	G0305383 0-0100	
		Project Name:	Texaco/ McKinley Lease	
		Location:	None Given	
Lab ID:	0305383-12			
Sample ID:	SS-13 (16')			

			8015M			
Method <u>Blank</u>	Date <u>Prepared</u>	Date <u>Analyzed</u> 1/6/03 18:04	Sample <u>Amount</u> 1	Dilution <u>Factor</u> 1	<u>Analyst</u> RKT	Method 8015M
	Parameter		Resul mg/kg	-	RL	
	GRO, C6-C12		<10.0		10.0	
	DRO, >C12-C35	· · · · · · · · · · · · · · · · · · ·	<10.0		10.0	
	TOTAL, C6-C35		<10.0		10.0	

Surrogates	% Recovered	QC Li	mits (%)
1-Chlorooctane	108%	70	130
1-Chlorooctadecane	117%	70	130

Lab ID:	0305383-13
Sample ID:	SS-14 (10')

1

8015M

Method <u>Blank</u>	Date <u>Prepared</u>	Date <u>Analyzed</u> 1/6/03 18:04	Sample <u>Amount</u> 1	Dilution <u>Factor</u> 1	<u>Analyst</u> RKT	Method 8015M
	Parameter		Result mg/kg		RL	
	GRO, C6-C12		<10.0		10.0	
	DRO, >C12-C35		176		10.0	
	TOTAL, C6-C35		176		10.0	

Surrogates	% Recovered	QC Li	mits (%)
1-Chlorooctane	112%	70	130
1-Chlorooctadecane	114%	70	130

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

ENVIRONMENTAL LAB OF TEXAS I, LTD.

CINDY CRAIN LARSON AND AS P.O. BOX 50685 MIDLAND, TX	SSOCIATES, INC. 79710			Order#: Project: Project Name Location:	0- e: Te	030538 0100 exaco/] one Giv	McKinley I	Lease
Lab ID: Sample ID:	0305383-14 SS-15 (19')					-		
				8015M				
	Method <u>Blank</u>	Date <u>Prepared</u>	Date <u>Analyzed</u>	Sample <u>Amount</u>	Dilut <u>Fact</u>		<u>Analyst</u>	Method
			1/6/03 18:04	1	1		RKT	8015M
		Parameter		Resul mg/kg]	яГ Т	
		GRO, C6-C12		52.3			10.0	
		DRO, >C12-C35		264			10.0	
		TOTAL, C6-C35		316			10.0	
		Surroga	ates	% Recovered		Limits	(%)	
		1-Chlorooc		119%	70			•
		1-Chlorooc	tadecane	126%	70	13	0	

			8015M			
Method <u>Blank</u>	Date <u>Prepared</u>	Date <u>Analyzed</u> 1/6/03 18:04	Sample <u>Amount</u> 1	Dilution <u>Factor</u> 1	<u>Analyst</u> RKT	Method 8015M
	Parameter		Resi	ılt	RL	

Parameter	mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

Surrogates	% Recovered	QC Li	mits (%)
1-Chlorooctane	121%	70	130
1-Chlorooctadecane	125%	70	130

CINDY CRAIN	Order#:	G0305383
LARSON AND ASSOCIATES, INC.	Project:	0-0100
P.O. BOX 50685	Project Name:	Texaco/ McKinley Lease
MIDLAND, TX 79710	Location:	None Given

Lab ID: 0305383-16 Sample ID: :

SS-17 (29')

			8015M			
Method <u>Blank</u>	Date <u>Prepared</u>	Date <u>Analyzed</u> 1/6/03 18:04	Sample <u>Amount</u> 1	Dilution <u>Factor</u> 1	<u>Analyst</u> RKT	<u>Method</u> 8015M
	Parameter		Result mg/kg		RL	
	GRO, C6-C12		<10.0		10.0	
	DRO, >C12-C35		<10.0		10.0	
	TOTAL, C6-C35		<10.0		10.0	

Surrogates	% Recovered	QC Limits (%)		
1-Chlorooctane	126%	70	130	
1-Chlorooctadecane	127%	70	130	

Lab ID:	0305383-17	
Sample ID:	SS-18 (29')	

			8015M			
Method <u>Blank</u>	Date <u>Prepared</u>	Date <u>Analyzed</u>	Sample <u>Amount</u>	Dilution <u>Factor</u>	<u>Analyst</u>	Method
		1/6/03 18:04	1	1	RKT	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

Surrogates	% Recovered	QC Li	mits (%)
1-Chlorooctane	119%	70	130
1-Chlorooctadecane	120%	70	130

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

CINDY CRAIN LARSON AND A P.O. BOX 50685 MIDLAND, TX				Order#: Project: Project Name Location:	0-01 : Texa	05383 00 1co/ McKinley L e Given	case	
Lab ID: Sample ID:	0305383-18 SS-19 (20')							
				8015M				
	Method	Date	Date	Sample	Dilutio	1		
	Blank	Prepared	Analyzed	Amount	Factor		Method	
			1/6/03 18:04	1	1	RKT	8015M	
		Parameter		Result mg/kg		RL		
		GRO, C6-C12		<10.0		10.0		
		DRO, >C12-C35		<10.0		10.0		
		TOTAL, C6-C35		<10.0		10.0		
		Surrogat	es	% Recovered	QC Lir	nits (%)	·	
		1-Chloroocta		130%	70	130		
		1-Chloroocta	decane	120%	70	130		
Lab ID: Sample ID:	0305383-19 SS-20 (26')							
				8015M				
	Method	Date	Date	Sample	Dilutio	n		
	<u>Blank</u>	Prepared	Analyzed	Amount	<u>Factor</u>	<u>Analyst</u>	Method	
			1/6/03 18:04	1	1	RKT	8015M	
		Parameter		Result mg/kg		RL		
		GRO, C6-C12		<10.0		10.0		
		DRO, >C12-C35		<10.0		10.0		
	÷	TOTAL, C6-C35		<10.0		10.0		

Surrogates	% Recovered	QC Li	mits (%)
1-Chlorooctane	122%	70	130
1-Chlorooctadecane	121%	70	130

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

Page 10 of 12

		1		CAL REP	UR		
CINDY CRAIN LARSON AND ASS P.O. BOX 50685 MIDLAND, TX 79'				Order#: Project: Project Name Location:	0-01 :: Tex	05383 00 aco/ McKinley L e Given	.case
Lab ID: 0305383-20 Sample ID: SS-21 (15')							
•	. ,			8015M			
	Method	Date	Date	Sample	Dilutio	n	
	<u>Blank</u>	<u>Prepared</u>	<u>Analyzed</u> 1/6/03 18:04	<u>Amount</u> 1	<u>Factor</u> 1		Method 8015M
		Parameter		Result mg/kg		RL	
		GRO, C6-C12		<10.0		10.0	
		DRO, >C12-C35		<10.0		10.0	
		TOTAL, C6-C35		<10.0		10.0	
		Surroga	ates	% Recovered	QC Li	mits (%)	
		1-Chlorooct	lane	122%	70	130	
		1-Chlorooct	ladecane	117%	70	130	
Lab ID: Sample ID:	0305383-21 SS-22 (27')			8015M			
	Method	Date	Date	Sample	Dilutio		
	<u>Blank</u>	<u>Prepared</u>	<u>Analyzed</u> 1/6/03 18:04	<u>Amount</u> 1	<u>Facto</u> 1	<u>r Analyst</u> RKT	<u>Method</u> 8015M
		Parameter		Resul mg/kg		RL	
		GRO, C6-C12		<10.0		10.0	
		DRO, >C12-C35		49.3		10.0	
		TOTAL, C6-C35		49.3		10.0	
		Surroga	ates	% Recovered	OC Li	mits (%)	
		1-Chlorooc		84%	70	130	
		4 011			+		

85%

70

130

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

1-Chlorooctadecane

TD. 12600 West I-20 East, Odessa, TX 79765 Ph: 915-563-1800

CINDY CRAIN LARSON AND ASSOCIATES, INC. P.O. BOX 50685 MIDLAND, TX 79710				Pı Pı	Project: Project Name:		G0305383 0-0100 Texaco/ McKinley Lease None Given		
Lab ID: Sample ID:	0305383-22 SS-23 (10')								
				8015	М				
	Method <u>Blank</u>	Date <u>Prepared</u>	Date <u>Analyzed</u> 1/6/03		imple <u>nount</u> 1	Dilutio <u>Factor</u> 10	<u>r An</u>	alyst KT	<u>Method</u> 8015M
			18:04						
		Parameter			Result mg/kg		RL		
		GRO, C6-C12			< 100		100		
		DRO, >C12-C35			3970		100		
		TOTAL, C6-C35			3970		100		
		Surroga	ites	% F	Recovered	QC Li	mits (%)		
		1-Chlorooct	ane		11%	70	130		
		1-Chlorooct	adecane		13%	70	130		

Approval: <u>Ol-07-03</u> Raland K. Tuttle, Lab Director, QA Officer Date Celey D. Keene, Org. Tech. Director Jeanne McMurrey, Inorg. Tech. Director Sandra Biezugbe, Lab Tech. Sara Molina, Lab Tech.

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

ENVIRONMENTAL LAB OF TEXAS I, LTD.

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

8015M

Order#: G0305383

BLANK SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg	0004256-02			<10.0		
TOTAL, C6-C35-mg/kg	0004257-02			<10.0		
CONTROL SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg	0004256-03		952	850	89.3%	<u></u>
CONTROL DUP	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg	0004256-04		952	860	90.3%	1.2%
MS SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg	0305383-15	0	952	790	83.%	
MSD SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg	0305383-15	0	952	810	85.1%	2.5%
SRM SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg	0004256-05		1000	840	84.%	
TOTAL, C6-C35-mg/kg	0004257-05		1000	814	81.4%	

ENVIRONMENTAL LAB OF TEXAS QUALITY CONTROL REPORT

8021B/5030 BTEX

Order#: G0305383

BLANK	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-mg/kg		0004249-02			<0.025		****
Toluene-mg/kg		0004249-02			<0.025		
Ethylbenzene-mg/kg		0004249-02			<0.025		
p/m-Xylene-mg/kg		0004249-02			<0.025		
o-Xylene-mg/kg		0004249-02			<0.025		
MS	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-mg/kg		0305380-06	0	0.1	0.105	105.%	
Toluene-mg/kg		0305380-06	0	0.1	0.112	112.%	
Ethylbenzene-mg/kg	• •• •	0305380-06	0	0.1	0.113	113.%	
p/m-Xylene-mg/kg		0305380-06	0	0.2	0.225	112.5%	
o-Xylene-mg/kg		0305380-06	0	0.1	0.108	108.%	
MSD	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-mg/kg		0305380-06	0.105	0.1	0.102	102.%	2.9%
Toluene-mg/kg		0305380-06	0.112	0.1	0.105	105.%	6.5%
Ethylbenzene-mg/kg		0305380-06	0.113	0.1	0.104	104.%	8.3%
p/m-Xylene-mg/kg		0305380-06	0.225	0.2	0.210	105.%	6.9%
o-Xylene-mg/kg		0305380-06	0.108	0.1	0.102	102.%	5.7%
SRM	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-mg/kg		0004249-05		0.1	0.118	118.%	
Toluene-mg/kg	·	0004249-05		0.1	0.113	113.%	
Ethylbenzene-mg/kg		0004249-05		0.1	0.111	111.%	
p/m-Xylene-mg/kg		0004249-05	4	0.2	0.232	116.%	
o-Xylene-mg/kg		0004249-05		0.1	0.111	111.%	

CASE NARRATIVE ENVIRONMENTAL LAB OF TEXAS

Prepared for:

LARSON AND ASSOCIATES, INC. P.O. BOX 50685 MIDLAND, TX 79710 Order#: G0305383

Project: Texaco/ McKinley Lease

The following samples were received as indicated below and on the attached Chain of Custody record. All analyses were performed within the holding time and with acceptable quality control results unless otherwise noted.

