3R - <u>238</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,

Simole D Milles

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



EPFS GROUNDWATER PITS 1997 ANNUAL GROUNDWATER REPORT

STANDARD OIL COM #1

Meter/Line ID - 70445

SITE DETAILS

Legals - Twn: 29N Rng: 9W NMOCD Hazard Ranking: 30 Operator: BURLINGTON RESOURCES Unit: N Land Type: STATE

PREVIOUS ACTIVITIES

Site Assessment: May-94 Monitor Well: Sep-95

94 **Excavation:** May-94 (60 cy)

Sec: 36

Soil Boring: Sep-95

1997 ACTIVITIES

Quarterly Groundwater Monitoring - Quarterly groundwater monitoring was initiated on 11/7/96 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.

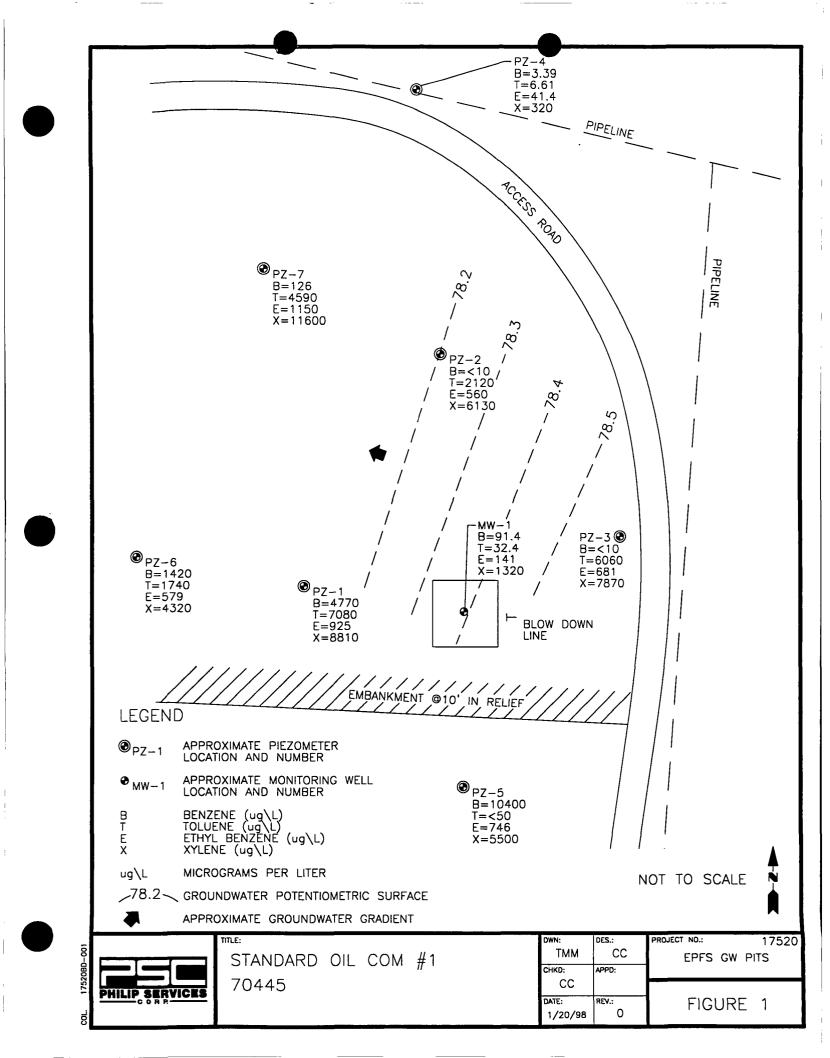
Groundwater samples collected from MW-1 have been in excess of standards for benzene, and total xylenes since quarterly sampling was initiated. Seven groundwater samples were collected from temporary monitoring wells up and down-gradient of MW-1.

One sample collected from PZ-5, located up-gradient of MW-1 was in excess of standards for benzene at 10,400 ppb, and total xylenes at 5,500 ppb, indicating a potential second source.

RECOMMENDATIONS

• EPFS proposes to conduct no further action at this site, until the operator commences with remediation of their production pit, which is upgradient of EPFS' pit.

J:\17520\REPORT97





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lotal BJEN	2149	1768	1740	1638	1585	
		N	9	6	9	
Tetal Xytenes (PPB)	1590	1490	1480	1400	1320	
		л	;;	n,	8	
Ethyl Bearene (PPB)	161	139	145	140	141	
			_	,		
Teluene (PPB)	121	20.2 =	14.2 =	15.6 =	32.4	
			<u></u> d	11	p.	
Benžene (PPB)	277	119	105	82.6	91.4	
<u></u>	b	IJ	9	IJ	"	
Project	Sample 4 - 1st Quarter	Sample 4 - 2nd Qtr	Sample 4 - 3rd Qtr	Sample 4 - 4th Qtr	Sample 4 - 5th Qtr	
mple Date MW#	-	-		_	-	
Sample Dat	11/07/96	2/7/97	5/9/97	8/8/97	11/4/97	
Site Name	Standard Oil Com #1	Standard Oil Com #1	Standard Oil Com #1	Standard Oil Com #1	Standard Oil Com #1	
<u>ب</u>	45	45	45	45	45	
Meteri Line#	70445	70445	70445	70445	70445	
Sample #	960926	970075	970427	970832	971186	

