3**R** - <u>166</u>

REPORTS

DATE: 1997



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

February 27, 1998

RECEIVED

MAR 0 2 1998

Environmental Bureau Oil Conservation Division

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,

indre O Milles

Såndra 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



EPFS GROUNDWATER PITS 1997 ANNUAL GROUNDWATER REPORT

D LOOP LINE DRIP Meter/Line ID - LD169

SITE DETAILS

Legals - Twn: 28N Rng: 8W NMOCD Hazard Ranking: 30 Operator: EL PASO FIELD SERVICES Unit: I Land Type: FEDERAL

PREVIOUS ACTIVITIES

Site Assessment: Jan-95 Monitor Well: Nov-95 Excavation: Feb-95 (80 cy) Geoprobe: Dec-96

Sec: 33

Soil Boring: Nov-95

1997 ACTIVITIES

Quarterly Groundwater Monitoring - Quarterly groundwater monitoring was initiated on 11/6/96 and has continued into 1997. Groundwater analytical data are presented in Table 1. **Well Point Installation** - Groundwater samples were collected from temporary monitoring wells. In addition, groundwater gradient was determined using the temporary monitoring wells.

CONCLUSIONS

Based on groundwater levels collected from Well Point data, the groundwater flow trends to the northwest on this site, as presented in Figure 1. This site is approximately 200 yards from Largo Wash in a remote location.

Groundwater samples collected from MW-1 have been above standards for benzene only, since quarterly sampling was initiated. Groundwater samples were collected from temporary monitoring wells and a Geoprobe up and down-gradient of MW-1. With the exception of the down-gradient sample, only one sample was above standards. One groundwater sample collected from PH-3, which is cross-gradient of MW-1, was in excess of standards for benzene only, at 12.2 ppb. One downgradient groundwater sample was in excess of standards for benzene, toluene, and total xylenes.

RECOMMENDATIONS

- Collect groundwater sample further downgradient of MW-1. If no further migration has occurred, site may be candidate for risk based closure.
- Quarterly sampling will continue at MW-1 until 4 consecutive clean quarters are achieved.
- Following OCD approval for closure, MW-1 will be abandoned following OCD approved abandonment procedures.



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EPFS Groundwater Pits 1997 Annual Groundwater Report

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Fotal Nytenes (PPB)	114	54	53.6	129	275
	n		3	u	1
Ethyl Benzene (PPB)	45.5	12.5	10.5	5.74	11.2
	II.		ų	п	I
Telucae (PPB)	49.5	_	5.59	7.92	12.6
		V	а	11	ŋ
Benzene (PPB)	44.5	12.7	15.5	14.9	23.9
		н	1!	11	11
Project	Sample 4 - 1st Quarter	Sample 4 - 2nd Qtr	Sample 4 - 3rd Qtr	Sample 4 - 4th Qtr	Sample 4 - 5th Qtr
MW ∉	1	-	-	-	-
Sample Date	11/06/96	2/7/97	5/6/97	8/8/87	11/6/97
Site Name	D Loop Line Drip	D Loop Line Drip	D Loop Line Drip	D Loop Line Drip	D Loop Line Drip
Meter/ Line #	LD169	LD169	LD169	1.D169	LD169
Sample #	960922	970072	970393	970833	971191

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RECORD	OF SI	JBSUR	FACE	EXPLURATION		¥ر_) ا			Boreholi Well #	e #BH-1
PHILIP ENV	IRONN	MENTAL							Page	1 of 2
4000 Monroe f	Road w Mexici	0 87401		đ.	Project N	ame	EPNG	PITS		
(606) 326-2262	FAX (505) 326-2	388		Project N	umber	14	509	Pha	se <u>6000 77</u>
					Project L	ocation	<u>D</u>	Loop	Dri	ρ
Elevation					Well Log	ged 8γ		см сі	hance	
Borehole Lo	cation		<u>- s33</u>	- T28 - R8	Personne	I On-Site		K Pad	illa, L	Charlin
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Date/Time	Started		<u>11/6/</u>	95-1221	Drilling M	lethod	4 1/4	" ID HS	5A/81	14 1.0. HSA
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Depth (Feet)	Sample	Sample	Type &	Sample Description	USCS	Lithology	A	r Monitor	ing	Drilling Condition
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					-	1 1		\cap i		

RECORD OF SUBSURFACE EXPLORATION

34.4'