SAMPLE ID	LAB ID	MATRIX	Date Collected	Date Received
SS-2 (8')	0305383-01	SOIL	01/02/2003	01/03/2003
SS-3 (9')	0305383-02	SOIL	01/02/2003	01/03/2003
SS-4 (8')	0305383-03	SOIL	01/02/2003	01/03/2003
SS-5 (8')	0305383-04	SOIL	01/02/2003	01/03/2003
SS-6 (7')	0305383-05	SOIL	01/02/2003	01/03/2003
SS-7 (7')	0305383-06	SOIL	01/02/2003	01/03/2003
SS-8 (9')	0305383-07	SOIL	01/02/2003	01/03/2003
SS-9 (9')	0305383-08	SOIL	01/02/2003	01/03/2003
SS-10 (9')	0305383-09	SOIL	01/02/2003	01/03/2003
SS-11 (16')	0305383-10	SOIL	01/02/2003	01/03/2003
SS-12 (17')	0305383-11	SOIL	01/02/2003	01/03/2003
SS-13 (16')	0305383-12	SOIL	01/02/2003	01/03/2003
SS-14 (10')	0305383-13	SOIL	01/02/2003	01/03/2003
SS-15 (19')	0305383-14	SOIL	01/02/2003	01/03/2003
SS-16 (27')	0305383-15	SOIL	01/02/2003	01/03/2003
SS-17 (29')	0305383-16	SOIL	01/02/2003	01/03/2003
SS-18 (29')	0305383-17	SOIL	01/02/2003	01/03/2003
SS-19 (20')	0305383-18	SOIL	01/02/2003	01/03/2003
SS-20 (26')	0305383-19	SOIL	01/02/2003	01/03/2003
SS-21 (15')	0305383-20	SOIL	01/02/2003	01/03/2003
SS-22 (27')	0305383-21	SOIL	01/02/2003	01/03/2003
SS-23 (10')	0305383-22	SOIL	01/02/2003	01/03/2003

Surrogate recoveries are outside the control limits because they were diluted out. (TPH) (0205383-07, 08, 09, 22)

1

CASE NARRATIVE ENVIRONMENTAL LAB OF TEXAS

Prepared for:

LARSON AND ASSOCIATES, INC. P.O. BOX 50685 MIDLAND, TX 79710

Order#: G0305383

Texaco/ McKinley Lease Project:

The following samples were received as indicated below and on the attached Chain of Custody record. All analyses were performed within the holding time and with acceptable quality control results unless otherwise noted.

The enclosed results of analyses are representative of the samples as received by the laboratory. Environmental Lab of Texas makes no representations or certifications as to the methods of sample collection, sample identification, or transportation handling procedures used prior to our receipt of samples. To the best of my knowledge, the information contained in this report is accurate and complete.

Approved By: Spanne McMune Environmental Lab of Texas I, Etd.

Date: 01-07-03

CLIENT NAME:			SITE MANAGER:		<u>ج</u> و	PARAMETER	PARAMETERS/METHOD NUMBER	ABER	CHAIN-C	CHAIN-OF-CUSTODY RECURD
Texaco			Cinety Cain			E				
PROJECT NO .: D. DIDD			PROJECT NAME: MCK in Levi Le	141515 12 12 11 11 11 11 11		7180			Acron & Ssociates, Inc.	X Consultants Consultants 915-687-0901
PAGE / OF	6	LAB. PO #	- Annal .						507 N. Marient	507 N. Marienfeld, Ste. 202 • Midland, TX 79701
	1105 231	OTHER	SAMPLE IDENTIFICATION			718 HL		<u> </u>	Lab. I.D. Number (Lab Use only)	Remarks (I.E., Filtered, Unfiltered, Preserved, Undreserved, Grab composite)
3 1040	1		55-2 (8')		7				0305383-01	
	>	<u> </u>	K		7				20	
1044	7				7				63	
" 1057	7				1				75	
" 1059	7		1	_	1				05	
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" 1105	1		55-8 191)		1 1				67	
" 1107	7		55-9 (9:)		1				89	
0111 "	7		55-10 (9.)		1			_	Å.	
" 1130	7		55-11 (10)		7			_	0	
" 1/35	7		55-12 (17))					
" 1138	7		55-13 (16)		7				[2]	
afrii "	7		55-14 (10')	-					3	
CHII "	7		55-15 (191)	-	7				<u>,</u>	
1145	7		- 16 1	-	7				5	
1240	1		-17 1)				j	
1245	7		55-18 (291)		7				-	
" 12/5	7		55-19 (201)	-	7				8/ *	
SAMPLED BY: (Signature)	jel .			RELINQUISHED BY: (Signature)	3Y: (Sigi	nature)	DATE: TIME:	6∠	RECEIVED BY: (Signature)	Jre) DATE: TIME:
RELINQUISHED BY: (Signature)	anature)		1/5/03	Received BY: (Si	(Signature)	el le	DATE:	Ň	SAMPLE SHIPPED BY: (Circle)	(Circle)
) in 1	0101		1815)		TIME:	<u> </u>	FEDEX	Ā
COMMENTS	1.200					TUR	TURNAROUND TIME NEEDED		WHITE - RECEIVING LAB	LIVERED UPS OTHER: - RECEIVING LAB DECENNING LAB ITO RE PETI IPNED TO
RECEIVING LABORATORY: ADDRESS. 12600 CITY: 04 cs Sq	Ψ <u>β</u>		20 E alter Labor 7X 20 E alter 7X ZIP: 797	3	INED BY	Y: (Signature	Comuner TIME: 08 25-			LA AFTER RECEIPT) PROJECT MANAGER QA/QC COORDINATOR
CUNIACI: SAMPLE CONDITION WHEN RECEIVED	RECEIVED:		-1.5°C		CONI	LA CONTACT PERSON:		N N	SAMPLE TYPE:	

CLIENT NAME: 704. PROJECT NO.:	NAME: Texard D- 0100	8			SITE MANAGER: CIAN PROJECT NAME: MCKINJEY	Sain V Lease	CONTRINERS 40 2 0 5	a W 5102	RAMETI	ERS/MET	PARAMETERS/METHOD NUMBER	MBER	CHAIN-OF- Harson & Environmental Cons.		STODY RECORD Fax: 915-687-0456 915-687-0901	
PAGE	5 3 <i>MIL</i>	Matter &	1105	LAB. PO #	PO # SAMPLE IDENTIFICATION	VIION	NUMBER OF (8 HJL					UV N. MURI LAB. I.D. NUMBER (LAB USE ONIC)	eriteid, Jie. 202 REA REA ILE, Furtee PRESERVED, GRAB C	e. 202 Wilding, 10, 73,01 Remarks (I.E. Futreed, UNPIESERVED, Grab Composite)	
12/03	k220		X			26.)							0305383-19			
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AMPR	SAMPLED PX: (Signapure)	apprel] ~]	DATE: //	22/03 RELINQUISHED BY: (Signature)	D BY: (Signat	ure)		DATE: TIME:		RECEIVED BY: (Signature)	ature)	DATE: TIME:	
SELINOL	RELINQUISHED BY: (Signature)	Sig				3/03 RECEIVED BY: (Signature)	(Signc	Iture)			DATE:		SAMPLE SHIPPED BY: (Circle)			1
COMMENTS	NITS		m		TIME: 0/2	582			110	RNAROUN	TIME: TURNAROUND TIME NEEDED	ЧГ	FEDEX HAMD DELIVERED	BUS AIRBILL #: UPS OTHER:	Irbill #: Other:	
	5								!				WHITE - RECEIVING LAB YELLOW - RECEIVING LAB	Receiving LAB Receiving LAB (to be returned to	INED TO	
Receiving Address: City: Contact:	RECEIVING LABORATORY: ADDRESS: 12600 CITY: 048556 CONTACT:	ATORY:	EAV!		STATE: TX PHONE:	ZIP: -19765 D	AIE	RECEIVED BY: (Signa DATE: 01-03 03	Ξ Å	TIME: 082	222		la Afte Pink - Projec Gold - Qa/QC	la After Receipt) - project Manager - Qa/Qc Coordinator		
AMPLE C	Sample condition when received	HEN REC	eived:	Ī	l,S°C		IA CC		LA CONTACT PERSON:	,ç			SAMPLE TYPE:	1.1		
									Š							

ANALYTICAL REPORT

Prepared for:

CINDY CRAIN LARSON AND ASSOCIATES, INC. P.O. BOX 50685 MIDLAND, TX 79710

Project: Texaco / McKinley

PO#:

Order#: G0305663

Report Date: 02/11/2003

<u>Certificates</u> US EPA Laboratory Code TX00158

ENVIRONMENTAL LAB OF TEXAS SAMPLE WORK LIST

LARSON AND ASSOCIATES, INC. P.O. BOX 50685 MIDLAND, TX 79710 915-687-0456 Order#:G0305663Project:2-0100Project Name:Texaco / McKinleyLocation:None Given

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas, unless otherwise noted.