J:\17520Veport97\1997aw

RECORD	OF SU	JBSU	RFACE	EXPLORATION				Bore	hole # R.H.
Philip Eavire	oumenta							Well Page	#
Fermington, Ne (606) 326-226:					Project Project Project	Number	EPNG P 1450 5+240	<u>9 · P</u>	hase <u>601-6000</u>
Elevation Borehole Lo GWL Depth Logged By	ר	TZ9 S.Kelly	,R9,3	2.36, <u>/</u>	Contract	iged By al On-Site ors On-Site irsonnel On-	<u> </u>	.Kelly 1. <i>Dono</i>	hue, J.O'Keefe
Drilled By Date/Time Date/Time		9	2 <u>enoh</u> 15/95 15/95	1145 1145 1300	Dritting N Air Moni	lethod toring Meth	<u>4/4</u>	$\frac{7}{2D}$ GI, PID	H5A
Depth (Feet)	Sample Number	Sample Interval	Sample Type & Recovery (inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Unit	onitoring s: NDU BH S	Drilling Conditions & Blow Counts
5 10 10 10 10 10 10 10 10 10 10		18-20		Backfill +C. Z silty SAND, dk.q. rey, 19 35% silt, Fine Sand, loose, damp. No recovery, cuttings of auger appear SAA. TOB- 30.4'				[2]6	ek q/5/0 1240. Weter Woter encount 27 22.5: Ofter 15min, Woter level rose to 20.1.
Comments:		81-Ze	2' 50 red >	mpk (SEK79) sent and iced prior to be at 20.1; Monitori	ind nut	BT	EX q	<u>TPH</u>) <u>Kamplo</u> was

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MONITORING WELL INSTALLATION RECORD

Millip Euvironuncu(al Services Corp. 4000 Morroe Road Farmington, New Mexico 87401 16061 326-2262 FAX (6061 326-2388

Elevation	
Well Location T29, R9, 5	36.N
GWL Depth	
Installed By M, Donchu	e

Date/Time Started 9/5/95, 1300 Date/Time Completed 9/5/95, 1545

Borehole # Well # Page 1 ot 1
Page of
Project Name EPUG- Pit Drilling
Project Number 14509 Phase 6000
Project Location Standard Oil Com No.1 70445
On-Site Geologist 5: Kolly
Personnel On-Site M. Denchule, J. C'Keete
Contractors On-Site
Client Personnel On-Site

Depths in Reference to Ground S	Surface		F	=	Top of Protective Casing Top of Riser	+7.81
ltem	Material	Depth			Ground Surface	0,0'
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	TypeIdII cement w/ 5% bentenite	0.0				
Bottom of Grout	↓ ↓	10,0'				
Top of Well Riser	4". Sch 40. PUC	+2.8'				
Bottom of Well Riser	4"5ch.40 pVC	15,1				
Top of Well Screen	4", sch 40, PUC.	15.1			Top of Seal	-10.01
Bottom of Well Screen	V -	30,4				
Kentonite Top of Pationito Seal	Enviroplug Med.	100	0X0			-17 71
Bontonite Bottom of Pettonite Seal	Z-50# V 6795 V	ZZ'	xx	xx	Top of Gravel Pack	<u>-12,z'</u> -15,1'
Top of Gravel Pack	10-ZO CSSI	12.2			Top of Screen	13,1
Bottom of Gravel Pack	V10-50#bags-	304				
Top of Natural Cave-In				-	_	
Bottom of Natural Cave-In						
Top of Groundwater	-	Z0,1			Bottom of Screen	- 30.4'
Total Depth of Borehole		30,41		<u> </u>	Bottom of Borehole	
commonts: PUC end ca,	0 is 4": (app	TOX. 3')			

Geologist Signature

SIA.

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WELLPOINTS

llip Enviro		l Service	s Corp.						Well # Page	le # <u>PZ-01</u>
0 Monroe (nington, Ne		87401			Project N	ame	EPF	56	ROUN	O WATER
5) 326-2262			388		Project N		1751		Pha	
					Project Lo	ocation	STAND		ic Cor	1# 1 70445
vation					Well Logg	and Dec			5. Popi	-
rehole Lo	cation	<u></u>			Personnel					z, D. Charlie
VL Depth		19			Contracto	ors On-Site				<u> </u>
gged By		5.2			Client Per	rsonnel On-	Site			
lled By te/Time	Started		ADILA	21197	Drilling M	ethod	·H	5# 4	14 10	
te/Time			15 7/	3/17	-	oring Metho			10	· · · · · · · · · · · · · · · · · · ·
Depth	Sample	Sample	Sample Type &	Sample Description	USCS	Depth Lithology	منه	Monitor		Drilling Conditions
(Feet)	Number	Interval	Recovery	Classification System: USCS	Symbol	Change		nits: ND	-	& Blow Counts
			(inches)			(feet)	8Z	вн	s	
°										
-										
_										
5		5		Provide SAND Mails (a security of	1				0	
_	1	5 7	24	Brown SAND, Med - Coorse Grained Moist, LOOSE		×	0	0		
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10		.°			Į					
	2	12	20	SAB	í		0	0	0	
15		15		SAA -			0	0	16	Highly Stormer'
-	3	17	24	SAA BLACK, SOME SILTS CLAY						Highly Stormer He, Degraded odor Stuined Collo beging
										Stained Coils beging
										16
20				GIM. DY Gray SAND JE SANN CITY						¥ 19.0
<u> </u>	4			Fine Mer Gray SAND J Some Silt, Fine Mer Grained, SATURDER, 10051			0	0	2	WL@ BOWH
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40	1		I	1	1	1	1	1	4	

