3R - 212

REPORTS

DATE:
1998-1997

EL PASO
FIELD SERVICES

Certified Mail: #Z 211 324 121

March 31, 1999

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

RE: 1998 Pit Project Annual Groundwater Report

Dear Mr. Olson:

In accordance with reporting requirements, El Paso Field Services (EPFS) has enclosed annual updates for the 49 remaining groundwater impacted locations that were identified during our pit closure project of 1994 / 1995.

Of the 49 reports, EPFS hereby requests closure of 18 of these locations. The 18 sites EPFS is requesting closure on are presented in 4 separate binders entitled "Final Closure Report for Groundwater Sites with Four Consecutive Quarters Below Standards".

The Jaquez Com. C #1 and Jaquez Com. E #1 site is included in a separate report which is entitled "Jaquez Com. C #1 and Jaquez Com. E #1 Annual Report for Soil and Groundwater Remediation".

If you have any questions concerning the enclosed reports or closure requests, please call me at (505) 599-2124.

Sincerely,

Scott T. Pope P.G.
Senior Environmental Scientist

xc: Mr. Denny Foust, NMOCD, Aztec - w / enclosures; **Certified Mail # Z 211 324 122**
Mr. Bill Liesse, BLM – w / enclosures; **Certified Mail # Z 211 324 123**
Ms. Charmaine Tso, Navajo EPA – w / enclosures; **Certified Mail # Z 211 324 120**

EPFS GROUNDWATER PITS
1998 ANNUAL GROUNDWATER REPORT

RECEIVED
APR 05 1999
ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

LAT L-40 LINE DRIP
Meter/Line ID - LD174

SITE DETAILS

Legals - Twn: 28N **Rng:** 4W **Sec:** 13 **Unit:** H
NMOCD Hazard Ranking: 20 **Land Type:** FEDERAL
Operator: EL PASO FIELD SERVICES

PREVIOUS ACTIVITIES

Site Assessment: Feb-95 **Test Excavation:** Mar-95 **Soil Boring:** Sep-95
Monitor Well: Sep-95

1998 ACTIVITIES

Phase Separated Hydrocarbon (PSH) Removal - PSH removal from MW-1 was initiated on January 8, 1998. Groundwater level data and PSH recovery data are presented in Table 2. A site map is presented as Figure 1.

