

3R - 144

REPORTS

DATE:

1997



Certified Mail: #Z 295 387 297; #Z 295 387 296

February 27, 1998

Mr. William C. Olson
New Mexico Oil Conservation Division
2040 S. Pacheco
Santa Fe, NM 87504

RECEIVED

MAR 02 1998

Environmental Bureau
Oil Conservation Division

Re: 1997 Groundwater Annual Report

Dear Mr. Olson:

In accordance with reporting requirements, El Paso Field Services (EPFS) has enclosed annual updates for 57 groundwater impacted locations that were identified during our pit closure project of 1994/1995.

Of the 57 reports, EPFS hereby requests your approval for closure of 11 of these locations. The 11 reports for which EPFS requests closure, are in 2 separate binders entitled "Request for Closure".

After you have had an opportunity to review these updates, EPFS would like to schedule a meeting with you to discuss issues related to closure criteria for some of the more complex locations that are currently being addressed.

If you have any questions regarding this information, please call me at 505/599-2141. I will contact you within the next quarter to schedule a meeting.

Sincerely,

A handwritten signature in cursive script that reads 'Sandra D. Miller'.

Sandra D. Miller
Environmental Manager

xc: Mr. Bill Liesse, BLM w/o enclosures
Mr. Denny Foust, NMOCD - Aztec w/enclosures; **Certified Mail #Z 295 387 298; #Z 295 387 299**
Ms. Charmaine Tso, Navajo EPA w/enclosures; **Certified Mail #Z 295 387 292**

SAN JUAN BASIN PIT CLOSURES
San Juan Basin, New Mexico

El Paso Field Services Pit Project
Pit Closure Report

March 1998

Prepared For

El Paso Field Services
Farmington, New Mexico

Project 17520



EPFS GROUNDWATER PITS

1997 ANNUAL GROUNDWATER REPORT

2C-45 LINE DRIP

Meter/Line ID - LD241

SITE DETAILS

Legals - Twn: 25N	Rng: 6W	Sec: 13	Unit: P
NMOCD Hazard Ranking: 30			Land Type: FEDERAL
Operator: EL PASO FIELD SERVICES			

PREVIOUS ACTIVITIES

Site Assessment: Sep-95	Excavation: Sep-95 (170 cy)	Soil Boring: Nov-95
Monitor Well: Nov-95		

The pit was excavated to 12 feet below ground surface (bgs) and a soil sample was collected from the excavation bottom. The headspace soil reading from the excavation bottom was 418 ppm. Soil analytical were as follows: TPH - 750 mg/kg.

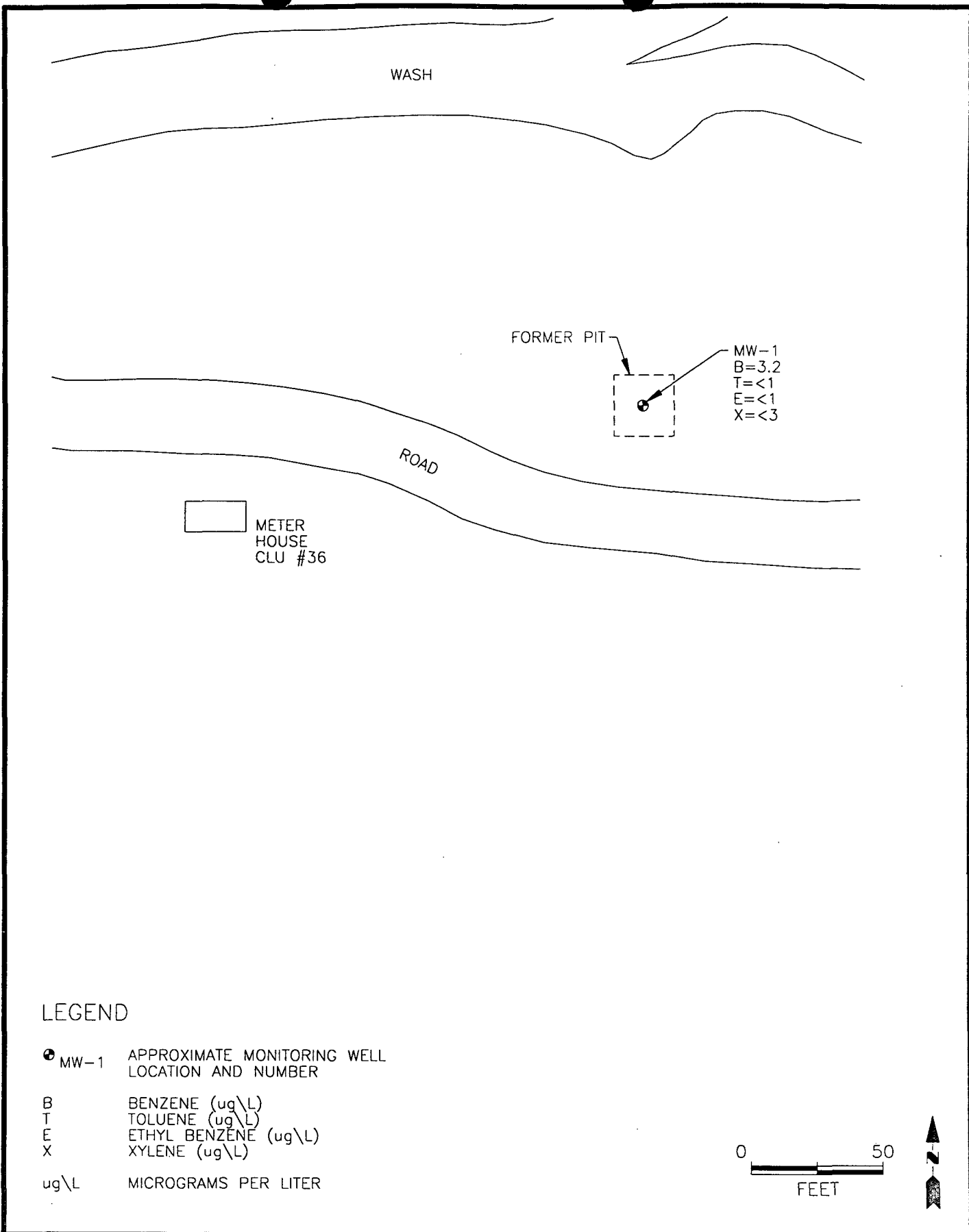
One soil boring was drilled in the center of the former pit and a monitoring well was installed. A soil sample was collected from 38-40 feet bgs. Soil analytical were as follows; benzene - <0.5 mg/kg, total BTEX - <3 mg/kg, TPH - <10 mg/kg. Quarterly groundwater monitoring was re-initiated on 4/29/97. Groundwater analytical is presented in Table 1, and a site map is presented in Figure 1.

CONCLUSIONS

Groundwater analytical data has been below standards for 4 consecutive quarters at MW-1. Minimal impact to groundwater has occurred at this site.

RECOMMENDATIONS

- EPFS requests closure at this site.
- Following OCD approval for closure, MW-1 will be abandoned following OCD approved abandonment procedures.



COL. 17520AS-001



TITLE:
2C-45 LINE DRIP
LD241

DWN: TMM	DES.: CC
CHKD: CC	APPD:
DATE: 1/14/98	REV.: 0

PROJECT NO.: 17520 EPFS GW PITS
FIGURE 1

FIELD PIT SITE ASSESSMENT FORM

GENERAL

LD 241 P132506
 Meter: N/A Location: 2C-45 Line Drip
 Operator #: N/A Operator Name: EPNG P/L District: Off to
 Coordinates: Letter: P Section 13 Township: 2 S Range: 06
 Or Latitude _____ Longitude _____
 Pit Type: Dehydrator _____ Location Drip: _____ Line Drip: X Other: _____
 Site Assessment Date: 9-12-95 Area: 06 Run: 62

SITE ASSESSMENT

NMOCD Zone: (From NMOCD Maps) Inside ☒ (1) Outside ☒ (2)
 Land Type: BLM ☒ (1) State ☐ (2) Fee ☐ (3) Indian _____

Depth to Groundwater
 Less Than 50 Feet (20 points) ☒ (1)
 50 Ft to 99 Ft (10 points) ☐ (2)
 Greater Than 100 Ft (0 points) ☐ (3)

Wellhead Protection Area :

Is it less than 1000 ft from wells, springs, or other sources of fresh water extraction? , or ; Is it less than 200 ft from a private domestic water source? ☐ (1) YES (20 points) ☒ (2) NO (0 points)

Horizontal Distance to Surface Water Body

Less Than 200 Ft (20 points) ☐ (1)
 200 Ft to 1000 Ft (10 points) ☒ (2)
 Greater Than 1000 Ft (0 points) ☐ (3)

Name of Surface Water Body Ephemeral Drain to Gonzales Canyon.