-11/6/95

4/7/0

CM CHANCE

K Padilla

QT - S33 - T28 - R8

BG

11/6/95-1221

-1410-0-1

PHILIP ENVIRONMENTAL

Elevation **Borehole Location**

GWL Depth

Logged By

Drilled By

Date/Time Started

Date/Time Completed

4000 Monroe Road Fermington, New Mexico 87401 (505) 326-2262 FAX (506) 326-2388

9	
i,	- Borehole # BH-1 Well # Page 2 of 2
Project Name	EPNG PITS
Project Number	14509 Phase 6000 77
Project Location	D Loop Drip
Well Logged By Personnel On-Site Contractors On-Site Client Personnel On-	CM Chance K Padilla, Q. C. Larlip
Drilling Method Air Monitoring Meth	4 1/4" ID HSA / 81/4 1. D. HSA
Death	

r			<u> </u>			Darah				
			Sample		11000	Depth				
Depth	Sample	Sample	Type &	Sample Description	USCS	Lithology		Monitor		Drilling Conditions
(Feet)	Number	Interval	Recovery	Classification System: USCS	Symbol	Change	Units	PPM	<u>s</u>	& Blow Counts
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Comments	:									

Geologist Signature

Cong Ch



MONITORING WELL INSTALLATION RECORD

Philip Environmental Services Corp. 4000 Morroe Road Ferminaton, New Mexico 87401 (6061 326-2262 FAX (6061 326-2388

Elevation		
Well Location	QI -533-T20-Kg	
GWL Depth	37. 9' 565	
Installed By	Padilla	
	cm1	
Date/Time Starte	-11/6/95-7-120 11/7/95-	0915
Date/Time Comp	eted +1/6/95-1 11/7/95 -	NJD

Borehole # <u>BH</u> -1 Well # <u>MW-1</u> Page <u>1</u> of <u>1</u>
Project Name EPNG PITS
Project Number 14509 Phase 6001.77 Project Location D Loop Line Drip
On-Site Geologist Personnel On-Site Contractors On-Site
Client Personnel Un-Site

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Depths in Reference to Ground S		7	Top of Protective Casing Top of Riser	<u>NA</u> +3'		
ltem	Material	Depth			Ground Surface	0
Top of Protective Casing		NA		1999 - A.		
Bottom of Protective Casing		NA				
Casing		NA				
Bottom of Permanent Borehole Casing		NA				
Top of Concrete		NA				
Bottom of Concrete		NA				
Top of Grout	- 94 # Type <u>T-U</u>	0'				
Bottom of Grout	- SOH Boudered Bentonin	21'				
Top of Well Riser	' 4" dia Sch40	*)'				
Bottom of Well Riser	PVC	79,				
Top of Well Screen	FlushThread	26'			Top of Seal	<u>a1'</u>
Bottom of Well Screen	0.01 SIOT PVC	41'				
Top of Peltonite Seal	-50# Enviro Plus	21'			T (0) (0) (131
Bottom of Peltonite Seal	Bentonite	נג'			Top of Gravel Pack	$\frac{\alpha \beta}{\beta \ell}$
Top of Gravel Pack	-50# 10-20	23'			Top of Screen	90
Bottom of Gravel Pack	SilicaSand	41'		1999 (N		
Top of Natural Cave-In		41'		No.		
Bottom of Natural Cave-In		45'				
Top of Groundwater		23.9			Bottom of Screen Bottom of Borebole	41
Total Depth of Borehole		45				
Comments: BH had 4' of	slovah, Well ser @	YI'B	65. Bentunite	L	drated w/ 10001	

Comments: 15H had 4' of slough. Well set (241'Bbs. Benton Itp hydrated w/ 1044) potable maren. Locking well cap & padlock placed on well. GW(2). 9'Bbs after well install... Geologist Signature





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SITE ACTIVITIES

21-Feb-97

Meter/Line #: LD169

Location/Line #: D Loop Line Drip

MW#:

Depth to GW:

Depth to Product:

Product Thickness:

Date: 12/9/96

Activity: Geoprobe

Comments: Collect GW samples from 5 probe holes. MW1 in center of pit. Could not install piezos due to depth of GW and geology.