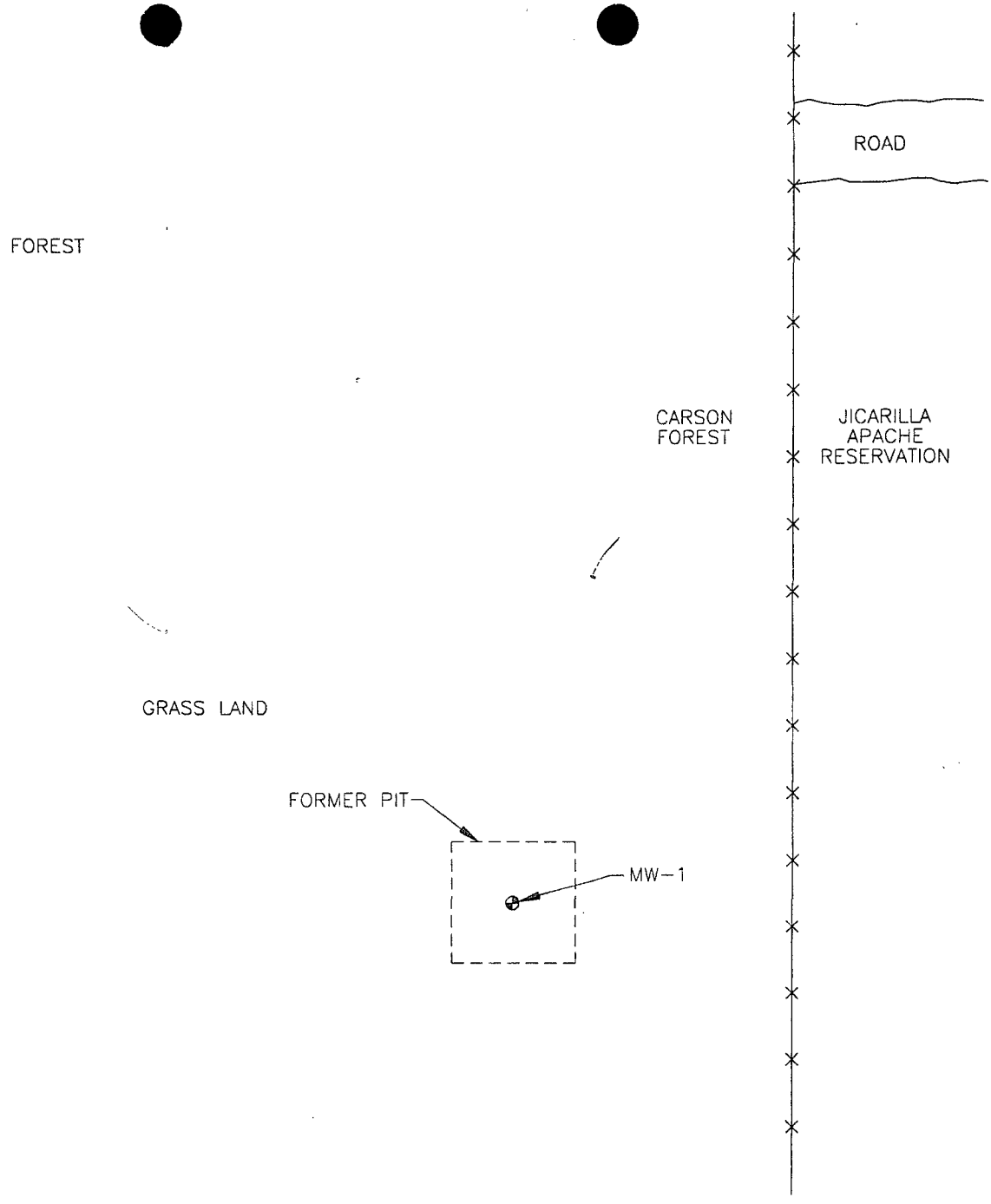
CONCLUSIONS

A total of 7.35 gallons of PSH have been recovered from MW-1 and removed from the site to date. All PSH has been disposed of at the EPFS Kutz Separator in Bloomfield, NM. Groundwater gradient has not yet been determined at this site.

Pertinent data from the 1997 groundwater report includes the following: Quarterly groundwater samples have been over standards since sampling was initiated. In addition, product has been measured in MW-1.

RECOMMENDATIONS

- Obtain access to the site with a drill rig, install temporary groundwater monitoring wells, and define plume.
- Determine groundwater gradient and collect groundwater samples up and down-gradient of MW-1.
- Following removal of product, sample annually until BTEX levels are below New Mexico Groundwater Standards, then sample quarterly for closure.



LEGEND

MW-1 APPROXIMATE MONITORING WELL LOCATION AND NUMBER

NOT TO SCALE

N

PHILIP SERVICES CORP

TITLE:
LAT L-40 LINE DRIP
LD174
12/14/98

DWN:	DES.:	PROJECT NO.: 17520
TMM	CC	EPFS GW PITS
CHKD:	APPD:	
CC		
DATE:	REV.:	FIGURE 1
2/18/99	0	

COL. 17520AH-002

EPFS Groundwater Pits
1998 Annual Groundwater Report

TABLE 2

Meter/Line #	Location/Line Name	Date	MW	Depth to Product	Depth to Water	Product Thickness	Volume Removed	Cumulative
LD174	Lat. L-40 Line Drip	01/08/98	1	37.72	38.17	0.45	0.25	0.00
LD174	Lat. L-40 Line Drip	06/15/98	1	37.29	39.22	1.93	1.25	1.25
LD174	Lat. L-40 Line Drip	06/08/99	1	37.09	39.61	2.52	1.25	2.50
LD174	Lat. L-40 Line Drip	06/09/99	1	35.86	39.17	3.31	0.00	2.50
LD174	Lat. L-40 Line Drip	10/01/98	1	37.31	38.97	1.61	1.25	3.75
LD174	Lat. L-40 Line Drip	10/07/98	1	37.09	38.43	1.44	1.25	5.00
LD174	Lat. L-40 Line Drip	10/13/98	1	37.64	38.03	0.39	1.25	6.25
LD174	Lat. L-40 Line Drip	11/19/98	1	38.11	37.84	0.27	0.50	6.75
LD174	Lat. L-40 Line Drip	12/03/98	1	37.68	38.94	1.26	0.50	7.25
LD174	Lat. L-40 Line Drip	12/14/98	1	37.66	38.13	0.47	0.10	7.35

EL PASO ENERGY

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

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,

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 Groundwater Report
Annual Report

March 1998

Prepared For

El Paso Field Services
Farmington, New Mexico

Project 17520

PHILIP ENVIRONMENTAL

LAT L-40 LINE DRIP
Meter/Line ID - LD174

SITE DETAILS

Legals - Twn: 28N **Rng:** 4W **Sec:** 13 **Unit:** H
NMOCD Hazard Ranking: 20 **Land Type:** FEDERAL
Operator: EL PASO FIELD SERVICES

PREVIOUS ACTIVITIES

Site Assessment: Feb-95 **Test Excavation:** Mar-95 **Soil Boring:** Sep-95
Monitor Well: Sep-95

1997 ACTIVITIES

Quarterly Groundwater Monitoring - Quarterly groundwater monitoring was initiated on 11/11/96 and has continued into 1997. Groundwater analytical data is presented in Table 1.