(Surface Water Body : Perennial Rivers, Major Wash, Streams, Creeks, Irrigation Canals, Ditches, Lakes, Ponds)

Distance to Nearest Ephemeral Stream ☐ (1) < 100' (Navajo Pits Only)
☐ (2) > 100'

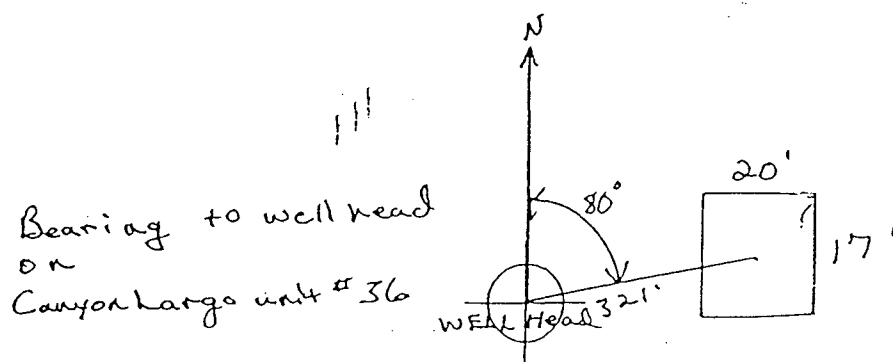
TOTAL HAZARD RANKING SCORE: 30 POINTS

Remarks : Both Topo & Redline show inside 1/2.

LD241

ORIGINAL PIT LOCATION

Original Pit : a) Degrees from North 80° Footage from Wellhead 321'
b) Length 20' Width : 17' Depth : 3'



Remarks :

photos: 4 pict 10:30

Pit has water with oil on top.

Took Bearing to Wellhead on Canyon Largo unit #36
meter #71351

Completed By:

A

EPFS Groundwater Pits
1997 Annual Groundwater Report

TABLE 1

Sample #	Meter/ Line #	Site Name	Sample Date	NW #	Project	Benzene (PPB)	Toluene (PPB)	Ethyl Benzene (PPB)	Total Xylene (PPB)	Total BTEX
960377	LD241	2C-45 Line Drip	4/29/97	1	Sample 4 - 1st Qtr (Restart)	< 1	< 1	< 1	< 3	< 6
970701	LD241	2C-45 Line Drip	7/22/97	1	Sample 4 - 2nd Qtr	= 1.56	< 1	< 1	< 3	< 2
971125	LD241	2C-45 Line Drip	10/21/97	1	Sample 4 - 3rd Qtr	= 3.2	< 1	< 1	< 3	< 3
980016	LD241	2C-45 Line Drip	1/8/98	1	Sample 4 - 4th Qtr	= 2.98	< 1	< 1	< 3	= 3

PHASE I EXCAVATION

FIELD PIT REMEDIATION/CLOSURE FORM

GENERAL

Meter: N/A Location: 20-45 line drip
 Coordinates: Letter: P Section 13 Township: 25 Range: 06
 Or Latitude _____ Longitude _____
 Date Started : 9-19-95 Run: 06 62

PIT OBSERVATIONS

Sample Number(s): BK 465
 Sample Depth: 12' Feet
 Final PID Reading 418 PPM PID Reading Depth 12' Feet
 Yes No
 Groundwater Encountered ☐ ☒ Approximate Depth _____ Feet

CLOSURE

Remediation Method :
 Excavation ☒ Approx. Cubic Yards 17000 Yd
 Onsite Bioremediation ☐
 Backfill Pit Without Excavation ☐
 Soil Disposition:
 Envirotech ☒ Tierra ☐
 Other Facility ☐ Name: _____
 Pit Closure Date: 9-19-95 Pit Closed By: Philips

REMARKS

Remarks : Arrived took fence down pit had about 1' of
water & oil on top of it dug 180 Yd out sample walls
Bottom N-wall 252 PPM S-wall 33 PPM E-wall 367 PPM W-wall
3 PPM Bottom 357 PPM Phase I FENCE: 24x21x3

Signature of Specialist: Morgan Killion

No NET
 9/28/95
 LT



CHAIN OF CUSTODY RECORD

Page 1 of 1

SUBJECT NUMBER 24324		PROJECT NAME Pit Closure Project		DATE 9-20-95	
LAB ID		DATE	TIME	MATRIX	FIELD ID
47508	9-20-95	12:00	Soil	Soil	MK465
47509	9-20-95	13:25	Soil	Soil	MK466
147510	9-20-95	13:25	Soil	Soil	MK467
147511	9-20-95	13:30	Soil	Soil	MK468

TOTAL NUMBERS OF CONTAINERS		SAMPLE TYPE		REQUESTED ANALYSIS				SEQUENCE #	
TPH	EPA 418.1	BTEX	EPA 8020	LAB PID					
X	X	X	X	720	VC	1	419	8-58 Line Dip LD242 Grav. Sh. Brown Soil Strong Hydrocarbon	
X	X	X	X	430	VG	1	420	20-15 Line Dip LD241 Black Soil Strong Hydrocarbon	
X	X	X	X	430	VC	1			
X	X	X	X	430	VC	1			

RECEIVED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	DATE/TIME
<i>Morgan Killian</i>	9-20-95 19:00	<i>Julie Dicks</i>	9/21/95 9:10
RECEIVED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	DATE/TIME
		<i>Ken B.</i>	

QUESTED TURNAROUND TIME:	ROUTINE	RUSH
	☐	☐

RESULTS & INVOICES TO:
FIELD SERVICES LABORATORY EL PASO NATURAL GAS COMPANY P.O. BOX 4990 FARMINGTON, NEW MEXICO 87499

CHARGE CODE

L NO.



FIELD SERVICES LABORATORY

ANALYTICAL REPORT

PIT CLOSURE PROJECT - Soil Samples Outside the GWV Zone

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	MK466	947509
MTR CODE SITE NAME:	LD241	2C-45 Line NA P
SAMPLE DATE TIME (Hrs):	09-20-95	1325
Project SAMPLED BY:	Phase I	N/A
DATE OF TPH EXT. ANAL.:	9-22-95	9-22-95
DATE OF BTEX EXT. ANAL.:	Not Required	Not Required
TYPE DESCRIPTION:	VG	Dark brown Sand & clay

REMARKS: (N-252)(S-33)(E-367)(W-3)

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q	M(g)	V(ml)
TPH (418.1)	750	MG/KG			2.16	28
HEADSPACE PID	430	PPM				
PERCENT SOLIDS	85	%				

-- TPH is by EPA Method 418.1 --

Narrative:

DF = Dilution Factor Used

Prepared By:

Date:

9-29-95

QUALITY CONTROL REPORT

TPH by Modified 418.1 by Infrared

Date of Analysis: September 22, 1995

12 Pit Samples

LABORATORY CONTROL SAMPLES: CALIBRATION CHECKS

SAMPLE ID	SOURCE	TRUE VALUE (PPM)	FOUND (MG/KG)	%R	ACCEPTABLE RANGE 75-125 %R YES NO
INITIAL CALIBRATION VERIF. "B" Heavy Oil (Lot M3G9616)	HORIBA	300	306	102	X

Narrative: Acceptable.

LABORATORY DUPLICATES:

SAMPLE NUMBER	TYPE	SAMPLE RESULT (S)MG/KG	DUPLICATE RESULT (D)MG/KG	RPD	ACCEPTABLE RANGE + / - 35% YES NO
947506	2nd Extract	619	572	7.9	X
947509	2nd Extract	750	856	13.2	X

Narrative : Acceptable.

LABORATORY SPIKES:

SAMPLE NUMBER	SPIKE ADDED (SA)MG/KG	SAMPLE RESULT (S)MG/KG	SPIKE SAMPLE RESULT (SR)MG/KG	%R	ACCEPTABLE RANGE 75-125 %R YES NO
947506	2800	619	3820	114	X
947509	2510	750	3860	124	X

Narrative: Acceptable.