CHAIN OF CUSTODY RECORD

ID:505-599-2261 23'96 **0** ELPASO NO.REG.LAB DEC 12:23 No.001 P.02 Wmente RECEIVED OF LABORATOPY BY: (Sumating) (Water reacted w/HcL. Slight prol. EL PASO NATURAL GAS COMPANY P. O. BOX 4990 FARMINGTON, NEW MEXICO 87499 Unec T FAX: 505-599-2261 FIELD SERVICES LABORATORY Potentia LD169 RECEIVED BY: (Signature) Marle PHY DLOD Ling Unit Forelson4-1 #14 Page_ a cologian asi REMARKS H d 1. Odor CONTRACT LABORATORY P. O. NUMBER JACANEZ 3 PC 12-11-96 0935 TRIP BLANK 2-11-96 9:35 DATE/TIME DATE/TIME ういって PHS PHI RESULTS & INVOICES TO: # SEGNENCE 505-599-2144 REQUESTED ANALYSIS Killin Stavall AELINQUISHED BY: (Signature) RELINQUISHED BY: (Signature) DIG BAJ X3T8 EPA 8020 X $\boldsymbol{\times}$ Ķ × × Н9Т Г.814 д9З **۲** ک SAMPLE TYPE ex X Ħ Ξ -SAMPLE RECEIPT REMARKS Atria REGULAUMBER OF CONTAINED FO Ъ 6 3 RECEIVED ON SUMETING RECEIVED BY: (Signature) 3 V dent CHARGE CODE TRIPOLANY 44 9480 43 [13/10/4 [0920 [N/attr] CM(280 FIELD ID CMCABI Cm(283) 101 CMCJE 12/10/96 1170D DATE DATE/TIME Pit Closure Project MATRIX \geq JMF كموما のと 1510 1 PHONECT NAME DATE REQUESTED TURNAROUND TIME \geq RELINOUISHED BY: (Signiture) Y: (Signathura SAMPLERS: (Signature 948044 948046 948045 PROJECT NUMBER # 24324 LABIO/ RELINQUISH O ROUTINE CARRIER CO. BILL NO .:

White - Testing Laboratory Canary - EPNG Lab Pink - Field Sampler

TET HE C

FM-09-0565 A (Rev. 05-94)

ID:505-599-2261

EL PASO

DEC 23'96 12:24 No.001 P.03

FIELD SERVICES



FIELD SERVICES LABORATORY

ANALYTICAL REPORT

PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID				
SAMPLE NUMBER:	CMC280	948043				
MTR CODE SITE NAME:	LD169	D Loop Line Drip				
SAMPLE DATE TIME (Hrs):	12/10/96	920				
PROJECT:	GEOPROBE					
DATE OF BTEX EXT. ANAL.:	12/11/96	12/11/96				
TYPE DESCRIPTION:	PH4	Water				

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS					
			DF	0				
BENZENE	1.25	РРВ						
TOLUENE	<1	РРВ						
ETHYL BENZENE	<1	РРВ						
TOTAL XYLENES	3.29	РРВ						
TOTAL BTEX	4.54	РРВ						

-BTEX is by EPA Method 8020 --

The Surrogate Recovery was at DF = Dilution Factor Used

90.7 % for this sample All QA/QC was acceptable.

Narrative:

Jen Tartela Approved By: Date: 12/16/96

968043,XLS,12/13/96



EL PASO

ØD

DEC 23'96 12:25 No.001 P.04

FIELD SERVICES



FIELD SERVICES LABORATORY

ANALYTICAL REPORT

PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field 10	Lab ID
SAMPLE NUMBER:	CMC281	948044
MTR CODE SITE NAME:	LD169	D Loop Line Drip
SAMPLE DATE TIME (Hrs):	12/10/96	1005
PROJECT:	GEO	PROBE
DATE OF BTEX EXT. ANAL.:	12/11/96	12/11/96
TYPE DESCRIPTION:	PH5	Wøter

Field Remarks:

RESULTS PARAMETER RESULT UNITS QUALIFIERS DF Q BENZENE <1 **PPB** TOLUENE <1 PPB **ETHYL BENZENE** <1 PPB TOTAL XYLENES PPB 5.93 TOTAL BTEX 5.93 PPB -BTEX is by EPA Method 8020 -The Surrogate Recovery was at 94.2 % for this sample All QA/QC was acceptable. DF = Dilution Factor Used Narrative:

John Jaroh Date: 12/13/96 Approved By: 968044,XLS,12/13/96

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White - Testing Laboratory Canary - EPNG Lab Pink - Field Sampler

FM-08-0565 A (Rev. 05-94)

ID:505-599-2261 (D)

EL PASO

DEC <u>1</u>6'96



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FIELD SERVICES LABORATORY

ANALYTICAL REPORT

FIELD SERVICES

PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	CMC277	948040
MTR CODE SITE NAME:	LD169	D Loop Line Drip
SAMPLE DATE TIME (Hrs):	12/9/96	1050
PROJECT:	GEO	PROBE
DATE OF BTEX EXT. ANAL.:	12/11/96	12/11/96
TYPE DESCRIPTION:	PH1	Water

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFI	RS	
BENZENE	<1	PPB			
TOLUENE	<1	РРВ			
ETHYL BENZENE	<1	PPB			
TOTAL XYLENES	<3	PPB	 		
TOTAL BTEX	<6	PPB			

97.2

-BTEX is by EPA Method 8020 --

The Surrogate Recovery was at DF = Dilution Factor Used

% for this sample All QA/QC was acceptable.