On 8/19/97 0.18 feet of product was measured in MW-1.

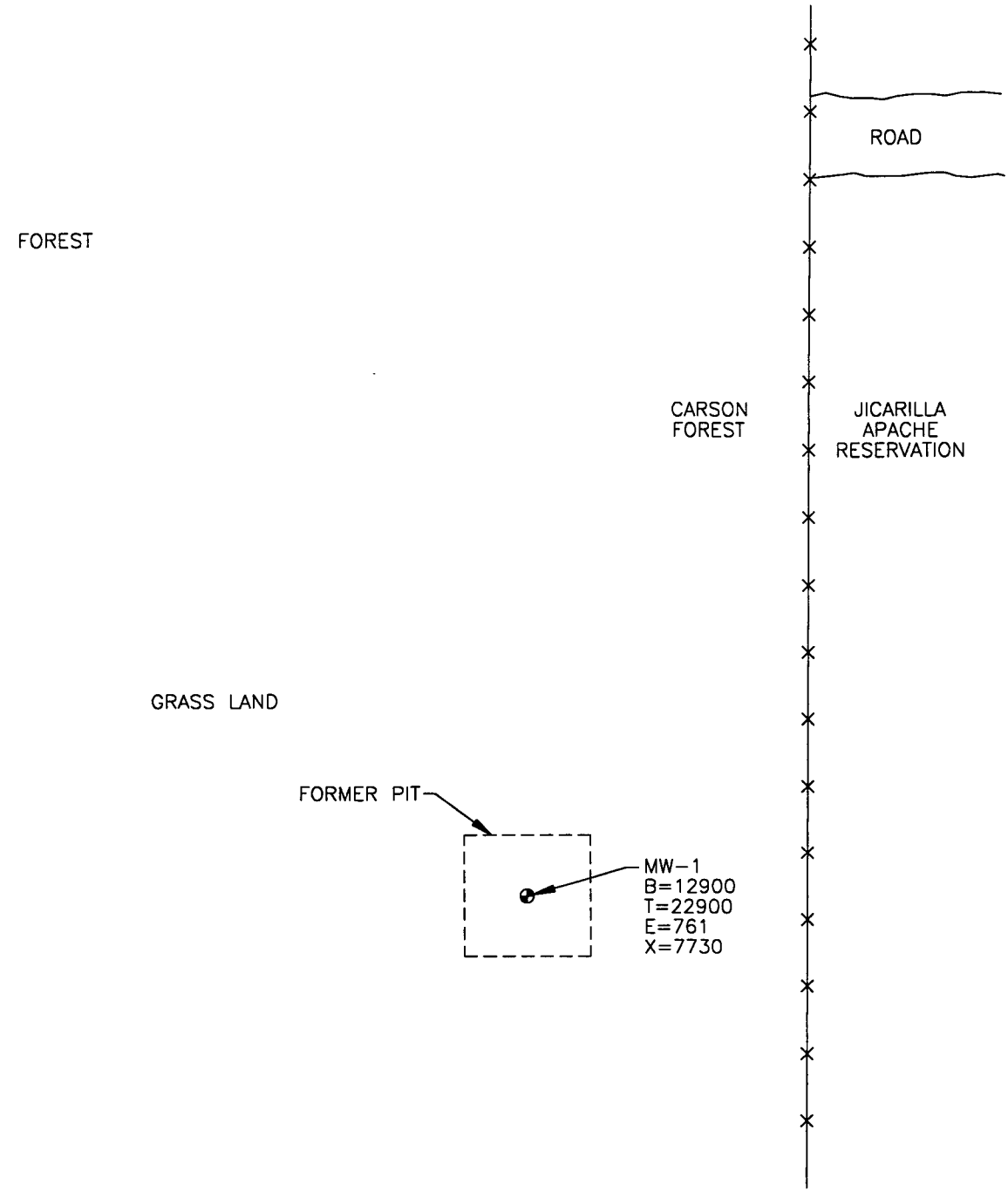
Further site investigation was scheduled for 1997, however access to the site with the drill rig has been impeded due to a berm constructed at the end of the road.

CONCLUSIONS

Quarterly groundwater samples have been over standards since sampling was initiated. In addition, product has been measured in MW-1. Groundwater gradient has not yet been determined at this site.