Geologist Signature

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MONITORING WELL INSTALLATION RECORD

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

Well Location	STANDARD Oil Com# 1 70445
GWL Depth	19
Installed By	K. PADILLA

	7/31/97 7/31/17			
Depths in Reference to Ground S	Surface		Top of Protective Casing Top of Riser	
ltem	Material	Depth	Ground Surface	_0
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				
Bottom of Grout				
Top of Well Riser				
Bottom of Well Riser				
Top of Well Screen			Top of Seal	
Bottom of Well Screen				
Top of Pettonite Seal				_
Bottom of Peltonite Seal			Top of Gravel Pack	12.8
Top of Gravel Pack			Top of Screen	12.0
Bottom of Gravel Pack				
Top of Natural Cave-In				
Bottom of Natural Cave-In		24		
Top of Groundwater		19	Bottom of Screen	
Total Depth of Borehole		<u> : 4</u>	Bottom of Borehole	23.2

Comments: True TO 20 Blow in TO 22.7. Went a hear' and Set were and Se

Well # P2-01Page of Project Name <u>EPES Grouw Dwatzh</u> Project Number <u>17520</u> Phase Project Location <u>LARCO WASH</u> On-Site Geologist <u>S. Popr</u> Personnel On-Site <u>Character</u> D. Character

Borehole #

Personnel On-Site Contractors On-Site Client Personnel On-Site

Geologist Signature

RECORD OF SUBSURFACE EXPLORATION

-	

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

Elevation	
Borehole Location	
GWL Depth	
Logged By	5, POPE
Drilled By	K. PADILLA
Date/Time Started	1145 7/31/97
Date/Time Completed	1230 7/31/97

	Well #	
	Page	of
Project Name <u>E</u>	EPFS Groundway	F.P.
Project Number	7520 Phase	
Project Location	TANDARD O'l Comt	t1 70445
Well Logged By	J. PODE	
Personnel On-Site		Junefie
Contractors On-Site		
Client Personnel On-Site		

Borehole #

P2-02

Drilling Method HSA 4/4 10 Air Monitoring Method

DID

					·		_			
			Sample			Depth				
Depth	Sample	Sample	Туре &	Sample Description	USCS	Lithology	Air	Monitor	ring	Drilling Conditions
(Feet)	Number	Interval	Recovery	Classification System: USCS	Symbol	Change	U	nits: NC	υ	& Blow Counts
			(inches)			(feet)	ВŻ	вH	s	
0 5 5	1	<u>-</u> 7		BROWN SAND Troce SILT, FINE. Mat Grounst, LOOSE, Moist		(leet)	B2	вн	0	
	Z	10 12	24	SAA Trace CLAY			0	Ø	σ	
- 15										
 	3	15 17	24	SAA WeT			0	0	0	BLACK DISTONORIE SEIL Begin @ 17.9. 5 Libli Dogradoel Odor, Very degrader Hydrocorbons.
20 	4	20 22	24	SAA Cray . IX Gray, Spinate			¢	0	•	Strawig He det. ON SAMPLE, Soils Stray 4
25				T0B - 22						V.S. 1 , 2 910
30 										
							,			

Comments:

Geologist Signature

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IONITORING WELL INST	TALLATION HI	ECORD		Borehole # <u></u> Well #
Tuilip Eavironmental Services Corp 000 Morvoe Rood	р.			Well # of
ermington, New Mexico 87401			Project Name	EPES GROUNDWITTER
5051 326-2262 FAX (6061 326-2388				EPFS GROUNDWATER HAGHERAN OLL COM #1 100 7520 Phase
			Project Number	7520 Phase
			Project Location	
levation			On-Site Geologist	5, Pope P. Chanlie, C. Coome
Vell Location			Personnel On-Site	P. Charlie, C. Coome
GWL Depth <u>≄18.9</u>			Contractors On-Site	~
nstalled By K. PADILLA			Client Personnel Or	1-Site
Date/Time Started <u>1230</u> Date/Time Completed <u>1360</u>	7/31/97 7/31/97			
Depths in Reference to Ground S	Surface		Top of Protec	tive Casing
	Material	Depth	Ground Surfa	
Item				<u>-</u>
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				
Bottom of Grout				
Top of Well Riser				
Bottom of Well Riser				
Top of Well Screen			Top of Seal	
Bottom of Well Screen			000 000 000 000 000 000	
Top of Peltonite Seal			XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	l Pack
Bottom of Peltonite Seal			Top of Scree	
Top of Gravel Pack				····
Bottom of Gravel Pack				
Top of Natural Cave-In				
Bottom of Natural Cave-In		23.2		
Top of Groundwater		190	Bottom of Se	
	1	23.2	Bottom of Bo	orenole <u>23.4</u>

Comments:

Geologist Signature

MONITORING WELL INSTALLATION RECORD

Philip Euvironmental Services Corp. 4000 Monroe Road Fermington, New Mexico 87401 (6061 326-2262 FAX (5061 326-2388

Elevation	
Well Location	Standord Oil Com #1 70445
GWL Depth	18.9
Installed By	K. PROILLA

 Date/Time Started
 1430
 7/31/97

 Date/Time Completed
 1500
 7/31/97

Depths in Reference to Ground S	Surface	
ltem	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	-	
Bottom of Grout		
Top of Well Riser		
Bottom of Well Riser		
Top of Well Screen		
Bottom of Well Screen		
Top of Peltonite Seal		
Bottom of Peltonite Seal		
Top of Gravel Pack		
Bottom of Gravel Pack		
Top of Natural Cave-In		
Bottom of Natural Cave-In		
Top of Groundwater		
Total Depth of Borehole		

Comments:_

Geologist Signature

Borehole # PZ -3

EPFS GROUNDWINTER

S. PODE

of

STATE GASCOM#1 70445

Phase

D. Charlie, L. Gomez

Well #

Page_

17520

Project Name

Project Number

Project Location

On-Site Geologist Personnel On-Site

Contractors On-Site Client Personnel On-Site

MONITORING WELL INSTALLATION RECORD



 Philip Environmental Services Corp.

 4000 Monxoe Road

 Ferminaton, New Mexico 87401

 (6061 326-2262 FAX (6061 326-2388)

Elevation	
Well Location	STANDARD Dil Com# 1 70445
GWL Depth	16.4
Installed By	K. PADILLA

 Date/Time Started
 1515
 7/31/97

 Date/Time Completed
 1545
 7/31/97

Depths in Reference to Ground S	Sufface			7	Top of Protective Casing Top of Riser	
Item	Material	Depth			Ground Surface	
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						
Bottom of Grout						
Top of Well Riser						
Bottom of Well Riser						
Top of Well Screen					Top of Seal	
Bottom of Well Screen	+		xxx			
Top of Peltonite Seal			xxx		Top of Gravel Pack	Name of Street, or Str
Bottom of Peltonite Seal					Top of Screen	9.2
Top of Gravel Pack					int of organi	<u> </u>
Bottom of Gravel Pack				National Section		
Top of Natural Cave-In						
Bottom of Natural Cave-In						
Top of Groundwater					Bottom of Screen Bottom of Borehole	19.6
Total Depth of Borehole						

Borehole # PZ-04

Phase

20445

of

EPES Groundwar

S. Pope

compl

Well #

Page

Project Location STANDARD Oil Com # 1

C

Project Name

On-Site Geologist Personnel On-Site

Contractors On-Site

Project Number 17520

Comments:

Geologist Signature

RECORD OF SUBSURFACE EXPLORATION

Philip Environmental Services Corp								
4000 Monroe Road								
Fermington, New	Mexico 87401							
(505) 326-2262	FAX (505) 326-2388							

Elevation	
Borehole Location	
GWL Depth 2	8.1
Logged By K	PADILLA
Drilled By	
Date/Time Started	900 B/1/97
Date/Time Completed	944 81,197

	Page	of	
Project Name	EPFS GROU	NO WATER	
Project Number	17520 Pha	ise	
	Standard Oil	Com. # 1. 76	445
Well Logged By	_ S. Pope		
Personnel On-Site	L. Gom	[2	
Contractors On-Site	-		
Client Personnel On-S	ite		

Borehole # Well #

HCA 4/14 1D Drilling Method PiD Air Monitoring Method

····				· · · · · · · · · · · · · · · · · · ·		0	r			·····
Depth	Sample	Sample	Sample Type &	Sample Description	USCS	Depth Lithology	نم ا	r Monitor	ina	Drilling Conditions
(Feet)	Number	Interval	Recovery	Classification System: USCS	Symbol	Change		nits: ND	-	& Blow Counts
(1-661)	Number	1146140			Cynico.					
0 5 10 15			(inches)	BABUUNSAND Mect-COBRAINED Trau Silt & CLAY, LOOSE Moint		(feet)	82	BH	S	
20 25 30 35 40	1	30 32	24	Fili Star / Stills, Fire Man Goldings Starnalsed, Loost TOB-32			0;	0		-Contopour Cutting Sailt -15 Note Do for the main -15 Note Do for the main Strong NC Odo -101 - 1 R Million - 5/18ht Degrad of HC Oclos Head Sp

Comments:

Geologist Signature

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IONITORING WELL INST	FALLATION R	ECORD	Borehole # _ <u>Pz - 63</u>
hilip Environmental Services Corp).		Well # Page of
00 Monroe Road			
mington, New Mexico 87401			Project Name <u>EPFS</u>
061 326-2262 FAX (6061 326-2388			Project Number 1752.0 Phase
			Project Location $\frac{1/520}{5+4TE} GMS Com # 1$
			_
evation			On-Site Geologist <u>S, Popre</u>
ell Location			Personnel On-Site
WL Depth stalled ByK. PADILLA			Client Personnel On-Site
ate/Time Started 945	8/1/97		
Depths in Reference to Ground S	Surface		Top of Protective Casing Top of Riser
	Surface Material	Depth	
Item	1	Depth	Top of Riser
Item Top of Protective Casing	1	Depth	Top of Riser
Item Top of Protective Casing Bottom of Protective Casing Top of Permanent Borehole	1	Depth	Top of Riser
Top of Protective Casing Bottom of Protective Casing Top of Permanent Borehole Casing	1	Depth	Top of Riser
Item Top of Protective Casing Bottom of Protective Casing Top of Permanent Borehole Casing Bottom of Permanent Borehole	1	Depth	Top of Riser
Item Top of Protective Casing Bottom of Protective Casing Top of Permanent Borehole Casing	1	Depth	Top of Riser
Item Top of Protective Casing Bottom of Protective Casing Top of Permanent Borehole Casing Bottom of Permanent Borehole	1	Depth	Top of Riser
Item Top of Protective Casing Bottom of Protective Casing Top of Permanent Borehole Casing Bottom of Permanent Borehole Casing	1	Depth	Top of Riser
Item Top of Protective Casing Bottom of Protective Casing Top of Permanent Borehole Casing Bottom of Permanent Borehole Casing Top of Concrete	1	Depth	Top of Riser
Item Top of Protective Casing Bottom of Protective Casing Top of Permanent Borehole Casing Bottom of Permanent Borehole Casing Top of Concrete Bottom of Concrete	1	Depth	Top of Riser
Item 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	1	Depth	Top of Riser

_	~



Comments:

Bottom of Well Riser

Top of Well Screen

Bottom of Well Screen

Top of Peltonite Seal

Top of Gravel Pack

Bottom of Gravel Pack

Top of Natural Cave-In

Top of Groundwater

Total Depth of Borehole

Bottom of Natural Cave-In

Bottom of Peltonite Seal

Geologist Signature

30°

28,5

30.º

Top of Seal

Top of Gravel Pack

Bottom of Screen

Bottom of Borehole

14.6

30

30

Top of Screen

RECORD OF SUBSURFACE EXPLORATION

-	

Philip Environmental Services Corp. 4000 Monroe Road Fermington, New Mexico 87401 (505) 326-2262 FAX (506) 326-2388

Sample

Number

Depth

(Feet)

0

5

10

Elevation	
Borehole Location	
GWL Depth	
Logged By _<	5. Pope
Drilled By 7	L. PADIL A
Date/Time Started	1015 8/1/97
Date/Time Completed	1100 8/1/97

Sample

Interval

Sample

Type &

Recovery (inches)

Project Name	EPFS GIOUNDWATE
Project Number	17520 Phase
Project Location	17520 Phase Standard GAS Com #1
Well Logged By	S. Pope
Personnel On-Site	C. Gomez
Contractors On-Site	
Client Personnel On-	Site

Borehole #

Well #

Page

PZ-02

of

Drilling Method Air Monitoring Method

Depth

\$

1457 41/4 D 710

USCS Symbol	Lithology Change	Air Monitoring Units: NDU		-	Drilling Conditions & Blow Counts
	(feet)	ВZ	вн	s	1
					- No fed Contamino Suil = Begin @ 4' Strong HC Oder - Head space Cutting S = 392 ppm

WATER 019.5

15 20 40B -23 25

Sample Description

Classification System: USCS

BROWN SAND Ned- 6 Grained

BLACE - DK Glay Med - LO SAND Trace, Silt and Clay, Moist

Trace Moisture, Loosa

Loose

Comments:	

40

30

35

MONITORING WELL INSTALLATION RECORD

8/1/97

 Philip Environmental Services Corp.

 4000 Monroe Road

 Farmington, New Mexica 87401

 (606) 326-2262

 FAX (506) 326-2388

Elevation	
Well Location	
GWL Depth 19.5	
Installed By K. PADILLA	

Date/Time Started 1/60 Date/Time Completed

Comments:

Depths in Reference to Ground S	urface			[Top of Protective Casing Top of Riser	
ltem	Material	Depth	_			Ground Surface	
Top of Protective Casing							
Bottom of Protective Casing					7		
Top of Permanent Borehole Casing							
Bottom of Permanent Borehole Casing							
Top of Concrete							
Bottom of Concrete							
Top of Grout							
Bottom of Grout							
Top of Well Riser							
Bottom of Well Riser							
Top of Well Screen				xxx	xx	Top of Seal	
Bottom of Well Screen							
Top of Peltonite Seal				xχ	$\infty \infty$		
Bottom of Peltonite Seal				xxx	xx	Top of Gravel Pack	12.4
Top of Gravel Pack						Top of Screen	_16
Bottom of Gravel Pack	· · · · · · · · · · · · · · · · · · ·						
Top of Natural Cave-In							
Bottom of Natural Cave-In		ļ					
Top of Groundwater				E		Bottom of Screen Bottom of Borehole	23
Total Depth of Borehole		23			<u>}</u>		

	Well #	ole #_ <u>PZ-0</u>	6
Project Name	EPFS	Groundwat	~
Project Number	17520	Phase	
Project Location	SHNDAR D	Oil Com#	70445
On-Site Geologist Personnel On-Site Contractors On-S	·	Pope Gonuz	

Client Personnel On-Site

Geologist Signature

RECORD OF SUBSURFACE EXPLORATION

Philip Environmental Services Corp.				
4000 Monroe Road				
Farmington, New	Mexico 87401			
(505) 326-2262	FAX (606) 326-2388			

Elevation	
Borehole Location	
GWL Depth	110.0
Logged By 5.	Pope
Drilled By <u>IL.</u>	Padilla
	1125 8/1/27
Date/Time Completed	1215 8/1/97

	Borehole #	P
	Well #	
	Page	of
7F5	GROUNDWA	TEN.