Narrative:

Approved By: _	John Jack		Date:	13/96	
	\bigcup	948040.XLS,12/13/96			

"我们是你们的你们,我们就没有你们,你们们就是你们的,你这个你们你的你,你就是你们的你们,你就是你们的你们,你们们就是你们,你们,你们不是你们,你们们不是你们,你们

ID:505-599-2261

EL PASO

(II)

DEC 16'96

9:31 No.001 P.03

FIELD SERVICES

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FIELD SERVICES LABORATORY

ANALYTICAL REPORT

PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Leb ID
SAMPLE NUMBER:	CMC278	948041
MTR CODE SITE NAME:	LD169	D Loop Line Drip
SAMPLE DATE TIME (Hrs):	12/9/96	1210
PROJECT:	GEOI	PROBE
DATE OF BTEX EXT. ANAL.:	12/11/96	12/13/96
TYPE DESCRIPTION:	PH2	Water

Field Remarks:

RESULTS PARAMETER RESULT UNITS **QUALIFIERS** 0 DP BENZENE 273 PPB 2 D TOLUENE 41.8 **PPB** 2 D **ETHYL BENZENE** 114 PPB 2 D TOTAL XYLENES 334 PPB 2 D TOTAL BTEX 763 PPB

-BTEX is by EPA Method 8020 -

The Surrogate Recovery was at 98.0 % for this sample All QA/QC was acceptable.

DF = Dilution Factor Used

THE REPORT OF THE PARTY

The "D" qualifier indiciates that the analyte calculated is based on a secondary dilution factor.

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Narrative:

John Faller Approved By: _ Date: 12/13/96 948041.XLS,12/13/96

EL PASO

DEC 1<u>6</u>'96

FIELD SERVICES



FIELD SERVICES LABORATORY

ANALYTICAL REPORT

PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

_	Field 1D	Leb ID
SAMPLE NUMBER:	CMC279	948042
MTR CODE SITE NAME:	LD169	D Loop Line Drip
SAMPLE DATE TIME (Hrs):	12/9/96	1424
PROJECT:	GEOI	РКОВЕ
DATE OF BTEX EXT. ANAL.:	12/11/96	12/11/96
TYPE DESCRIPTION:	PH3	Water

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFI	RS	
BENZENE	12.2	РРВ	 		
TOLUENE	6.90	РРВ			
ETHYL BENZENE	5.68	РРВ			
TOTAL XYLENES	42.4	РРВ			
TOTAL BTEX	67.2	ррв			

96.2

-BTEX is by EPA Method 8020 --

The Surrogate Recovery was at DF = Dilution Factor Used

% for this sample All QA/QC was acceptable.

Narrative:

She Tabla Date: 12/13/96 Approved By: 948042.XLS,12/13/96



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WELLPOINTS

		CHAIN OF	CUSTUD	/ RECORD		ì
						Page0f
PROJECT NUMBER PROJECT NAME # 24324 Pit Closure Project	883 838		REQUE	STED ANALYSIS		CONTRACT LABORATORY P. O. NUMBER
SAMPLERS: (Signature) DATE: DATE: 8/4/0		TYPE SAMPLE	8020 EX	Did 8	‡ іеисе	
		11	АЧЭ Г8 АЧЭ	ראב	seor	HEMARKS
70806 84/911410 Wate CMC3	A St.	V6	X			D Loop Drip LO169 PZ1
370 807 6 - V Tri. RI	ant 1	AF BF	×			Trip Olank
	ab a	- A	X	cmc 8/4/92		
		ک_				
		/		767		
						Note: PZI had hydrocarbon odor
						4 Water Reacted W/ HCL, G
						35°
AELINOUISHED BY: (Signature) DATE/TIME HE/CE	(ownedde) Art of IAL			H D RY' (Signature)	-	DATE/TIME RECEIVED BY: (Signature)
(1/2/1/70) (1/20)			, <u>, 1</u> 0)	100 CU	MO	8/5/97 1015
RELINQUISHED BY: (Signature) DATE/TIME RECE	EIVED BY: (Signature)		RELINQUIS	IED BY: (Signature)		DATE/TIME RECEIVED OF LABORATORY BY: (Signature)
						18/5/4/1012 N/1are Unneme
AEQUESTED TURNAROUND TIME: SAMP D ROUTINE D RUSH	PLE RECEIPT REMAR	Š				FIELD SERVICES LABORATORY
CHAR	RGE CODE					P. O. BOX 4990 FARMINGTON, NEW MEXICO 87499
BILL NO:				202	-599-2144	FAX: 505-599-2261

White - Testing Laboratory Canary - EPNG Lab Pink - Field Sampler

FM-08-0565 A (Rev. 05-94)





FIELD SERVICES LABORATORY ANALYTICAL REPORT PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	CMC325	970806
MTR CODE SITE NAME:	LD169	D Loop Drip
SAMPLE DATE TIME (Hrs):	8/4/97	1410
PROJECT:	WellP	Points
DATE OF BTEX EXT. ANAL.:	8/6/97	8/6/97
TYPE DESCRIPTION:	PZ-1	Water

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS	1. 1. 1. 1. 1. 1.	QUALIFI	ERS	
			DF	0		
BENZENE	1240	PPB	50	D		
TOLUENE	4410	РРВ	50	D		
ETHYL BENZENE	686	РРВ	50	D		
TOTAL XYLENES	6610	PPB	50	D		
TOTAL BTEX	13000	РРВ				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at

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.