RECOMMENDATIONS

- Obtain access to the site with a drill rig, install temporary groundwater monitoring wells, and define plume.
- Determine groundwater gradient and collect groundwater samples up and down gradient of MW-1.
- Initiate product removal in MW-1.
- Discontinue sampling at MW-1 until product removal is complete.



LEGEND

⊕ MW-1	APPROXIMATE MONITORING WELL LOCATION AND NUMBER
B	BENZENE (ug\L)
T	TOLUENE (ug\L)
E	ETHYL BENZENE (ug\L)
X	XYLENE (ug\L)
ug\L	MICROGRAMS PER LITER

NOT TO SCALE

PHILIP SERVICES CORP.

TITLE:
LAT L-40 LINE DRIP
LD174

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

PROJECT NO.: 17520
EPFS GW PITS

FIGURE 1

COL. 17520AH-001

TABLE 1

Sample #	Meter/ Line #	Site Name	Sample Date	MW #	Project	Benzene (PPB)	Toluene (PPB)	Ethyl Benzene (PPB)	Total Xylenes (PPB)	Total BTEX
960936	LD174	Lat L-40 Line Drip	11/11/96	1	Sample 4 - 1st Quarter	= 12000	= 20400	= 612	= 6075	= 39087
970224	LD174	Lat L-40 Line Drip	3/31/97	1	Sample 4 - 2nd Quarter	= 11100	= 24700	= 702	= 7440	= 43942
970426	LD174	Lat L-40 Line Drip	5/9/97	1	Sample 4 - 3rd Quarter	= 12900	= 22900	= 761	= 7730	= 44300

10-62 Bloomfield

RECORD OF SUBSURFACE EXPLORATION

Borehole # BH-1
Well #
Page 1 of 2

PHILIP ENVIRONMENTAL
4000 Monroe Road
Farmington, New Mexico 87401
(505) 326-2262 FAX (505) 326-2388

Project Name EPNG Pits
Project Number 14509 Phase 6000.77
Project Location LAT L-40 LINE DRIP

Elevation
Borehole Location T28, S13, R 4, H
GWL Depth
Logged By Jeff W. Kindley
Drilled By S. Sneider
Date/Time Started 09/19/95 1510
Date/Time Completed 09/20/95 1230

Well Logged By Jeff W. Kindley
Personnel On-Site S. Sneider, D. Roberts, D. Charley
Contractors On-Site
Client Personnel On-Site

Drilling Method 4 1/4 ID HSA
Air Monitoring Method PID, CGI

Depth (Feet)	Sample Number	Sample Interval	Sample Type & Recovery (inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: PPM BZ	BH	S	Drilling Conditions & Blow Counts
0				Backfill material to 12 feet.						
15	1	15-17	18/2.0	SW, BR/BL SAND, medium grained, medium dense, dry, hydrocarbon odor					78/74	1545 30 blows per Foot
20	2	20-22	14/2.0	SW, Yellow/Tan SAND, coarse grained, dry, dense, hydrocarbon odor					77/68	1550 34 blows per Foot
25	3	25-27	14/2.0	SW, yellow/tan sand, coarse-grained, dry medium dense, hydrocarbon odor					90/74	1600 28 blows per Foot
30	4	30-32	18/2.0	SC, yellow/tan clayey Sand (20% clay), coarse-grained, dry, dense, hydrocarbon odor.					75/79	1614 96 blows per Foot
35	5	35-37	16/2.0	S.A.A.					72/65	1622 79 blows per Foot
40										

Comments:

Geologist Signature

RECORD OF SUBSURFACE EXPLORATION

Borehole # BH-1
Well #
Page 2 of 2

PHILIP ENVIRONMENTAL
4000 Monroe Road
Farmington, New Mexico 87401
(505) 326-2262 FAX (505) 326-2388

Project Name EPNG Pits
Project Number 14509 Phase 6000.77
Project Location LAT L-40 LINE DRIP

Elevation
Borehole Location T28, S 13, R4, H
GWL Depth
Logged By Jeff W. Kindley
Drilled By S. Sneiden
Date/Time Started 09/19/95 1510
Date/Time Completed 09/20/95 1230

Well Logged By Jeff W. Kindley
Personnel On-Site S. Sneider, D. Roberts, D. Charley
Contractors On-Site
Client Personnel On-Site

Drilling Method 4 1/4 ID HSA
Air Monitoring Method PID, CGI

Depth (Feet)	Sample Number	Sample Interval	Sample Type & Recovery (inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: PPM BZ	BH	S	Drilling Conditions & Blow Counts
40	6	40-42	1/2.0	S.A.A.						16 32 53 blows per Foot ∘ GROUNDWATER AT 40'
45										
50				SAA Boring terminated at 50 feet.						
15										
20										
25										
30										
35										
40										

