

1R - 257

REPORTS

DATE:

2000

RECEIVED

FEB 04 2000

Environmental Bureau
Oil Conservation Division

ECD Environmental, Inc.

TURNER/RODRIQUEZ WATER DATA
COLLECTED BY ECD ENVIRONMENTAL AND EDDIE SEAY CONSULTING

<u>Sample ID</u>	<u>Date</u>	<u>Results</u>	<u>Analysis</u>	<u>Comments</u>
Background	10/28/98	ND	418.1	
		44 ppm Cl	300.0	
		0.4 ppm Br	300.0	
		78 ppm Sulfate	300.0	
Turner 1 st Purge		ND	8021	Pumps pulled and deconed pump and pipe used for development. Samples taken teflon bailers.
Turner Well		1.8 ppm Toluene	8021	
		19 ppm TPH	418.1	
		94 ppm Cl	300.0	
		0.9 ppm Br	300.0	
		88 ppm Sulfate	300.0	
Rodriquez 1 st Purge		ND	8021	
Rodriquez Well		1.6 ppm Toluene	8021	
		2.6 ppm TPH	418.1	
		270 ppm Cl	300.0	
		2.4 ppm Br	300.0	
		130 ppm Sulfate	300.0	
Turner Well	10/15/99	12.4 ppm TPH	418.1	Samples taken from spigot.
		108 ppm Cl	325.3	
		89 ppm Sulfate	375.4	
Rodriquez Well		1.94 ppm TPH	418.1	Split with NMOCD.
		279 ppm Cl	325.3	
		112 ppm Sulfate	375.4	

RECEIVED

FFR n 4 2000

Environmental Bureau
Oil Conservation Division

ECD Environmental, Inc.

<u>Sample ID</u>	<u>Date</u>	<u>Results</u>	<u>Analysis</u>	<u>Comments</u>
Trench E 3'	6/6/99	3,600 ppm TPH	418.1	
		ND	8021	
		2.4 ppm Cl	300.0	
Trench F 4'		200 ppm TPH	418.1	
		ND	8021	
		6.1 ppm Cl	300.0	
Trench G 4'		810 ppm TPH	418.1	
		ND	8021	
		6.3 ppm Cl	300.0	
Trench H 4'	6/30/99	0.24 ppm Toluene	8021	Used a backhoe
		0.60 ppm Total xylene	8021	to collect samples
		20,000 ppm TPH	418.1	Backhoe unable
		22 ppm Cl	300.0	to cut caleeche.
Trench I 3.5'		3,200 ppm TPH	418.1	Sample at
		ND	8021	caleeche.
		23 ppm Cl	300.0	
Trench J 3'		210 ppm TPH	418.1	
		ND	8021	
		20 ppm Cl	300.0	
Trench K 3'		240 ppm TPH	418.1	
		ND	8021	
		8.3 ppm Cl	300.0	
Trench L 32"		3,700 ppm TPH	418.1	
		ND	8021	
		1.8 ppm Cl	300.0	

RECEIVED

FEB 04 2000

ECD Environmental, Inc.

Environmental Bureau
Oil Conservation Division

**TURNER AND RODRIQUEZ SOIL SAMPLES
COLLECTED BY ECD ENVIRONMENTAL AND EDDIE SEAY CONSULTING**

<u>Sample ID</u>	<u>Date</u>	<u>Results</u>	<u>Analysis</u>	<u>Comments</u>
Background 6'	1/27/99	ND	8021	Samples taken w/ backhoe and deconed w/ steam. Samples taken from side-walls. BTEX samples taken w/ MeOH kits.
#2-12"		ND	418.1	
		3.3 ppm Cl	300.0	
		7.8 ppm Sulfate	300.0	
		ND	8021	
		38,000 ppm TPH	418.1	
#2-4'		42 ppm Gasoline Range	8015 GRO	
		23,000 ppm Diesel Range	8015 DRO	
		14,000 ppm Motor Range	8015 DRO	
		ND	8021 BTEX	
		910 ppm TPH	418.1	
#3-14"		3,100 ppm TPH	418.1	
#3-32"		ND	8021	
#4-16"		7,000 ppm TPH	418.1	
		30,000 ppm TPH	418.1	
		2.9 ppm Toluene	8021	
		26 ppm Ethylbenzene	8021	
		31 ppm Total xylene	8021	
#4-6.5'		1,900 ppm Gasoline Ran	8015GRO	
		16,000 ppm Diesel Range	8015 DRO	
		6,000 ppm Motor Oil Ran	8015 DRO	
		30,000 ppm TPH	418.1	
		3.7 ppm Toluene	8021	
#4-13.5'		31 ppm Ethylbenzene	8021	
		46 ppm Total xylene	8021	
		28,000 ppm TPH	418.1	
		9,000 ppm TPH	418.1	
		2 ppm Toluene	8021	
Trench A 15.5'	6/9/99	22 ppm Ethylbenzene	8021	
		41 ppm Total xylene	8021	
		230 ppm Cl	300.0	
		44,000 ppm TPH	418.1	
		1.7 ppm Toluene	8021	
Trench B 5.5'		26 ppm Ethylbenzene	8021	
		1.7 ppm Total xylene	8021	
		130 ppm Cl		
		4,900 ppm TPH	418.1	
		ND	8021	
Trench C 10.5'		140 Cl	300.0	
		1,700 ppm TPH	418.1	
		ND	8021	
		17 ppm Cl	300.0	
Trench D 9'				

RECEIVED
FFR n 4 2000
Environmental Bureau
Oil Conservation Division

BOREHOLE DATA

BOREHOLE NUMBER	GROUND ELEVATION FEET AMSL
BH-1	3593.1
BH-2	3591.9
BH-3	3594.7
BH-4	3594.7
BH-5	3594.3
BH-6	3595.1
BH-7	3594.7
BH-8	3594.8
BH-9	3594.0
BH-10	3595.3
BH-11	3595.6



J.C. TURNER LAND

BACKGROUND

BH-2

BH-1

BH-3

BH-4

BH-5

BH-9

BH-6

BH-7

BH-8

BH-11

BH-10

330.5'

BPL (ARCO)

FENCE

FENCE

SCALE
(FEET)



● Soil sample ECO 1/27/99

LEGEND

- #1 HAND AUGER BOREHOLE LOCATION (4/10/97)
- BH-1 ROTARY DRILLED BOREHOLE LOCATION (4/28-29/99)
- X- FENCE
- /- PIPELINE

FIGURE NO. 2

LEA COUNTY, NEW MEXICO

TEXACO EXPLORATION &
PRODUCTION, INC.

SITE DRAWING

HIGHLANDER ENVIRONMENTAL
MIDLAND, TEXAS

DWG
5/17/99
JCA
C:\DWG\1181
SITE





JC Turner Residence 12:15
Met Donna Turner at Hox, 10-15-53

Ground water sample taken from outside
faucet on Garage Side of House
Faucet Run for 5 minutes Prior to

Sampling

Texaco Turner Name
East Hobbs Pool Area Location

991015 ~~25~~ Sample ID

Sampler Leage Price & Jack Ford
Eddie Seay witnesses
Paperwork By Martine Kiching

2 pictures one of well and one of
Faucet.

Eddie took Gen Chem & TPH.
End 12:45



ARDINAL LABORATORIES

PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

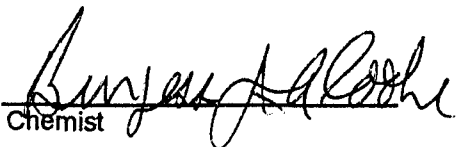
ANALYTICAL RESULTS FOR
EDDIE SEAY CONSULTING
ATTN: EDDIE SEAY
601 W. ILLINOIS
HOBBS, NM 88242
FAX TO:

Receiving Date: 10/15/99
Reporting Date: 10/19/99
Project Owner: TURNER-RODRIQUEZ
Project Name: TURNER-RODRIQUEZ
Project Location: EAST HOBBS

Analysis Date: 10/18/99
Sampling Date: 10/15/99
Sample Type: GROUNDWATER
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: BC

LAB NUMBER	SAMPLE ID	TPH (mg/L)
H4399-1	TR#1 TURNER WELL	12.4
H4399-2	TR #2 RODRIQUEZ WELL	1.94
Quality Control		41.3
True Value QC		40.0
% Recovery		103
Relative Percent Difference		0.6

METHOD: EPA 600/4-79-020 418.1


Chemist

10/19/99
Date

H4399B.XLS

PLEASE NOTE: **Liability and Damages.** Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise.

Wayne

Here is a copy of
the Turner - Rodriguez
water samples I
split with you on
10/15/99

Eddie



ARDINAL LABORATORIES

PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
EDDIE SEAY CONSULTING
ATTN: EDDIE SEAY
601 W. ILLINOIS
HOBBS, NM 88242
FAX TO:

Receiving Date: 10/15/99
Reporting Date: 10/18/99
Project Owner: TURNER-RODRIGUEZ
Project Name: TURNER-RODRIGUEZ
Project Location: EAST HOBBS

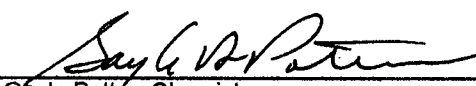
Sampling Date: 10/15/99
Sample Type: GROUNDWATER
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: AH

LAB NUMBER SAMPLE ID	P-Alkalinity (mg/L)	T-Alkalinity (mg/L)	Hardness (mg/L)	Chloride (mg/L)	Sulfates (mg/L)	pH (s.u.)
ANALYSIS DATE	10/15/99	10/15/99	10/15/99	10/15/99	10/15/99	10/15/99
H4399-1 TR #1 TURNER WELL	0	140	308	108	89	7.61
H4399-2 TR #2 RODRIQUEZ WELL	0	116	524	279	112	7.52
Quality Control	NR	NR	NR	955	47.47	6.98
True Value QC	NR	NR	NR	1000	50.00	7.00
% Accuracy	NR	NR	NR	95.5	94.9	100
Relative Percent Difference	NR	NR	NR	2.9	5.2	1.4

METHODS: EPA 600/4-79-020,	-	-	130.2	325.3	375.4	150.1
Standard Method	2320 B	2320 B	-	-	-	-

LAB NUMBER SAMPLE ID	Hydroxides (mg/L)	Carbonates (mg/L)	Bicarbonates (mg/L)	Conductivity (umhos/cm)	TDS (mg/L)
ANALYSIS DATE	10/15/99	10/15/99	10/15/99	10/15/99	10/15/99
H4399-1 TR #1 TURNER WELL	0	0	171	789	515
H4399-2 TR #2 RODRIQUEZ WELL	0	0	116	1366	1191
Quality Control	NR	124	221	1392	NR
True Value QC	NR	112	259	1413	NR
% Accuracy	NR	111	85.4	98.5	NR
Relative Percent Difference	NR	0	0	0.2	NR

METHODS: EPA 600/4-79-020,	-	-	-	120.1	160.1
Standard Method	2320 B	2320 B	2320 B	-	-


Gayle Potter, Chemist

10/18/99
Date

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise.



CARDINAL LABORATORIES, INC.

2111 Beechwood, Abilene, TX 79603 101 East Marland, Hobbs, NM 88240
(915) 673-7001 Fax (915) 673-7020 (505) 393-2326 Fax (505) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page ____ of ____

Company Name: <u>Edible Seed Consulting</u>		BILL TO		PO #:		ANALYSIS REQUEST																		
Project Manager: <u>JJ</u>		Company:																						
Address: <u>601 W Illinois</u>		Attn: <u>JJ</u>																						
City: <u>Hobbs</u>		Address:																						
State: <u>NM</u>		City:																						
Zip: <u>88240</u>		State:																						
Phone #: <u>2-2234</u>		City:																						
Fax #:		State:																						
Project #: <u>TR</u>		Project Owner: <u>Turner-Rodriguez</u>		Zip:																				
Project Name: <u>Turner-Rodriguez</u>		Phone #:																						
Project Location: <u>East Hobbs</u>		Fax #:																						
FOR LAB USE ONLY																								
LAB I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						PRES.	SAMPLING	DATE	TIME											
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:					ACID:	ICE / COOL	OTHER:								
HL4984-1	TR #1	✓	2	✓							10/15	12:25	✓	✓										
	Turner well																							
-2	TR #2	✓	2	✓							10/15	1:05	✓	✓										
	Rodriguez well																							
PLEASE NOTE: Liability and Damages, Cardinal's liability and client's acceptance remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analysis. A claim including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profit incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.		Terms and Conditions: Interest will be charged on all accounts more than 30 days past due at the rate of 24% per annum from the original date of invoice, and all costs of collections, including attorney's fees.																						
Sampler Relinquished:		Date: <u>10/15</u>	Received By:																					
Relinquished By: <u>Edible Seed</u>		Time: <u>1:35</u>	Received By: (Lab Staff)																					
Delivered By: (Circle One)		Date:	Sample Condition	CHECKED BY: (Initials)																				
Sampler - UPS - Bus - Other:			✓ Yes ☒ No ☐																					
			✓ Yes ☒ No ☐																					
			✓ Yes ☒ No ☐																					
REMARKS:		TR-1 Turner																						
		TR-2 Rodriguez																						