REFERENCE SOIL (Laboratory Control Sample):

SAMPLE ID	SOURCE	KNOWN VALUE (MG/KG)	SAMPLE RESULT FOUND (MG/KG)	MFG SPECIFIED RANGE	ACCEPTABLE YES NO
ERA TPH STANDARD #1 LOT # 91030	ENVIRONMENTAL RESOURCE ASS.	2920	3110	1900 - 3360	X
ERA TPH STANDARD #2 w/int LOT # 91030	ENVIRONMENTAL RESOURCE ASS.	1150	1240	750 - 1320	X

Narrative: Acceptable.

LABORATORY REAGENT BLANK:

SAMPLE ID	SOURCE	TPH LEVEL (MG/KG)	STATUS
Freon Solvent	EPNG Lab	<10.0	ACCEPTABLE
Reagent Blank	EPNG Lab	<10.0	ACCEPTABLE

Narrative: Acceptable.

Approved By: *John Tardella*

Date: 26-Sep-95

Extracted: 09/22/95

PHASE II SOIL BORING

RECORD OF SUBSURFACE EXPLORATION

Philip Environmental Services Corp.

4000 Monroe Road

Farmington, New Mexico 87401

(505) 326-2262 FAX (505) 326-2388

Borehole #

BH-1

Well #

Page

1 of 2

Project Name

EPNG Pits

Project Number

14509

Phase

601

Project Location

2C-45 Line Strip, Nonmeter

Elevation

Borehole Location T25, R6, S13, P

GWL Depth

Logged By S. Kelly

Drilled By M. Donohue

Date/Time Started 11/2/95, 1215

Date/Time Completed 11/2/95, 1345

Well Logged By

S. Kelly

Personnel On-Site

M. Donohue, F. Rivera

Contractors On-Site

Client Personnel On-Site

Drilling Method

4 1/4" ID HSA

Air Monitoring Method

CGI, PID

Depth (Feet)	Sample Number	Sample Interval	Sample Type & Recovery (Inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: NDU			Drilling Conditions & Blow Counts
0				Backfill						
5				to 12'						
10										
15										
20	1	18-20	7 2.0	clayey SILT, dk. grey, 10-25% clay, v. loose, damp		21		231 6429		1235
25	1	23-24.5	1.51 1.5	SAND, tan, fine sand, v. loose, damp				AK 438 11/2/95 64 1702		1243
30	3	28-30	.61 2.0	silty SAND, dk. brown, 15-35% silt, Fine sand, loose, damp.				546 958		1252
35	4	33-34.5	1.01 1.51	SAND				152 2500		1259 sm. intervals of clay rich sand 2"-4" thick
40	5	38-40	1.51 2.0	clayey SAND, brown, 10-30% plastic clay, Fine sand, loose, wet.				17		1310 no headspace wet sample

Comments:

36'-40' sample (SEK 102) sent to lab (BTEX & TPH). Sample was bagged and iced prior to being put in jar. Water level 42.2'. Installed well at 52.1'.

MONITORING WELL INSTALLATION RECORD

Milip Environmental Services Corp.
4000 Marroc Road
Farmington, New Mexico 87401
(505) 326-2262 FAX (505) 326 2388

Borehole # BH-1
Well # MW-1
Page 1 of 1

Project Name EPNG Pit Drilling
Project Number 14509 Phase 600Z
Project Location ZC-45 Line Drip, No meter
On-Site Geologist S. Kelly
Personnel On-Site M. Donohue, E. Rivera
Contractors On-Site _____
Client Personnel On-Site _____

Elevation _____
Well Location T25, R6, S13 P
GWL Depth _____
Installed By M. Donohue

Date/Time Started 11/2/95, 1345
Date/Time Completed 11/2/95, 1715

Depths in Reference to Ground Surface				
Item	Material	Depth		
Top of Protective Casing			Top of Protective Casing	—
Bottom of Protective Casing			Top of Riser	<u>+2.0'</u>
Top of Permanent Borehole Casing			Ground Surface	<u>0.0</u>
Bottom of Permanent Borehole Casing				
Top of Concrete	Type I & II with 5% bentonite			
Bottom of Concrete				
Top of Grout		0.0		
Bottom of Grout		32.0		
Top of Well Riser	4" Sch. 40 PVC	+2.0		
Bottom of Well Riser		-36.7		
Top of Well Screen	4" Sch. 40 PVC .010 slot	-36.7		
Bottom of Well Screen		-51.7	Top of Seal	<u>32.0'</u>
Top of Potterite Seal	bentonite Enviroplug med.	-32.0		
Bottom of Potterite Seal	bentonite	-35.0	Top of Gravel Pack	<u>-35.0</u>
Top of Gravel Pack	10-20 CSSI sand, 12 bags	-35.0	Top of Screen	<u>-36.7</u>
Bottom of Gravel Pack		-52.1		
Top of Natural Cave-In		—		
Bottom of Natural Cave-In		—		
Top of Groundwater			Bottom of Screen	<u>-51.7'</u>
Total Depth of Borehole		-52.1	Bottom of Borehole	<u>-52.1</u>

Comments: .4' end cap - PVC

Geologist Signature

Smith Kelly

CHAIN OF CUSTODY RECORD

PROJECT NUMBER # 24324		PROJECT NAME Pit Closure Project		DATE: 11/2/95		FIELD ID		TOTAL NUMBER OF CONTAINERS		SAMPLE TYPE		REQUESTED ANALYSIS				CONTRACT LABORATORY P. O. NUMBER							
LAB ID		DATE		TIME		MATRIX						TPH EPA 418.1		BTEX EPA 8020		LAB PID		PID HS		SEQUENCE #		REMARKS	
947729		11/2/95		0930		Soil		SEK 100		1		V6		V						0		K-201 Canyon Largo Unit #26, 14049	
947730		11/2/95		1105		Soil		SEK 101		1		V6		V						459		K-58 Line Dip, Nonmeter 18'-20' L0242	
947731		11/2/95		1310		Soil		SEK 102		1		V6		V						No HS		ZC-45 Line Dip, No meter 38'-40' L0241	



FIELD SERVICES LABORATORY

ANALYTICAL REPORT

PIT CLOSURE PROJECT - Soil Samples Inside the GWV Zone

SAMPLE IDENTIFICATION

Field ID

Lab ID

SAMPLE NUMBER:

SEK102

947731

MTR CODE | SITE NAME:

LD241

2C-45 Line Drip

SAMPLE DATE | TIME (Hrs):

11-2-95

1310

PROJECT:

Phase II Drilling

DATE OF TPH EXT. | ANAL.:

11-8-95

11/6/95 m/w 7-18-96

DATE OF BTEX EXT. | ANAL.:

11/6/95

11/6/95

TYPE | DESCRIPTION:

VG

DARK BROWN CLAY

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q	M(g)	V(ml)
BENZENE	< 0.5	MG/KG				
TOLUENE	< 0.5	MG/KG				
ETHYL BENZENE	< 0.5	MG/KG				
TOTAL XYLENES	< 1.5	MG/KG				
TOTAL BTEX	< 3	MG/KG				
TPH (418.1)	410	MG/KG			1.91	25
HEADSPACE PID	na	PPM				
PERCENT SOLIDS	82.4	%				

-- TPH is by EPA Method 418.1 and BTEX is by EPA Method 8020 --

Surrogate Recovery was at
Narrative:

105%

for this sample All QA/QC was acceptable.

DF = Dilution Factor Used

Date:

11/8/95

QUALITY CONTROL REPORT
TPH by Modified 418.1 by Infrared

Date of Analysis: November 6, 1995

17 Pit Samples

LABORATORY CONTROL SAMPLES: CALIBRATION CHECKS

SAMPLE ID	SOURCE	TRUE VALUE (PPM)	FOUND (MG/KG)	%R	ACCEPTABLE RANGE 75-125 %R YES NO
INITIAL CALIBRATION VERIF. "B" Heavy Oil (Lot M3G9616)	HORIBA	300	339	113	X

Narrative: Acceptable.

LABORATORY DUPLICATES:

SAMPLE NUMBER	TYPE	SAMPLE RESULT (S)MG/KG	DUPLICATE RESULT (D)MG/KG	RPD	ACCEPTABLE RANGE + / - 35% YES NO
947732	2nd Extract	<10	<10	0.0	X
947739	2nd Extract	36	31	14.9	X

Narrative : Acceptable.