Comments: Monitoring well installed to 50 feet. Sample collected at 35 to 37 feet (JWK 76). Sample analyzed for BTEX and TPH. Samples from 40 to 50 are from drill cuttings

Geologist Signature D. Jeff Kindley

MONITORING WELL INSTALLATION RECORD

Philip Environmental Services Corp.
4000 Monroe Road
Farmington, New Mexico 87401
(606) 326-2262 FAX (606) 326-2388

Borehole # _____
Well # _____
Page 1 of 1

Project Name EPNG DRIP PITS
Project Number 14509 Phase 6000-77
Project Location Lat L-40

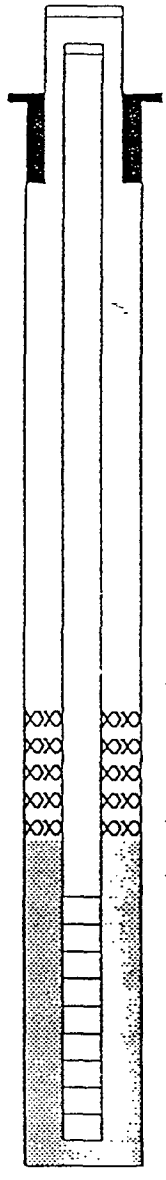
Elevation _____
Well Location T28, S13, R9, H
GWL Depth _____
Installed By Steve Sneider

Date/Time Started 09/19/95 1510
Date/Time Completed 09/20/95 1230

On-Site Geologist Jeff Kindley
Personnel On-Site _____
Contractors On-Site _____
Client Personnel On-Site _____

Depths in Reference to Ground Surface

Item	Material	Depth
Top of Protective Casing		
Bottom of Protective Casing		
Top of Permanent Borehole Casing		
Bottom of Permanent Borehole Casing		
Top of Concrete		
Bottom of Concrete		
Top of Grout	Cement Slurry	5.0
Bottom of Grout	Cement Slurry	30.0
Top of Well Riser	4 inch schedule 40 PVC	+2.5
Bottom of Well Riser	"	35.2
Top of Well Screen	4 inch schedule 40 PVC .010	35.2
Bottom of Well Screen	inch screen.	50.2
Top of Peltonite Seal	Enviroplug	30.0
Bottom of Peltonite Seal	"	32.0
Top of Gravel Pack	CSSI 10/20 silica	32.0
Bottom of Gravel Pack	Sand	50.2
Top of Natural Cave-In		50.2
Bottom of Natural Cave-In		50.5
Top of Groundwater		40.0
Total Depth of Borehole		50.5



Top of Protective Casing _____
Top of Riser +2.5
Ground Surface 0

Top of Seal 30.0

Top of Gravel Pack 32.0

Top of Screen 35.2

Bottom of Screen 50.2
Bottom of Borehole 50.5

Comments: _____

Geologist Signature Jeffrey Kindley

1997 GROUNDWATER ANALYTICAL

El Paso Natural Gas Company

CHAIN OF CUSTODY RECORD

A 2677

Project No.:

Project Name: BLOOMFIELD PIPELINE

Samplers: (Signature) [signature] Date: 11-11-96

Matrix	Date	Time	Comp.	GRAB	Sample Number	Type and No. of Sample Containers	Preservation Technique	BTXE	General Chemistry	RCRA Metals		Remarks
WATER	11-11-96	1200		X	960936	G2 G2	4°C	X	X	X		LAT. L-40 LINE ORIGINAL [illegible] LOTH
WATER	11-11-96	—		X	—	G2	4°C	X				TRIP BLANK

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[signature]	11-11-96 1635				

Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks:
		[signature]	11/12/96 0700	

Carrier Co:

Air Bill No.:

Carrier Phone No.

Date Results Reported / by: (Signature)

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	960936
MTR CODE | SITE NAME:	LD174	Lat L-40 Line Drip MW-1
SAMPLE DATE | TIME (Hrs):	11/11/96	1242
PROJECT:	Sample 4 - 1st Quarter	
DATE OF BTEX EXT. | ANAL.:	11/14/96	11/14/96
TYPE | DESCRIPTION:	Monitor Well	Water

Field Remarks: ______________________

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	12000	PPB	50	D		
TOLUENE	20400	PPB	50	D		
ETHYL BENZENE	612	PPB	50	D		
TOTAL XYLENES	6075	PPB	50	D		
TOTAL BTEX	39100	PPB				

–BTEX is by EPA Method 8020 –

The Surrogate Recovery was at 105 % for this sample All QA/QC was acceptable.
DF = Dilution Factor Used
The "D" qualifier indiciates that the analyte calculated is based on a secondary dilution factor.