RECEIVED

MAY 03 2000

Environmental Bureau
Oil Conservation Division



RECEIVED

MAY 03 2000

Environmental Bureau
Oil Conservation Division



RECEIVED

MAY 03 2000

Environmental Bureau
Oil Conservation Division



RECEIVED

MAY 03 2000

Environmental Bureau
Oil Conservation Division



RECEIVED

MAY 03 2000

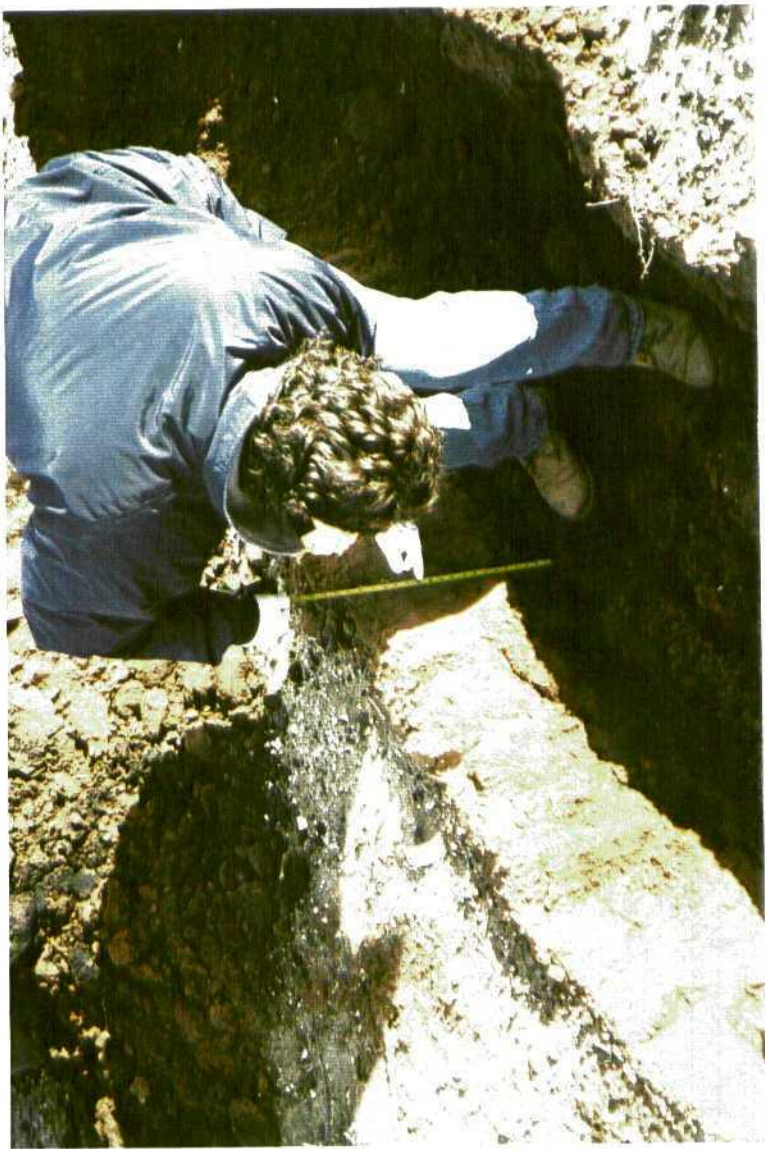
Environmental Bureau
Oil Conservation Division



RECEIVED

MAY 03 2000

Environmental Bureau
Oil Conservation Division



RECEIVED
MAY 03 2000
Environmental Bureau
Oil Conservation Division



RECEIVED

MAY 03 2000

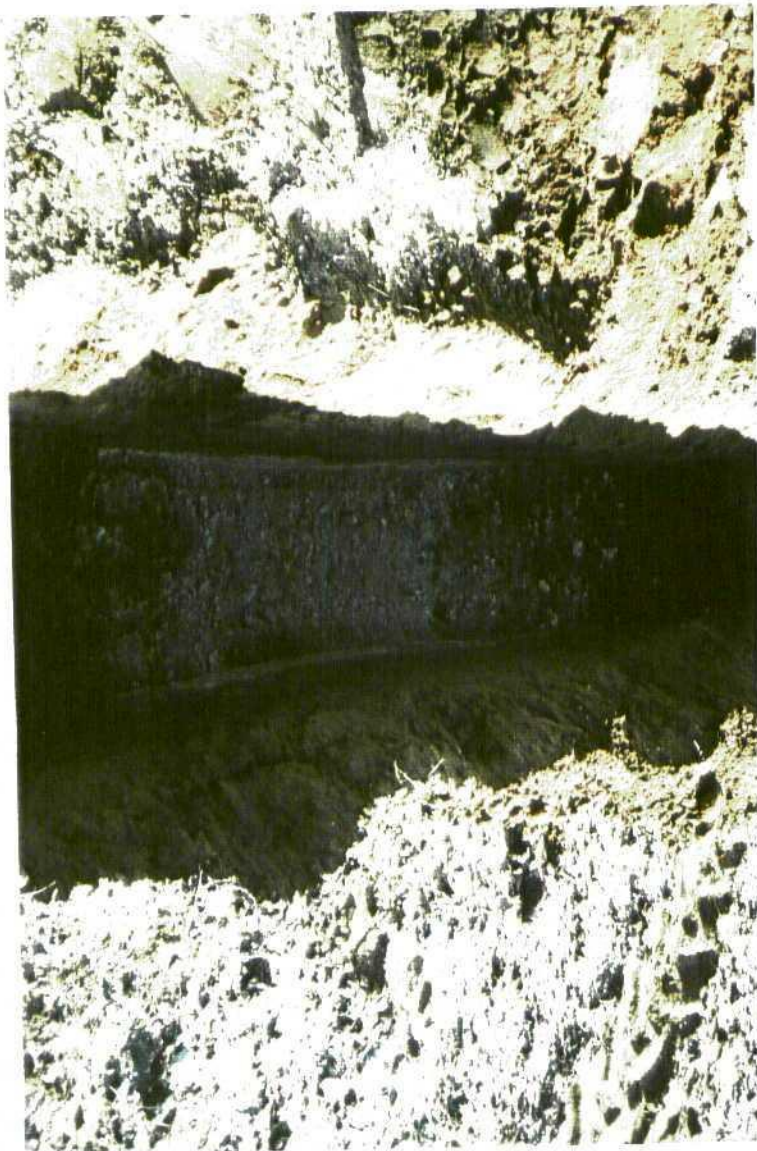
Environmental Bureau
Oil Conservation Division



RECEIVED

MAY 03 2000

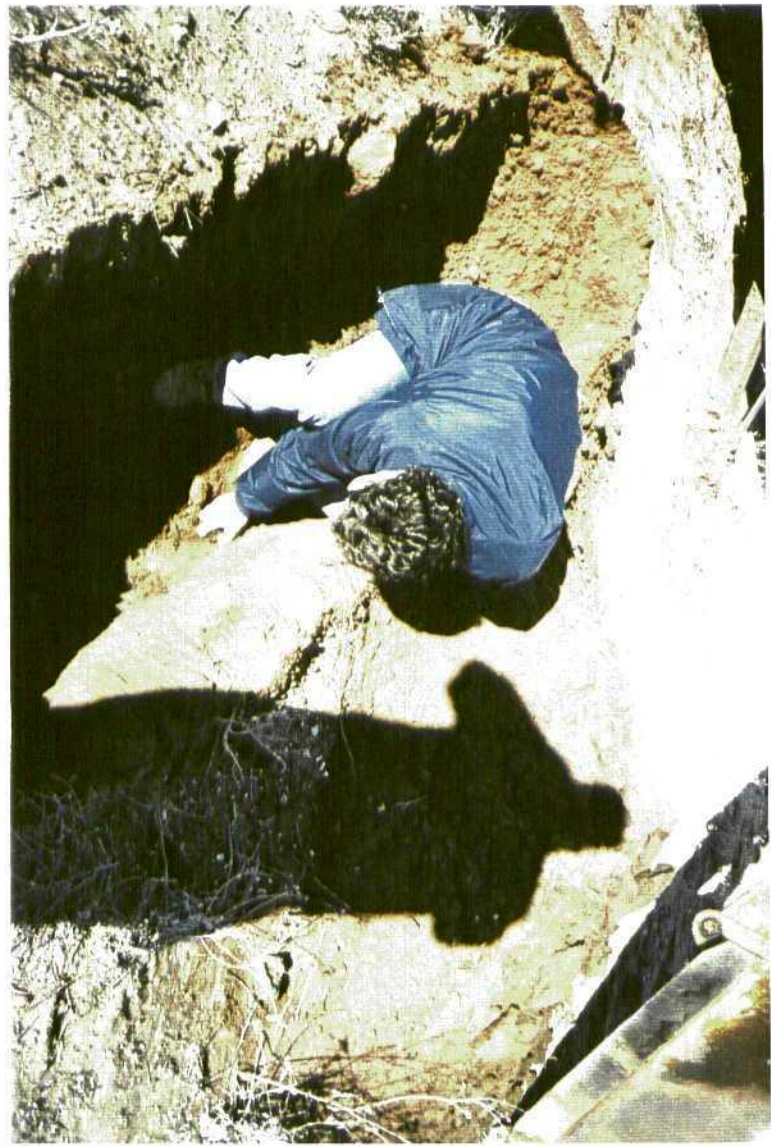
Environmental Bureau
Oil Conservation Division



RECEIVED

MAY 03 2000

Environmental Bureau
Oil Conservation Division



Turner - Rodriguez

1/27/99

RECEIVED

MAY 03 2000

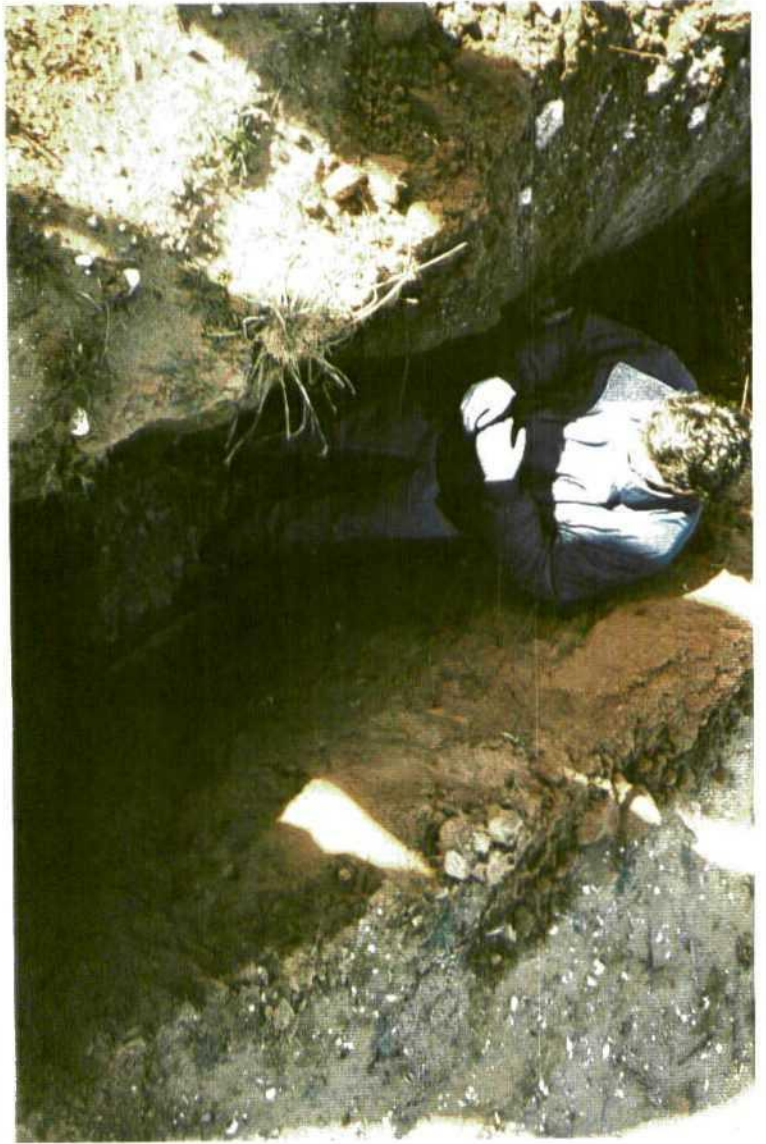
Environmental Bureau
Oil Conservation Division



RECEIVED

MAY 03 2000

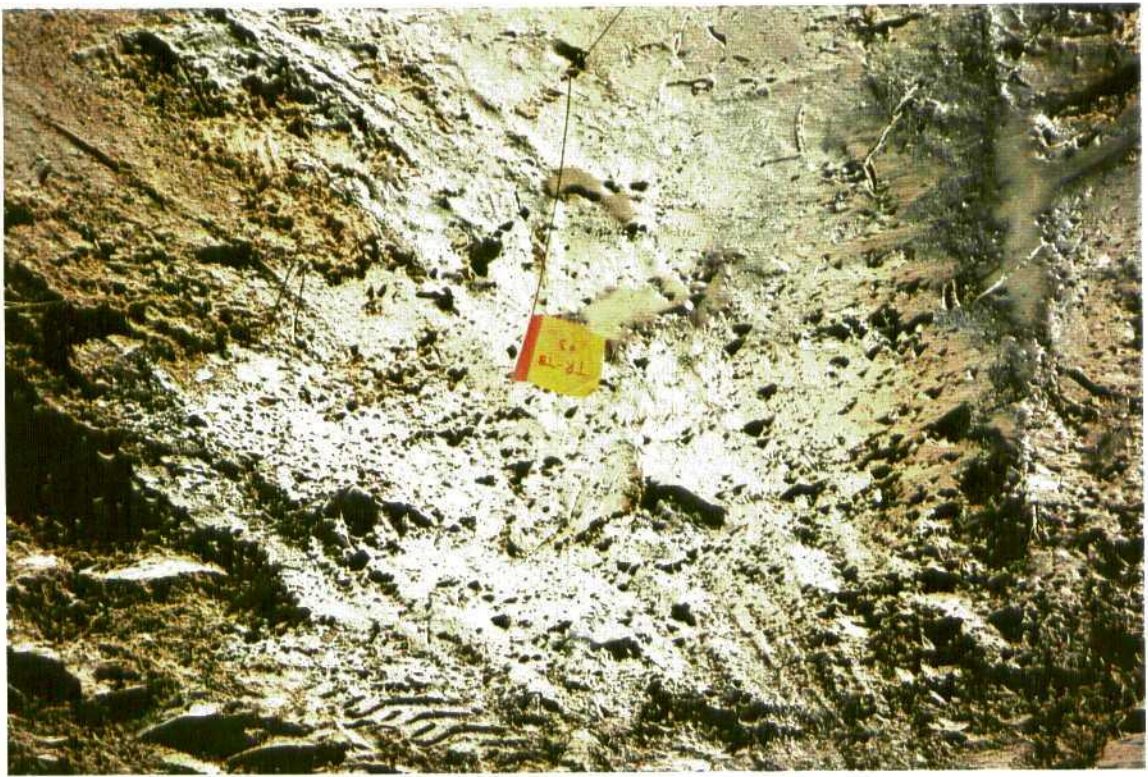
Environmental Bureau
Oil Conservation Division