LABORATORY SPIKES:

SAMPLE NUMBER	SPIKE ADDED (SA)MG/KG	SAMPLE RESULT (S)MG/KG	SPIKE SAMPLE RESULT (SR)MG/KG	%R	ACCEPTABLE RANGE 75-125 %R YES NO
947732	1570	<10	1840	117	X
347739	1620	36	1910	116	X

Narrative: Acceptable.

REFERENCE SOIL (Laboratory Control Sample):

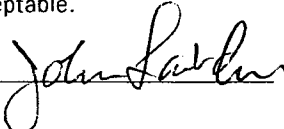
SAMPLE ID	SOURCE	KNOWN VALUE (MG/KG)	SAMPLE RESULT FOUND (MG/KG)	MFG SPECIFIED RANGE	ACCEPTABLE YES NO
ERA TPH STANDARD #1 LOT # 91030	ENVIRONMENTAL RESOURCE ASS.	2920	3100	1900 - 3360	X
ERA TPH STANDARD #2 w/int LOT # 91030	ENVIRONMENTAL RESOURCE ASS.	1150	1200	750 - 1320	X

Narrative: Acceptable.

LABORATORY REAGENT BLANK:

SAMPLE ID	SOURCE	TPH LEVEL (MG/KG)	STATUS
Freon Solvent Reagent Blank	EPNG Lab	<10.0	ACCEPTABLE
	EPNG Lab	<10.0	ACCEPTABLE

Narrative: Acceptable.

Approved By: 

Date: 9-Nov-95

Extracted: 11/06/95

EL PASO NATURAL GAS - FIELD SERVICES LAB

QUALITY CONTROL REPORT

EPA METHOD 8020 - BTEX

Samples: 947720, 947724 thru 947726, and 947728 thru 947732

QA/QC for 11/06/95 Sample Set

LABORATORY CALIBRATION CHECKS, LABORATORY CONTROL SAMPLES:

SAMPLE NUMBER	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE	
					YES	NO
ICV LA-52589 50 PPB					RANGE	
Benzene	Standard	50.0	51.4	102.8	75 - 125 %	X
Toluene	Standard	50.0	48.2	96.4	75 - 125 %	X
Ethyl benzene	Standard	50.0	47.7	95.4	75 - 125 %	X
m & p - Xylene	Standard	100	93.4	93.4	75 - 125 %	X
o - Xylene	Standard	50.0	47.4	94.8	75 - 125 %	X
LCS LA-45476 25 PPB					RANGE	
Benzene	Standard	25.0	22.3	89.2	39 - 150	X
Toluene	Standard	25.0	21.7	86.8	46 - 148	X
Ethyl benzene	Standard	25.0	22.4	89.6	32 - 160	X
m & p - Xylene	Standard	50.0	43.4	86.8	Not Given	X
o - Xylene	Standard	25.0	22.4	89.6	Not Given	X
CCV1 LA-52589 50 PPB					RANGE	
Benzene	Standard	50.0	53.8	107.6	75 - 125 %	X
Toluene	Standard	50.0	50.3	100.6	75 - 125 %	X
Ethyl benzene	Standard	50.0	49.4	98.8	75 - 125 %	X
m & p - Xylene	Standard	100	95.9	95.9	75 - 125 %	X
o - Xylene	Standard	50.0	49.3	98.6	75 - 125 %	X
CCV2 LA-52589 50 PPB					RANGE	
Benzene	Standard	50.0	54.4	108.8	75 - 125 %	X
Toluene	Standard	50.0	50.9	101.8	75 - 125 %	X
Ethyl benzene	Standard	50.0	50.1	100.2	75 - 125 %	X
m & p - Xylene	Standard	100	97.2	97.2	75 - 125 %	X
o - Xylene	Standard	50.0	49.5	99.0	75 - 125 %	X
CCV3 LA-52589 50 PPB					RANGE	
Benzene	Standard	50.0	53.1	106.2	75 - 125 %	X
Toluene	Standard	50.0	49.3	98.6	75 - 125 %	X
Ethyl benzene	Standard	50.0	48.9	97.8	75 - 125 %	X
m & p - Xylene	Standard	100	94.6	94.6	75 - 125 %	X
o - Xylene	Standard	50.0	48.7	97.4	75 - 125 %	X

Narrative: Acceptable.

LABORATORY DUPLICATES:

SAMPLE NUMBER	TYPE	SAMPLE RESULT PPM ug/L	DUPLICATE RESULT PPM ug/L	RPD	ACCEPTABLE	
					YES	NO
947724					RANGE	
Benzene	Extraction Dup	<2.5	<2.5	0	+/- 35 %	X
Toluene	Extraction Dup	<2.5	<2.5	0	+/- 35 %	X
Ethyl benzene	Extraction Dup	<2.5	<2.5	0	+/- 35 %	X
m & p - Xylene	Extraction Dup	<5.0	<5.0	0	+/- 35 %	X
o - Xylene	Extraction Dup	<2.5	<2.5	0	+/- 35 %	X

Narrative: Acceptable.

LABORATORY DUPLICATES:

SAMPLE NUMBER	TYPE	SAMPLE RESULT PPM ug/L	DUPLICATE RESULT PPM ug/L	RPD	ACCEPTABLE	
					YES	NO
NA					RANGE	
Benzene	Extraction Dup			0	+/- 35 %	NA
Toluene	Extraction Dup			0	+/- 35 %	NA
Ethyl benzene	Extraction Dup			0	+/- 35 %	NA
m & p - Xylene	Extraction Dup			0	+/- 35 %	NA
o - Xylene	Extraction Dup			0	+/- 35 %	NA

Narrative:

LABORATORY DUPLICATES:

SAMPLE NUMBER	TYPE	SAMPLE RESULT PPM ug/L	DUPLICATE RESULT PPM ug/L	RPD	ACCEPTABLE	
					YES	NO
947724					RANGE	
Benzene	Matrix Duplicate	<2.5	<2.5	0	+/- 35 %	X
Toluene	Matrix Duplicate	<2.5	<2.5	0	+/- 35 %	X
Ethyl benzene	Matrix Duplicate	<2.5	<2.5	0	+/- 35 %	X
m & p - Xylene	Matrix Duplicate	<5.0	<5.0	0	+/- 35 %	X
o - Xylene	Matrix Duplicate	<2.5	<2.5	0	+/- 35 %	X

Narrative: Acceptable.

LABORATORY DUPLICATES:

SAMPLE NUMBER	TYPE	SAMPLE RESULT PPM ug/L	DUPLICATE RESULT PPM ug/L	RPD	ACCEPTABLE	
					YES	NO
NA					RANGE	
Benzene	Matrix Duplicate			0	+/- 35 %	NA
Toluene	Matrix Duplicate			0	+/- 35 %	NA
Ethyl benzene	Matrix Duplicate			0	+/- 35 %	NA
m & p - Xylene	Matrix Duplicate			0	+/- 35 %	NA
o - Xylene	Matrix Duplicate			0	+/- 35 %	NA

Narrative:

LABORATORY SPIKES:

SAMPLE NUMBER	SPIKE ADDED PPB	SAMPLE RESULT PPB	SPIKE SAMPLE RESULT PPB	%R	ACCEPTABLE	
					YES	NO
947724	50.00				RANGE	
Benzene	50.0	<2.5	52.9	105.8	75 - 125 %	X
Toluene	50.0	<2.5	49.9	99.8	75 - 125 %	X
Ethyl benzene	50.0	<2.5	49.1	98.2	75 - 125 %	X
m & p - Xylene	100.0	<5.0	95.0	95.0	75 - 125 %	X
o - Xylene	50.0	<2.5	49.2	98.4	75 - 125 %	X

Narrative: Acceptable.