Narrative:

Approved By: John Hatch Date: 11/20/96

960920BT.XLS,11/20/96

EL PASO FIELD SERVICES

Field Services Laboratory
Analytical Report

SAMPLE IDENTIFICATION

EPFS LAB ID:	960936
DATE SAMPLED:	11/11/96
TIME SAMPLED (Hrs):	1242
SAMPLED BY:	D. Bird
MATRIX:	Water
METER CODE:	LD174
SAMPLE SITE NAME:	Bloomfield Pipeline
SAMPLE POINT:	Lat L-40 Line Drip MW-1

FIELD REMARKS: ______________________

GENERAL CHEMISTRY WATER ANALYSIS RESULTS

PARAMETER	RESULT	UNITS	DATE ANALYZED
Laboratory pH	7.4	Units	11/06/96
Alkalinity as CO_3	0.0	PPM	11/06/96
Alkalinity as HCO_3	381	PPM	11/06/96
Calcium as Ca	234	PPM	11/07/96
Magnesium as Mg	60	PPM	11/07/96
Total Hardness as $CaCO_3$	830	PPM	11/07/96
Chloride as Cl	40	PPM	11/06/96
Sulfate as SO_4	1,200	PPM	11/06/96
Fluoride as F	0.6	PPM	11/07/96
Nitrate as NO_3-N	<0.6	PPM	11/06/96
Nitrite as NO_2-N	<0.6	PPM	11/06/96
Ammonium as NH_4^+	<0.6	PPM	11/07/96
Phosphate as PO_4	<0.6	PPM	11/06/96
Potassium as K	2.0	PPM	11/07/96
Sodium as Na	332	PPM	11/07/96
Total Dissolved Solids	2,110	PPM	11/06/96
Conductivity	2,150	umhos/cm	11/06/96
Anion/Cation %	2.1%	%, <5.0 Accepted	11/20/96

Lab Remarks:

Reported By: mdw

Approved By: John Lobdo

Date: 11/20/96

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT

SAMPLE IDENTIFICATION

SAMPLE NUMBER:	960936
SAMPLE DATE:	11/11/96
SAMPLE TIME (Hrs):	1242
SAMPLED BY:	D. Bird
MATRIX:	Water
METER CODE:	~~LD146~~ LD174
SAMPLE SITE NAME:	Bloomfield Pipeline
SAMPLE POINT:	Lat. L-40 Line Drip MW-1

REMARKS: _____

RESULTS

PARAMETER	TOTAL RESULT (mg/L)	N. M. WQCC LIMIT (mg/L)
ARSENIC	<.010	0.100
BARIUM	0.05	1.00
CADMIUM	<.0002	0.010
CHROMIUM	0.001	0.050
LEAD	<.004	0.050
MERCURY	<.00024	0.002
SELENIUM	<.003	0.050
SILVER	<.0005	0.050

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

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 7081, Barium (Atomic Absorption, Furnace Technique), Test Methods for Evaluating Solid Waste, SW-846, USEPA, July, 1992.

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: _____ Approved By: _____ Date: 12/18/96

EL PASO FIELD SERVICES

QUALITY CONTROL REPORT

Sample ID: 960936
Date Sampled: 11/11/96

Date Reported: 12/16/96

STANDARD REFERENCE MATERIAL

Analyte	Found Result (µg/L)	Known Value (µg/L)	% Recovery
Arsenic	30.6	32.4	94%
Barium	75.5	64.9	116%
Cadmium	2.75	2.38	116%
Chromium	5.07	4.76	107%
Lead	28.8	29.7	97%
Mercury	4.86	4.59	106%
Selenium	36.3	40.5	90%
Silver	4.81	4.32	111%

DUPLICATE ANALYSIS (mg/L)

Analyte	Original Sample Result	Duplicate Sample Result	% RPD
Arsenic	0.025	0.027	7.7%
Barium	0.58	0.55	5.3%
Cadmium	ND	ND	NA
Chromium	ND	ND	NA
Lead	ND	ND	NA
Mercury	ND	ND	NA
Selenium	ND	ND	NA
Silver	ND	ND	NA

SPIKE ANALYSIS (µg/L)

Analyte	Original Sample Result	Spike Sample Result	Spike Added	Recovery Percent
Arsenic	25.3	132	100	106%
Barium	580	1520	1000	94%
Cadmium	ND	9.72	10.0	97%
Chromium	ND	59.8	50.0	118%
Lead	ND	42.9	50.0	86%
Mercury	ND	1.81	2.00	91%
Selenium	ND	47.9	50.0	96%
Silver	ND	51.6	50.0	103%

METHOD BLANK

Analyte	Found Result (µg/L)	Detection Level (µg/L)
Arsenic	ND	10
Barium	ND	10
Cadmium	ND	0.2
Chromium	ND	2
Lead	ND	4
Mercury	ND	0.24
Selenium	ND	3
Silver	ND	0.5

ND: Not Detected at stated detection level. NA: Not Applicable.