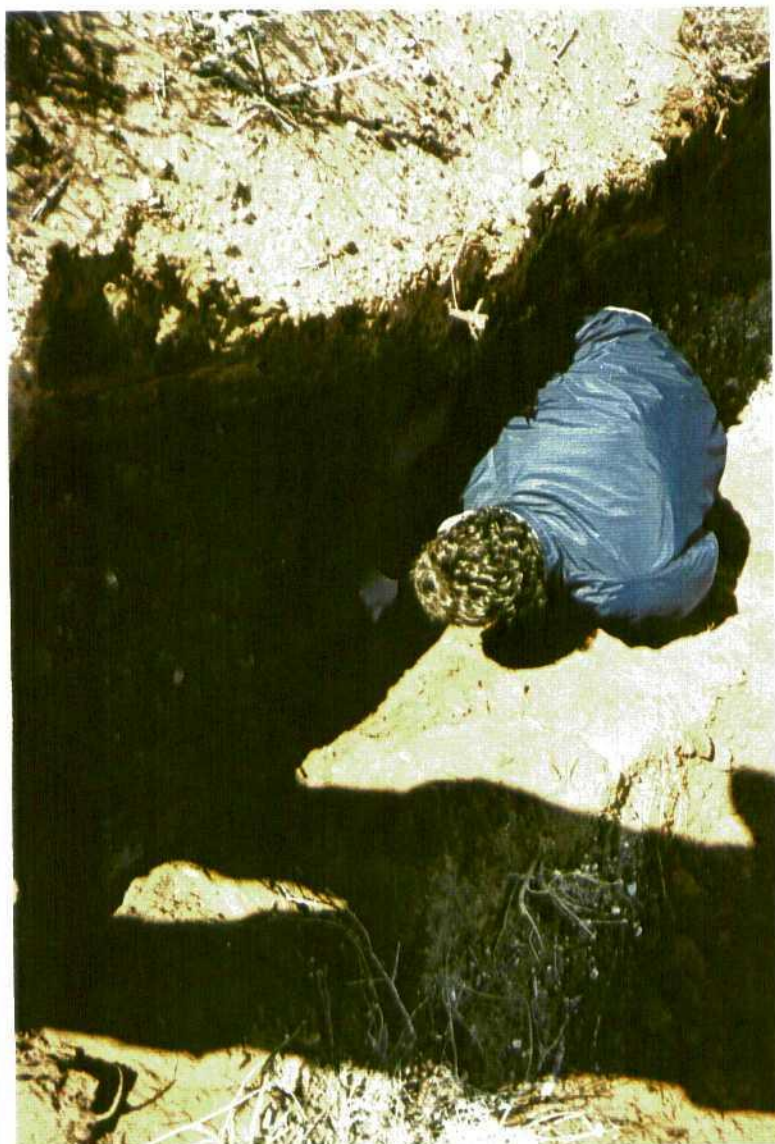
RECEIVED
MAY 03 2000
Environmental Bureau
Oil Conservation Division



RECEIVED
MAY 03 2000
Environmental Bureau
Oil Conservation Division



RECEIVED
MAY 03 2000
Environmental Bureau
Oil Conservation Division



RECEIVED
JUN 03 2000
Environmental Bureau
Oil Conservation Division

**Hall Environmental
Analysis Laboratory**

Client: ECD Environmental
Project: Turner Rodriguez
Project Manager: Greg Bybee
Project Number: -

Date Collected: 6/30/99
Date Received: 7/1/99
Sample Matrix: Soil
Extraction Date: 7/6/99

EPA Method - 418.1

HEAL ID	Client ID	Dilution	TPH mg/kg	Analysis Date
9907004-1	Trench H 4'	40	20 000	7/7/99
9907004-2	Trench I 3.5'	20	3,200	7/7/99
9907004-3	Trench J 3'	1	210	7/7/99
9907004-4	Trench K 3'	1	240	7/7/99
9907004-5	Trench L 32"	40	3,700	7/7/99
Extraction Blank	-	1	ND	7/7/99

MRL	20
-----	----

QA/QC

<u>Sample ID:</u>	<u>Sample Amount</u>	<u>Spike</u>	<u>Recovery</u>	<u>% Recovery</u>
9907023-5 MS	<20	102	108	105

<u>Sample ID:</u>	<u>Sample Amount</u>	<u>Duplicate</u>	<u>RPD</u>
9907023-5 MD	<20	<20	NA



Hall Environmental Analysis Laboratory

Client: ECD Environmental
Project: Turner Rodriguez
Project Manager: Greg Bybee
Project Number:

Date Collected: 6/30/99
Date Received: 7/1/99
Sample Matrix: Soil
Date Extracted: 6/30/99

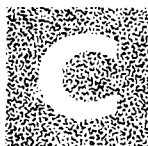
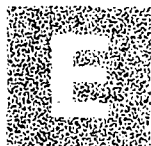
EPA Method - 8021

Units: PPM mg/kg - Methanol Field Extraction - Dry Weight Basis

HEAL LAB ID	Sample ID	MTBE	Benzene	Toluene	Ethylbenzene	Total Xylenes	BFB % Recovery	Dilution Factor	Date Analyzed
9907004-1	Trench H 4'	ND	ND	0.24	ND	0.60	***	1	7/1/99
9907004-2	Trench I 3.5'	ND	ND	ND	ND	ND	102	1	7/1/99
9907004-3	Trench J 3'	ND	ND	ND	ND	ND	97	1	7/1/99
9907004-4	Trench K 3'	ND	ND	ND	ND	ND	95	1	7/1/99
9907004-5	Trench L 32"	ND	ND	ND	ND	ND	94	1	7/1/99
9907004-6	MeOH Blank	ND	ND	ND	ND	ND	96	1	7/1/99

MRL

0.1	0.05	0.05	0.05	0.05	0.05
-----	------	------	------	------	------



TURNER/RODRIGUEZ
Split Sampling 4/26,27,28/99

The following are the results from the split sampling that took place on the old pit area between the Turner and Rodriguez properties. The sampling was conducted by Highlander Environmental Corporation, whose method was outlined in the work plan of September 28, 1998.

Bore holes were drilled by Scarbouro Drilling company using an air rotary drill rig, split spoons and/or a core barrel. Samples were collected by Mark from Highlander. Also present on site were Mr. Eddie Seay from Eddie Seay Consulting, Mr. Rick Anderson from Environmental Land Services, Ms. Donna Williams from New Mexico OCD and several representatives from Texaco.

Soil samples were taken at the surface by split spoon, then at 10 foot intervals there after (most often with a core barrel). Samples were taken to Mark who measured the length of the core, then placed the sample into a plastic ziplock bag and broke up the core by shaking and/or hitting the sample with a hammer. Once the sample was broken up, the bag was unzipped and soil samples splits taken. The remaining samples were allowed to sit for several minuets in the bag before Mark screened them with an OVA meter. The drill rig was deconed between bore holes using an onsite steamer.

Bore hole were plugged with hole plug and cement. Bore hole locations were measured with a GPS and are marked on the attached map.

Soil samples taken by ECD Environmental were taken to Hall Environmental Laboratory where they were analyzed for Total Petroleum Hydrocarbons (TPH 418.1), volatile method 8020 (BTEx) and anions and cations.

Soil samples were taken using a backhoe. Samples were taken at two depths and analyzed for the following compounds: TPH (total petroleum hydrocarbons) and BTEX (benzene, toluene, ethylbenzene and xylene). Background soil and decon water samples were also analyzed for anions and cations. The backhoe bucket was steam cleaned before the backhoe was moved to a new sample site. All sample sites were marked with a flag and a GPS position taken.

Background Sample

A background soil sample was taken from the front of the Turner home, far away from the pit area to the south. A soft calechee layer was encounter at six feet. Sample taken at six feet. Soil was a light brown and the calechee was a bright white. There was no hydrocarbon odor.

GPS reading: 31° 43.51n, 102° 04.67w

Sample #2

Southeast corner of pit area. Samples were taken at 12" and at 4'. Discolored calechee was encountered at 3'10". Strong hydrocarbon odor.

GPS reading: 32° 43.31n, 103° 04.73w

Sample #3

Center of pit area. Samples taken at 14" and 32". Calechee was discolored and encountered at 30". Soil discolored with hydrocarbon odor.

GPS reading: 32° 43.34n, 103° 04.74w

Sample #4

Samples taken from the west side of the pit. VERY strong hydrocarbon odor. Calechee was highly discolored and very powdery. Calechee did not seem to have any structure. Samples taken at 16", 6'5" and 13'5" (the limit of the backhoe arm). Discoloration was still present at backhoe limit.

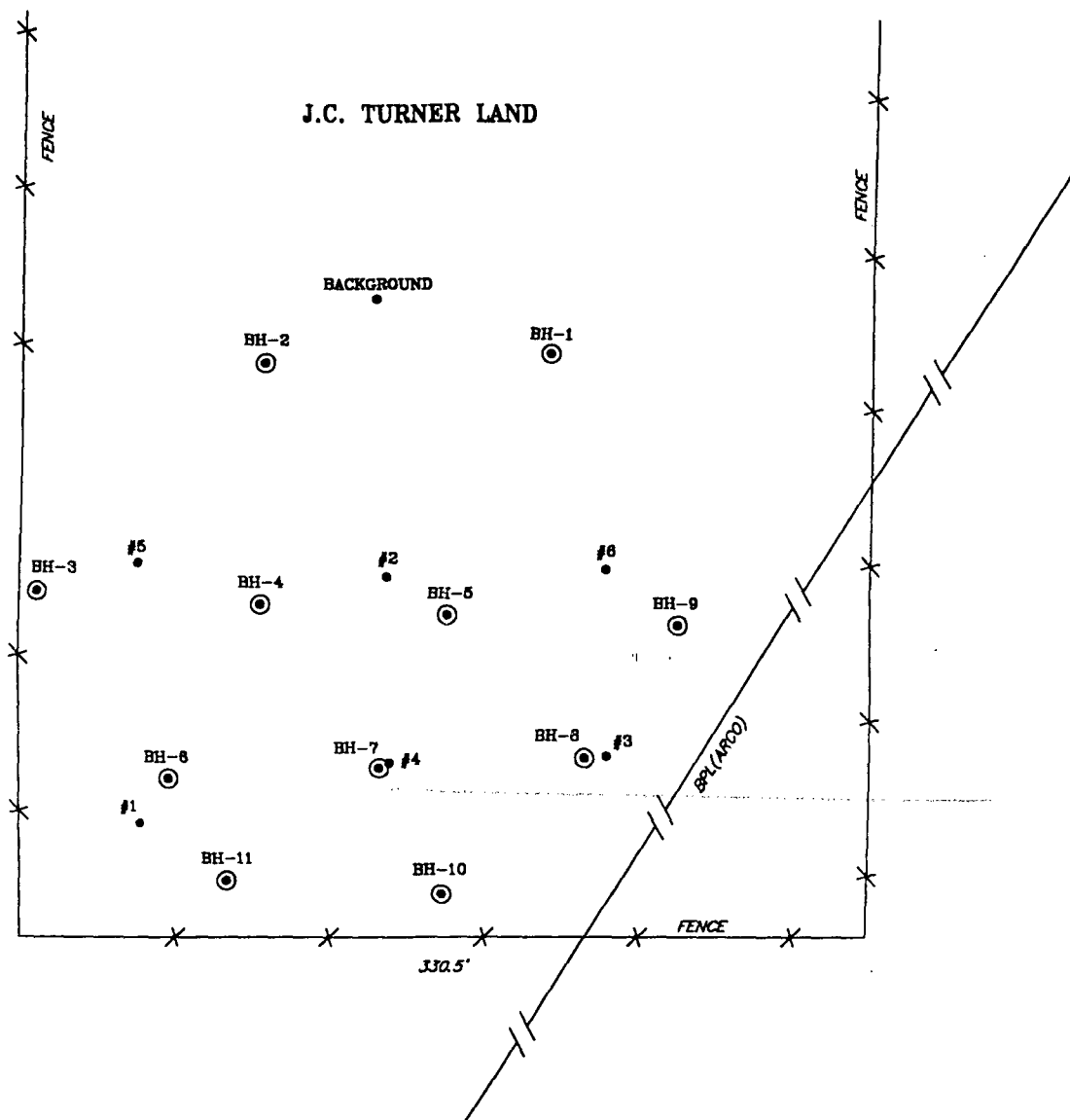
GPS reading: 32° 43.44n, 103° 04.79w

All samples were taken to Hall Environmental Laboratory for chemical analysis .

BOREHOLE NUMBER

GROUND ELEVATION FEET AMSL

BH-1	3381.1
BH-2	3381.9
BH-3	3394.7
BH-4	3394.7
BH-5	3394.3
BH-6	3385.1
BH-7	3394.7
BH-8	3394.8
BH-9	3394.0
BH-10	3395.3
BH-11	3395.6



SCALE
(FEET)



LEGEND

- #1 HAND AUGER BOREHOLE LOCATION (4/10/97)
- BH-1 ROTARY DRILLED BOREHOLE LOCATION (4/28-29/99)
- x- FENCE
- /- PIPELINE

FIGURE NO. 2

LEA COUNTY, NEW MEXICO

TEXACO EXPLORATION &
PRODUCTION, INC.