				Date / Time	Da	te / Time		
Lab ID:	Sample :	<u>Matrix:</u>		Collected	F	leceived	<u>Container</u>	Preservative
0305663-01	SS-24 (10')	SOIL		2/7/03		2/7/03	4 oz Glass	None
		··· • . •	N Y -	10:15		16:55		
<u>Lat</u>	Testing:	Rejected:	NO	Те	mp:	1.0 C		
	8015M							
	Chloride	······						
0305663-02	SS-25 (19')	SOIL		2/7/03		2/7/03	4 oz Glass	None
				10:20		16:55		
	b Testing:	Rejected:	No	Te	mp:	1.0 C		
	8015M							
J	Chloride							
0305663-03	SS-26 (7')	SOIL		2/7/03		2/7/03	4 oz Glass	None
0303003-03				10:25		16:55		
Lal	b Testing:	Rejected:	No	Te	mp:	1.0 C		
	8015M							
	Chloride							
0305663-04	SS-27 (7')	SOIL		2/7/03		2/7/03	4 oz Glass	None
0500000 04				10:30		16:55		
Lal	b Testing:	Rejected:	No	Te	mp:	1.0 C		
	8015M							
	Chloride						······································	
- 0305663-05	SS-28 (20')	SOIL		2/7/03		2/7/03	4 oz Glass	None
0505005-05				10:35		16:55		
La	<u>b Testing:</u>	Rejected:	No	Те	mp:	1.0 C		
	8015M							
	Chloride							
0305663-06	SS-29 (18')	SOIL		2/7/03		2/7/03	4 oz Glass	None
				10:40		16:55		
La	<u>b Testing:</u>	Rejected:	No	Te	mp:	1.0 C		
	8015M							
	Chloride							· · · · · · · · · · · · · · · · · · ·
0305663-07	SS-30 (18')	SOIL		2/7/03		2/7/03	4 oz Glass	None
5555566 67	·			10:50		16:55		
E Ia	<u>b Testing:</u>	Rejected:	No	Te	mp:	1.0 C		

ENVIRONMENTAL LAB OF TEXAS SAMPLE WORK LIST

LARSON AND ASSOCIATES, INC. P.O. BOX 50685 MIDLAND, TX 79710 915-687-0456 Order#:G0305663Project:2-0100Project Name:Texaco / McKinleyLocation:None Given

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas, unless otherwise noted.

<u>Lab ID:</u>	<u>Sample :</u> 8015M Chloride	<u>Matrix:</u>		Date / Tim <u>Collected</u>		Date / Time <u>Received</u>	Container	Preservative
0305663-08	SS-31 (15')	SOIL		2/7/03		2/7/03	4 oz Glass	None
0303003-00				11:00		16:55		
La	<u>b Testing:</u>	Rejected:	No		Temp:	1.0 C		
	8015M							
	Chloride							
0305663-09	SS-32 (8')	SOIL		2/7/03		2/7/03	4 oz Glass	None
				11:05		16:55		
<u>La</u>	<u>b Testing:</u>	Rejected:	No		Temp:	1.0 C		
	8015M							
	Chloride							
0305663-10	SS-33 (11')	SOIL		2/7/03		2/7/03	4 oz Glass	None
				10:45		16:55		
La	<u>b Testing:</u>	Rejected:	No		Temp:	1.0 C		
	8015M							
	Chloride		<u> </u>					
0305663-11	SS-34 (8')	SOIL		2/7/03		2/7/03	4 oz Glass	None
				11:10		16:55		
La	b Testing:	Rejected:	No		Temp:	1.0 C		
	8015M							
	Chloride							

		4					
CINDY CRAIN			· · · · · · · · · · · · · · · · · · ·	Order#:	G03	05663	
LARSON AND A	SSOCIATES, INC.			Project:	2-01	00	
P.O. BOX 50685				Project Nan	ne: Texa	aco / McKinley	
MIDLAND, TX	79710			Location:	Non	e Given	
Lab ID:	0305663-01						
Sample ID:	SS-24 (10')						
				8015M			
	Method	Date	Date	Sample	Dilutio	n	
	Blank	Prepared	Analyzed	<u>Amount</u>	Factor	<u>Analyst</u>	Method
			2/10/03	1	1	CDH	8015M
		Parameter		Resu	lt	RL	
				mg/k			
		GRO, C6-C12		<10.		10.0	
		DRO, >C12-C35		<10.		10.0	
		TOTAL, C6-C35	5	<10.	0	10.0	
		Surroga		% Recovered	-	mits (%)	
		1-Chlorooc		104%	70	130	
		1-Chlorooc	tadecane	101%	70	130	
Lab ID:	0305663-02						
Sample ID:	SS-25 (19')						
				8015M			
				0015111			
	Method	Date	Date	Sample	Dilutio	n	
	Method <u>Blank</u>	Date <u>Prepared</u>			Dilutio <u>Factor</u>		Method

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

Surrogates	% Recovered	QC Li	mits (%)
1-Chlorooctane	101%	70	130
1-Chlorooctadecane	98%	70	130

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

CINDY CRAIN LARSON AND A P.O. BOX 50685 MIDLAND, TX				Order#: Project: Project Name Location:			
Lab ID: Sample ID:	0305663-03 SS-26 (7')						
				8015M			
	Method <u>Blank</u>	Date Prepared	Date <u>Analyzed</u>	Sample <u>Amount</u>	Dilution <u>Factor</u>	Analyst	Method
			2/10/03	1	1	CDH	8015M
		Parameter	<u></u>	Result mg/kg		RL	
		GRO, C6-C12		<10.0		10.0	
		DRO, >C12-C35		<10.0		10.0	
		TOTAL, C6-C35		<10.0		10.0	
		Surrogat	es	% Recovered	QC Lin	nits (%)	
		1-Chloroocta	ne	110%	70	130	
		1-Chloroocta	decane	107%	70	130	
Lab ID: Sample ID:	0305663-04 SS-27 (7')			8015M			
	Method	Date	Date	Sample	Dilution	1	
	Blank	Prepared	Analyzed	Amount	<u>Factor</u>	<u>Analyst</u>	Method
			2/10/03	1	1	CDH	8015M
		Parameter		Result mg/kg		RL	
		000 01 010			1	10.0	

Parameter	mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

Surrogates	% Recovered	QC Limits (%)		
1-Chlorooctane	103%	70	130	
1-Chlorooctadecane	101%	70	130	

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

CINDY CRAIN LARSON AND A P.O. BOX 50685 MIDLAND, TX				Order#: Project: Project Name Location:	2-010 :: Texa	95663 00 co / McKinley e Given	
Lab ID:	0305663-05						
Sample ID:	SS-28 (20')						
				8015M			
	Method	Date	Date	Sample	Dilution		
	Blank	Prepared	<u>Analyzed</u>	Amount	Factor	<u>Analyst</u>	Method
			2/10/03	1	1	CDH	8015M
		Parameter	<u></u>	Result mg/kg		RL	
		GRO, C6-C12		<10.0		10.0	
		DRO, >C12-C35		<10.0		10.0	
		TOTAL, C6-C35		<10.0		10.0	
		Surroga	ites	% Recovered	QC Lin	nits (%)	
		1-Chlorooct	·····	102%	70	130	
		1-Chlorooct	ladecane	97%	70	130	
Lab ID: Sample ID:	0305663-06 SS-29 (18')						
				8015M			
	Method <u>Blank</u>	Date <u>Prepared</u>	Date <u>Analyzed</u>	Sample <u>Amount</u>	Dilution <u>Factor</u>		Method
			2/10/03	1	1	CDH	8015M
		Parameter		Resul mg/kg		RL	
		GRO, C6-C12		<10.0		10.0	
		DRO, >C12-C35		<10.0		10.0	

Surrogates	% Recovered	QC Limits (%)		
1-Chlorooctane	104%	70	130	
1-Chlorooctadecane	101%	70	130	

<10.0

10.0

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

TOTAL, C6-C35

CINDY CRAIN	<u></u>			Order#:		05663	
	ASSOCIATES, INC.			Project:	2-01		
.O. BOX 50685				Project Name		aco / McKinley	
AIDLAND, TX	79710		······································	Location:	Non	e Given	<u>. </u>
Lab ID:	0305663-07						
Sample ID:	SS-30 (18')						
				8015M			
	Method	Date	Date	Sample	Dilutio	n	
	Blank	Prepared	Analyzed	Amount	Factor	Analyst	Method
			2/10/03	1	1	CDH	8015M
			<u></u>	Result			
		Parameter		mg/kg		RL	
		GRO, C6-C12		<10.0		10.0	
		DRO, >C12-C35		85.1		10.0	
		TOTAL, C6-C35		85.1		10.0	
		Surroga	ates	% Recovered	OC Li	mits (%)	
		1-Chlorooct		103%	70	130	
					70	130	
		1-Chlorooct	adecane	101%	//	130	
I ah M•	0305663-08	1-Chlorooct	adecane	101%	70	130	
Lab ID:	0305663-08	1-Chlorooct	adecane	101%	70	130	
Lab ID: Sample ID:	0305663-08 SS-31 (15')	1-Chlorooct	2			130	
	SS-31 (15')		2	8015M			
	SS-31 (15') Method	Date	Date	8015M Sample	Diluțio	n	
	SS-31 (15')		2	8015M		n	<u>Method</u> 8015M

Parameter	Result mg/kg	RL	
GRO, C6-C12	<10.0	10.0	
DRO, >C12-C35	<10.0	10.0	
TOTAL, C6-C35	<10.0	10.0	

Surrogates	% Recovered	QC Limits (%)		
1-Chlorooctane	112%	70	130	
1-Chlorooctadecane	111%	70	130	

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

CINDY CRAIN LARSON AND ASSOCIATES, INC.	Order#: Project:	G0305663 2-0100
P.O. BOX 50685	Project Name:	Texaco / McKinley
MIDLAND, TX 79710	Location:	None Given

Lab ID:	0
Sample ID:	5

i

0305663-09 SS-32 (8')

			8015M			
Method <u>Blank</u>	Date <u>Prepared</u>	Date <u>Analyzed</u> 2/10/03	Sample <u>Amount</u> 1	Dilution <u>Factor</u> 1	<u>Analyst</u> CDH	Method 8015M
	Parameter		Resul mg/kg	1	RL	
	GRO, C6-C12		<10.0)	10.0	

430

430

10.0

10.0

Surrogates	% Recovered	QC Limits (%)		
1-Chlorooctane	107%	70	130	
1-Chlorooctadecane	107%	70	130	

Lab ID:	0305663-10
Sample ID:	SS-33 (11')

			8015M			
Method <u>Blank</u>	Date <u>Prepared</u>	Date <u>Analyzed</u> 2/10/03	Sample <u>Amount</u> 1	Dilution <u>Factor</u> 1	<u>Analyst</u> CDH	<u>Method</u> 8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

Surrogates	% Recovered	QC Li	mits (%)
1-Chlorooctane	90%	70	130
1-Chlorooctadecane	90%	70	130

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

DRO, >C12-C35

TOTAL, C6-C35

CINDY CRAIN	Order#:	G0305663
LARSON AND ASSOCIATES, INC.	Project:	2-0100
P.O. BOX 50685	Project Name:	Texaco / McKinley
MIDLAND, TX 79710	Location:	None Given

Lab ID: Sample ID:

0305663-11 SS-34 (8')

			8015M			
Method <u>Blank</u>	Date <u>Prepared</u>	Date <u>Analyzed</u> 2/10/03	Sample <u>Amount</u> 1	Dilution <u>Factor</u> 1	<u>Analyst</u> CDH	Method 8015M
	Parameter		Resu mg/k		RL	
	GRO, C6-C12		<10.)	10.0	
	DRO, >C12-C35		159		10.0	
	TOTAL, C6-C35		159		10.0	

Surrogates	% Recovered	QC Li	mits (%)
1-Chlorooctane	83%	70	130
1-Chlorooctadecane	84%	70	130

Kaland K Just) 2-11-03 Approval: Date

Raland K. Tuttle, Lab Director, QA Officer Celey D. Keene, Org. Tech. Director Jeanne McMurrey, Inorg. Tech. Director Sandra Biezugbe, Lab Tech. Sara Molina, Lab Tech.