93.6

Narrative:

<u> </u>				······································	
Approved By:	John Larlin		Date:	877/67	
	\bigcirc	970806.XLS,8/11/97			

FIELD SERVICES LABORATORY **ANALYTICAL REPORT PIT CLOSURE PROJECT**

FIELD SERVICES

EL PASO

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	970807
MTR CODE SITE NAME:	LD169	D Loop Drip
SAMPLE DATE TIME (Hrs):	8/4/97	1410
PROJECT:	Wei	IPoints
DATE OF BTEX EXT. ANAL.:	8/5/97	8/5/97
TYPE DESCRIPTION:	Trip Blank	Water

Field Remarks:

PARAMETER RESULT UNITS QUALIFIERS DF 0 BENZENE PPB <1 TOLUENE <1 PPB ETHYL BENZENE <1 PPB TOTAL XYLENES PPB <3 TOTAL BTEX < 6 PPB

RESULTS

The Surrogate Recovery was at DF = Dilution Factor Used

--BTEX is by EPA Method 8020 --

97.7

for this sample All QA/QC was acceptable.

Narrative:

Approved By: John Farch 970807.XLS,8/7/97



QUALITY CONTROL REPORT EPA METHOD 8020 - BTEX

Samples: 970790, 970794-970798, 970804-970807

QA/QC for 8/05/97 Sample Set

LABORATORY CALIBRATION CHECKS / LABORATORY CONTROL SAMPLES:

SAMPLE		EXPECTED	ANALYTICAL		ACC	EPTAB	LE.
NUMBER	TYPE	RESULT	RESULT	%R		•	
ICV LA-52589		PPB	PPB			YES	NO
50 PPB					RANGE		
Benzene	Standard	50.0	47.9	95.8	75 - 125 %	Х	
Toluene	Standard	50.0	48.1	96.2	75 - 125 %	х	
Ethylbenzene	Standard	50.0	48.5	97.0	75 - 125 %	Х	
m & p - Xylene	Standard	100	96.0	96.0	75 - 125 %	х	
o - Xylene	Standard	50.0	48.9	97.8	75 - 125 %	Х	
SAMPLE		EXPECTED	ANALYTICAL		AC	CEPTAE	BLE
NUMBER	ТҮРЕ	RESULT	RESULT	%R			
LCS LA-45476		PPB	PPB I			YES	NO
25 PPB					RANGE		
Benzene	Standard	25.0	24.1	96.4	39 - 150	X	
Toluene	Standard	25.0	24.5	98.0	46 - 148	х	
Ethylbenzene	Standard	25.0	24.7	98.8	32 - 160	Х	
m & p - Xylene	Standard	50.0	48.9	97.8	Not Given	х	
o - Xylene	Standard	25.0	25.0	100	Not Given	Х	
SAMPLE		EXPECTED	ANALYTICAL		ACC	EPTAB	LE
NUMBER	ТҮРЕ	RESULT	RESULT	%R			
CCV LA-52589		PPB	PPB			YES	NO
50 PPB					RANGE		
Benzene	Standard	50.0	47.6	95.2	75 - 125 %	Х	
Toluene	Standard	50.0	47.4	94.8	75 - 125 %	х	
Ethylenzene	Standard	50.0	47.4	94.8	75 - 125 %	Х	
m & p - Xylene	Standard	100	93.1	93.1	75 - 125 %	х	
o - Xylene	Standard	50.0	47.9	95.8	75 - 125 %	Х	
SAMPLE		EXPECTED	ANALYTICAL		ACC	CEPTAB	LE
NUMBER	ТҮРЕ	RESULT	RESULT	%R			
CCV LA-52589		РРВ	PPB			YES	NO
50 PPB					RANGE		
Benzene	Standard	50.0	47.9	95.8	75 - 125 %	X	
Toluene							
-	Standard	50.0	47.6	95.2	75 - 125 %	Х	
Ethylbenzene	Standard Standard	50.0 50.0	47.6 47.3	95.2 94.6	75 - 125 % 75 - 125 %	X X	
Ethylbenzene m & p - Xylene	Standard Standard Standard	50.0 50.0 100	47.6 47.3 92.8	95.2 94.6 92.8	75 - 125 % 75 - 125 % 75 - 125 %	X X X	

Narrative: Acceptable.