SITE DRAWING

HIGHLANDER ENVIRONMENTAL
MIDLAND, TEXAS

DATE	3/17/98
DRAWN BY	EA
CHECKED BY	EA
DATE	3/17/98



Hall Environmental Analysis Laboratory

Client: ECD
Project: Turner/Rodriguez
Project Manager: Greg Bybee
Project Number: -

Date Collected: NA
Date Received: NA
Sample Matrix: Soil
Date Extracted: NA

8021 QC: BS/BSD 5/3

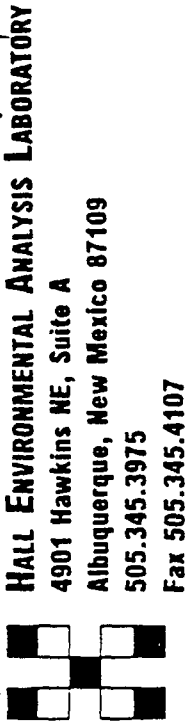
<u>Compound</u>	<u>Sample Amount (mg/kg)</u>	<u>Spike</u>	<u>Recovery</u>	<u>% Rec</u>	<u>Dup</u>	<u>% Dup</u>	<u>RPD</u>
MTBE	<0.1	2.00	2.10	105	2.09	105	0
Benzene	<0.05	1.00	1.02	102	1.02	102	0
Toluene	<0.05	1.00	1.03	103	1.02	102	1
Ethylbenzene	<0.05	1.00	1.03	103	1.02	102	1
Total Xylenes	<0.05	3.00	3.03	101	3.04	101	0

CHAIN-OF-CUSTODY RECORD

Client: ECI Environmental
 Address: P.O. Box 9328
Albuquerque, NM
87119
 Project Name: Turner/Rodriguez
 Project #: _____
 Project Manager: G. Bybee
 Sampler: GB
 Samples Cold?: ☒ Yes ☐ No

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative		HEAL No.
					H ₂ O ₂	HCl	
4/26/99		sed	BH#1 0-2				9904/50-1
"		"	BH#1 10				2
"		"	BH#1 20				3
"		"	BH#2 0-2				4
"		"	BH#2 10				5
"		"	BH#2 20				6
"		"	BH#3 0-2				7
"		"	BH#3 10				8
"		"	BH#3 20				9
"		"	BH#3 30				10
"		"	BH#4 0-2				11
"		"	BH#4 10				12

Date: 4/27/99 Time: _____
 Relinquished By: (Signature) _____
 Relinquished By: (Signature) _____
 Received By: (Signature) _____
 Received By: (Signature) _____



HALL ENVIRONMENTAL ANALYSIS LABORATORY
 4901 Hawkins NE, Suite A
 Albuquerque, New Mexico 87109
 505.345.3975
 Fax 505.345.4107

ANALYSIS REQUEST

BTEX + MTBE + TMBs (8021)	
BTEX + MTBE + TPH (Gasoline Only)	
TPH Method 8015B MOD (Gas/Diesel)	
TPH (Method 418.1)	
Volatiles Full List (8021)	
EDB (Method 504.1)	
EDC (Method 8021)	
8310 (PNA or PAH)	
RCRA 8 Metals	
Cations (Na, K, Ca, Mg)	
Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	
8081 Pesticides / PCBs (8082)	
8260 (VOA)	
8270 (Semi-VOA)	
Air Bubbles or Headspace (Y or N)	

Remarks: Please report BTEX (Before and After)
separately
Bybee
4/27/99 5-11-99 If any questions, see mssg.

CHAIN-OF-CUSTODY RECORD

Client: ED Environmental
 Address: PO. Box 9328
Alb. N.M. 87119
 Phone #: (505) 268-2401
 Fax #: _____

Project Name: Turner/Rodriguez
 Project #: _____
 Project Manager: G. Sykes
 Sampler: GB
 Samples Cold?: ☒ Yes ☐ No

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative		HEAL No.
					HgCl ₂	HCl	
4/27/99		soil	BH#7 0-2				9904150-24
"		"	BH#7 10				25
"		"	BH#7 20				26
"		"	BH#7 30				27
"		"	BH#7 40				28
"		"	BH#8 0-2				29
"		"	BH#8 10				30
"		"	BH#8 20				31
"		"	BH#8 30				32
"		"	BH#8 40				33
"		"	BH#8 52				34

Date: 4/27/99 Time: _____
 Relinquished By: (Signature) _____
 Relinquished By: (Signature) _____

Date: 4/27/99 Time: _____
 Received By: (Signature) _____
 Received By: (Signature) _____

ANALYSIS REQUEST

BTEX + MTBE + TPH (Gasoline Only)	
BTEX + MTBE + TPH (Gas/Diesel)	
TPH (Method 418.1)	
Volatiles Full List (8021)	
EDB (Method 504.1)	
EDC (Method 8021)	
8310 (PNA or PAH)	
RCRA 8 Metals	
Cations (Na, K, Ca, Mg)	
Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	
8081 Pesticides / PCBs (8082)	
8260 (VOA)	
8270 (Semi-VOA)	
Air Bubbles or Headspace (Y or N)	

Remarks: Please report BTEX (Before + After) separately

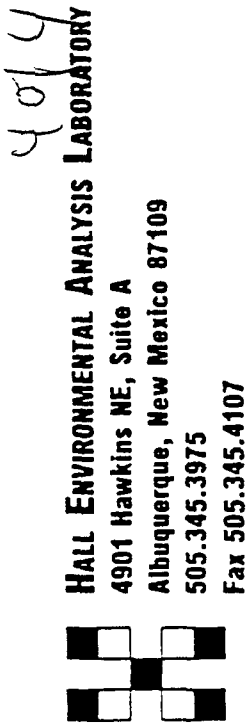
CHAIN-OF-CUSTODY RECORD

Client: ECV Environmental
 Address: QO. Box 9328
Alb. N.M.
87119
 Phone #: 505/268-2401
 Fax #:

Project Name: Turner/Redeque
 Project #:
 Project Manager: G. Bybee
 Sampler: G.B.
 Samples Cold?: ☒ Yes ☐ No

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative		HEAL No.
					H ₂ O ₂	HCl	
11/27/98		soil	BH#9 0-2				9904150-35
"		"	"				-36
"		"	"				-37
"		"	"	42			-38
"		"	"	50			-39
"		"	"				-40
"		"	"				-41
"		"	"				-42
"		"	"				-43

Date: 11/27/98 Time:
 Relinquished By: (Signature) [Signature]
 Relinquished By: (Signature)
 Received By: (Signature) [Signature]
 Received By: (Signature)

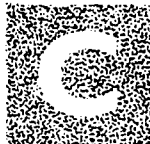
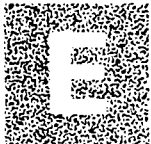


HALL ENVIRONMENTAL ANALYSIS LABORATORY
 4901 Hawkins NE, Suite A
 Albuquerque, New Mexico 87109
 505.345.3975
 Fax 505.345.4107

ANALYSIS REQUEST

BTEX + MTBE + TMBs (8021)	
BTEX + MTBE + TPH (Gasoline Only)	
TPH Method 8015B MOD (Gas/Diesel)	
TPH (Method 418.1)	X
Volatiles Full List (8021)	
EDB (Method 504.1)	
EDC (Method 8021)	
8310 (PNA or PAH)	
RCRA 8 Metals	
Cations (Na, K, Ca, Mg)	
Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	
8081 Pesticides / PCBs (8082)	
8260 (VOA)	
8270 (Semi-VOA)	X
Air Bubbles or Headspace (Y or N)	

Remarks: Please report BTEX (Before & After) separately



Mr. Bill Robins
Robins, Cloud & Lubel
910 Travis
Suite 2020
Houston, TX 77002

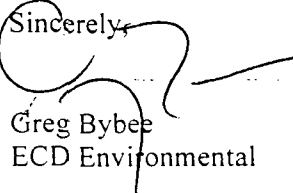
5/30/99

Dear Mr. Robins,

Enclosed are the chemical analysis of soil samples taken during the split sampling with Highlander Environmental Corp. on the Turner/Rodriguez project (April 26,27,28, 1999).

Please feel free to contact me if you have any questions.

Sincerely,



Greg Bybee
ECD Environmental

TURNER/RODRIGUEZ
Split Sampling 4/26,27,28/99

The following are the results from the split sampling that took place on the old pit area between the Turner and Rodriguez properties. The sampling was conducted by Highlander Environmental Corporation, whose method was outlined in the work plan of September 28, 1998.

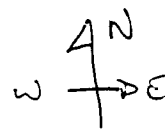
Bore holes were drilled by Scarbouro Drilling company using an air rotary drill rig, split spoons and/or a core barrel. Samples were collected by Mark from Highlander. Also present on site were Mr. Eddie Seay from Eddie Seay Consulting, Mr. Rick Anderson from Environmental Land Services, Ms. Donna Williams from New Mexico OCD and several representatives from Texaco.

Soil samples were taken at the surface by split spoon, then at 10 foot intervals there after (most often with a core barrel). Samples were taken to Mark who measured the length of the core, then placed the sample into a plastic ziplock bag and broke up the core by shaking and/or hitting the sample with a hammer. Once the sample was broken up, the bag was unzipped and soil samples splits taken. The remaining samples were allowed to sit for several minuets in the bag before Mark screened them with an OVA meter. The drill rig was deconed between bore holes using an onsite steamer.

Bore hole were plugged with hole plug and cement. Bore hole locations were measured with a GPS and are marked on the attached map.

Soil samples taken by ECD Environmental were taken to Hall Environmental Laboratory where they were analyzed for Total Petroleum Hydrocarbons (TPH 418.1), volatile method 8020 (BTEX) and anions and cations.

Wheat Field



32°43.37^N
103°04.75
2

32°43.40^N
103°04.73
1

32°43.32
103°04.76
3

32°43.33
103°04.75
4

32°43.33
103°04.71
5

32°43.29
103°04.75
6

32°43.31
103°04.72
7

32°43.33
103°04.71
8

32°43.34
103°04.74
10

32°43.33
103°04.73
11

Fence

ECD Environmental, Inc.

Soil Samples:

Soil samples obtained on 1/27/99 reveal very high levels of TPH and VOCs at a depth of 13.5 feet in the west side of the pit area. This depth was not the extent of the contamination that was encountered, rather 13.5 feet was the limitation of the backhoe used for trench excavations. All soil samples taken during this sampling showed high levels of TPH. The exception was the sample taken from the far north of the property, which showed non-detect for TPH and VOCs.

Due to the presence of shallow groundwater (less than 100 feet from the surface) and the fact that this groundwater already reflects an impact from organic and inorganic oil production products, it is imperative that the soil contaminated with high levels of oil and inorganic compounds be removed from the site as soon as possible.

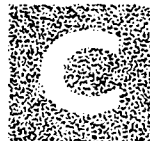
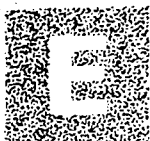
Cost of Cleanup

In addition to the previously projected costs for the removal of contaminated soil and its replacement with clean soil, further cost must also be considered:

Soil Gas Survey	\$20,000.00
On-site analysis	\$ 3,000.00
Pump and Treat System for Groundwater	\$75,000.00
Analysis	\$ 2,500.00/year
System Up Keep	\$ 5,000.00/year
Vapor Extraction System (Soil Gas Result Dependant)	\$60,000.00

I feel these costs as well as the estimated costs for the removal of contaminated soil are reasonable in order to restore the Turner and Rodriguez properties to their pre-polluted condition.


Greg Bybee
ECD Environmental
6/1/99



TURNER/RODRIGUEZ

Summary:

After receiving soil and water chemical analysis of samples taken by ECD Environmental, Inc. as well as by Eddie Seay Consulting (10/28/98, 1/27/99, and 4/26,27,28/99), the following conclusions have been made:

1. The Turner and Rodriguez water wells tested on 10/28/98 have been impacted by oil production activities.
2. Soil samples collected on 1/27/99 indicate extensive penetration by oil and related waste products.
3. Although the soil sampling method employed by Highlander Environmental Corporation was critically flawed, analysis of the samples taken by ECD Environmental, Inc. is consistent with the deep penetration of oil production waste.
4. An average of 20 vertical feet of soil, site wide in the pit area, needs to be removed due to the presence of inorganic and semi-volatile organic compounds.
5. The volatile organic compounds (VOCs) found in deep soil samples (taken on 10/28/99) indicate the need for an investigation to determine the extent of the VOC vapor plume. This would provide the parameters for a vapor extraction system.

Water Samples:

The analysis of water samples taken on 10/28/98 indicate high levels of total petroleum hydrocarbons (TPH) and increased concentrations of inorganic compounds as compared to the background water samples. There are no acceptable levels for petroleum hydrocarbons in New Mexico Groundwater Regulations.

The elevated inorganic constituents of the water samples indicate an impact by compounds associated with oil field wastes. In addition, the chloride ion concentration in the Rodriguez House well water sample exceeds the groundwater parameters for the state of New Mexico.

In order to remove the inorganic and non-volatile organic compounds, a pump and treat system using either activated carbon or synthetic resin beds will need to be installed. Monitoring the system's effluent for contaminants will be carried out on a quarterly basis and reported to the state of New Mexico.

FACSIMILE TRANSMITTAL COVER SHEET

ECD ENVIRONMENTAL INCORPORATED

Date: 3/29/99

Fax Number: (713)650-1400

Number of pages: 2

To: Mr. Bill Robbins
Company: Robbins, Cloud and Lubel
Phone number: (713)650-1200

From: Greg Bybee
Phone number: (505)268-2401

Message:

Mr. Robbins,

Enclosed are my comments to Highlander Environmental's scope of work (9/28/98) concerning the Turner/Rodriguez case in Hobbs, New Mexico. The Highlander document was forwarded to me by Mr. Seay last week. I'm sending him a copy of these comments. Please contact me if you have any questions.

Thanks,

Greg

E

C

D

TURNER/RODRIGUEZ

3/24/99

**Comments on Highlander Environmental's Scope of Work
for Pit Closure Investigation (9/28/98)**

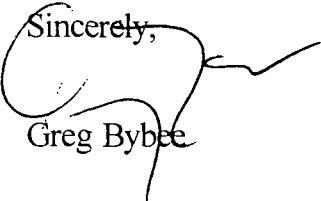
Dear Mr. Robbins,

After reviewing the scope of work for pit closure investigation submitted by Highlander Environmental Corporation concerning the Turner/Rodriguez contamination case I have the following comments:

- 1) Using an air rotary drill unit will degas the volatile constituents from the soil. Highlander's suggestion that "samples will be collected as drill cuttings exit the borehole" (page 2, 4th sentence) is an unacceptable method for sampling soil for volatile organic compound analysis.
- 2) Samples should be collected using the best sample collection methods for BOTH volatile and TPH analysis. Samples should then be sent to a analytical laboratory.
- 3) The installation of a monitor well should be dependant on the results of laboratory analysis, not the "field screening."
- 4) The soil headspace analysis using plastic bags and a PID meter is a very poor method for volatile organic compound analysis:
 - a) Opening the bag to insert the PID releases the headspace.
 - b) The PID is sensitive to aromatic compounds, non-aromatic organic compounds have a much lower sensitivity (nearly invisible).