Reported By: mh Approved By: John Loftis Date: 12/18/96

EPFS
EL PASO FIELD SERVICES

Well Development and Purging Data

☐ Development
☒ Purging

Well Number MW-1

Site Name WAT. L-40 LINE DRIP

Meter Code L0174

Development Criteria

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

Methods of Development

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

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 52.40'
Initial Depth to Water (feet) 36.82
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		10.4	31.3
Gravel Pack			
Drilling Fluids			
Total			

Instruments

☒ pH Meter
☐ DO Monitor
☒ Conductivity Meter
☒ Temperature Meter
☒ Other

Water Disposal

KUTZ SEPARATOR

Water Removal Data

Date	Time	Development Method		Removal Rate	Intake Depth	Ending Water Depth	Water Volume Removed (gal)		Product Volume Removed (gallons)		Temperature °C	pH	Conductivity µmho/cm	Dissolved Oxygen mg/L	Comments
		Pump	Bailer	(gal/min)	(feet)	(feet)	Increment	Cumulativ	Increment	Cumulative					
11-11-96	1112										12.9	6.71	2920		
11-11-96	1120						5.0	5.0			12.0	6.68	2940		
11-11-96	1128						5.0	10.0			12.0	6.79	2900		
11-11-96	1140						5.0	15.0			12.3	6.86	3070		
11-11-96	1148						5.0	20.0			13.9	6.91	3130		
11-11-96	1158						5.0	25.0			13.9	6.91	3140		
11-11-96	1207						5.0	30.0			13.2	6.94	3070		
11-11-96	1218						5.0	35.0			12.1	7.00	2940	4.5	

Comments 0.46' OF FREE FLOATING HYDROCARBON. LIGHT HYDROCARBON SMELL.

Developer's Signature Dennis Bird Date 11-11-96 Reviewer John Kelly Date 11/20/96

El Paso Natural Gas Company

A 2695

CHAIN OF CUSTODY RECORD

Project No.	Project Name	Type and No. of Sample Containers	Preservation Technique	Requested Analysis			Remarks
	BLOOMFIELD PIPELINE			BTXE			
Samplers: (Signature) Dennis Bird	Date: 3-31-97						

MATRIX	Date	Time	Comp.	GRAB	Sample Number							
WATER	3-31-97	1334		X	970224	G-2	4°C	X				LAT. 6-40 LINE DRIP MC LD174
WATER	3-31-97	—		X	—	G-1	4°C	X				TRIP BLANK

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Dennis Bird	3-31-97 1540				
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks:	
		Marlon Rapp	4/1/97 0830		

Carrier Co: | Carrier Phone No. | Date Results Reported / by: (Signature)

Air Bill No.:

EL PASO FIELD SERVICES

4-9-97

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	970224
MTR CODE | SITE NAME:	LD174	Lat L-40 Line Drip MW-1
SAMPLE DATE | TIME (Hrs):	3/31/97	1234
PROJECT:	Sample 4 - 2nd Quarter	
DATE OF BTEX EXT. | ANAL.:	4/4/97	4/4/97
TYPE | DESCRIPTION:	Monitor Well	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	11100	PPB	100	D		
TOLUENE	24700	PPB	200	D		
ETHYL BENZENE	702	PPB	100	D		
TOTAL XYLENES	7440	PPB	100	D		
TOTAL BTEX	43900	PPB				

The Surrogate Recovery was at 103 for this sample All QA/QC was acceptable.
DF = Dilution Factor Used
The "D" qualifier indiciates that the analyte calculated is based on a secondary dilution factor.