LABORATORY SPIKES:

SAMPLE NUMBER	SPIKE ADDED PPB	SAMPLE RESULT PPB	SPIKE SAMPLE RESULT PPB	%R	ACCEPTABLE	
					YES	NO
NA	50.00				RANGE	
Benzene	50.0			0.0	75 - 125 %	NA
Toluene	50.0			0.0	75 - 125 %	NA
Ethyl benzene	50.0			0.0	75 - 125 %	NA
m & p - Xylene	100.0			0.0	75 - 125 %	NA
o - Xylene	50.0			0.0	75 - 125 %	NA

Narrative:

ADDITIONAL ANALYTICAL BLANKS:

SAMPLE ID AUTO BLANK/BOILED WATER	SOURCE	PPB	STATUS
Benzene	Boiled Water	<2.5	ACCEPTABLE
Toluene	Boiled Water	<2.5	ACCEPTABLE
Ethyl benzene	Boiled Water	<2.5	ACCEPTABLE
Total Xylenes	Boiled Water	<7.5	ACCEPTABLE

Narrative: Acceptable.

SAMPLE ID SOIL VIAL BLANK	SOURCE Lot # M12151	PPB	STATUS
Benzene	Vial + Boiled Water	<2.5	ACCEPTABLE
Toluene	Vial + Boiled Water	<2.5	ACCEPTABLE
Ethyl benzene	Vial + Boiled Water	<2.5	ACCEPTABLE
Total Xylenes	Vial + Boiled Water	<7.5	ACCEPTABLE

Narrative: Acceptable.

SAMPLE ID EXTRACTION BLANK	SOURCE 1106 Ext. Blk	PPB	STATUS
Benzene	Methanol	<2.5	ACCEPTABLE
Toluene	Methanol	<2.5	ACCEPTABLE
Ethyl benzene	Methanol	<2.5	ACCEPTABLE
Total Xylenes	Methanol	<7.5	ACCEPTABLE

Narrative: Acceptable.

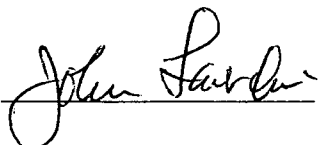
SAMPLE ID Carryover contamination checks	SOURCE	NARRATIVE (None analyzed with this set)	STATUS
Benzene	Vial + Boiled Water	<2.5	NA
Toluene	Vial + Boiled Water	<2.5	NA
Ethyl benzene	Vial + Boiled Water	<2.5	NA
Total Xylenes	Vial + Boiled Water	<7.5	NA

Narrative: Acceptable.

SAMPLE ID METHANOL CHECK	SOURCE Lot # H18318	PPB (Not analyzed with this set)	STATUS
Benzene	MeOH/Boiled Water	<2.5	ACCEPTABLE
Toluene	MeOH/Boiled Water	<2.5	ACCEPTABLE
Ethyl benzene	MeOH/Boiled Water	<2.5	ACCEPTABLE
Total Xylenes	MeOH/Boiled Water	<7.5	ACCEPTABLE

Narrative: Acceptable.

Approved By:



Date: 7-Nov-95

GROUNDWATER ANALYSIS



Natural Gas Company

CHAIN OF CUSTODY RECORD

Project No.		Project Name		Total No. of Containers		Chain of Custody Seals		Intact?		Requested Analysis		Contract Laboratory							
Samplers: (Signature)		Date		Receiving Temp. (°F)		Matrix		Sample Number		Composite or Grab		BTX		GENERAL		8 PCRA		EL PASO FIELD SERVICE CO.	
Lab ID	Date	Time	Matrix	Date		Receiving Temp. (°F)		Sample Number		Intact?		Chain of Custody Seals		Total No. of Containers		Requested Analysis		Contract Laboratory	
41996	4-19-96	1628	WATER	4-19-96		34		960377				4		4		X		770 WEST AVENUE	
41996	4-19-96	1628	WATER	4-19-96		34		960378				4		4		X		FARMINGTON N.M. 87401	
41996	4-19-96	---	WATER	4-19-96		---		---				1		1		X		TRIP BOONK	
[Diagonal line across the table]																			
Relinquished by: (Signature)		Date/Time		Received by: (Signature)		Date/Time		Relinquished by: (Signature)		Date/Time		Received by: (Signature)		Date/Time		Relinquished by: (Signature)		Date/Time	
[Signature]		4-19-96 1958		[Signature]		4-19-96 1958		[Signature]		4-19-96 1958		[Signature]		4-19-96 1958		[Signature]		4-19-96 1958	
Relinquished by: (Signature)		Date/Time		Received by: (Signature)		Date/Time		Relinquished by: (Signature)		Date/Time		Received by: (Signature)		Date/Time		Relinquished by: (Signature)		Date/Time	
[Signature]		4-19-96 1958		[Signature]		4-19-96 1958		[Signature]		4-19-96 1958		[Signature]		4-19-96 1958		[Signature]		4-19-96 1958	
Relinquished by: (Signature)		Date/Time		Received for Laboratory by: (Signature)		Date/Time		Remarks:		Date/Time		Remarks:		Date/Time		Remarks:		Date Results Reported / by: (Signature)	
[Signature]		4-19-96 1958		[Signature]		4-19-96 1958		[Signature]		4-19-96 1958		[Signature]		4-19-96 1958		[Signature]		4-19-96 1958	
Results & Invoices to:																			

EPFS

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY ANALYTICAL REPORT

SAMPLE IDENTIFICATION

SAMPLE NUMBER:	960377
METER CODE:	LD 241
SITE NAME:	Ojito Pipeline
SAMPLE SITE:	2C-45 Line Drip MW-1
SAMPLE DATE:	04/19/96
SAMPLE TIME (Hrs):	1628
SAMPLED BY:	D. Bird
DATE OF BTEX ANALYSIS:	04/22/96
SAMPLE TYPE:	Water

REMARKS:

EPA Method 8020 (BTEX) RESULTS

PARAMETER	RESULT PPB	QUALIFIER	WQCC LIMIT PPB
BENZENE	5.82	D (X2)	10
TOLUENE	31.2	D (X2)	740
ETHYL BENZENE	5.35	D (X2)	750
TOTAL XYLENES	36.3	D (X2)	620
SURROGATE % RECOVERY	91.9	Allowed Range 80 to 120 %	

NOTES:

The "D" Qualifier indicates that the reported result for this analyte is calculated based on the secondary dilution factor shown.

Reported By: [Signature]

Approved By: [Signature]

[Signature]

Date:

4/30/96

EPFS

EL PASO FIELD SERVICES

Field Services Laboratory Analytical Report

SAMPLE IDENTIFICATION

EPNG LAB ID:	960377
DATE SAMPLED:	04/19/96
TIME SAMPLED (Hrs):	1628
SAMPLED BY:	D. Bird
MATRIX:	Water
SAMPLE SITE NAME:	Ojito Pipeline
SAMPLE POINT:	2C-45 Line Drip MW-1
METER CODE:	LD 241

FIELD REMARKS:

GENERAL CHEMISTRY WATER ANALYSIS RESULTS

PARAMETER	RESULT	UNITS	DATE ANALYZED
pH	8.2	Units	04/23/96
Alkalinity as CO_3	0.0	PPM	04/23/96
Alkalinity as HCO_3	351	PPM	04/23/96
Calcium as Ca	19	PPM	04/23/96
Magnesium as Mg	2	PPM	04/23/96
Total Hardness as CaCO_3	57	PPM	04/23/96
Chloride as Cl	4	PPM	04/20/96
Sulfate as SO_4	202	PPM	04/20/96
Fluoride as F	0.3	PPM	04/23/96
Nitrate as $\text{NO}_3\text{-N}$	<0.2	PPM	04/20/96
Potassium as K	1.5	PPM	04/23/96
Sodium as Na	213	PPM	04/23/96
Total Dissolved Solids	648	PPM	04/25/96
Conductivity	920	umhos/cm	04/23/96
Anion/Cation %	1.7%	%, < 5.0 Accepted	04/26/96

Lab Remarks:

Reported By:

mh

Approved By:

John Jarch

Date:

4/30/96

EPFS

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY ANALYTICAL REPORT

SAMPLE IDENTIFICATION

SAMPLE NUMBER:	960377
LOCATION:	Ojito Pipeline
SAMPLE SITE:	2C-45 Line Drip MW-1
METER CODE:	LD241
SAMPLE DATE:	04/19/96
SAMPLE TIME (Hrs):	1628
SAMPLED BY:	D. Bird

REMARKS: _____

RESULTS

PARAMETER	TOTAL RESULT (mg/L)	N. M. WQCC LIMIT (mg/L)
ARSENIC	<0.025	0.100
BARIUM	<0.5	1.00
CADMIUM	<0.0005	0.010
CHROMIUM	0.009	0.050
LEAD	0.015 *	0.050
MERCURY	<0.00024	0.002
SELENIUM	<0.005	0.050
SILVER	<0.0004	0.050

NOTE: The sample results have been corrected for volume adjustment associated with Method 3015.