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

ENVIRONMENTAL LAB OF TEXAS I, LTD.

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

CINDY CRAIN LARSON AND P.O. BOX 5068 MIDLAND, TY	ASSOCIATES, INC. 5		Order# Project Project Locatio	: Name:	G0305663 2-0100 Texaco / McF None Given	Kinley		
Lab ID:	0305663-01							
Sample ID:	SS-24 (10')						_	
Test Parameter	neters	Result	Units	Dilution <u>Factor</u>		Method	Date Analyzed	Analyst
Chloride	· · · · · · · · · · · · · · · · · · ·	44.3	mg/kg	1	20.0	9253	2/10/03	СК
Lab ID:	0305663-02							
Sample ID:	SS-25 (19')							
Test Paran Parameter	neters	Result	Units	Dilution Factor		Method	Date Analyzed	Analyst
Chloride	1	324	mg/kg	1	20.0	9253	2/10/03	СК
Lab ID:	0305663-03	· · · · · · · · · · · · · · · · · · ·						
Sample ID:	SS-26 (7')							
Test Paran Parameter	neters	Result	Units	Dilution Factor		Method	Date Analyzed	Analyst
Chloride		< 20.0	mg/kg	1	20.0	9253	2/10/03	СК
Lab ID: Sample ID:	0305663-04 SS-27 (7')							
Test Parar	neters			Dilutio	n		Date	
Parameter Chloride	. <u>.</u>	<u>Result</u> < 20.0	<u>Units</u> mg/kg	<u>Factor</u> 1	<u>. RL</u> 20.0	<u>Method</u> 9253	Analyzed 2/10/03	<u>Analyst</u> CK
Lab ID:	0305663-05							
Sample ID:	SS-28 (20')							
Test Paran _Parameter	neters	<u>Result</u>	Units	Dilution <u>Factor</u>		Method	Date Analyzed	<u>Analyst</u>
Chloride		177	mg/kg	1	20.0	9253	2/10/03	CK
Lab ID: Sample ID:	0305663-06 SS-29 (18')							
Test Parai Parameter	meters	<u>Result</u>	Units	Dilutio <u>Facto</u>		Method	Date Analyzed	<u>Analyst</u>
Chloride		< 20.0	mg/kg	1	20.0	9253	2/10/03	CK

RL = Reporting Limit N/A = Not Applicable

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ENVIRONMENTAL LAB OF TEXAS I, LTD. 12600 West I-20 East, Odessa, TX 79765 Ph: 915-563-1800

Page 1 of 2

	1		
	1	Date	
	<u> </u>	Analyzed Ana	nalyst
9253	20.0	2/10/03 0	СК
	1	Date	
<u>fethod</u>	<u>RL</u> <u>M</u>	Analyzed An	nalyst
9253	20.0	2/10/03 0	СК
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<u>lethod</u>		Analyzed An	nalys
9253	20.0	2/10/03	СК
	n	Date	
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9253	20.0	2/10/03	СК
	······		
Aethod	n r RL N	Date Analyzed An	nalys
9253	20.0		CK
N	<u>r RL</u> .	<u>Method</u> 9253	Method Analyzed A

Kalandk July 24103 Approval: Date

Raland K. Tuttle, Lab Director, QA Officer Celey D. Keene, Org. Tech. Director Jeanne McMurrey, Inorg. Tech. Director Sandra Biezugbe, Lab Tech. Sara Molina, Lab Tech.

RL = Reporting Limit N/A = Not Applicable

ENVIRONMENTAL LAB OF TEXAS I, LTD.

ENVIRONMENTAL LAB OF TEXAS QUALITY CONTROL REPORT

8015M

Order#: G0305663

BLANK	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg		0004576-02			<10.0		····
MS	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg		0305663-01	0	952	989	103.9%	
MSD	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg		0305663-01	0	952	998	104.8%	0.9%
SRM	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg		0004576-05		1000	1060	106.%	

ENVIRONMENTAL LAB OF TEXAS QUALITY CONTROL REPORT

Test Parameters

Order#: G0305663

BLANK	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg	<u></u> ,	0004580-01	<u> </u>		< 20.0		
MS	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg		0305665-02	2350	834	3280	111.5%	
MSD	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg		0305665-02	2350	834	3190	100.7%	2.8%
SRM	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg		0004580-04		5000	5140	102.8%	

CLIENT NAME:	NAME:			UIIS	E MANAGER	<			PAR	parameters/method number	METHOD	NUMBER	CHAIN-	- L C	-CUSTODY RECORD
V T	Texaco				Cindy	Crain	_								
PROJECT NO.	ст NO.: <i>J - DI DD</i>			भ्र	PROJECT NAME: MCV (10101)			tainers						A arson & Sociates, Inc. Environmental consultants	Fax: 915-687-0456
PAGE	ы С			LAB. PO #	+ VIIIC			ь CON		201			507 N. A	507 N. Marienfeld, Ste. 2	915-68/-0901 202 • Midland, TX 79701
3140	₹WIL	MATER	1105	S SA OTHER	WPLE IDENTI	FICATION	SAMPLE IDENTIFICATION	NOWBEB C	1614 161	10110			Lab. I.D. NUMBER ILAB USE ONIYI		REMARKS I.E., FILTERED, UNFILTERED, PREERVED, UNPRESERVED, GAMADYATTEI
2/7/03	+				55-24	(.01/	01		7						
	1020		7	N N	55-25	(14.)	20	-	7 7						
2	1025		7	5	55-26	(2)	03	<u> -</u>	7						
ų	1030		7	2	55-27	(1)	5	1	7						
"	1035		7	Ś	55-28	(-020-)	52	-	~ ~						
1	1040		7	2	55-29	(181)	Clo	1	7 7						
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SAMPLI	SAMPLED BY ASignature	natione)	au.		Date: Time:	DATE: 2/7/03 TIME: 1/15	RELINQUISHED BY: (Signature)	ED BY: (Signature	(6	Date: Time:	ن نن	RECEIVED BY: (Signature)	signature)	DATE:
RELINO	RELINQUISHED BY: (Signature)	: (Signe	Dure)		DATE	2/7/03	RECEIVED	BY: (Signature)	ture)		DATE	ننب	SAMPLE SHIPPED BY: (Circle)	ED BY: (Circle)	
	1 miles	4	neu		TIME	~		•			TIME:	ļ	FEDEX		AIRBILL #:
COMM	COMMENTS:									TURNAF	TURNAROUND TIME NEEDED	E NEEDED	SU S	ED UPS	OTHER:
			Į					•					VELIOW - PEC	- Receiving LAB	ETI IPNEN TO
RECEIVING	RECEIVING LABORATORY:	ATORY:	à	[0]				RECEIVE	BY: (Sig	Signature	1. M		Ę	LA AFTER RECEIPT)	
	 ק נ			STA	STATE:	ZIP:		指	X11/2	IME				- Project Manager - Qa/QC Coordinator	Z
				É				•							
SAMPLE (ihen rec	the second	thes gunss		5	`	5 A	la contact person:	ERSON:			SAMPLE TYPE:	l'ig	

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ANALYTICAL REPORT

Prepared for:

CINDY CRAIN LARSON AND ASSOCIATES, INC. P.O. BOX 50685 MIDLAND, TX 79710

Project: Texaco/ McKinley PO#:

Order#: G0305714

Report Date: 02/18/2003

<u>Certificates</u> US EPA Laboratory Code TX00158



April 7, 2003

Mr. Paul Sheeley New Mexico Oil Conservation Division 1625 N. French Drive Hobbs, New Mexico 88240

Re: Soil Sample Results, Former McKinley Lease Production Facility, UL A, Section 30, Township 18 South, Range 38 East, Lea County, New Mexico

Dear Mr. Sheeley:

Please find enclosed a copy of the above-referenced report. The report is submitted on behalf of ChevronTexaco Exploration and Production, and presents the results of soil remediation activities conducted by Larson and Associates, Inc. Please call Scott Toner at (915) 687-7318 or myself at (915) 687-0901 if you have questions.

Sincerely, Larson and Associates, Inc.

ing K. (rain

Cindy K. Crain Geologist

cc: Scott Toner - ChevronTexaco William Olson, NMOCD



FAX

DATE: April 9, 2003

TO: Paul Sheeley

WITH: New Mexico Oil Conservation Division

FAX: (505) 393-0720

FROM: Cindy Crain

WITH: Larson and Associates, Inc.

PAGES (with cover): 16

RE: Soil Sample Results for Texaco Exploration and Production, Inc. McKinley Lease (Davis Property)

> Larson and Associates, Inc. 507 N. Marienfeld Street Suite 202 Midland, Texas 79701 (915) 687-0901

cindy@laenvironmental.com

Please call Cindy Crain at (915) 687-0901 if this transmittal is not legible.



April 7, 2003

Mr. Paul Sheeley New Mexico Oil Conservation Division 1625 N. French Drive Hobbs, New Mexico 88240

Re: Soil Sample Results, Former McKinley Lease Production Facility, UL A, Section 30, Township 18 South, Range 38 East, Lea County, New Mexico

Dear Mr. Sheeley:

Please find enclosed a copy of the above-referenced report. The report is submitted on behalf of ChevronTexaco Exploration and Production, and presents the results of soil remediation activities conducted by Larson and Associates, Inc. Please call Scott Toner at (915) 687-7318 or myself at (915) 687-0901 if you have questions.