PZ-07

Project Name	EPES GROUNDWATER
Project Number	17520 Phase
Project Location	STANDARD OIL Com #1 70445
Well Logged By	SiPORE

Personnel On-Site Contractors On-Site Client Personnel On-Site

1ODE Comer

Drilling Method Air Monitoring Method

45A 414 D PID

Depth (Feet)	Semple Number	Sample Interval	Sample Type & Recovery (inches)	Semple Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)		r Monitor Inits: NC BH	Drilling Conditions & Blow Counts
				BROWN SAND Trace sitt and CLAY. Med- lo Guarad, Trace Moisture. 708 20			;	вн	- discolored soil Begin @ 14.0 By cutting s
Comments	:							· · · ·	

Geologist Signature

.



MONITORING WELL INSTALLATION RECORD

Philip Environmental Services Corp. 4000 Monroe Road Fermington, New Mexico 87401 (506) 326-2262 FAX (506) 326-2388

Elevation	
Well Location	
GWL Depth //o.o	
Installed By K, PADILLA	

 Date/Time Started
 1215
 8/1/97

 Date/Time Completed
 1245
 3/1/87

Depths in Reference to Ground S	Sufface		[F	Top of Protective Casing Top of Riser	
Item	Material	Depth			Ground Surface	
Top of Protective Casing						
Bottom of Protective Casing Top of Permanent Borehole Casing Bottom of Permanent Borehole Casing						
Top of Concrete	<u> </u>					
Bottom of Concrete						
Top of Grout						
Bottom of Grout						
Top of Well Riser						
Bottom of Well Riser						-
Top of Well Screen			xxx	xx	Top of Seal	
Bottom of Well Screen						
Top of Peltonite Seal					Top of Gravel Pack	
Bottom of Peltonite Seal					Top of Screen	9.6
Top of Gravel Pack						
Bottom of Gravel Pack						
Top of Natural Cave-In						
Bottom of Natural Cave-In						
Top of Groundwater				ן ן	Bottom of Screen Bottom of Borehole	<u>70</u> Zo
Total Depth of Borehole	1		L <u></u>	ن 		

Comments:

Geologist Signature

	Page _	of	
Project Name	EPFS GAR	UNDWATER	
Project Number	17520	Phase	
Project Number Project Location	STANDARD	Oil Com# 1	70455
On-Site Geologis	t 5.2	an F	
Personnel On-Sit	e <u>C. C</u>	OMEZ	

Contractors On-Site

Borehole #____ Well # 72-07

GELMASO Watural Gas Company Wall Points	Dints	СН	AIN OF	CUSTO	CHAIN OF CUSTODY RECORD	Q	Pageof	
PROJECT NUMBER PROJECT NAME # 24324 Pit Closure Project		ਤਸ: ਸਤ		REC	REQUESTED ANALYSIS	SISY	CONTRACT LABORATORY P. O. NUMBER	
ature)	e 11/37		түре түре Амрісе		DIA	ЕИСЕ		
LABID DATE TIME MATRIX		OF CI	TP AT	178 178 1493	ראפ	# Inoas	REMARKS	
970790 N3197 1325 WARE 577	577-25	2 17	ß	×			72-01, Staware on Con#1 (20445)	
7/31/97 1345 VINTER	0-26	2 6		×			72-02, Stawsheson (Orith) (Terus)	
970792 N31/97 1540 WATER 572 - 27	- 27	2 6	3	Ż			72 - 03, StownARD Ou Com # 1 (70445)	
970793 7/31/97 1615 WINKE 517-28	- 28	N	3	×			PZ-04 StANDARDON Com# 1 (70445	$\overline{\mathbf{c}}$
970794 Naiki	TRIP BLANK	/ 1	m	×				
							30°	
	RECEIVED BY: (Signature)	nature)		RELINOL	RELINQUISHED BY: (Signature)	lure)	DATE/TIME RECEIVED BY: (Signature)	
r L				Cor.	بالماندا الم	liano	8/4/97 1105	
RELINOUISHED BY: (Signature) DATE/TIME	RECEIVED BY: (Signature)	nature)		RELINO	RELINOUISHED BY: (Signature)	iture)	DATE/TIME RECEIVED OF LABORATORY BY: (Signature)	(Jure)
							8/4/97/1/05] XMANLe Usme	tra
	SAMPLE RECEIPT REMARKS	REMARKS				RESULTS & IN		
CARRIER CO.							EL PASO NAI UHAL GAS COMPANY P. O. BOX 4990	— ≻
	CHARGE CODE					505-599-2144		•
White - Testing Laboratory Canary - EPNG Lab Pink - Field Sampler	Sampler						FM-08-0565 A (Rev. 05-94)	Rev. 05-94)

2 Callary - Er White - Testing Laboratory





FIELD SERVICES LABORATORY ANALYTICAL REPORT PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	STP25	970790
MTR CODE SITE NAME:	70445	Standard Oil Com #1
SAMPLE DATE TIME (Hrs):	7/31/97	1325
PROJECT:	W	ellPoints
DATE OF BTEX EXT. ANAL.:	8/5/97	8/5/97
TYPE DESCRIPTION:	PZ-1	Water