* This analyte was detected in the associated Method Blank at a concentration of 0.011 mg/L.

References:

Method 3015, Microwave Assisted Acid Digestion of Aqueous Samples and Extracts, Test Methods for Evaluating Solid Waste, SW-846, Sept., 1994.
Method 7061A, Arsenic (Atomic Absorption, Gaseous Hydride), Test Methods for Evaluating Solid Waste, SW-846, USEPA, July, 1992.
Method 7080A, Barium (Atomic Absorption, Direct Aspiration), Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept., 1994.
Method 7131, Cadmium (Atomic Absorption, Furnace Technique), Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept., 1986.
Method 7191, Chromium (Atomic Absorption, Furnace Technique), Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept., 1986.
Method 7421, Lead (Atomic Absorption, Furnace Technique), Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept., 1986.
Method 245.5, Mercury (Automated Cold Vapor Technique), Methods for the Determination of Metals in Environmental Samples, EPA 600/4-91/010, USEPA, June, 1991.
Method 7741A, Selenium (Atomic Absorption, Gaseous Hydride), Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept., 1994.
Method 7761, Silver (Atomic Absorption, Furnace Technique), Test Methods for Evaluating Solid Waste, SW-846, USEPA, July, 1992.

Reported By: mh

Approved By: John Linder

Date: 10/5/96

EPFS

EL PASO FIELD SERVICES

QUALITY CONTROL REPORT

Sample ID: 960320 to 960323, 960325 to 960327, 960330 to 960334,
960340 to 960343, 960350 to 960353, 960355 to 960356,
960370 to 960373, and 960375 to 960378, 960380 & 960386

Date Reported: 05/10/96

TOTAL METALS

LABORATORY CONTROL SAMPLE

Analyte	Found Value (µg/L)	Known Value (µg/L)	% Recovery
Arsenic	26.2	27.0	97%
Barium	309	315	98%
Cadmium	3.06	2.90	106%
Chromium	7.09	6.70	106%
Lead	35.9	39.5	91%
Mercury	1.79	1.75	102%
Selenium	36.7	31.0	118%
Silver	3.16	3.06	103%

LABORATORY CONTROL SAMPLE (2nd run)

Analyte	Found Value (µg/L)	Known Value (µg/L)	% Recovery
Arsenic	NA	NA	NA
Barium	NA	NA	NA
Cadmium	2.76	2.90	95%
Chromium	7.34	6.70	110%
Lead	35.9	39.5	91%
Mercury	1.71	1.75	98%
Selenium	NA	NA	NA
Silver	NA	NA	NA

NA: Not Applicable. A second run was not required.

John L. Ladd

Date: 10/1/96



EL PASO FIELD SERVICES

QUALITY CONTROL REPORT

TOTAL METALS, DUPLICATE ANALYSIS

SAMPLE ID: 960321

Analyte	Original Sample Result (µg/L)	Duplicate Sample Result (µg/L)	% RPD
Arsenic	ND	ND	NA
Barium	ND	ND	NA
Cadmium	ND	ND	NA
Chromium	1.65	1.61	2.5%
Lead	2.3	2.1	8.2%
Mercury	ND	ND	NA
Selenium	ND	ND	NA
Silver	ND	ND	NA

SAMPLE ID: 960343

Analyte	Original Sample Result (µg/L)	Duplicate Sample Result (µg/L)	% RPD
Arsenic	ND	ND	NA
Barium	ND	ND	NA
Cadmium	ND	ND	NA
Chromium	1.14	1.28	11.6%
Lead	2.4	2.1	11.7%
Mercury	ND	ND	NA
Selenium	ND	ND	NA
Silver	ND	ND	NA

SAMPLE ID: 960375

Analyte	Original Sample Result (µg/L)	Duplicate Sample Result (µg/L)	% RPD
Arsenic	ND	ND	NA
Barium	1.15	1.12	2.6%
Cadmium	0.56	0.55	1.8%
Chromium	29.1	29.0	0.3%
Lead	12.1	13.3	9.4%
Mercury	ND	ND	NA
Selenium	ND	ND	NA
Silver	ND	ND	NA

ND: Analyte Not Detected at stated detection level.

NA: Not Applicable.

EPFS

EL PASO FIELD SERVICES

QUALITY CONTROL REPORT

TOTAL METALS, SPIKE ANALYSIS

SAMPLE ID: 960321

Analyte	Original Sample Result (µg/L)	Spike Sample Result (µg/L)	Spike Added	Recovery Percent
Arsenic	ND	47.4	45.5	104%
Barium	236	1098	959	92%
Cadmium	ND	8.12	9.59	85%
Chromium	1.65	51.9	45.5	108%
Lead	ND	37.3	45.5	82%
Mercury	ND	1.94	2.00	97%
Selenium	ND	9.64	9.60	100%
Silver	ND	43.0	45.5	95%

SAMPLE ID: 960343

Analyte	Original Sample Result (µg/L)	Spike Sample Result (µg/L)	Spike Added	Recovery Percent
Arsenic	ND	53.7	45.5	118%
Barium	166	1102	959	99%
Cadmium	ND	9.33	9.60	96%
Chromium	1.14	39.8	45.5	85%
Lead	ND	40.0	45.5	88%
Mercury	ND	1.92	2.00	96%
Selenium	ND	10.3	9.60	108%
Silver	ND	36.0	45.5	79%

SAMPLE ID: 960375

Analyte	Original Sample Result (µg/L)	Spike Sample Result (µg/L)	Spike Added	Recovery Percent
Arsenic	8.5	55.3	45.5	105%
Barium	1036	1889	959	99%
Cadmium	0.42	11.1	9.60	112%
Chromium	29.1	59.5	45.5	73%
Lead	10.9	38.1	45.5	62%
Mercury	ND	2.03	2.00	101%
Selenium	ND	9.47	9.60	99%
Silver	ND	39.1	45.5	86%

NOTE: Spike recoveries for Cr and Pb for Sample 960375 are below acceptance criteria due to matrix interference.

Reported By: mh Approved By: [Signature]

Date: 10/5/90

EPFS

EL PASO FIELD SERVICES

QUALITY CONTROL REPORT

TOTAL METALS, METHOD BLANK ANALYSIS

04/24/96 METHOD BLANK

Analyte	Found Value (µg/L)	Detection Level (µg/L)
Arsenic	ND	25
Barium	ND	500
Cadmium	ND	0.5
Chromium	ND	1
Lead	ND	4
Mercury	ND	0.24 *
Selenium	ND	5
Silver	ND	0.4

04/25/96 METHOD BLANK

Analyte	Found Value (µg/L)	Detection Level (µg/L)
Arsenic	ND	25
Barium	ND	500
Cadmium	ND	0.5
Chromium	ND	1
Lead	11	4
Mercury	ND	0.24 *
Selenium	ND	5
Silver	ND	0.4

ND: Not Detected at stated detection level.

NA: Not Applicable.

NOTE: All detection levels except Hg are 5X MDL.

Hg detection level is based on a Practical Quantitation Level (PQL) of 10X MDL.

Handwritten signature

Date: 10/5/96

MEMORANDUM

To: John Lambdin
From: Dennis Bird
Date: May 8, 1996
Place: Laboratory Services

Subject: Ojito Pipeline Pit Monitor Well

On Friday, April 19, 1996, I went to the Ojito Pipeline and sampled the following pit monitor well. The following analytical parameters are to be performed on this groundwater sample: BTXE, 8 RCRA Metals, General Chemistry to include Nitrate as NO₃. The samples were assigned the laboratory numbers 960377 to 960378. A field duplicate was also collected on this well. The Field Service Laboratory will be performing all of the analysis.

The following information was collected on this well.

Well Name	Monitor Well#	Pipe ID	Static Level	Total Depth	Gallons Bailed	
26-317 2C-45 Line Drip	MW-1	4"	39.03'	54.89'	33.0	LD 241

All bailing and sampling was done with disposable, one time use equipment and bottles. All samples were preserved on ice immediately after collection. The static level and total depth was measured from the top of the pipe.

Should you have any question or comments, please let me know.