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cc: Scott Toner - ChevronTexaco William Olson, NMOCD

507 North Marienfeld, Suite 202 ♦ Midland, Texas 79701 ♦ Ph. (915) 687-0901 ♦ Fax (915) 687-0456



April 7, 2003

VIA FACSIMILE: (505) 393-0720

Mr. Paul R. Sheeley New Mexico Oil Conservation Division 1625 N. French Drive Hobbs, New Mexico 88240

Re: Soil Sample Results, Former M^cKinley Lease Production Facility, UL A, Section 30, Township 18 South, Range 38 East, Lea County, New Mexico

Dear Mr. Sheeley:

ChevronTexaco Exploration and Production Company (ChevronTexaco), as successor to Texaco Exploration and Production Inc. (Texaco), has retained Larson and Associates, Inc. (LA) to supervise remediation of soil at a former oilfield production facility (Site) once operated by Texaco on the McKinley Lease in Unit Letter A (NE/4 NE/4), Section 30, Township 18 South, Range 38 East, Lea County, New Mexico. Figure 1 presents a location and topographic map.

A remediation work plan was submitted to the New Mexico Oil Conservation Division (NMOCD) on January 28, 2002, and proposed to excavate soil at three locations to achieve the NMOCD Recommended Remediation Action Level (RRAL) of 100 milligrams per kilogram (mg/kg) total petroleum hydrocarbon (TPH). Following excavation of approximately 7,288 cubic yards of soil from the three locations (Hole #1, Hole #2 and Hole #3), a Final Remediation Report was submitted to the NMOCD on June 11, 2002. The NMOCD denied closure since a soil sample from the bottom of Hole #3 was above the NMOCD recommended remediation action level (RRAL) of 100 mg/kg. The NMOCD also requested that Texaco investigate an area between the excavations (Hole #2 and Hole #3) since a sample from BH-3 from 20 to 21 feet below ground surface (BGS) reported TPH at 82 mg/kg (below the RRAL).

Results of additional sampling of Hole #3, which showed that TPH was below the RRAL of 100 mg/kg, were presented to the NMOCD in a letter dated September 20, 2002. The letter also stated that Holes #1, #2 and #3 would be filled with clean soil, and a soil boring would be drilled between BH-3 and BH-4, to a depth of approximately 25 feet below ground surface (bgs). The NMOCD approved the work plan in a letter dated October 9, 2002, with two requests as follows:

- The proposed boring depth be extended from 25 feet bgs, to a depth of approximately 40 45 feet bgs,
- The OCD be notified 48 hours in advance of any sampling event.

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Mr. Paul R. Sheeley April 7, 2003 Page 2

Appendix A provides copies of NMOCD correspondence.

Environmental Plus, Inc. (EPI) was retained to fill the excavations with clean soil, and began backfilling Hole #1 and Hole #2 on October 14, 2002. Backfilling was also stopped on that date, when NMOCD personnel visited the Site and observed additional soil staining at the north end of Hole #2. ChevronTexaco was required to investigate and remediate as necessary the soil staining north of Hole #2.

The NMOCD has established remediation action levels (RRAL) for benzene, total BTEX and TPH in soil ("Guidelines for Remediation of Leaks, Spills and Releases, August 13, 1993"). Remediation levels for benzene, total BTEX and TPH were calculated for the Site using the following NMOCD criteria:

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

Based on the total ranking score above, the following RRALs were assigned to the Site based on NMOCD criteria:

Benzene	10 mg/kg
Total BTEX	50 mg/kg
ТРН	100 mg/kg

Remediation Activities

On December 5, 2003, soil boring BH-13 was drilled between the two excavations (Hole #2 and Hole #3) and south of BH-3 and BH-4. The boring was drilled by Scarborough Drilling, Inc. of Lamesa, Texas, utilizing an air rotary drilling rig. Figure 2 shows the location of excavations (Holes #1, 2 and 3) and soil borings BH-1 through BH-13. BH-12 is located north of the Site and is not shown on Figure 2.

Soil samples were collected at ground surface, and approximately every five (5) feet bgs, thereafter, using a split-spoon sampler. The split-spoon sampler was thoroughly washed between sample events. Drill cuttings were placed on the ground adjacent to the boring. The soil samples were placed in clean glass sample jars, labeled, chilled in an ice chest, and delivered under chain-of-custody control to Environmental Lab of Texas I, Ltd., located in Odessa, Texas. A portion of each sample was also placed in a clean glass sample jar for headspace analysis. The headspace jars were filled approximately ³/₄ full,

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04/09/2003 WED 13:53 FAX 915 687 0456 LARSON & ASSOCIATES INC.

Mr. Paul R. Sheeley April 7, 2003 Page 3

and a layer of aluminum foil was placed over the opening of the jar before replacing the cap. The headspace samples were allowed to reach ambient temperature before a RAE Instruments, Model 2000 photoionization detector (PID) was used to measure the concentration of organic vapors in the headspace of the sample jars. The PID probe was inserted into the headspace of the sample jars (through the aluminum foil), and the concentration of organic vapors was displayed by the instrument in parts per million (ppm). The NMOCD allows a PID measurement of less than 100 ppm to be used as a substitute for laboratory analysis of benzene and total benzene, toluene, ethylbenzene and xylenes (collectively referred to as BTEX). However, the PID measurement cannot be used as a substitute for total petroleum hydrocarbon (TPH) analysis by a laboratory. Samples from the surface and approximately every ten (10) feet bgs were analyzed for TPH by EPA method SW-846-8015 for gasoline range organics (GRO) and diesel range organics (DRO).

On October 15, 2002, EPI began to excavate soil from the north end of Hole #2. As remediation activities progressed to the north, soil samples were taken from the bottom and sides of the excavation. Soil samples were collected on December 30, 2002, January 2, 2003, February 7, 2003, February 13, 2003 and March 31, 2003, until laboratory analyses of soil samples from the sides and bottom of the excavation reported TPH values below 100 mg/kg. The final excavation, extending from the north boundary of Hole #2, measured approximately 130×70 feet, and was excavated to a maximum depth of 29 feet bgs. The impacted soil was transported to ChevronTexaco's centralized waste management facility (landfarm) located northwest of Jal, New Mexico. The final soil samples from the bottom and sides of the excavation reported TPH (DRO and GRO) levels below 100 mg/kg. The sample results are presented on Table 2. Figures 3, 4 and 5 present Site drawings showing the excavation boundary, sample locations and TPH concentrations from each sampling event.

Soil Boring Results

All samples collected from BH-13 exhibited a total TPH of less than ten (<10.0) mg/kg except the sample from approximately 20-21 feet bgs, which resulted in a DRO concentration of 190 mg/kg. Table 1 presents a summary of headspace and TPH analyses of soil samples from BH-13. Figure 2 shows the location of BH-13. Appendix B provides the boring log. Appendix C provides laboratory and chain-of-custody documentation. Appendix D presents photographs of the soil boring installation. The boring was filled with bentonite chips and hydrated with potable water upon completion of drilling.

Remediation Results

Only one sample (SS-9, North Bottom, 9') exhibited PID readings above 100 ppm (381.0 ppm) and was analyzed for BTEX using EPA method SW-846-8021B. Referring to Table 2, benzene was reported below the detection limit of 0.025 mg/kg and total BTEX was reported at 8.864 mg/kg. The results were below the RRAL for benzene (10 mg/kg)

507 North Marienfeld, Suite 202 Midland, Texas 79701 Ph. (915) 687-0901 Fax (915) 687-0456

Mr. Paul R. Sheeley April 7, 2003 Page 4

and total BTEX (50 mg/kg). All samples were analyzed for TPH by EPA method SW-846-8015 for gasoline range organics (GRO) and diesel range organics (DRO). The concentrations of TPH in the final samples from the bottom and sides of the excavation were below the RRAL for TPH of 100 mg/kg. Table 2 provides a summary of headspace and laboratory results following excavation. Figures 3, 4 and 5 present Site drawings showing the excavation boundary, sample locations and TPH concentrations from each sampling event. Appendix C provides laboratory and chain-of-custody documentation. Appendix D presents photographs of the excavation.

Approximately 8,156 cubic yards (yd^{3}) of impacted soil was transferred to ChevronTexaco's landfarm since October 31, 2002. Approximately 9,892 yd³ of clean soil was transported to the Site, and has been stockpiled. ChevronTexaco requests the NMOCD allow it to fill the excavations. The excavations will be filled with clean soil, and a final letter will be submitted to the NMOCD upon completion. Please call Mr. Scott Toner with ChevronTexaco at (915) 687-7318 or myself at (915) 687-0901 if you have questions.

Sincerely, Larson and Associates, Inc.

K. Crain

Cindy K Crain Geologist

Encl.

cc: Scott Toner, ChevronTexaco William Olson, OCD Hydrologist

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TABLES

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Table 1:Summary of Headspace and Laboratory Analysis of Soil SamplesTexaco Exploration and Production Inc., McKinley LeaseNE/4, NE/4, Section 30, Township 18 South, Range 38 EastLea County, New Mexico

Borehole Number	Sample Date	Sample Depth (feet BGS)	PID (ppm)	GRO C6-C12 mg/kg	DRO >C12-C35 mg/kg	TPH (C6-C35) mg/kg
RRAL					gen generation of the second	100
BH-13	12/5/2002	0-1	1	<10.0	<10.0	<10.0
		10-11	1	<10.0	<10.0	<10.0
		20-21	6.1	<10.0	190.0	190.0
		30-31	5.5	<10.0	<10.0	<10.0
		50-51	3.1	<10.0	<10.0	<10.0

Notes: All analyses performed by Environmental Lab of Texas, Inc., Midland, Texas

1. BGS: Depth in feet below ground surface

2. PID: Photoionization detector

- 3. ppm: Parts per million
- 4. GRO: Gasoline-range organics
- 5. DRO: Diesel-range organics
- 6. TPH: Total petroleum hydrocarbons (Sum of GRO + DRO)
- 7. mg/kg Milligrams per kilogram
- 8. ---: No data available
- 9. <: Below method detection limit
- 10. RRAL: NMOCD Recommended Remediation

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Texaco Exploration and Production Inc., McKinley Lease NE/4, NE/4, Section 30, Township 18 South, Range 38 East Lea County, New Mexico