Field Remarks:

RESULTS										
PARAMETER	RESULT	UNITS		QUALIF	IERS	<u> </u>				
			DF	<u>0</u>						
BENZENE	4770	РРВ	50	D	_					
TOLUENE	7080	PPB	50	D						
ETHYL BENZENE	925	PPB	50	D						
TOTAL XYLENES	8810	PPB	50	D						
TOTAL BTEX	21600	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

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

Narrative:

Approved By: _	Jan Lath		Date:	\$8/97
	\bigcirc	970790.XLS.8/8/97		

FIELD SERVICES FIELD SERVICES LABORATORY



ANALYTICAL REPORT

PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	STP26	970791
MTR CODE SITE NAME:	70445	Standard Oil Com #1
SAMPLE DATE TIME (Hrs):	7/31/97	1345
PROJECT:	W	ellPoints
DATE OF BTEX EXT. ANAL.:	8/6/97	8/6/97
TYPE DESCRIPTION:	PZ-2	Water

EL PASO

Field Remarks:

RESULTS UNITS PARAMETER RESULT QUALIFIERS DF Q BENZENE PPB <10 10 D TOLUENE 2120 PPB 10 D PPB ETHYL BENZENE 560 10 D TOTAL XYLENES 6130 PPB 10 D TOTAL BTEX PPB 8810

--BTEX is by EPA Method 8020 --

for this sample All QA/QC was acceptable.

DF = Dilution Factor Used

The Surrogate Recovery was at

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

92.8

Narrative:

Approved By: ______

Date: 8857

970791.XLS,8/8/97

D SERVICES FIELD SERVICES LABORATORY



ANALYTICAL REPORT **PIT CLOSURE PROJECT**

aso

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	STP27	970792
MTR CODE SITE NAME:	70445	Standard Oil Com #1
SAMPLE DATE TIME (Hrs):	7/31/97	1540
PROJECT:	W	ellPoints
DATE OF BTEX EXT. ANAL.:	8/6/97	8/6/97
TYPE DESCRIPTION:	PZ-3	Water

Field Remarks:

RESULTS										
PARAMETER	RESULT	UNITS		QUALIF	IERS					
			DF	Q						
BENZENE	< 10	PPB	10	D						
TOLUENE	6060	PPB	10	D						
ETHYL BENZENE	681	PPB	10	D						
TOTAL XYLENES	7870	PPB	10	D						
TOTAL BTEX	14600	PPB								

--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.

94.8

Narrative:

du Harth 8/8/97 Date: ____ Approved By: 970792.XL\$,8/8/97





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

SAMPLE IDENTIFICATION

	Field ID	Lab ID		
SAMPLE NUMBER:	STP28	970793		
MTR CODE SITE NAME:	70445	Standard Oil Com #1		
SAMPLE DATE TIME (Hrs):	7/31/97	1615		
PROJECT:	WellPoints			
DATE OF BTEX EXT. ANAL.:	8/6/97	8/6/97		
TYPE DESCRIPTION:	PZ-4	Water		

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	3.39	РРВ				
TOLUENE	6.61	PPB				
ETHYL BENZENE	41.4	РРВ				
TOTAL XYLENES	320	PPB				
TOTAL BTEX	371	PPB				

92.3

The Surrogate Recovery was at DF = Dilution Factor Used

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

Narrative:

du Fath. Approved By: Date: 970793.XLS,8/8/97



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

SAMPLE IDENTIFICATION

	Field ID	Lab ID		
SAMPLE NUMBER:	N/A	970794		
MTR CODE SITE NAME:	NAME: 70445 Star			
SAMPLE DATE TIME (Hrs):	7/31/97	1615		
PROJECT:	w	ellPoints		
DATE OF BTEX EXT. ANAL.:	8/5/97	8/5/97		
TYPE DESCRIPTION:	Blank	Water		

Field Remarks: TRIP Blank

99.0

John Hartsch

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

The Surrogate Recovery was at DF = Dilution Factor Used

for this sample All QA/QC was acceptable.

Narrative:

Approved By:

8/8/97 Date: _____

970794.XLS,8/8/97

QUALITY CONTROL REPORT EPA METHOD 8020 - BTEX

el paso

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 %	X	
SAMPLE		EXPECTED	ANALYTICAL		AC	CEPTAE	BLE
NUMBER	TYPE	RESULT	RESULT	%R			
LCS LA-45476		PPB	PPB			YES	NO
25 PPB					RANGE		
Benzene	Standard	25.0	24.1	96.4	39 - 150	Х	
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	<u> </u>	
SAMPLE		EXPECTED	ANALYTICAL		ACC	CEPTAB	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 %	<u> </u>	
SAMPLE		EXPECTED	ANALYTICAL		ACO	CEPTAE	BLE
NUMBER	ТҮРЕ	RESULT	RESULT	%R			
CCV LA-52589		PPB	PPB			YES	NO
50 PPB					RANGE		
Benzene	Standard	50.0	47.9	95.8	75 - 125 %	Х	
Toluene	Standard	50.0	47.6	95.2	75 - 125 %	Х	
Ethylbenzene	Standard	50.0	47.3	94.6	75 - 125 %	Х	
m & p - Xylene	Standard	100	92.8	92.8	75 - 125 %	Х	
o - Xylene	Standard	50.0	47.9	95.8	75 - 125 %	Х	

1

Narrative: Acceptable.