Dennis P. Bird

cc: Nancy Prince
Sandra Miller



A 1935

CHAIN OF CUSTODY RECORD

Project No.		Project Name		Requested Analysis		Remarks									
Samplers: (Signature)		Date: 4-29-97		Type and No. of Sample Containers											
Date	Time	Comp.	GRAB	Sample Number	Type and No. of Sample Containers										
4/29/97	1406		X	970356	B3	20-45 LBS DRIED MW-1 MC L0241									
BTX GEN TOX TCM METALS															
Relinquished by: (Signature)		Date/Time		Received by: (Signature)		Date/Time									
Relinquished by: (Signature)		Date/Time		Received by: (Signature)		Date/Time									
Relinquished by: (Signature)		Date/Time		Received by: (Signature)		Date/Time									
Relinquished by: (Signature)		Date/Time		Received by: (Signature)		Date/Time									
Carrier Co:		Carrier Pkg No.		Date Results Reported / by: (Signature)											
Air Bill No.:															



EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY ANALYTICAL REPORT



5-9-97

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	970356
MTR CODE SITE NAME:	LD241	2C-45 #1 Line Drip MW-1
SAMPLE DATE TIME (Hrs):	4/29/97	1406
PROJECT:	Sample 4	2nd Quarter (Bestover)
DATE OF BTEX EXT. ANAL.:	4/30/97	4/30/97
TYPE DESCRIPTION:	Monitor Well	Water

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	<1.0	PPB				
TOLUENE	<1.0	PPB				
ETHYL BENZENE	<1.0	PPB				
TOTAL XYLENES	<3.0	PPB				
TOTAL BTEX	<6.0	PPB				

The Surrogate Recovery was at 83.5 % for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative:

Approved By:

John L. Ladd

Date:

5/6/97



5.9-97

Field Services Laboratory

Analytical Report

SAMPLE IDENTIFICATION

EPFS LAB ID:	970356
DATE SAMPLED:	04/29/97
TIME SAMPLED (Hrs):	1406
SAMPLED BY:	D. Bird
MATRIX:	Water
METER CODE:	LD241
SAMPLE SITE NAME:	Ojito Pipeline
SAMPLE POINT:	2C-45 #1 MW-1

FIELD REMARKS:

GENERAL CHEMISTRY WATER ANALYSIS RESULTS

PARAMETER	RESULT	UNITS	DATE ANALYZED
Laboratory pH	8.0	Units	04/30/97
Alkalinity as CO_3	0	PPM	04/30/97
Alkalinity as HCO_3	340	PPM	04/30/97
Calcium as Ca	18	PPM	04/30/97
Magnesium as Mg	1	PPM	04/30/97
Total Hardness as CaCO_3	48	PPM	04/30/97
Chloride as Cl	4	PPM	04/30/97
Sulfate as SO_4	201	PPM	04/30/97
Fluoride as F	0.8	PPM	04/30/97
Nitrate as $\text{NO}_3\text{-N}$	<0.1	PPM	04/30/97
Nitrite as $\text{NO}_2\text{-N}$	<0.1	PPM	04/30/97
Ammonium as NH_4^+	<0.3	PPM	04/30/97
Phosphate as PO_4	<0.1	PPM	04/30/97
Potassium as K	1.0	PPM	04/30/97
Sodium as Na	214	PPM	04/30/97
Total Dissolved Solids	646	PPM	04/30/97
Calculated TDS	607	PPM	04/30/97
Conductivity	948	umhos/cm	04/30/97
Anion/Cation %	1.8%	%, <5.0 Accepted	05/01/97

Lab Remarks:

1.0 1.0

1.0 1.0



Well Number MW-1
Meter Code LD241

Site Name 2C-45 LINE DRIP

Development Criteria

- ☒ 3 to 5 Casing Volumes of Water Removal
☐ Stabilization of Indicator Parameters
☐ Other

Methods of Development

- | | | | |
|--------------------------|-------------|-------------------------------------|--------------------------|
| ☐ | Pump | ☐ | Bailer |
| ☐ | Centrifugal | ☒ | Bottom Valve |
| ☐ | Submersible | ☐ | Double Check Valve |
| ☐ | Peristaltic | ☐ | Stainless-steel Kemmerer |

Water Volume Calculation

Initial Depth of Well (feet) 54.89
Initial Depth to Water (feet) 39.18
Height of Water Column in Well (feet) 15.71

Diameter (Inches): Well 4 Gravel Pack

Item	Water Volume in Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing		10.4	31.2
Gravel Pack			
Drilling Fluids			
Total			

Instruments

- ☒ pH Meter
☐ DO Monitor
☒ Conductivity Meter
☒ Temperature Meter
☒ Other D.O.C.

Water Disposal

DATE 2107

Water Removal Data

[illegible]

Comments

Comments _____

Developer's Signature Dennis Bird

Date 4-29-97

Reviewer:

John F. Kennedy

Date:

5/6/97



QUALITY CONTROL REPORT
EPA METHOD 8020 - BTEX

Samples: 970349 thru 970356

QA/QC for 04/30/97 Sample S

LABORATORY CALIBRATION CHECKS / LABORATORY CONTROL SAMPLES:

SAMPLE NUMBER ICV LA-57725 50 PPB	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE	
					YES	NO
					RANGE	
Benzene	Standard	50.0	47.0	94.0	75 - 125 %	X
Toluene	Standard	50.0	46.4	92.8	75 - 125 %	X
Ethylbenzene	Standard	50.0	47.2	94.4	75 - 125 %	X
m & p - Xylene	Standard	100	94.6	94.6	75 - 125 %	X
o - Xylene	Standard	50.0	47.8	95.6	75 - 125 %	X
SAMPLE NUMBER LCS LA-47496 25 PPB	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE	
					YES	NO
					RANGE	
Benzene	Standard	25.0	24.4	97.6	39 - 150	X
Toluene	Standard	25.0	23.4	93.6	46 - 148	X
Ethylbenzene	Standard	25.0	23.6	94.4	32 - 160	X
m & p - Xylene	Standard	50.0	47.2	94.4	Not Given	X
o - Xylene	Standard	25.0	23.7	94.8	Not Given	X
SAMPLE NUMBER ICV LA-57725 50 PPB	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE	
					YES	NO
					RANGE	
Benzene	Standard	50.0	44.7	89.4	75 - 125 %	X
Toluene	Standard	50.0	44.0	88.0	75 - 125 %	X
Ethylbenzene	Standard	50.0	43.4	86.8	75 - 125 %	X
m & p - Xylene	Standard	100	86.9	86.9	75 - 125 %	X
o - Xylene	Standard	50.0	43.9	87.8	75 - 125 %	X
SAMPLE NUMBER ICV LA-57725 50 PPB	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE	
					YES	NO
					RANGE	
Benzene	Standard	50.0	41.8	83.6	75 - 125 %	X
Toluene	Standard	50.0	40.8	81.6	75 - 125 %	X
Ethylbenzene	Standard	50.0	40.3	80.6	75 - 125 %	X
m & p - Xylene	Standard	100	80.6	80.6	75 - 125 %	X
o - Xylene	Standard	50.0	40.6	81.2	75 - 125 %	X

Narrative: Acceptable.

EL PASO FIELD SERVICES LAB
 QUALITY CONTROL REPORT
 EPA METHOD 8020 - BTEX
 Samples: 970349 thru 970356

LABORATORY DUPLICATES:

SAMPLE ID	TYPE	SAMPLE RESULT PPB	DUPLICATE RESULT PPB	RPD	ACCEPTABLE	
					YES	NO
970350					RANGE	
Benzene	Matrix Duplicate	<1.0	<1.0	0.00	+/- 20 %	X
Toluene	Matrix Duplicate	<1.0	<1.0	0.00	+/- 20 %	X
Ethylbenzene	Matrix Duplicate	<1.0	<1.0	0.00	+/- 20 %	X
m & p - Xylene	Matrix Duplicate	<2.0	<2.0	0.00	+/- 20 %	X
o - Xylene	Matrix Duplicate	<1.0	<1.0	0.00	+/- 20 %	X

Narrative: Acceptable.