	Lea county, new mexico	•							Page 1 of 2	1 of 2
Sample, Number	Lbcation of Sample	Sample Date	Sample Depth (feat BGS)	(liuda)	Benzene mg/kg	Total BTEX mg/kg	GRO CB-C12 mg/kg	DRO >C12-C35 mg/kg	LPH (ce-ca5) (ce-ca5)	Chloride (mg/kg)
RAI					10	- 99			<u>i († 100 – 11</u>	250
SS-1	Bottom Center	12/30/02	28	1	ł	;	<10.0	<10.0	<10.0	1
28.2	East Wall	01/02/03	æ	0	ł	i	<10.0	146.0	146.0	١
5.82	East Wall	01/02/03	Ð	–	ł	i	<10.0	<10.0	<10.0	I
4-55	East Wall	01/02/03	60	Ċ -		i	<10.0	<10.0	<10.0	
5-85	North Wall	01/02/03	60	<u>.</u>	1	í	18.6	216.0	234.6	1
889	West Wall	01/02/03	~	0.0	1	ł	<10.0	199.0	199.0	1
2-55	West Walf	01/02/03	~	0.0	ł	I	<10.0	113.0	113.0	1
8-55	North Bottom	01/02/03	0	17.4	1	ļ	128.0	4,050.0	4,178.0	1
0.00	North Bottom	01/02/03	S	381.0	<0.025	8.864	1,530.0	12,800.0	14,330.0	I
SS-10	North Bottom	01/02/03	თ	6,6	I	ł	<100	1,740.0	1,740.0	1
S8-11	West Wall	01/02/03	16	0.0	ł	;	<10.0	<10.0	<10.0	I
SS-12	Bottom	01/02/03	17	0.4	1	ł	<100	800.0	900.0	I
SS-13	East Wall	01/02/03	16	0.0	ł	i	<10.0	<10.0	<10.0	I
SS-14	West Wall	01/02/03	10	0.0	ļ	i	<10.0	176.0	178.0	1
SS-15	West Wall	01/02/03	18	22.1	ł	i	52.3	264.0	316.3	!
SS-16	West Wall	01/02/03	27	3.8	1	i	<10.0	<10.0	<10.0	:
SS-17	Bottom	01/02/03	58	12.2		1	<10.0	<10.0	<10.0	1
SS-18	Bottom	01/02/03	59	<u>.</u> .	1	i	<10.0	<10.0	<10.0	ł
SS-19	South Wall	01/02/03	20	1.5	}	1	<10.0	<10.0	<10.0	!
SS-20	South Wall	01/02/03	26	6.9	1	ł	<10.0	<10.0	<10.0	;
55.23	East Wall	01/02/03	15	0.1	!	i	<10.0	<10.0	<10.0	1
55.22	East Wall	01/02/03	27	2	1	!	<10.0	49.3	49.3	1
SS-23	North Bottom	01/02/03	10	15.4	I	;	<100	3,970.0	3,970.0	3

Table 2:	Table 2: Summary of Headspace and Laboratory Analysis of Soil Samples Following Excavation
	Texaco Exploration and Production Inc., McKinley Lease
	NE/4, NE/4, Section 30, Township 18 South, Range 38 East
	Lea County, New Mexico

Page 2 of 2

,

Sample Number	Sample Location of Sample Number	Sample Date	Sample Depth (feet BGS)	(ude) CHA	Benzene mg/kg	Total BTEX mg/kg	GRO CB-C12 mg/kg	DRO >C12-C35 mg/kg	1PH (C8-C35) mg/kg	Chloride (mg/kg)
IVGO						20 20			100	250
1000	Maet Wall	02/07/03	101	1.2	1	!	<10.0	<10.0	<10.0	44.3
22.25	West Wall	02/07/03	5	0.3	ł	ļ	<10.0	<10.0	<10.0	324
25.26	West Wall	02/07/03	. ~	¢-,	I	ł	<10.0	<10.0	<10.0	<20.0
25.27	West Wall	02/07/03		1.5	l	ł	<10.0	<10.0	<10.0	<20.0
25.28	Bottom	02/02/03	50	1.3	ł	ł	<10.0	<10.0	<10.0	177
22.20	Bottom	02/02/03	18	1.4	I	ł	<10.0	<10.0	<10.0	<20.0
	Rattom	02/07/03	18	5.7	I	ł	<10.0	85.1	85.1	88. 6
20.24	Rotton	02/07/03	15	3.8	ł	1	<10.0	<10.0	<10.0	59.1
20.00	North Wall	E0/20/20	, ag	2.0	!	ł	<10.0	430.0	430.0	103
10.25	Rottom	02/07/03		18.3	-	1	<10.0	<10.0	<10.0	295
55.34 55.34	East Wall	02/07/03	æ	4.	i		<10.0	159.0	159.0	59.1
							6	007	0.07	0.64
SS-35	Narth Bottom	02/13/03	0 0		1	ļ	<10.0	<10.0	<10.0	0.07
88-36	North Side	02/13/03	G	0.1	I	ł	<10.0	<10.0	<10.0	88.6
SS-37	Northeast Side	02/13/03	G	0.1	1	1	<10.0	<10.0	<10.0	118
00 20	Lact Wall	03/31/03	α	0 1	ł	i	<10.0	<10.0	<10.0	ł
2720	E281 W28	00/10/00	•	-			21217			

All analyses performed by Environmental Lab of Texas, Inc., Midland, Texas Depth in feet below ground surface

1. BGS: 2. PID: Notes:

Photoionization detector

Parts per million 3. ppm:

Gasoline-range organics 4 GRO

Diesel-range organics 5. DRO: 6. TPH:

Total petroleum hydrocarbons (Sum of GRO + DRO)

Milligrams per kilogram 7. mg/kg:

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No data available Below method detection limit v v

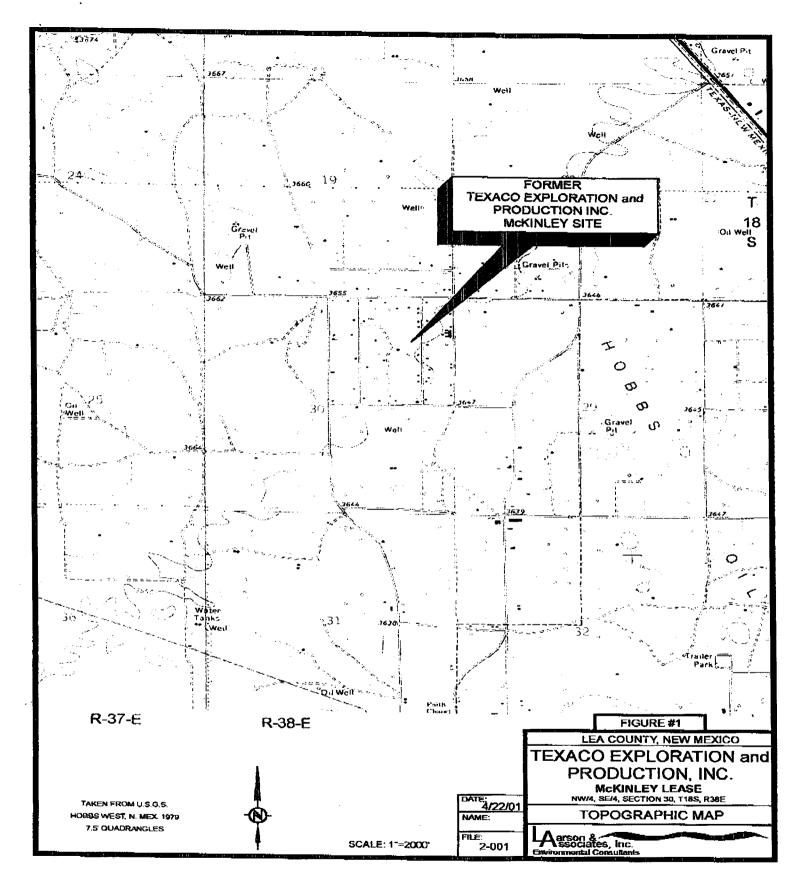
10. RRAL: NMOCD Recommended Remediation Action Level

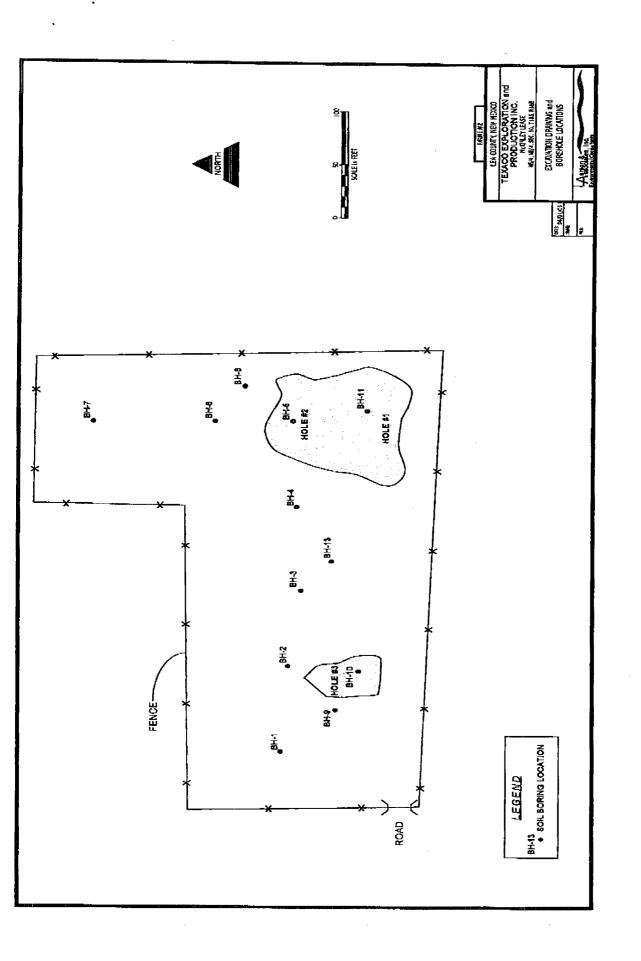
`

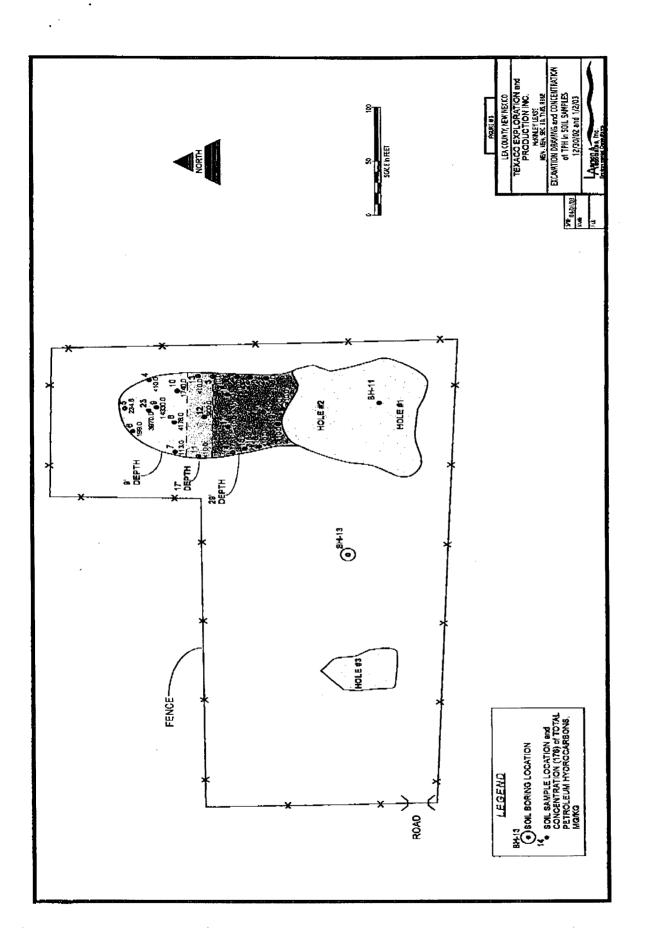
Χ.