Any work conducted at the site by Highlander or any representative of the defendant should be observed by both Mr. Eddie Seay and myself. Split samples should be obtained in order to ensure the accuracy of any conclusions.

Sincerely,


Greg Bybee



**Hall Environmental
Analysis Laboratory**

May 26, 1999

Hall Environmental Analysis Laboratory
4901 Hawkins NE, Ste. A
Albuquerque, NM 87109

ECD
P. O. Box 9328
Albuquerque, NM 87119

Dear Mr. Bybee:

Enclosed are the results for the analyses that were requested. These were done according to EPA procedures or equivalent.

Detection limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman
Assistant Laboratory Manager

Project: 9904150/Turner/Rodriguez



Hall Environmental Analysis Laboratory

Client: ECD
Project: Turner/Rodriguez
Project Manager: Greg Bybee
Project Number:

Date Collected: 4/26,27/99
Date Received: 4/28/99
Sample Matrix: Soil
Date Extracted: 4/26,27/99

EPA Method - 8021

Units: PPM mg/kg - Methanol Field Extraction - Dry Weight Basis

HEAL LAB ID	Sample ID	MTBE	Benzene	Toluene	Ethyl- benzene	Total Xylenes	BFB % Recovery	Dilution Factor	Date Analyzed
9904150-1A	BH#1 0-2	ND	ND	ND	ND	ND	100	1	4/28/99
9904150-1B	BH#1 0-2	ND	ND	ND	ND	ND	97	1	4/28/99
9904150-2A	BH#1 10	ND	ND	ND	ND	ND	102	1	4/28/99
9904150-2B	BH#1 10	ND	ND	ND	ND	ND	99	1	4/28/99
9904150-4A	BH#2 0-2	ND	ND	ND	ND	ND	97	1	4/28/99
9904150-4B	BH#2 0-2	ND	ND	ND	ND	ND	97	1	4/28/99
9904150-5A	BH#2 10	ND	ND	ND	ND	ND	96	1	4/28/99
9904150-5B	BH#2 10	ND	ND	ND	ND	ND	95	1	4/28/99
9904150-7A	BH#3 0-2	ND	ND	ND	ND	ND	95	1	4/28/99
9904150-7B	BH#3 0-2	ND	ND	ND	ND	ND	99	1	4/29/99
9904150-8A	BH#3 10	ND	ND	ND	ND	ND	95	1	4/29/99
9904150-8B	BH#3 10	ND	ND	ND	ND	ND	98	1	4/29/99
9904150-11A	BH#4 0-2	ND	ND	ND	ND	ND	98	1	4/29/99
9904150-11B	BH#4 0-2	ND	ND	ND	ND	ND	101	1	4/29/99
9904150-12A	BH#4 10	ND	ND	ND	ND	ND	96	1	4/29/99
9904150-12B	BH#4 10	ND	ND	ND	ND	ND	98	1	4/29/99
9904150-15A	BH#5 0-2	ND	ND	ND	ND	ND	97	1	4/30/99
9904150-15B	BH#5 0-2	ND	ND	ND	ND	ND	97	1	4/30/99
9904150-16A	BH#5 10	ND	ND	ND	ND	ND	102	1	4/30/99
9904150-19A	BH#6 10	ND	ND	ND	ND	ND	96	1	4/30/99
9904150-19B	BH#6 10	ND	ND	ND	ND	ND	96	1	4/30/99

MRL	0.1	0.05	0.05	0.05	0.05
-----	-----	------	------	------	------



Hall Environmental Analysis Laboratory

Client: ECD
Project: Turner/Rodriguez
Project Manager: Greg Bybee
Project Number: -

Date Collected: 4/27/99
Date Received: 4/28/99
Sample Matrix: Soil
Date Extracted: 4/27/99

EPA Method - 8021

Units: PPM mg/kg - Methanol Field Extraction - Dry Weight Basis

HEAL LAB ID	Sample ID	MTBE	Benzene	Toluene	Ethyl- benzene	Total Xylenes	BFB % Recovery	Dilution Factor	Date Analyzed
9904150-20A	BH#6 20	ND	ND	ND	ND	ND	94	1	4/30/99
9904150-20B	BH#6 20	ND	ND	ND	ND	ND	96	1	4/30/99
9904150-24A	BH#7 0-2	ND	ND	ND	ND	ND	101	1	4/30/99
9904150-24B	BH#7 0-2	ND	ND	ND	ND	ND	103	1	4/30/99
9904150-29A	BH#8 0-2	<0.50	<0.25	<0.25	0.33	<0.25	102	5	5/3/99
9904150-29B	BH#8 0-2	<0.50	<0.25	<0.25	0.33	<0.25	102	5	5/3/99
9904150-30A	BH#8 10	ND	ND	ND	ND	ND	101	1	5/3/99
9904150-35A	BH#9 0-2	ND	ND	ND	ND	ND	104	1	5/3/99
9904150-35B	BH#9 0-2	ND	ND	ND	ND	ND	103	1	5/3/99
9904150-40A	BH#6 0-2	ND	ND	ND	ND	ND	104	1	5/3/99
9904150-40B	BH#6 0-2	ND	ND	ND	ND	ND	105	1	5/3/99
9904150-41	MeOH Blank	ND	ND	ND	ND	ND	98	1	5/3/99
9904150-42	MeOH Blank	ND	ND	ND	ND	ND	102	1	5/3/99

MRL	0.1	0.05	0.05	0.05	0.05
-----	-----	------	------	------	------



Hall Environmental Analysis Laboratory

Client: ECD Environmental
Project: Turner/Rodriguez
Project Manager: Greg Bybee
Project Number:

Date Collected: 4/26/99
Date Received: 4/28/99
Sample Matrix: Aqueous
Extraction Date: 5/3/99

EPA Method - 418.1

HEAL ID	Client ID	Dilution	TPH (mg/L)	Analysis Date
9904150-23	Decon H2O	1	<1.0	5/3/99
Ext. Blk.	-	1	<1.0	5/3/99

MRL	1.0
-----	-----

QA/QC

<u>Sample ID:</u>	<u>Sample Amount</u>	<u>Spike</u>	<u>Recovery</u>	<u>% Recovery</u>
BS 5/3	<1.0	5.0	4.5	90

<u>Sample ID:</u>	<u>Sample Amount</u>	<u>Duplicate</u>	<u>RPD</u>
Ext. Blk. Dup 5/3	<1.0	<1.0	NA

Sincerely:

Andy Freeman
Assistant Lab Manager



Hall Environmental Analysis Laboratory

Client: ECD Environmental
Project: Turner/Rodriguez
Project Manager: Greg Bybee
Project Number:

Date Collected: 4/26,27/99
Date Received: 4/28/99
Sample Matrix: Soil
Extraction Date: 5/3,4/99

EPA Method - 418.1

HEAL ID	Client ID	Dilution	TPH (mg/kg)	Analysis Date
9904150-1	BH1, 0-2'	1	71	5/4/99
9904150-2	BH1, 10'	1	<20	5/4/99
9904150-3	BH1, 20'	1	43	5/4/99
9904150-4	BH2, 0-2'	1	53	5/4/99
9904150-5	BH2, 10'	1	<20	5/4/99
9904150-6	BH2, 20'	1	<20	5/4/99
9904150-7	BH3, 0-2'	20	2,100	5/4/99
9904150-8	BH3, 10'	1	<20	5/4/99
9904150-9	BH3, 20'	1	<20	5/4/99
9904150-10	BH3, 30'	1	<20	5/4/99
9904150-11	BH4, 0-2'	1	510	5/4/99
9904150-12	BH4, 10'	1	<20	5/4/99
9904150-13	BH4, 20'	1	200	5/4/99
9904150-14	BH4, 30'	1	59	5/5/99
9904150-15	BH5, 0-2'	5	1,400	5/5/99
9904150-16	BH5, 10'	1	50	5/5/99
9904150-17	BH5, 20'	1	<20	5/5/99
9904150-18	BH5, 30'	1	50	5/5/99
9904150-19	BH6, 10'	1	37	5/5/99
9904150-20	BH6, 20'	1	28	5/5/99
Extraction Blank	-	1	<20	5/4/99
		MRL	20	

QA/QC

<u>Sample ID:</u>	<u>Sample Amount</u>	<u>Spike</u>	<u>Recovery</u>	<u>% Recovery</u>
BS II 5/3	<20	250	227	91

<u>Sample ID:</u>	<u>Sample Amount</u>	<u>Duplicate</u>	<u>RPD</u>
Ext.Blk.Dup. II 5/3	<20	<20	NA



Hall Environmental Analysis Laboratory

Client: ECD Environmental
Project: Turner/Rodriguez
Project Manager: Greg Bybee
Project Number:

Date Collected: 4/27/99
Date Received: 4/28/99
Sample Matrix: Soil
Extraction Date: 5/4/99

EPA Method - 418.1

HEAL ID	Client ID	Dilution	TPH (mg/kg)	Analysis Date
9904150-21	BH6, 30'	1	25	5/5/99
9904150-22	BH6, 40'	1	<20	5/5/99
9904150-24	BH7, 0-2'	20	7,600	5/5/99
9904150-25	BH7, 10'	1	30	5/5/99
9904150-26	BH7, 20'	1	52	5/5/99
9904150-27	BH7, 30'	1	64	5/5/99
9904150-28	BH7, 40'	1	29	5/5/99
9904150-29	BH8, 0-2'	20	15,000	5/5/99
9904150-30	BH8, 10'	1	120	5/5/99
9904150-31	BH8, 20'	1	40	5/5/99
9904150-32	BH8, 30'	1	24	5/5/99
9904150-33	BH8, 40'	1	130	5/5/99
9904150-34	BH8, 52'	1	<20	5/5/99
9904150-35	BH9, 0-2'	40	19,000	5/5/99
9904150-36	BH9, 10'	1	<20	5/5/99
9904150-37	BH9, 20'	1	20	5/5/99
9904150-38	BH9, 42'	1	41	5/5/99
9904150-39	BH9, 50'	1	<20	5/5/99
Extraction Blank	-	1	<20	5/5/99

MRL	20
-----	----

QA/QC

<u>Sample ID:</u>	<u>Sample Amount</u>	<u>Spike</u>	<u>Recovery</u>	<u>% Recovery</u>
BS 5/4	<20	250	232	93

<u>Sample ID:</u>	<u>Sample Amount</u>	<u>Duplicate</u>	<u>RPD</u>
Ext.Blk.Dup.5/4	<20	<20	NA



Hall Environmental Analysis Laboratory

Client: ECD
Project: Turner/Rodriguez
Project Manager: Greg Bybee
Project Number: -

Date Collected: 4/26,27/99
Date Received: 4/28/99
Sample Matrix: Soil

Inorganic Compounds

HEAL LAB ID	Sample ID	Chloride mg/kg	Date Analyzed
9904150-1	BH#1 0-2	7.6	5/6/99
9904150-2	BH#1 10	18	5/6/99
9904150-3	BH#1 20	4.5	5/6/99
9904150-4	BH#2 0-2	8.6	5/6/99
9904150-5	BH#2 10	31	5/6/99
9904150-6	BH#2 20	28	5/6/99
9904150-7	BH#3 0-2	5.9	5/6/99
9904150-8	BH#3 10	9.1	5/6/99
9904150-9	BH#3 20	6.2	5/6/99
9904150-10	BH#3 30	9.9	5/6/99
9904150-11	BH#4 0-2	7.3	5/6/99
9904150-12	BH#4 10	3.8	5/6/99
9904150-13	BH#4 20	16	5/6/99
9904150-14	BH#4 30	10	5/6,11/99
9904150-15	BH#5 0-2	4.6	5/6,11/99
9904150-16	BH#5 10	14	5/6,11/99
9904150-17	BH#5 20	67	5/6,11/99
9904150-18	BH#5 30	150	5/6,11/99
9904150-19	BH#6 10	94	5/6,11/99
9904150-20	BH#6 20	97	5/6,11/99
9904150-21	BH#6 30	130	5/6,11/99
9904150-22	BH#6 40	230	5/6,11/99
9904150-24	BH#7 0-2	6.3	5/6,11/99
9904150-25	BH#7 10	18	5/6,11/99
9904150-26	BH#7 20	20	5/6,11/99
9904150-27	BH#7 30	65	5/6,11/99
9904150-28	BH#7 40	120	5/10,14/99
9904150-29	BH#8 0-2	17	5/10,14/99
9904150-30	BH#8 10	180	5/10,14/99
9904150-31	BH#8 20	220	5/10,14/99
9904150-32	BH#8 30	160	5/10,14/99
9904150-33	BH#8 40	190	5/10,14/99
9904150-34	BH#8 52	140	5/10,14/99
9904150-35	BH#9 0-2	8.8	5/10,14/99
9904150-36	BH#9 10	16	5/10,14/99
9904150-37	BH#9 20	19	5/10,14/99
9904150-38	BH#9 42	150	5/10,14/99
9904150-39	BH#9 50	34	5/10,14/99
9904150-8 Dup	Duplicate	9.2	5/6/99
Detection Limits		0.3	-
Method		300.0	-



Hall Environmental Analysis Laboratory

Client: ECD

Project: Turner/Rodriguez

Project Manager: Greg Bybee

Project Number: -

Date Collected: 4/26/99

Date Received: 4/28/99

Sample Matrix: Aqueous

Inorganic Compounds

HEAL LAB ID	Sample ID	Fluoride (mg/L)	Chloride (mg/L)	Nitrite (mg/L)	Bromide (mg/L)	Nitrate (mg/L)	Sulfate (mg/L)	o-Phosphate-P (mg/L)
9904150-23	Decon H ₂ O	3.8	260	*ND	1.4	*18	250	ND
Detection Limits		0.1	0.1	0.1	0.1	0.5	0.5	0.5
Method		300.0	300.0	300.0	300.0	300.0	300.0	300.0
Date Analyzed		5/12/99	5/14/99	5/12/99	5/12/99	5/12/99	5/14/99	5/12/99

*Nitrite/Nitrate sample run outside of holding time.



ENERGY LABORATORIES, INC.