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EL PASO FIELD SERVICES LAB QUALITY CONTROL REPORT EPA METHOD 8020 - BTEX Samples: 970790, 970794-970798, 970804-970807

BORATORY DUPLICATES:

SAMPLE ID	ТҮРЕ	SAMPLE RESULT PPB	DUPLICATE RESULT PPB	RPD	ACCEPTABLE YES NO
970804					RANGE
Benzene	Matrix Duplicate	<1	<1	0.00	+/- 20 % X
Toluene	Matrix Duplicate	<1	<1	0.00	+/- 20 % X
Ethylbenzene	Matrix Duplicate	<1	< 1	0.00	+/-20 % X
m & p - Xylene	Matrix Duplicate	<2	<2	0.00	+/-20 % X
o - Xylene	Matrix Duplicate	< 1	< 1	0.00	+ /- 20 % X

Narrative: Acceptable.

LABORATORY SPIKES:

SAMPLE	SPIKE	SAMPLE	SPIKE		ACCEPTABLE
ID 2nd Analysis 970804	ADDED PPB	RESULT PPB	SAMPLE RESULT PPB	%R	YES NO RANGE
Benzene	50	<1	49.1	98.2	75 - 125 % X
Toluene	50	<1	47.6	95.2	75 - 125 % X
Ethylbenzene	50	<1	47.8	95.6	75 - 125 % X
m & p - Xylene	100	<2	94.1	94.1	75 - 125 % X
o - Xylene	50	< 1	48.3	96.6	75 - 125 % X

arrative: 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 Lot MB1461	PPB (None 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 (Four 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

arrative: Acceptable.

Reported By: mda

Approved By: 2 Mu Holla

Date

Page	CONTRACT LABORATORY P. O. NUMBER	REMARKS	DLOOP Drip LD 169 PZZ	Canada Miss # 387640 PZ/	il pza	4C32B - mde 1050					35°	DATE/TIME RECEIVED BY: (Signature)	08-7-97 1037	DATENTIME RECEIVED OF LABORATOPH BY: (Signal 10)		EL PASO NATURAL GAS COMPANY P. O. BOX 4990	FARMINGTON, NEW MEXICO 87499 FAX: 505-599-2261
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White - Testing Laboratory Canary - EPNG Lab Pink - Field Sampler



FIELD SERVICES LABORATORY

ANALYTICAL REPORT

PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	CMC326	970818
MTR CODE SITE NAME:	LD169	D Loop Line Drip
SAMPLE DATE TIME (Hrs):	8/6/97	1000
PROJECT:	Well	Points
DATE OF BTEX EXT. ANAL.:	8/11/97	8/11/97
TYPE DESCRIPTION:	PZ-2	Water

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS		٥u	ALIFIE	RS	
			DF	<u> </u>			
BENZENE	<1	РРВ					
TOLUENE	<1	РРВ					
ETHYL BENZENE	<1	РРВ					
TOTAL XYLENES	5.98	РРВ					
TOTAL BTEX	5.98	РРВ					

94.6

--BTEX is by EPA Method 8020 --

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

Narrative: Hur Farde. 8/13/67 Date: ____ Approved By: 970818,8/13/97



FIELD SERVICES LABORATORY **ANALYTICAL REPORT**

PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	NA	970819
MTR CODE SITE NAME:	LD169	D Loop Line Drip
SAMPLE DATE TIME (Hrs):	8/6/97	1000
PROJECT:	We	llPoints
DATE OF BTEX EXT. ANAL.:	8/11/97	8/11/97
TYPE DESCRIPTION:	Trip Blank	Water

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS		QUALIFI	ERS	
			DF	٥		
BENZENE	<1	РРВ		 		
TOLUENE	<1	РРВ				
ETHYL BENZENE	<1	РРВ	· · · · · ·			
TOTAL XYLENES	<3	РРВ				
TOTAL BTEX	<6	РРВ				

--BTEX is by EPA Method 8020 --

98.8 The Surrogate Recovery was at DF = Dilution Factor Used

John Horden

% for this sample All QA/QC was acceptable.

...,

Date: 8/13/97

Narrative:

Approved By: ____

970819,8/13/97



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FIELD SERVICES LABORATORY

ANALYTICAL REPORT

PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	960922
MTR CODE SITE NAME:	LD169	D Loop Line Drip MW-1
SAMPLE DATE TIME (Hrs):	11/6/96	1052
PROJECT:	Sample 4	1st Quarter
DATE OF BTEX EXT. ANAL.:	11/6/96	11/6/96
TYPE DESCRIPTION:	Monitor Well	Water

Field Remarks:

RESULIS								
PARAMETER	RESULT	UNITS		QUALIFIERS				
			DF	٩				
BENZENE	44.5	РРВ	10	D	-			
TOLUENE	49.5	РРВ	10	D				
ETHYL BENZENE	45.5	РРВ	10	D				
TOTAL XYLENES	114	РРВ	10	D				
TOTAL BTEX	254	PPB						