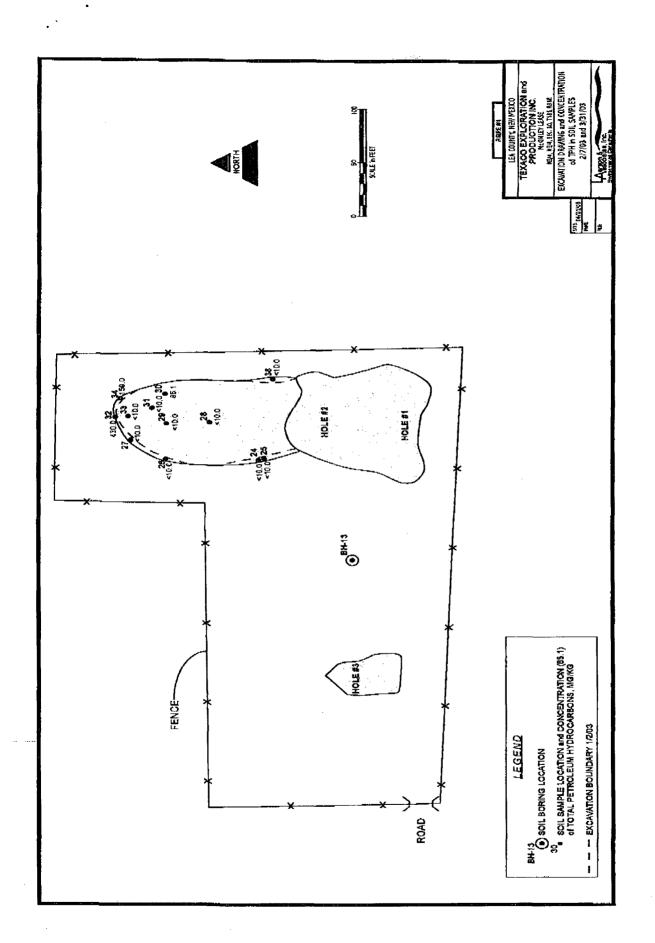
FIGURES

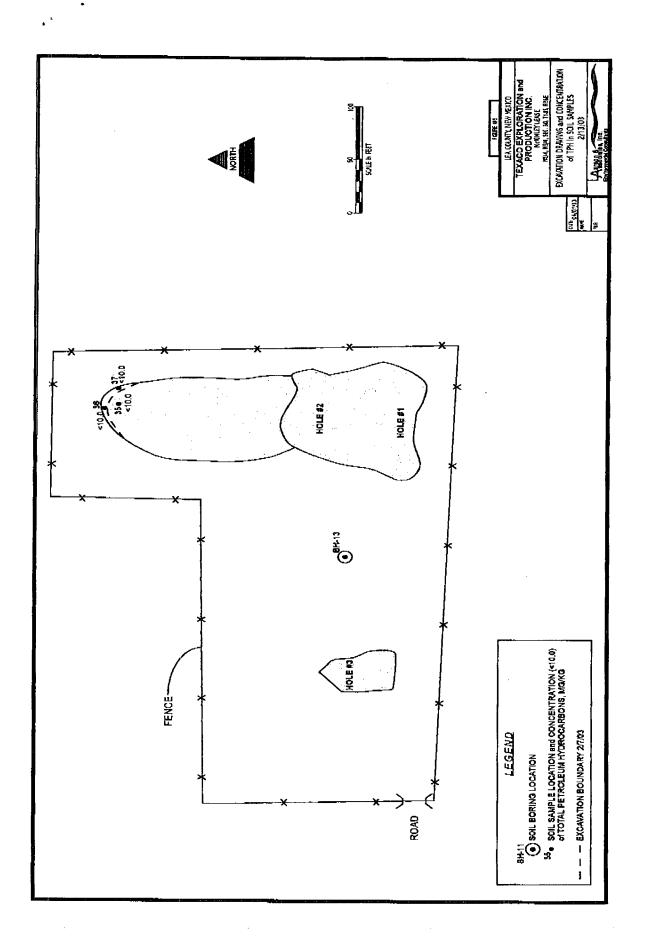
Ø 012/016











ENVIRONMENTAL LAB OF TEXAS SAMPLE WORK LIST

LARSON AND ASSOCIATES, INC. P.O. BOX 50685 MIDLAND, TX 79710 915-687-0456 Order#:G0305714Project:2-0100Project Name:Texaco/ McKinleyLocation:None Given

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas, unless otherwise noted.

]	Date / Tim	ne E	Date / Time		
<u>Lab ID:</u>	Sample :	Matrix:		Collected	L_	Received	<u>Container</u>	Preservative
0305714-01	SS-35 (9.5')	SOIL		2/13/03		2/13/03	4 oz glass	Ice
				11:35		16:55		
<u>La</u>	<u>ub Testing:</u>	Rejected: 1	No		Temp:	4.5 C		
	8015M							
	Chloride							
0305714-02	SS-36 (9')	SOIL		2/13/03		2/13/03	4 oz glass	Ice
0303/14-02				11:40		16:55	•	
	ub Testing:	Rejected: 1	No		Temp:	4.5 C		
	8015M							
	Chloride							
0305714-03	SS-37 (9')	SOIL		2/13/03		2/13/03	4 oz glass	Ice
0303/14-03	.,			11:45		16:55	-	
	ub Testing:	Rejected:	No		Temp:	4.5 C		
	8015M							
	Chloride							

CINDY CRAIN LARSON AND ASSO P.O. BOX 50685 MIDLAND, TX 797				Order#: Project: Project Name: Location:	2-01 Texa	05714 00 aco/ McKinley e Given	
	0305714-01 88-35 (9.5')						
				8015M			
	Method	Date	Date	Sample	Dilutio		Madhad
	Blank	<u>Prepared</u>	<u>Analyzed</u> 2/14/03	<u>Amount</u> 1	Factor 1	<u>Analyst</u> RKT	Method 8015M
		Parameter GRO, C6-C12 DRO, >C12-C35 TOTAL, C6-C35		Result mg/kg <10.0 <10.0 <10.0		RL 10.0 10.0 10.0	
		Surrogat	es	% Recovered	QC Lii	nits (%)	
		1-Chloroocta		86%	70	130	
		1-Chloroocta	decane	84%	70	130	
	0305714-02 SS-36 (9')			001514			
	Method	Date	Date	<i>8015M</i> Sample	Dilutio	n	
	Blank	Prepared	Analyzed	Amount	Factor		Method
			2/14/03	1	1	RKT	8015M
		Parameter		Result mg/kg		RL	
		GRO, C6-C12		<10.0		10.0	
		DRO, >C12-C35		<10.0		10.0	
		TOTAL, C6-C35		<10.0	1	10.0	

Surrogates	% Recovered	QC Li	mits (%)
1-Chiorooctane	97%	70	130
1-Chlorooctadecane	95%	70	130

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

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CINDY CRAIN	Order#:	G0305714
LARSON AND ASSOCIATES, INC.	Project:	2-0100
P.O. BOX 50685	Project Name:	Texaco/ McKinley
MIDLAND, TX 79710	Location:	None Given

Lab ID: 0305714-03 Sample ID:

SS-37 (9')

			8015M			
Method <u>Blank</u>	Date <u>Prepared</u>	Date <u>Analyzed</u> 2/14/03	Sample <u>Amount</u> 1	Dilution <u>Factor</u> 1	<u>Analyst</u> RKT	<u>Methođ</u> 8015M
	Parameter		Resu mg/k		RL	
	GRO, C6-C12		<10.0)	10.0	
	DRO, >C12-C35		<10.0)	10.0	
	TOTAL, C6-C35		<10.0)	10.0	

Surrogates	% Recovered	QC Li	mits (%)
1-Chlorooctane	96%	70	130
1-Chlorooctadecane	94%	70	130

Approval: Kaland K, June 2-19-03 Date

Raland K. Tuttle, Lab Director, QA Officer Celey D. Keene, Org. Tech. Director Jeanne McMurrey, Inorg. Tech. Director Sandra Biezugbe, Lab Tech. Sara Molina, Lab Tech.

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

Page 2 of 2

CINDY CRAIN	l		Order#	ł:	G0305714			
LARSON AND	ASSOCIATES, INC.		Project	:	2-0100			
P.O. BOX 5068	5		Project	Name:	Texaco/ Mck	linley		
MIDLAND, TY	K 79710		Locatio	on:	None Given			
Lab ID:	0305714-01							
Sample ID:	SS-35 (9.5')							
Test Paran	neters			Dilutio	n		Date	
Parameter		<u>Result</u>	Units	<u>Facto</u>	<u>r <u>RL</u></u>	Method	Analyzed	<u>Analyst</u>
Chloride		73.8	mg/kg	1	20.0	9253	2/14/03	СК
Lab ID:	0305714-02			·	<u></u>			
Sample ID:	SS-36 (9')							
Test Paran	neters			Dilutio	n		Date	
<u>Parameter</u>		<u>Result</u>	Units	<u>Facto</u>	<u>r RL</u>	Method	Analyzed	<u>Analyst</u>
Chloride		88.6	mg/kg	1	20.0	9253	2/14/03	СК
Lab ID:	0305714-03							
Sample ID:	SS-37 (9')							
Test Parar	neters			Dilutio	n		Date	
Parameter		Result	Units	<u>Facto</u>	<u>r RL</u>	Method	Analyzed	<u>Analys</u> t
Chloride		118	mg/kg	1	20.0	9253	2/14/03	СК

Approval: Ralan & K Jul 2-19-03 Date

Raland K. Tuttle, Lab Director, QA Officer Celey D. Keene, Org. Tech. Director Jeanne McMurrey, Inorg. Tech. Director Sandra Biezugbe, Lab Tech. Sara Molina, Lab Tech.