LABORATORY SPIKES:

SAMPLE ID	SPIKE ADDED PPB	SAMPLE RESULT PPB	SPIKE SAMPLE RESULT PPB	%R	ACCEPTABLE	
					YES	NO
2nd Analysis 970350					RANGE	
Benzene	50	<1.0	45.8	91.6	75 - 125 %	X
Toluene	50	<1.0	45.4	90.8	75 - 125 %	X
Ethylbenzene	50	<1.0	44.3	88.6	75 - 125 %	X
m & p - Xylene	100	<2.0	87.4	87.4	75 - 125 %	X
o - Xylene	50	<1.0	43.2	86.4	75 - 125 %	X

Narrative: Acceptable

ADDITIONAL ANALYTICAL BLANKS:

AUTO BLANK	SOURCE	PPB	STATUS
Benzene	Boiled Water	<1.0	ACCEPTABLE
Toluene	Boiled Water	<1.0	ACCEPTABLE
Ethylbenzene	Boiled Water	<1.0	ACCEPTABLE
Total Xylenes	Boiled Water	<3.0	ACCEPTABLE

Narrative: Acceptable.

SOIL VIAL BLANK	SOURCE	PPB (Analyzed with this set)	STATUS
Benzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Toluene	Vial + Boiled Water	<1.0	ACCEPTABLE
Ethylbenzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Total Xylenes	Vial + Boiled Water	<3.0	ACCEPTABLE

Narrative: Acceptable.

CONTAMINATION CARRYOVER CHECK	SOURCE	PPB (None analyzed with this set)	STATUS
Benzene	Vial + Boiled Water	<1.0	NA
Toluene	Vial + Boiled Water	<1.0	NA
Ethylbenzene	Vial + Boiled Water	<1.0	NA
Total Xylenes	Vial + Boiled Water	<3.0	NA

Narrative: Acceptable.

[Handwritten signature]



Natural Gas Company

CHAIN OF CUSTODY RECORD

A 2034

[illegible]



EL PASO FIELD SERVICES



8/7/97

FIELD SERVICES LABORATORY

ANALYTICAL REPORT

PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	970701
MTR CODE SITE NAME:	LD241	2C-45 Line Drip MW-1
SAMPLE DATE TIME (Hrs):	7/22/97	1549
PROJECT:	Sample 4 - 2nd Quarter	
DATE OF BTEX EXT. ANAL.:	7/23/97	7/23/97
TYPE DESCRIPTION:	Monitor Well	Water

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	1.56	PPB				
TOLUENE	< 1	PPB				
ETHYL BENZENE	< 1	PPB				
TOTAL XYLENES	< 3	PPB				
TOTAL BTEX	1.56	PPB				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 91.1 for this sample All QA/QC was acceptable.

DF = Dilution Factor Used

Narrative:

Approved By:

John Latch

Date:

7/31/97



7/31/97

CHAIN OF CUSTODY RECORD

[illegible]



FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	971125
MTR CODE SITE NAME:	LD241	2C-45 Line Drip
SAMPLE DATE TIME (Hrs):	10/21/97	1518
PROJECT:	Sample 4 3rd Quarter	
DATE OF BTEX EXT. ANAL.:	10/23/97	10/23/97
TYPE DESCRIPTION:	MW-1	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	3.20	PPB				
TOLUENE	<1	PPB				
ETHYL BENZENE	<1	PPB				
TOTAL XYLENES	<3	PPB				
TOTAL BTEX	3	PPB				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 90.9 % for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative: _____

Approved By: John L. Linder

Date: 11-3-97

971125BTEXMW,10/27/97

Well Development and Purging Data

Name 2C-45 LINE DRIP

☐ Development
☒ Purging

Well Number MW-1

Meter Code LO241

Development Criteria

- ☒ 3 to 5 Casing Volumes of Water Removal
☐ Stabilization of Indicator Parameters
☐ Other _____

Methods of Development

- ☐ Pump
 ☐ Centrifugal ☒ Bottom Valve
 ☐ Submersible ☐ Double Check Valve
 ☐ Peristaltic ☐ Stainless-steel Kemmerer

Water Volume Calculation

Initial Depth of Well (feet) 54.89
Initial Depth to Water (feet) 39.34
Height of Water Column in Well (feet) 15.55

Diameter (inches): Well 4 Gravel Pack _____

Item	Water Volume in Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing		<u>10.3</u>	<u>30.8</u>
Gravel Pack			
Drilling Fluids			
Total			

Instruments

- ☒ pH Meter
☐ DO Monitor
☒ Conductivity Meter
☒ Temperature Meter
☒ Other DO CHEMISTS KIT

Water Disposal

KOT2 SEPARATOR

Water Removal Data

Date	Time	Development Method		Intake Depth (feet)	Removal Rate (gal/min)	Ending Water Depth (feet)	Water Volume Removed (gal)		Product Volume Removed (gallons)		Temperature °C	pH	Conductivity µmho/cm	Dissolved Oxygen mg/L	Comments
		Pump	Bailer				Increment	Cumulative	Increment	Cumulative					
2-97	1424										15.0	7.05	920		
2-97	1431						5.0	5.0			14.4	7.32	959		
2-97	1438						5.0	10.0			13.9	7.34	1023		
2-97	1447						5.0	15.0			14.1	7.33	1039		
2-97	1454						5.0	20.0			14.2	7.34	1034		
2-97	1503						5.0	25.0			14.0	7.42	1038		
2-97	1511						5.0	30.0			14.0	7.38	1064	1.5	

Instruments _____

Operator's Signature Dennis Bird

Date 10-21-97

Reviewer _____

John Fells

Date 11-3-97



A 2181

CHAIN OF CUSTODY RECORD

Project No.	Project Name	Requested Analysis		Type and No. of Sample Containers	Preservation Technique	Remarks
MC # LD244						
Date: 1-8-98						
Samplers: (Signature) Dennis Bied						
MATRIX	Date	Time	Comp.	GRAB	Sample Number	
WATER	1-8-98	1447	X		980016	
2C-45 LINE DRIP MW-1						
[Diagonal line across the rest of the table]						
Relinquished by: (Signature) Dennis Bied Date/Time 1-8-98 1745 Received by: (Signature) _____ Date/Time _____						
Relinquished by: (Signature) _____ Date/Time _____ Received by: (Signature) _____ Date/Time _____						
Relinquished by: (Signature) _____ Date/Time _____ Received by: (Signature) _____ Date/Time _____						
Relinquished by: (Signature) _____ Date/Time _____ Received by: (Signature) _____ Date/Time _____						
Carrier Co: _____ Carrier Phone No. _____						
Remarks: 1/12/98 0745						
Date Results Reported / by: (Signature) _____						



FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	980016
MTR CODE SITE NAME:	LD241	2C-45 Line Drip
SAMPLE DATE TIME (Hrs):	1/8/98	1447
PROJECT:	Sample 4 4th Quarter	
DATE OF BTEX EXT. ANAL.:	1/12/98	1/12/98
TYPE DESCRIPTION:	MW-1	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	2.98	PPB				
TOLUENE	<1	PPB				
ETHYL BENZENE	<1	PPB				
TOTAL XYLENES	<3	PPB				
TOTAL BTEX	3	PPB				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 101.7 % for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative: _____

Approved By: _____

John L. Linder

Date: _____

1/21/98

980016BTEXMonitorWell, 1/16/98



Well Development and Purging Data

Well Number WV-1
Meter Code LD241

Site Name 7C-45 LINE DRIP

Development Criteria

- | | |
|-------------------------------------|--|
| ☒ | 3 to 5 Casing Volumes of Water Removal |
| ☐ | Stabilization of Indicator Parameters |
| ☐ | Other _____ |

Methods of Development

- | Pump | Bailer |
|--------------------------------------|---|
| ☐ Centrifugal | ☒ Bottom Valve |
| ☐ Submersible | ☐ Double Check Valve |
| ☐ Peristaltic | ☐ Stainless-steel Kemmerer |

Water Volume Calculation

Initial Depth of Well (feet) 54.89
Initial Depth to Water (feet) 39.31
Height of Water Column in Well (feet) 15.58

Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing		10.3	30.9
Gravel Pack			
Drilling Fluids			
Total			

Instruments

- ☒ pH Meter
☐ DO Monitor
☒ Conductivity Meter
☒ Temperature Meter
☒ Other D.O.C

Water Disposal

KUTZ SEPAPATOP

Water Removal Data

[illegible]

Comments_

Vernie Bird

Date 1-8-98

Reviewer _____

Date 1/21/98