-BTEX is by EPA Method 8020 --

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The Surrogate Recovery was at ______% 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:

P			
Approved By: Shin Hard		Date:	11/12/96
por			
\mathcal{O}	960910.XLS,11/11/96		

EL PASO FIELD SERVICES

Field Services Laboratory

Analytical Report

SAMPLE IDENTIFICATION

EPFS LAB ID:	960922	
DATE SAMPLED:	11/06/96	
TIME SAMPLED (Hrs):	1052	
SAMPLED BY:	D. Bird	
MATRIX:	Water	
METER CODE:	LD169	
SAMPLE SITE NAME:	Huerfano Pipeline	
SAMPLE POINT:	D Loop Line Drip MW-1	

FIELD REMARKS:

GENERAL CHEMISTRY WATER ANALYSIS RESULTS

PARAMETER	RESULT	UNITS.	DATE ANALYZED
Laboratory pH	7.5	Units	11/06/96
Alkalinity as C0 ₃	0.0	РРМ	11/06/96
Alkalinity as HC03	540	РРМ	11/06/96
Calcium as Ca	95	РРМ	11/07/96
Magnesium as Mg	18	PPM	11/07/96
Total Hardness as CaC0 ₃	314	РРМ	11/07/96
Chloride as Cl	14	РРМ	11/06/96
Sulfate as S04	1,050	РРМ	11/06/96
Fluoride as F	1.7	РРМ	11/07/96
Nitrate as N03-N	<0.6	РРМ	11/06/96
Nitrite as N02-N	<0.6	РРМ	11/06/96
Ammonium as NH4 ⁺	<0.1	PPM	11/07/96
Phosphate as PO ₄	<0.6	PPM	11/06/96
Potassium as K	1.7	PPM	11/07/96
Sodium as Na	540	PPM	11/07/96
Total Dissolved Solids	2,030	PPM	11/06/96
Conductivity	2,630	umhos/cm	11/06/96
Anion/Cation %	2.3%	%, <5.0 Accepted	11/18/96

Lab Remarks:

Reported By: Mdc

Approved By: ______ John Farboh.

Date: 11/20/96



FIELD SERVICES LABORATORY

ANALYTICAL REPORT

SAMPLE IDENTIFICATION

SAMPLE NUMBER:	960922
SAMPLE DATE:	11/06/96
SAMPLE TIME (Hrs):	1052
SAMPLED BY:	D. Bird
MATRIX:	Water
METER CODE:	LD169
SAMPLE SITE NAME:	Huerfano Pipeline
SAMPLE POINT:	D Loop Line Drip MW-1

REMARKS:

RESULTS

PARAMETER	TOTAL RESULT (mg/L)	N. M. WQCC LIMIT (mg/L)
ARSENIC	<.010	0.100
BARIUM	0.08	1.00
CADMIUM	<.0002	0.010
CHROMIUM	0.004	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, 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 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.

bod 7741A, Selenium (Atomic Absorption, Gaseous Hydride), Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept., 1994. od 7761, Silver (Atomic Absorption, Furnace Technique), Test Methods for Evaluating Solid Waste, SW-846, USEPA, July, 1992.

Reported By: Mdr

John Hotch-Approved By:

Date: 12/18/96



QUALITY CONTROL REPORT

Sample ID: 960922 Date Sampled: 11/06/96

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	ND	ND	NA NA
Barium	0.58	0.55	5.3%
Cadmium	ND	ND	NA
Chromium	0.002	0.002	0.0%
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	I ND	115	100	105%
Barium	580	1520	1000	94%
Cadmium	ND	9.53	10.0	95%
Chromium	2.3	51.6	50.0	99%
Lead	ND	40.2	50.0	80%
Mercury	ND	1.82	2.00	91%
Selenium	ND	47.9	50.0	96%
Silver	ND	49.6	50.0	99%

METHOD BLANK

Analyte	Found Result (µg/L)	Detection Level (µg/L)
Arsenic	ND 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.

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Approved By:_____

Date:

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FIELD SERVICES LABORATORY ANALYTICAL REPORT

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PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab iD
SAMPLE NUMBER:	N/A	970072
MTR CODE SITE NAME:	LD169	D Loop Line Drip MW-1
SAMPLE DATE TIME (Hrs):	2/7/97	1037
PROJECT:	Sample 4	2nd Quarter
DATE OF BTEX EXT. ANAL.:	2/12/97	2/12/97
TYPE DESCRIPTION:	Monitor Well	Water

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS		QUALIFI	IERS
			DF	Q	
BENZENE	12.7	РРВ	·····-		
TOLUENE	<1	РРВ			
ETHYL BENZENE	12.5	РРВ	<u>.</u>		
TOTAL XYLENES	54.0	РРВ			
TOTAL BTEX	79.2	РРВ			

94.8

-BTEX is by EPA Method 8020 -

% for this sample All QA/QC was acceptable.