RL = Reporting Limit N/A = Not Applicable

ENVIRONMENTAL LAB OF TEXAS QUALITY CONTROL REPORT

8015M

Order#: G0305714

BLANK	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg		0004668-02	·		<10.0		
MS	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg		0305714-02	0	1070.05	792	74.%	
MSD	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg		0305714-02	792	1070.05	813	76.%	2.6%
SRM	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg		0004668-05		1000	800	80.%	

ENVIRONMENTAL LAB OF TEXAS QUALITY CONTROL REPORT

Test Parameters

Order#: G0305714

BLANK	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg		0004640-01			<20.0		
MS	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg		0305697-01	3540	5000	8510	99.4%	
MSD	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg	······	0305697-01	3540	5000	8600	101.2%	1.1%
SRM	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg		0004640-04		5000	5230	104.6%	

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ANALYTICAL REPORT

Prepared for:

CINDY CRAIN LARSON AND ASSOCIATES, INC. P.O. BOX 50685 MIDLAND, TX 79710

Project: Texaco/ McKinley

PO#:

Order#: G0306129

Report Date: 04/02/2003

<u>Certificates</u> US EPA Laboratory Code TX00158

ENVIRONMENTAL LAB OF TEXAS SAMPLE WORK LIST

LARSON AND ASSOCIATES, INC. P.O. BOX 50685 MIDLAND, TX 79710 915-687-0456 Order#:G0306129Project:0-0100Project Name:Texaco/ McKinleyLocation:None Given

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas, unless otherwise noted.

Lab ID:	Sample :	Matrix:	Date / Time <u>Collected</u>	Date / Time <u>Received</u>	<u>Container</u>	Preservative
0306129-01	SS-38 (8.5')	SOIL	3/31/03 10:55	3/31/03 16:50	4 oz glass	Ice
	<u>b Testing:</u> 8015M	Rejected: No	Tem	p: 6C		

CINDY CRAIN	Order#:	G0306129
LARSON AND ASSOCIATES, INC.	Project:	0-0100
P.O. BOX 50685	Project Name:	Texaco/ McKinley
MIDLAND, TX 79710	Location:	None Given

Lab ID: Sample ID:

0306129-01 SS-38 (8.5')

Method BlankDate PreparedDate Analyzed 4/1/03Sample AmountDilution FactorMethod MethodParameterResult mg/kgRLGRO, C6-C12<10.010.0DRO, >C12-C35<10.010.0			8015M			
GRO, C6-C12 <10.0	 	Analyzed	Amount	Factor		
DRO, >C12-C35 <10.0 10.0	Parameter				RL	
	GRO, C6-C12		<10.0)	10.0	
TOTAL $C_{6}C_{35}$ <10.0 10.0	DRO, >C12-C35		<10.0)	10.0	
	TOTAL, C6-C35		<10.0)	10.0	

Surrogates	% Recovered	QC Li	mits (%)
1-Chlorooctane	102%	70	130
1-Chlorooctadecane	97%	70	130

Kalanakhu 02-03 Approval: Date

Raland K. Tuttle, Lab Director, QA Officer Celey D. Keene, Org. Tech. Director Jeanne McMurrey, Inorg. Tech. Director Sandra Biezugbe, Lab Tech. Sara Molina, Lab Tech.

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

Page 1 of 1

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

8015M

Order#: G0306129

BLANK	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg		0005102-02			<10.0		
MS	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg		0306116-01	0	952	898	94.3%	
MSD	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg		0306116-01	0	952	923	97.%	2.7%
SRM	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg		0005102-05		1000	907	90.7%	

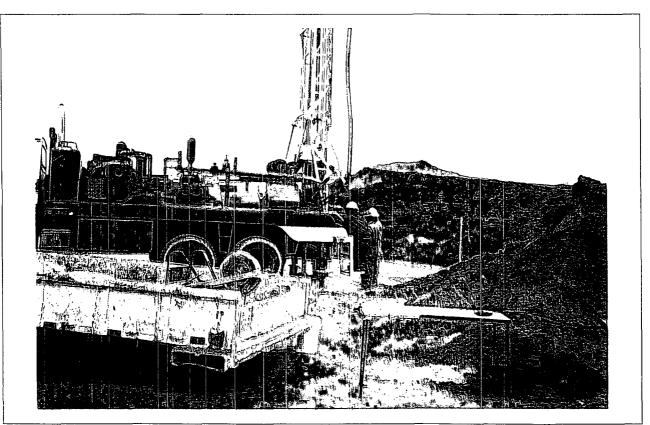
ENVIRONMENTAL LAB OF TEXAS I, LTD. 12600 West I-20 East, Odessa, TX 79765 Ph: 915-563-1800

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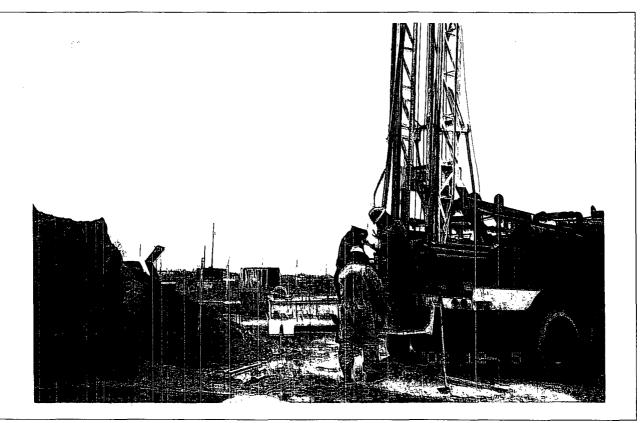
APPENDIX D

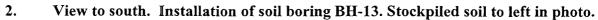
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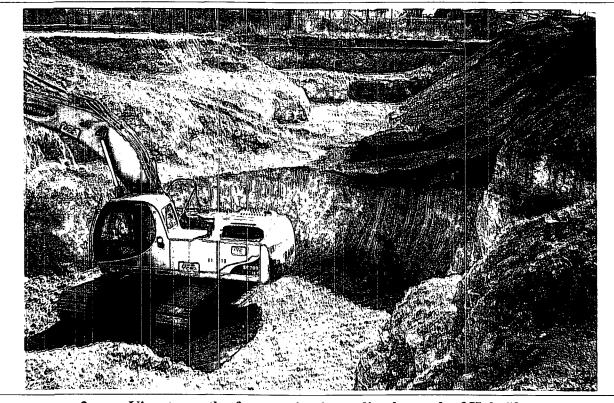
PHOTOGRAPHS



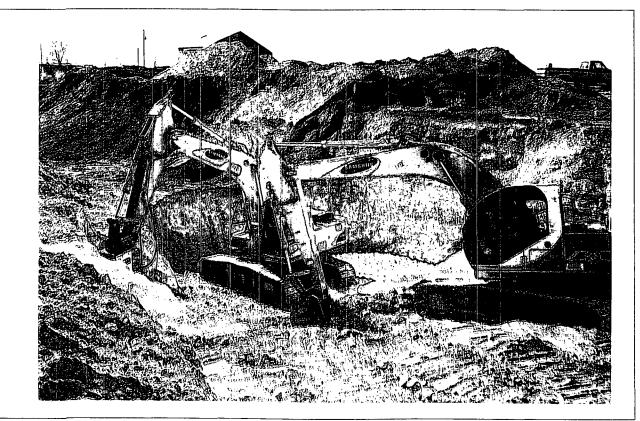
1. View to north. Installation of soil boring BH-13. Stockpiled soil to right in photo.



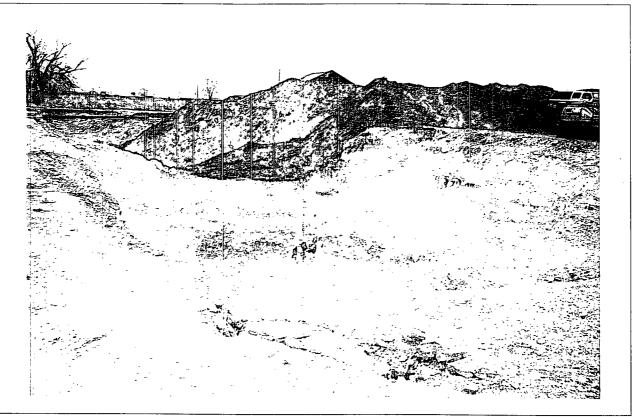




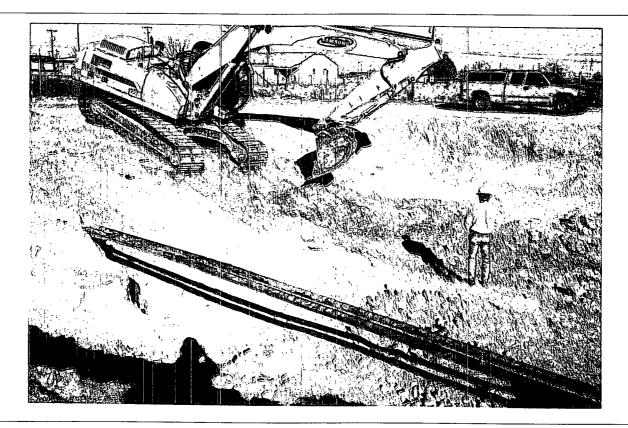
3. View to south of excavation immediately north of Hole #2.



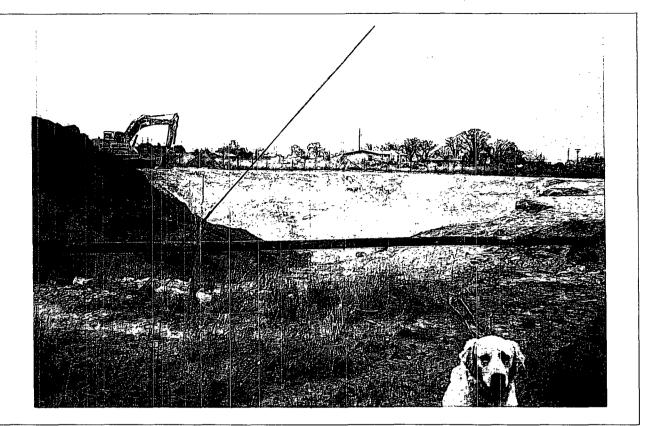
4. View to southwest of excavation immediately north of Hole #2.



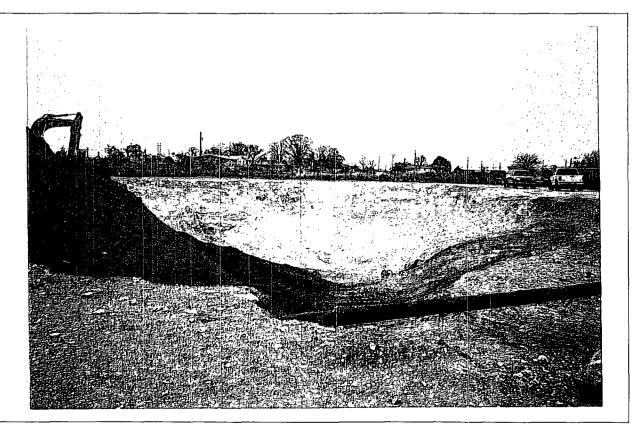
5. View to southwest of excavation immediately north of Hole #2.



6. View to northeast of north end of excavation.



7. View to north of Hole #1 and Hole #2 extended to the north.



8. View to north of Hole #1 and Hole #2 extended to the north.