P.O. BOX 30916 • 1120 SOUTH 27TH STREET • BILLINGS, MT 59107-0916 • PHONE (406) 252-6325
FAX (406) 252-6069 • 1-800-735-4489 • E-MAIL eli@energylab.com

LABORATORY ANALYSIS REPORT

Hall Environmental Laboratory
Nancy McDuffie
4901 Hawkins NE
Suite A
Albuquerque, NM 87109

Sample ID: Proj. #9904150, Turner/Rodriquez, Decon H2O
Laboratory ID: 99-52375-1
Sample Matrix: WATER
Sample Date: 26-Apr-99
Report Date: 14-May-99

	Results	Units	Reporting Limit	Method	Analized
Calcium	93	mg/l	1	200.7	12-May-99 1458 RLH
Potassium	19	mg/l	1	200.7	12-May-99 1540 RLH
Magnesium	69	mg/l	1	200.7	12-May-99 1458 RLH
Sodium	199	mg/l	1	200.7	12-May-99 1458 RLH

Lab Nos. 99-52375-1

QUALITY ASSURANCE DATA PACKAGE

This report includes the results of quality assurance tests performed with the sample analyses. They are performed to determine if the methodology is in control and to monitor the laboratory's ability to produce accurate and precise results.

<u>Constituents</u>	<u>Duplicate Analysis</u>		<u>Spiked</u>	<u>Blank</u> <u>Analysis,</u> <u>mg/l (ppm)</u>	<u>Sample</u> <u>Analysis,</u> <u>mg/l (ppm)</u>	<u>-----Calibration Verification-----</u>	
	<u>-----mg/l (ppm)-----</u>		<u>Analysis,</u>			<u>Acceptance</u>	<u>Date</u>
	<u>Original</u>	<u>Duplicate</u>	<u>Recovery</u>			<u>Range,</u> <u>mg/l (ppm)</u>	
Calcium	58	60	101	< 1	52	45-55	05/12/99
Potassium	2	2	103	< 1	52	45-55	05/12/99
Magnesium	42	43	103	< 1	52	45-55	05/12/99
Sodium	82	83	103	< 1	52	45-55	05/12/99

Lab No.: 001-99-52375

Date: 10-MAY-99

Received by: Pam Harder

Logged In by: Pam Harder

SAMPLE CONDITION QA/QC REPORT

This report provides information about the condition of the sample(s)
and associated sample custody information on receipt at the laboratory.

Chain of Custody Form
Completed & Signed

Yes Comments: _____

Chain of Custody Seal

No Comments: _____

Intact

N/A Comments: _____

Signature Match Chain of Custody vs. Seal

N/A Comments: _____

Samples Received Cold

Yes Comments: _____

Samples Received Within Holding Time

Yes Comments: _____

Samples Received in Proper Containers

Yes Comments: _____

Samples Received Properly Preserved

N/A Comments: _____

Samples requiring analysis for volatile organics are tested for proper preservation at the time of analysis.
Any preservation problems encountered for these samples are noted on the analytical parameter report pages.

Client notified about sample discrepancies:

Who: _____ By: _____ Date/Time: _____

Method of Shipping: Fed Ex 811333942158

Additional comments: _____



Hall Environmental Analysis Laboratory

Client: ECD
Project: Turner/Rodriguez
Project Manager: Greg Bybee
Project Number: -

Date Collected: NA
Date Received: NA
Sample Matrix: Soil
Date Extracted: NA

8021 QC: 9904129-4 MS/MSD

<u>Compound</u>	<u>Sample Amount (mg/kg)</u>	<u>Spike</u>	<u>Recovery</u>	<u>% Rec</u>	<u>Dup</u>	<u>% Dup</u>	<u>RPD</u>
MTBE	<0.1	2.00	2.45	123	2.25	113	9
Benzene	<0.05	1.00	0.83	83	0.85	85	2
Toluene	<0.05	1.00	0.94	94	0.94	94	0
Ethylbenzene	<0.05	1.00	0.93	93	0.93	93	0
Total Xylenes	<0.05	3.00	2.79	93	2.82	94	1



Hall Environmental Analysis Laboratory

Client: ECD
Project: Turner/Rodriguez
Project Manager: Greg Bybee
Project Number: -

Date Collected: NA
Date Received: NA
Sample Matrix: Soil
Date Extracted: NA

8021 QC: 9904159-3 MS/MSD

<u>Compound</u>	<u>Sample Amount (mg/kg)</u>	<u>Spike</u>	<u>Recovery</u>	<u>% Rec</u>	<u>Dup</u>	<u>% Dup</u>	<u>RPD</u>
MTBE	<0.1	2.00	2.07	104	2.10	105	1
Benzene	<0.05	1.00	1.05	105	0.99	99	6
Toluene	<0.05	1.00	1.07	107	1.01	101	6
Ethylbenzene	<0.05	1.00	1.01	101	0.96	96	5
Total Xylenes	<0.05	3.00	3.09	103	2.90	97	6



PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

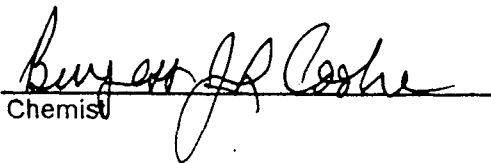
ANALYTICAL RESULTS FOR
EDDIE SEAY CONSULTING
ATTN: EDDIE SEAY
601 W. ILLINOIS
HOBBS, NM 88242
FAX TO:

Receiving Date: 04/28/99
Reporting Date: 04/29/99
Project Owner: J.C. TURNER
Project Name: TURNER-RODRIQUEZ
Project Location: HOBBS EAST

Sampling Date: 04/28/99
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: GP
Analyzed By: BC

LAB NO.	SAMPLE ID	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)
ANALYSIS DATE		04/28/99	04/28/99	04/28/99	04/28/99
H4120-1	#1 BH 10	<0.050	<0.050	<0.050	<0.050
H4120-2	#2 BH 10	<0.050	<0.050	<0.050	<0.050
H4120-6	#1 BH 11	<0.050	<0.050	<0.050	<0.050
Quality Control		0.088	0.094	0.093	0.281
True Value QC		0.100	0.100	0.100	0.300
% Recovery		88.2	93.9	92.8	93.8
Relative Percent Difference		5.9	3.2	2.9	1.0

METHOD: EPA SW 846-8021B, 5030, 5021 Gas Chromatography


Chemist


Date

H4120B.XLS

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise.



PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
EDDIE SEAY CONSULTING
ATTN: EDDIE SEAY
601 W. ILLINOIS
HOBBS, NM 88242
FAX TO:

Receiving Date: 04/28/99
Reporting Date: 04/30/99
Project Owner: J.C. TURNER
Project Name: TURNER-RODRIGUEZ
Project Location: HOBBS EAST

Sampling Date: 04/28/99
Sample Type: WASTEWATER
Sample Condition: COOL & INTACT
Sample Received By: GP
Analyzed By: AH

LAB NUMBER	SAMPLE ID	P-Alkalinity (mgCaCO ₃ /L)	T-Alkalinity (mgCaCO ₃ /L)	Hardness (mgCaCO ₃ /L)	Chloride (mg/L)	Sulfates (mg/L)	pH (s.u.)
ANALYSIS DATE		04/29/99	04/29/99	04/29/99	04/29/99	04/29/99	04/29/99
H4120-10	#1 DECEN	56	196	292	88	105	7.47
	WATER						
Quality Control		NR	NR	NR	1225	47.69	7.02
True Value QC		NR	NR	NR	1319	50.00	7.00
% Accuracy		NR	NR	NR	93	95	100
Relative Percent Difference		NR	NR	NR	2.4	2.5	0.1
METHODS: EPA 600/4-79-02							
		-	-	130.2	325.3	375.4	150.1
	Std. Methods	2320 B	2320 B	-	-	-	-

LAB NUMBER	SAMPLE ID	Hydroxides (mg/L)	Carbonates (mg/L)	Bicarbonates (mg/L)	Conductivity (umhos/cm)	TDS (mg/L)
ANALYSIS DATE		04/29/99	04/29/99	04/29/99	04/29/99	04/30/99
H4120-10	#1 DECEN	0	67	102	910	561
	WATER					
Quality Control		NR	112	221	1402	NR
True Value QC		NR	124	259	1413	NR
% Accuracy		NR	90	85	99	NR
Relative Percent Difference		NR	-	-	0.1	1.3
METHODS: EPA 600/4-79-02						
		-	-	-	120.1	160.1
	Std. Methods	2320 B	2320 B	2320 B	-	-

Chemist

Date

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise.



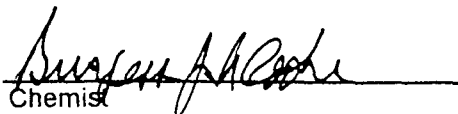
PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
EDDIE SEAY CONSULTING
ATTN: EDDIE SEAY
601 W. ILLINOIS
HOBBS, NM 88242
FAX TO:

Receiving Date: 04/28/99
Reporting Date: 04/29/99
Project Owner: J.C. TURNER
Project Name: TURNER-RODRIGUEZ
Project Location: HOBBS EAST

Sampling Date: 04/28/99
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: GP
Analyzed By: BC/AH

LAB NUMBER	SAMPLE ID	TPH (mg/Kg)	Cl (mg/Kg)
ANALYSIS DATE:		04/28/99	04/29/99
H4120-1	#1 BH 10	15400	32
H4120-2	#2 BH 10	246	112
H4120-3	#3 BH 10	<10	287
H4120-4	#4 BH10	<10	255
H4120-5	#5 BH 10	<10	303
H4120-6	#1 BH 11	4670	32
H4120-7	#2 BH 11	<10	64
H4120-8	#3 BH 11	<10	80
H4120-9	#4 BH 11	<10	80
Quality Control		249	1225
True Value QC		240	1319
% Recovery		104	93
Relative Percent Difference		2.1	2.4
METHODS: EPA 600/4-79-020		418.1	325.3


Chemist

4/29/99
Date

H4120T.XLS

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise.

2111 Beechwood, Abilene, TX 79603 101 East Marland, Hobbs, NM 88240
(915) 673-7001 Fax (915) 673-7020 (505) 393-2326 Fax (505) 393-2476

Page ___ of ___

BILL TO		PO #:	
Company Name: Eddie Seay Consulting			
Project Manager: Eddie Seay			
Address: 601 W Illinois	State: NM	Zip: 88242	
City: Hobbs			
Phone #: 2-2236			
Fax #: 2-6849			
Project #: Turner - Rodriguez	Project Owner: J.C. Turner		
Project Name: Turner - Rodriguez			
Project Location: Hobbs East			

LAB I.D.	Sample I.D.	MATRIX							PRES.		SAMPLING		DATE	TIME
		GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID :	ICE / COOL	OTHER :				
H4120-1	#1 BH 10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	4/28	7:40
-2	#2 BH 10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	"	7:48
-3	#3 BH 10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	"	7:56
-4	#4 BH 10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	"	8:14
-5	#5 BH 10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	"	8:22
-6	#1 BH 11	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	"	8:43
-7	#2 BH 11	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	"	8:50
-8	#3 BH 11	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	"	9:00
-9	#4 BH 11	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	"	9:10
-10	#1 Basin under	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	"	9:15

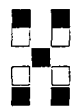
PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising from contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profit incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Terms and Conditions: Interest will be charged on all accounts more than 30 days past due at the rate of 2% per annum from the original date of invoice, and all costs of collections, including attorney's fees.

Sampler Relinquished: <i>Eddie Seay</i>	Received By: <i>[Signature]</i>
Date: 4/28	Date: 4/28
Time: 10:40	Time: 10:40
Relinquished By: <i>[Signature]</i>	Received By: (Lab Staff) <i>[Signature]</i>

Delivered By: (Circle One)	CHECKED BY:
☒ Cool ☒ Intact ☐ Yes ☐ No	(Initials)
Sampler - UPS - Bus - Other:	

ANALYSIS REQUEST	
CL TPH - 418.1 BTX	Phone Result: ☐ Yes ☐ No Fax Result: ☐ Yes ☐ No Additional Fax #: _____ REMARKS: _____



**Hall Environmental
Analysis Laboratory**

February 18, 1999

Hall Environmental Analysis Laboratory
4901 Hawkins NE, Ste. A
Albuquerque, NM 87109

ECD Environmental
P. O. Box 9328
Albuquerque, NM 87119

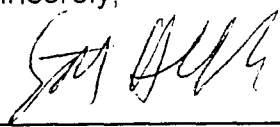
Dear Mr. Greg Bybee:

Enclosed are the results for the analyses that were requested. These were done according to EPA procedures or equivalent.