Narrative:

Approved By: John Leach Date: 4/8/97

970224,4/8/97

EPFS
EL PASO FIELD SERVICES

Well Development and Purging Data

☐ Development
☒ Purging

Well Number MW-1

Site Name LAT. L-40 LINE DRIP

Meter Code L0174

Development Criteria

☒ 3 to 5 Casing Volumes of Water Removel
☐ Stabilization of Indicator Parameters
☐ Other_____

Methods of Development

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

☐ Other_____

Water Volume Calculation

Initial Depth of Well (feet) 52.40
Initial Depth to Water (feet) 36.68
Height of Water Column in Well (feet) 15.72
Diameter (inches): Well 4 Gravel Pack_____

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

Instruments

☒ pH Meter
☐ DO Monitor
☒ Conductivity Meter
☒ Temperature Meter
☒ Other O.O. CHEMETS KIT

Water Disposal

KUTZ SEPARATOR

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gal): Increment	Water Volume Removed (gal): Cumulativ	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature °C	pH	Conductivity µmho/cm	Dissolved Oxygen mg/L	Comments
3-31-97	1110										15.5		1324		
3-31-97	1119						5.0	5.0			14.7		2330		
3-31-97	1127						5.0	10.0			12.8		2300		
3-31-97	1139						5.0	15.0			13.2		2280		
3-31-97	1147						5.0	20.0			13.1		2560		
3-31-97	1159						5.0	25.0			12.4		2500		
3-31-97	1207						5.0	30.0			12.0		2620		
3-31-97	1220						5.0	35.0			12.3	*7.39	2618	3.5	

Comments 0.50' OF FREE FLOATING HYDROCARBON. *pH RUN IN THE LAB ON 3/31/97 LIGHT HYDROCARBON SMELL

Developer's Signature Dennis Bird Date 3-31-97 Reviewer [signature] Date 4/8/97

El Paso Natural Gas Company

A 2455

CHAIN OF CUSTODY RECORD

Project No.	Project Name	Type and No. of Sample Containers	Preservation Technique	Requested Analysis			Remarks
	BLOOMFIELD PIPELINE			BTXE			
Samplers: (Signature) Dennis Bird	Date: 5-9-97						

MATRIX	Date	Time	Comp.	GRAB	Sample Number							
WATER	5-9-97	1733		X	970426	G-2	4°C	X				LAT. L-40 LINE DRIP MC 00174
WATER	5-9-97	—		X	—	G-1	4°C	X				TRIP BLANK

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Dennis Bird	5-9-97 1712				
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks:	
		Marlon Hopper	5/12/97 1100		

Carrier Co:	Carrier Phone No.	Date Results Reported / by: (Signature)
Air Bill No.:		

EL PASO FIELD SERVICES

6-11-97

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	970426
MTR CODE | SITE NAME:	LD174	Lat L-40 Line Drip MW-1
SAMPLE DATE | TIME (Hrs):	5/9/97	1233
PROJECT:	Sample 4 - 3rd Quarter	
DATE OF BTEX EXT. | ANAL.:	5/14/97	5/14/97
TYPE | DESCRIPTION:	Monitor Well	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	12900	PPB	100	D		
TOLUENE	22900	PPB	100	D,D1		
ETHYL BENZENE	761	PPB	100	D		
TOTAL XYLENES	7730	PPB	100	D		
TOTAL BTEX	44300	PPB				

The Surrogate Recovery was at 94.3 for this sample All QA/QC was acceptable.
DF = Dilution Factor Used
The "D1" qualifier indicates that the analyte concentration exceeded the calibration curve limit.
The "D" qualifier indiciates that the analyte calculated is based on a secondary dilution factor.
Narrative:

Approved By: _____ Date: 6/3/97

EPFS
EL PASO FIELD SERVICES

Well Development and Purging Data

☐ Development
☒ Purging

Well Number MW-1

Site Name CAT. C-40 LINE DRIP

Meter Code L0174

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

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 52.40
Initial Depth to Water (feet) 36.57
Height of Water Column in Well (feet) 15.83

Diameter (Inches): Well 4 Gravel Pack

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing		10.5	31.4
Gravel Pack			
Drilling Fluids			
Total			

Instruments

☒ pH Meter
☐ DO Monitor
☒ Conductivity Meter
☒ Temperature Meter
☒ Other D.O. CHEMETS KIT

Water Disposal

KUTZ SEPARATOR

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gal): Increment	Water Volume Removed (gal): Cumulativ	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature °C	pH	Conductivity µmho/cm	Dissolved Oxygen mg/L	Comments
5-9-97	1120										13.6	6.61	2420		
5-9-97	1127						5.0	5.0			12.3	7.09	2470		
5-9-97	1134						5.0	10.0			12.3	6.98	2610		
5-9-97	1144						5.0	15.0			13.4	7.05	2780		
5-9-97	1151						5.0	20.0			13.0	7.06	2800		
5-9-97	1201						5.0	25.0			13.0	7.12	2810		
5-9-97	1208						5.0	30.0			13.6	7.18	2900		
5-9-97	1219						5.0	35.0			13.0	7.22	2790	3.5	

Comments 0.12' OF FREE FLOATING HYDROCARBON. STRONG HYDROCARBON SMELL

Developer's Signature Dennis Bird Date 5-9-97 Reviewer JC Date 5/27/97