The Surrogate Recovery was at DF = Dilution Factor Used

Narrative:

de Salle Date: _____ 2-(9-97 Approved By: 970072.XLS,2/14/97

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FIELD SERVICES LABORATORY ANALYTICAL REPORT PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID			
SAMPLE NUMBER:	N/A	970393			
MTR CODE SITE NAME:	LD169	D Loop Line Drip MW-1			
SAMPLE DATE TIME (Hrs):	5/6/97	1118			
PROJECT:	Sample 4	- 3rd Quarter			
DATE OF BTEX EXT. ANAL.:	5/13/97	5/13/97			
TYPE DESCRIPTION:	Monitor Well	Water			

Field Remarks:

RESULTS										
PARAMETER	RESULT	UNITS	OUALIFIERS DF Q							
BENZENE	15.5	РРМ								
TOLUENE	5.59	PPM								
ETHYL BENZENE	10.5	PPM								
TOTAL XYLENES	53.6	PPM								
TOTAL BTEX	85.2	PPM								

The Surrogate Recovery was at 95.6 DF = Dilution Factor Used for this sample All QA/QC was acceptable.

Narrative:

Kota Hartch Date: 5/16/47 Approved By: 970393,5/15/97

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SAMPLE 4-1	Project No. Project Name Samplers: (Signature) Cont. N. N. MTTR Date Time Comp. GRAI	1.1111 St. St. St. 1219 X		Relinguished by: (Signature)	Relinquished by: (Signature)	Relinquished by: (Signature) Carrier Co: Air Bill No.:



FIELD SERVICES LABORATORY ANALYTICAL REPORT

PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	970833
MTR CODE SITE NAME:	LD169	D Loop Line Drip MW-1
SAMPLE DATE TIME (Hrs):	8/8/97	1219
PROJECT:	Sample 4 -	4th Quarter
DATE OF BTEX EXT. ANAL.:	8/11/97	8/11/97
TYPE DESCRIPTION:	Monitor Well	Water

Field Remarks:

RESULTS										
PARAMETER	RESULT	UNITS	DF	QUALIFIERS						
BENZENE	14.9	РРВ								
TOLUENE	7.92	РРВ								
ETHYL BENZENE	5.74	РРВ								
TOTAL XYLENES	129	РРВ								
TOTAL BTEX	158	РРВ								

97.2

--BTEX is by EPA Method 8020 --% for this sample All QA/QC was acceptable.

The Surrogate Recovery was at DF = Dilution Factor Used

Narrative:

			<u> </u>		
Approved By: _	John Tara:	970833BTEX,8/22/97	Date:	8/25/97	<u></u>

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EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY

ANALYTICAL REPORT

PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	971191
MTR CODE SITE NAME:	LD169	D Loop Line Drip
SAMPLE DATE TIME (Hrs):	11/6/97	1202
PROJECT:	Sample 4	5th Quarter
DATE OF BTEX EXT. ANAL.:	11/7/97	11/7/97
TYPE DESCRIPTION:	MW-1	Water

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS						
			DF	<u> </u>					
BENZENE	23.9	РРВ		 	 				
TOLUENE	12.6	РРВ	<u></u>						
ETHYL BENZENE	11.2	РРВ		 	·				
TOTAL XYLENES	275	РРВ	<u></u>						
TOTAL BTEX	323	РРВ							

94.9

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--BTEX is by EPA Method 8020 --% for this sample All QA/QC was acceptable.

The Surrogate Recovery was at DF = Dilution Factor Used

Narrative:						
		<u></u>			····	
Approved By:	John Ferlen	971191BTEXMW,11/10/97	Date:	11/12/97		

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY

ANALYTICAL REPORT

PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab (D	
SAMPLE NUMBER:	N/A	971192	
MTR CODE SITE NAME:	LD169	D Loop Line Drip	
SAMPLE DATE TIME (Hrs):	11/6/97	1202	
PROJECT:	Sample 4	5th Quarter	
DATE OF BTEX EXT. ANAL.:	11/7/97	11/7/97	
TYPE DESCRIPTION:	MW-1	Water	

Field DuplicATE Field Remarks:

97.2

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS		
			DF	Q	
BENZENE	22.3	РРВ			
TOLUENE	11.4	РРВ			
ETHYL BENZENE	10.6	РРВ			
TOTAL XYLENES	257	РРВ			
TOTAL BTEX	302	РРВ			

--BTEX is by EPA Method 8020 --

% for this sample All QA/QC was acceptable.

The Surrogate Recovery was at DF = Dilution Factor Used

Verrative:					
Approved By:	Jen Tarch	971192BTEXMW,11/10/97	Date:	11/12/97	

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