Detection limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

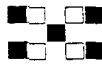
Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

 2/18/99

Scott Hallenbeck
Laboratory Manager

Project: 9901106/Turner Rodriguez



Hall Environmental Analysis Laboratory

Client: ECD Environmental
Project: Turner Rodriguez
Project Manager: Greg Bybee
Project Number: -

Date Collected: 1/27/99
Date Received: 1/28/99
Sample Matrix: Soil
Date Extracted: 1/27/99

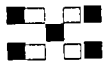
EPA Method - 8021

Units: PPM(mg/kg) Methanol Field Extraction/Dry Weight Basis

HEAL LAB ID	Sample ID	Benzene	Toluene	Ethyl- benzene	Total Xylenes	BFB % Recovery	Dilution Factor	Date Analyzed
9901106-1	Background 6'	ND	ND	ND	ND	93	1	1/28/99
9901106-3	#2-12"	ND	ND	ND	ND	95	1	1/28/99
9901106-4	#2-4'	ND	ND	ND	ND	95	1	1/28/99
9901106-6	#3-32"	ND	ND	ND	ND	97	1	1/28/99
9901106-8	#4-6.5	<1.3	2.9	26	31	101	25	1/28/99
9901106-9	#4-13.5	<1.3	3.7	31	46	99	25	1/28/99

MRL

0.05 0.05 0.05 0.05



Hall Environmental Analysis Laboratory

Client:	ECD Environmental	Date Collected:	1/27/99
Project:	Turner Rodriguez	Date Received:	1/28/99
Project Manager:	Greg Bybee	Sample Matrix:	Aqueous
Project Number:		Date Extracted:	NA

EPA Method - 8021

Units: PPB(ug/L)

HEAL LAB ID	Sample ID	Benzene	Toluene	Ethyl-benzene	Total Xylenes	BFB % Recovery	Dilution Factor	Date Analyzed
-	Reagent Blank	ND	ND	ND	ND	103	1	1/28/99

0.5	0.5	0.5	0.5
-----	-----	-----	-----

MRL



Hall Environmental Analysis Laboratory

Client: ECD Environmental
Project: Turner Rodriguez
Project Manager: Greg Bybee
Project Number: -

Date Collected: 1/27/99
Date Received: 1/28/99
Sample Matrix: Soil
Extraction Date: 1/27/99

EPA Method - 8015B GRO

Units: PPM (mg/kg) - Methanol Field Extraction - Dry Weight Basis

HEAL ID	Client ID	Dilution	Gasoline Range (mg/kg)	% BFB	Analysis Date
9901106-3	#2-12"	1	42	95	1/28/99
9901106-8	#4-6.5	25	1,900	112	1/28/99
Reagent Blank	-	1	ND	103	1/28/99

MRL	5.0
-----	-----

QA/QC: BS/BS	Sample Amt.	Spike	Rec.	%	Dup.	%	RPD
Sample ID:	<5.0	25.0	23.8	95	22.9	92	4
BS/BSD 1/28							



**Hall Environmental
Analysis Laboratory**

Client: ECD Environmental
Project: Turner Rodriguez
Project Manager: Greg Bybee
Project Number: -

Date Collected: 1/27/99
Date Received: 1/28/99
Sample Matrix: Soil
Extraction Date: 2/1/99

EPA Method - 8015B Modified DRO

HEAL ID	Client ID	Dilution	Diesel Range (mg/kg)	Motor Oil Range (mg/kg)	% DNOP	Analysis Date
9901106-3	#2-12"	100	23,000	14,000	**	2/7/99
9901106-8	#4-6.5	40	16,000	6,000	**	2/7/99
Extraction Blank	-	1	ND	ND	96	2/7/99

**Surrogate not recoverable due to matrix interference and sample dilution.

MRL	5.0	50
-----	-----	----

QA/QC

Sample ID:	Sample Amt.	Spike	Rec.	%	Dup.	%	RPD
Blank Spike 2/1	<5.0	50	47	94	44	88	7

4901 Hawkins NE, Suite A, Albuquerque, NM 87109
Ph (505)345-3975, Fax (505) 345-4107



Hall Environmental Analysis Laboratory

Client: ECD Environmental
Project: Turner Rodriguez
Project Manager: Greg Bybee
Project Number:

Date Collected: 1/27/99
Date Received: 1/28/99
Sample Matrix: Soil
Extraction Date: 1/28/99

EPA Method - 418.1

HEAL ID	Client ID	Dilution	TPH (mg/kg)	Analysis Date
9901106-1	Background 6'	1	ND	1/29/99
9901106-3	#2 12"	50	38,000	1/29/99
9901106-4	#2 4'	5	910	1/29/99
9901106-5	#3 14"	20	3,100	1/29/99
9901106-6	#3 32"	50	7,000	1/29/99
9901106-7	#4 16"	20	2,700	1/29/99
9901106-8	#4 6.5	40	30,000	1/29/99
9901106-9	#4 13.5	100	28,000	1/29/99
Extraction Blank	-	1	ND	1/29/99

MRL

20

QA/QC

Sample ID:

BS 1/28

Sample Amount

<20

Spike

100

Recovery

100

% Recovery

100

Sample ID:

Ext. Blk. Dup 1/28

Sample Amount

<20

Duplicate

<20

RPD

NA

Sincerely:

Andy Freeman

Assistant Lab Manager

4901 Hawkins NE Suite A, Albuquerque, NM 87109
Ph (505) 345-3975, Fax (505) 345-4107



Hall Environmental Analysis Laboratory

Client: ECD Environmental
Project: Turner Rodriguez
Project Manager: Greg Bybee
Project Number:

Date Collected: 1/27/99
Date Received: 1/28/99
Sample Matrix: Aqueous
Extraction Date: 2/2/99

EPA Method - 418.1

HEAL ID	Client ID	Dilution	TPH (mg/L)	Analysis Date
9901106-2	Decon H2O	1	ND	2/3/99
Extraction Blank	-	1	ND	2/3/99

MRL	1.0
-----	-----

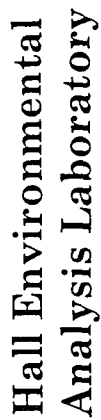
QA/QC

<u>Sample ID:</u>	<u>Sample Amount</u>	<u>Spike</u>	<u>Recovery</u>	<u>% Recovery</u>
BS 2/2	<1.0	5.0	4.6	92

<u>Sample ID:</u>	<u>Sample Amount</u>	<u>Duplicate</u>	<u>RPD</u>
Ext. Blk. Dup	<1.0	<1.0	NA

Sincerely:

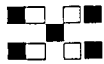
Andy Freeman
Assistant Lab Manager



Client:	ECD Environmental	Date Collected:	1/27/99
Project:	Turner/Rodriguez	Date Received:	1/28/99
Project Manager:	Greg Bybee	Sample Matrix:	Soil
Project Number:	-		

Inorganic Compounds

[illegible]



Hall Environmental Analysis Laboratory

Client: ECD Environmental
Project: Turner/Rodriguez
Project Manager: Greg Bybee
Project Number:

Date Collected: 1/27/99
Date Received: 1/28/99
Sample Matrix: Soil

Inorganic Compounds

HEAL LAB ID	Sample ID	Sodium (mg/kg)	Potassium (mg/kg)	Magnesium (mg/kg)	Calcium (mg/kg)
9901106-1	Background 6'	1.4	17	7.0	120
9901106-1 Dup	Background 6'	-	-	-	130
Detection Limits		0.3	0.3	0.3	0.3
Method		300.0	300.0	300.0	300.0
Date Analyzed		2/17/99	2/17/99	2/17/99	2/17/99



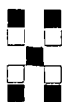
Hall Environmental Analysis Laboratory

Client: ECD Environmental
Project: Turner/Rodriguez
Project Manager: Greg Bybee
Project Number: -

Date Collected: 1/27/99
Date Received: 1/28/99
Sample Matrix: Aqueous

Inorganic Compounds

HEAL LAB ID	Sample ID	Fluoride (mg/L)	Chloride (mg/L)	Nitrite (mg/L)	Bromide (mg/L)	Nitrate (mg/L)	Sulfate (mg/L)	o-Phosphate-P (mg/L)
9901106-2	Decon H ₂ O	0.8	90	ND	0.6	4.4	96	ND
Detection Limits		0.1	0.1	0.1	0.1	0.1	0.5	0.5
Method		300.0	300.0	300.0	300.0	300.0	300.0	300.0
Date Analyzed		1/28/99	2/9/99	1/28/99	1/28/99	1/28/99	2/9/99	1/28/99



Hall Environmental Analysis Laboratory

Client: ECD Environmental
Project: Turner Rodriguez
Project Manager: Greg Bybee
Project Number: -

Date Collected: 1/27/99
Date Received: 1/28/99
Sample Matrix: Soil
Date Extracted: NA

8021 QC: BS/BSD 1/28

<u>Compound</u>	<u>Sample Amount (mg/kg)</u>	<u>Spike</u>	<u>Recovery</u>	<u>% Rec</u>	<u>Dup</u>	<u>% Dup</u>	<u>RPD</u>
Benzene	<0.05	1.00	1.02	102	1.00	100	2
Toluene	<0.05	1.00	1.04	104	1.02	102	2
Ethylbenzene	<0.05	1.00	1.03	103	1.02	102	1
Total Xylenes	<0.05	3.00	3.14	105	3.07	102	2

HALL ENVIRONMENTAL ANALYSIS LABORATORY
4901 Hawkins NE, Suite A
Albuquerque, New Mexico 87109
505.345.3975
Fax 505.345.4107

Project #:	
Project Manager:	
Sampler:	
Samples Col'd?:	☒ Yes ☐ No

Number/Volume	Preservative		HEAL No.
	HgCl ₂	HCl	
			1901106-1
			-2
			-3
			-4
			-5
			-6
			-7
			-8
			-9

Received By: (Signature)	<i>Janice M. Colburn</i>
Received By: (Signature)	

Project Manager.			
Sampler. 			
Samples Cold?: ☒ Yes ☐ No			
Number/Volume	Preservative		HEAL No.
	HgCl ₂	HCl	
			1901106-1
			-2
			-3
			-4
			-5
			-6
			-7
			-8
			-9

Remarks:



Hall Environmental Analysis Laboratory

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Suite A
Albuquerque, NM 87109

11/12/98

RECEIVED
FER 0 2 2000
Environmental Bureau
Oil Conservation Division

ECD Environmental
P. O. Box 9328
Albuquerque, NM 87119

Dear Mr. Greg Bybee,

Enclosed are the results for the analyses that were requested. These were done according to EPA procedures or equivalent.

Detection limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely:

Andy Freeman
Assistant Lab Manager

Project: 9810128 - Turner/Rodriguez

**Hall Environmental
Analysis Laboratory**

Client: ECD
Project: Turner/Rodriguez
Project Manager: Greg Bybee
Project Number:

Date Collected: 10/28/98
Date Received: 10/30/98
Sample Matrix: Aqueous
Extraction Date: 11/4/98

EPA Method - 418.1

HEAL ID	Client ID	Dilution	TPH (mg/L)	Analysis Date
9810128-5	Background	1	ND	11/5/98
Extraction Blank		1	ND	11/5/98

QA/QC

<u>Sample ID:</u>	<u>Sample Amount</u>	<u>Spike</u>	<u>Recovery</u>	<u>% Recovery</u>
Blank Spike 11/4	<1.0	5.0	3.9	78

<u>Sample ID:</u>	<u>Sample Amount</u>	<u>Duplicate</u>	<u>RPD</u>
Blank Duplicate 11/4	<1.0	<1.0	NA

Sincerely:

Andy Freeman
Semi Volatiles Supervisor



Hall Environmental Analysis Laboratory

Client: ECD Environmental
Project: Turner/Rodriguez
Project Manager: Greg Bybee
Project Number:
Date Collected: 10/28/98
Date Received: 10/30/98
Sample Matrix: Aqueous

Inorganic Compounds

HEAL LAB ID	Sample ID	Fluoride (mg/L)	Chloride (mg/L)	Bromide (mg/L)	Nitrate/Nitrite (mg/L)	Sulfate (mg/L)	o-Phosphate-P (mg/L)
9810128-5	Background	1.6	44	0.4	2.8	78	ND
9810128-5	Background Dup	1.6	45	0.4	2.8	-	ND
Detection Limits		0.1	0.1	0.1	0.1	0.5	0.5
Method		300.0	300.0	300.0	300.0	300.0	300.0
Date Analyzed		10/29/98	10/29/98	10/29/98	10/29/98	11/9/98	10/29/98



Hall Environmental Analysis Laboratory

Client:
Project:
Project Manager:
Project Number:

ECD Environmental
Turner/Rodriguez
Greg Bybee

Date Collected: 10/28/98
Date Received: 10/30/98
Sample Matrix: Aqueous

Inorganic Compounds

HEAL LAB ID	Sample ID	Sodium (mg/L)	Potassium (mg/L)	Magnesium (mg/L)	Calcium (mg/L)
9810128-5	Background	36	2.7	20	70
9810128-5	Background Dup	37	-	21	72
Detection		0.1	0.1	0.1	0.1
Limits					
Method		300.0	300.0	300.0	300.0
Date Analyzed		11/11/98	11/11/98	11/11/98	11/11/98

**Hall Environmental
Analysis Laboratory**

Client: ECD Environmental
Project: Turner Rodriguez
Project Manager: Greg Bybee
Project Number: -

Date Collected: 6/30/99
Date Received: 7/1/99
Sample Matrix: Soil

Inorganic Compounds

HEAL LAB ID	Sample ID	Cl mg/kg
9907004-1	Trench H 4'	22
9907004-2	Trench I 3.5'	23
9907004-3	Trench J 3'	20
9907004-4	Trench K 3'	8.3
9907004-5	Trench L 32"	1.3
9907004-4 Dup	Duplicate	7.6
Detection Limits		0.3
Method		300.0
Date Analyzed		7/8/99



**Hall Environmental
Analysis Laboratory**

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Suite A
Albuquerque, NM 87109

11/12/98

ECD Environmental
P. O. Box 9328
Albuquerque, NM 87119

Dear Mr. Greg Bybee,

Enclosed are the results for the analyses that were requested. These were done according to EPA procedures or equivalent.

Detection limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely:

Andy Freeman
Assistant Lab Manager

Project: 9810128 - Turner/Rodriguez



Hall Environmental Analysis Laboratory

Client: ECD Environmental
 Project: Turner/Rodriguez
 Project Manager: Greg Bybee
 Project Number:

Date Collected: 10/28/98
 Date Received: 10/30/98
 Sample Matrix: Aqueous
 Date Extracted: NA

EPA Method - 8021

Units: PPB(ug/L)

HEAL LAB ID	Sample ID	MTBE	Benzene	Toluene	Ethylbenzene	Total Xylenes	1,3,5-TMB	1,2,4-TMB	BFB % Recovery	Dilution Factor	Date Analyzed
9810128-1	TH Well #11st Purge	ND	ND	ND	ND	ND	ND	ND	98	1	11/2/98
9810128-2	TH Well #1	ND	ND	1.8	ND	ND	ND	ND	101	1	11/2/98
9810128-3	RH Well #11st Purge	ND	ND	ND	ND	ND	ND	ND	92	1	11/2/98
9810128-4	RH Well #1	ND	ND	1.6	ND	ND	ND	ND	95	1	11/2/98
9810128-5	Trip Blank	ND	ND	0.5	ND	ND	ND	ND	97	1	11/2/98
9810128-6	Reagent Blank	ND	ND	ND	ND	ND	ND	ND	100	1	11/2/98

MRL	2.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
-----	-----	-----	-----	-----	-----	-----	-----	-----

**Hall Environmental
Analysis Laboratory**

Client: ECD Environmental
Project: Turner/Rodriguez
Project Manager: Greg Bybee
Project Number:

Date Collected: 10/28/98
Date Received: 10/30/98
Sample Matrix: Aqueous
Extraction Date: 11/4/98

EPA Method - 418.1

HEAL ID	Client ID	Dilution	TPH (mg/L)	Analysis Date
9810128-2	Turner House Well #1	1	19	11/5/98
9810128-4	Rodriguez House Well	1	2.6	11/5/98
Extraction Blank	-	1	ND	11/5/98

MRL	1.0
-----	-----

QA/QC

<u>Sample ID:</u>	<u>Sample Amount</u>	<u>Spike</u>	<u>Recovery</u>	<u>% Recovery</u>
Blank Spike 11/4	<1.0	5.0	3.9	78

<u>Sample ID:</u>	<u>Sample Amount</u>	<u>Duplicate</u>	<u>RPD</u>
Blank Dup. 11/4	<1.0	<1.0	NA

Sincerely:

Andy Freeman
Semi Volatiles Supervisor



Hall Environmental Analysis Laboratory

Client:	ECD Environmental	Date Collected:	10/28/98
Project:	Turner/Rodriguez	Date Received:	10/30/98
Project Manager:	Greg Bybee	Sample Matrix:	Aqueous
Project Number:			

Inorganic Compounds

HEAL LAB ID	Sample ID	Fluoride (mg/L)	Chloride (mg/L)	Bromide (mg/L)	Nitrate/Nitrite (mg/L)	Sulfate (mg/L)	o-Phosphate-P (mg/L)
9810128-2	TH Well #1	1.0	94	0.9	3.6	88	ND
9810128-4	RH Well	0.8	270	2.4	3.4	130	ND

Detection Limits	0.1	0.1	0.1	0.1	0.1	0.5	0.5
Method	300.0	300.0	300.0	300.0	300.0	300.0	300.0
Date Analyzed	10/29/98	10/29/98	10/29/98	10/29/98	10/29/98	11/9/98	10/29/98

**Hall Environmental
Analysis Laboratory****Client:****Project:****Project Manager:****Project Number:**

ECD Environmental

Turner/Rodriguez

Greg Bybee

Date Collected: 10/28/98**Date Received:** 10/30/98**Sample Matrix:** Aqueous**Inorganic Compounds**

HEAL LAB ID	Sample ID	Sodium (mg/L)	Potassium (mg/L)	Magnesium (mg/L)	Calcium (mg/L)
9810128-2	TH Well #1	48	2.5	21	87
9810128-4	RH Well	64	3.3	40	150

Detection	0.1	0.1	0.1	0.1
Limits				
Method	300.0	300.0	300.0	300.0
Date Analyzed	11/11/98	11/11/98	11/11/98	11/11/98

4901 Hawkins NE, Suite A, Albuquerque, NM 87109
Ph (505) 345-3975, Fax 345-4107

**Hall Environmental
Analysis Laboratory**

Client: ECD Environmental
Project: Turner/Rodriguez
Project Manager: Greg Bybee
Project Number:

Date Collected: 10/28/98
Date Received: 10/30/98
Sample Matrix: Aqueous
Date Extracted: NA

8021 QC: 9810128-3 MS/MSD 11/2/98

<u>Compound</u>	<u>Sample Amount (ug/L)</u>	<u>Spike</u>	<u>Recovery</u>	<u>% Rec</u>	<u>Dup</u>	<u>% Dup</u>	<u>RPD</u>
MTBE	<2.5	40.0	40.0	94	40.4	101	1
Benzene	<0.5	20.0	20.1	102	20.1	101	0
Toluene	<0.5	20.0	19.8	99	20.0	100	1
Ethylbenzene	<0.5	20.0	20.0	100	20.1	101	0
Total Xylenes	<0.5	60.0	60.7	101	60.8	101	0
1,3,5-TMB	<0.5	20.0	20.8	104	21.0	105	1
1,2,4-TMB	<0.5	20.0	20.9	105	20.7	104	1

HALL ENVIRONMENTAL ANALYSIS LABORATORY
 4901 Hawkes NE, Suite A
 Albuquerque, New Mexico 87109
 505.345.3975
 Fax 505.345.4107



CHAIN-OF-CUSTODY RECORD

Client: ECD Environmental Project Name: Turkey/Bahques

Address: 20. Box 9328 Project #: _____

Albuquerque, NM Project Manager: Greg Byler

Phone #: (505) 768-7686 Sampler: Greg Byler

Fax #: (505) 768-7601 Samples Col'd?: ☒ Yes ☐ No

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative		HEAL No.
					HgCl ₂	HCl	
12/18/98	11:40	H ₂ O	Turkey House well #1	1st purg			4510128-1
"	12:30	H ₂ O	Turkey House well #1				-2
"	3:45	H ₂ O	Redegast House well #1	1st purg			-3
"	4:10	H ₂ O	Redegast House well				-4
"	5:00	H ₂ O	Bahques				-5
			Trip BIK				-6

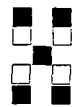
Date: 12/18/98 Time: _____ Relinquished By: (Signature) _____ Received By: (Signature) _____

Date: _____ Time: _____ Relinquished By: (Signature) _____ Received By: (Signature) _____

ANALYSIS REQUEST

BTX + MTBE + TMBs (8021)	BTX + MTBE + TPH (Gasoline Only)	TPH Method 8015B MOD (Gas/Diesel)	TPH (Method 418.1)	Volatiles Full List (8021)	EDB (Method 504.1)	EDC (Method 8021)	8310 (PNA or PAH)	RCRA 8 Metals	Cations (Na, K, Ca, Mg)	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / PCBs (8082)	8260 (VOA)	8270 (Semi-VOA)	Air Bubbles or Headspace (Y or N)
X			X						X	X				
X			X						X	X				
X			X						X	X				
X			X						X	X				
X			X						X	X				

Remarks:



Hall Environmental Analysis Laboratory

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Suite A
Albuquerque, NM 87109

11/12/98

ECD Environmental
P. O. Box 9328
Albuquerque, NM 87119

Dear Mr. Greg Bybee,

Enclosed are the results for the analyses that were requested. These were done according to EPA procedures or equivalent.

Detection limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely:

Andy Freeman
Assistant Lab Manager

Project: 9810128 - Turner/Rodriguez



Hall Environmental Analysis Laboratory

Client: ECD Environmental
Project: Turner/Rodriguez
Project Manager: Greg Bybee
Project Number:

Date Collected: 10/28/98
Date Received: 10/30/98
Sample Matrix: Aqueous

Inorganic Compounds

HEAL LAB ID	Sample ID	Fluoride (mg/L)	Chloride (mg/L)	Bromide (mg/L)	Nitrate/Nitrite (mg/L)	Sulfate (mg/L)	o-Phosphate-P (mg/L)
9810128-5	Background	1.6	44	0.4	2.8	78	ND
9810128-5	Background Dup	1.6	45	0.4	2.8	-	ND
Detection Limits		0.1	0.1	0.1	0.1	0.5	0.5
Method		300.0	300.0	300.0	300.0	300.0	300.0
Date Analyzed		10/29/98	10/29/98	10/29/98	10/29/98	11/9/98	10/29/98



Hall Environmental Analysis Laboratory

Client: ECD
Project: Turner/Rodriguez
Project Manager: Greg Bybee
Project Number:

Date Collected: 10/28/98
Date Received: 10/30/98
Sample Matrix: Aqueous
Extraction Date: 11/4/98

EPA Method - 418.1

HEAL ID	Client ID	Dilution	TPH (mg/L)	Analysis Date
9810128-5	Background	1	ND	11/5/98
Extraction Blank	-	1	ND	11/5/98

MRL	1.0
-----	-----

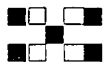
QA/QC

<u>Sample ID:</u>	<u>Sample Amount</u>	<u>Spike</u>	<u>Recovery</u>	<u>% Recovery</u>
Blank Spike 11/4	<1.0	5.0	3.9	78

<u>Sample ID:</u>	<u>Sample Amount</u>	<u>Duplicate</u>	<u>RPD</u>
Blank Duplicate 11/4	<1.0	<1.0	NA

Sincerely:

Andy Freeman
Semi Volatiles Supervisor



Hall Environmental Analysis Laboratory

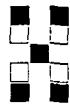
Client:
Project:
Project Manager:
Project Number:

ECD Environmental
Turner/Rodriguez
Greg Bybee

Date Collected: 10/28/98
Date Received: 10/30/98
Sample Matrix: Aqueous

Inorganic Compounds

HEAL LAB ID	Sample ID	Sodium (mg/L)	Potassium (mg/L)	Magnesium (mg/L)	Calcium (mg/L)
9810128-5	Background	36	2.7	20	70
9810128-5	Background Dup	37	-	21	72
Detection Limits		0.1	0.1	0.1	0.1
Method		300.0	300.0	300.0	300.0
Date Analyzed		11/11/98	11/11/98	11/11/98	11/11/98



Hall Environmental Analysis Laboratory

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Suite A
Albuquerque, NM 87109

11/12/98

ECD Environmental
P. O. Box 9328
Albuquerque, NM 87119

Dear Mr. Greg Bybee,

Enclosed are the results for the analyses that were requested. These were done according to EPA procedures or equivalent.

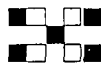
Detection limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely:

Andy Freeman
Assistant Lab Manager

Project: 9810128 - Turner/Rodriguez



Hall Environmental Analysis Laboratory

Client: ECD Environmental
Project: Turner/Rodriguez
Project Manager: Greg Bybee
Project Number:
Date Collected: 10/28/98
Date Received: 10/30/98
Sample Matrix: Aqueous
Date Extracted: NA

EPA Method - 8021

Units: PPB(ug/L)

HEAL LAB ID	Sample ID	MTBE	Benzene	Toluene	Ethyl-benzene	Total Xylenes	1,3,5-TMB	1,2,4-TMB	BFB % Recovery	Dilution Factor	Date Analyzed
9810128-1	TH Well #11st Purge	ND	ND	ND	ND	ND	ND	ND	98	1	11/2/98
9810128-2	TH Well #1	ND	ND	1.8	ND	ND	ND	ND	101	1	11/2/98
9810128-3	RH Well #11st Purge	ND	ND	ND	ND	ND	ND	ND	92	1	11/2/98
9810128-4	RH Well #1	ND	ND	1.6	ND	ND	ND	ND	95	1	11/2/98
9810128-5	Trip Blank	ND	ND	0.5	ND	ND	ND	ND	97	1	11/2/98
9810128-6	Reagent Blank	ND	ND	ND	ND	ND	ND	ND	100	1	11/2/98

MRL	2.5	0.5	0.5	0.5	0.5	0.5	0.5
-----	-----	-----	-----	-----	-----	-----	-----



Hall Environmental Analysis Laboratory

Client: ECD Environmental
Project: Turner/Rodriguez
Project Manager: Greg Bybee
Project Number:

Date Collected: 10/28/98
Date Received: 10/30/98
Sample Matrix: Aqueous
Extraction Date: 11/4/98

EPA Method - 418.1

HEAL ID	Client ID	Dilution	TPH (mg/L)	Analysis Date
9810128-2	Turner House Well #1	1	19	11/5/98
9810128-4	Rodriguez House Well	1	2.6	11/5/98
Extraction Blank	-	1	ND	11/5/98

MRL	1.0
-----	-----

QA/QC

Sample ID:
Blank Spike 11/4

Sample Amount
<1.0

Spike
5.0

Recovery
3.9

% Recovery
78

Sample ID:
Blank Dup. 11/4

Sample Amount
<1.0

Duplicate
<1.0

RPD
NA

Sincerely:

Andy Freeman
Semi Volatiles Supervisor



Hall Environmental Analysis Laboratory

Client: ECD Environmental Date Collected: 10/28/98
Project: Turner/Rodriguez Date Received: 10/30/98
Project Manager: Greg Bybee Sample Matrix: Aqueous
Project Number:

Inorganic Compounds

HEAL LAB ID	Sample ID	Fluoride (mg/L)	Chloride (mg/L)	Bromide (mg/L)	Nitrate/Nitrite (mg/L)	Sulfate (mg/L)	o-Phosphate-P (mg/L)
9810128-2	TH Well #1	1.0	94	0.9	3.6	88	ND
9810128-4	RH Well	0.8	270	2.4	3.4	130	ND
Detection Limits		0.1	0.1	0.1	0.1	0.5	0.5
Method		300.0	300.0	300.0	300.0	300.0	300.0
Date Analyzed		10/29/98	10/29/98	10/29/98	10/29/98	11/9/98	10/29/98



Hall Environmental Analysis Laboratory

Client: ECD Environmental
Project: Turner/Rodriguez
Project Manager: Greg Bybee
Project Number:

Date Collected: 10/28/98
Date Received: 10/30/98
Sample Matrix: Aqueous
Date Extracted: NA

8021 QC: 9810128-3 MS/MSD 11/2/98

<u>Compound</u>	<u>Sample Amount (ug/L)</u>	<u>Spike</u>	<u>Recovery</u>	<u>% Rec</u>	<u>Dup</u>	<u>% Dup</u>	<u>RPD</u>
MTBE	<2.5	40.0	40.0	94	40.4	101	1
Benzene	<0.5	20.0	20.1	102	20.1	101	0
Toluene	<0.5	20.0	19.8	99	20.0	100	1
Ethylbenzene	<0.5	20.0	20.0	100	20.1	101	0
Total Xylenes	<0.5	60.0	60.7	101	60.8	101	0
1,3,5-TMB	<0.5	20.0	20.8	104	21.0	105	1
1,2,4-TMB	<0.5	20.0	20.9	105	20.7	104	1



Hall Environmental Analysis Laboratory

Client:
Project:
Project Manager:
Project Number:

ECD Environmental
Turner/Rodriguez
Greg Bybee

Date Collected: 10/28/98
Date Received: 10/30/98
Sample Matrix: Aqueous

Inorganic Compounds

HEAL LAB ID	Sample ID	Sodium (mg/L)	Potassium (mg/L)	Magnesium (mg/L)	Calcium (mg/L)
9810128-2	TH Well #1	48	2.5	21	87
9810128-4	RH Well	64	3.3	40	150

Detection Limits	0.1	0.1	0.1	0.1
Method	300.0	300.0	300.0	300.0
Date Analyzed	11/11/98	11/11/98	11/11/98	11/11/98