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

ABORATORY DUPLICATES:

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

Narrative: Acceptable.

LABORATORY SPIKES:

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

Narrative: Acceptable

DDITIONAL 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: Maa

2 Au Jolla Approved By:

Date



QUALITY CONTROL REPORT EPA METHOD 8020 - BTEX

Samples: 970791 - 970793, 970808 - 970811

QA/QC for 8/06/97 Sample Set

LABORATORY CALIBRATION CHECKS / LABORATORY CONTROL SAMPLES:

LABORATORY CALIBRATION CHECK	5 / LABORATORY CONTROL 5/	AMPLES:			
SAMPLE NUMBER	түре	EXPECTED RESULT	ANALYTICAL RESULT	2	ACCEPTABLE
1CV LA-52589 50 PP8		РРВ	РРВ		YES NO Range
Benzene	Standard	50.0	46.9	93.8	75 - 125 % X
Toluene	Standard	50.0	47.1	94.2	75 - 125 % X
Ethylbenzene	Standard	50.0	47.4	94.8	75 - 125 % X
m & p - Xylene	Standard	100	93.7	93.7	75 - 125 % X
o - Xylene	Standard	50.0	47.9	95.8	75 - 125 % X
SAMPLE NUMBER LCS LA-45476 25 PPB	түре	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	3	ACCEPTABLE YES NO RANGE
Benzene	Standard	25.0	23.9	95.6	39 - 150 X
Toluene	Standard	25.0	24.2	96.8	46 - 148 X
Ethylbenzene	Standard	25.0	24.3	97.2	32 - 160 X
m & p - Xylene	Standard '	50.0	47.8	95.6	Not Given X
o - Xylene	Standard	25.0	24.7	99	Not Given X
SAMPLE NUMBER CCV LA-52589 50 PPB	түре	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	**	ACCEPTABLE YES NO RANGE
Benzene	Standard	50.0	47.3	94.6	75 - 125 % X
Toluene	Standard	50.0	47.2	94.4	75 - 125 % X
Ethylenzene	Standard	50.0	47.3	94.6	75 - 125 % X
m & p - Xylene	Standard	100	93.1	93.1	75 - 125 % X
o - Xylene	Standard	50.0	47.8	95.6	_75 - 125 % X
SAMPLE NUMBER CCV LA-52589 50 PPB	ТҮРЕ	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	XR	ACCEPTABLE YES NO RANGE
Benzene	Standard	50.0	47.1	94.2	75 - 125 % X
Toluene	Standard	50.0	46.8	93.6	75 - 125 % X
Ethylbenzene	Standard	50.0	46.8	93.6	75 - 125 % X
m & p - Xylene	Standard	100	91.9	91.9	75 - 125 % X
o - Xylene	Standard	50.0	47.4	94.8	75 - 125 % X

Narrative: Acceptable.



EL PASO FIELD SERVICES LAB QUALITY CONTROL REPORT EPA METHOD 8020 - BTEX Samples: 970791 - 970793, 970808 - 970811

BORATORY DUPLICATES:

10	туре	RESULT PPB	PPB		RANGE	ACCEPTABLE	NO
Benzene	Matrix Duplicate	2.2	2.6	12.94	+/- 20 %	x	
Toluene	Matrix Duplicate	8.3	8.4	1.44	+/- 20 %	x	
Ethylbenzene	Matrix Duplicate	3.07	2.60	16.61	+/- 20 %	X	
m & p - Xylene	Matrix Duplicate	27.0	25.1	7.30	+/- 20 %	x	
m & p - Xylene o - Xylene	Matrix Duplicate	6.2	6.23	0.58	+/- 20 %	X	

Narrative: Acceptable.

LABORATORY SPIKES:

SAMPLE ID 2nd Analysis 970811	ADDED PPB	SAMPLE RESULT PPB	SAMPLE Result	% R	RANGE	ACCEPTABLE	NO
Benzene	50	2.2	49.7	94.8	75 - 125 %	x	
Toluene	50	8.3	54.4	92.2	75 - 125 %	x	
Ethylbenzene	50	3.07	52.6	99.0	75 - 125 %	x	
m & p - Xylene	100	26.99	118.0	91.0	75 - 125 %	x	
m & p - Xylene o Xylene	50	6.19	53.9	95.5	75 - 125 %	x	

Narrative: Acceptable

TIONAL 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	SOURCE	РРВ	STATUS
CARRYOVER CHECK		(Four analyzed with this set)	
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.

Reported By:

Approved By:

Date:_

EI PESO Natural Gas Company]	Ne	Well POINTS	ST/	CH	AIN OI		TODY	CHAIN OF CUSTODY RECORD	BD	1	
PROJECT NUMBER # 24324	PROJECT	NAME	PROJECT NAME Pit Closure Project	-		ਤਬ ਬ=			REQUES	REQUESTED ANALYSIS	TASIS		
SAMPLERS (Signature)	\int_{t}			DATE: 8/1/9 7		AL NUMBLE	AMPLE HC		bID 8050 EX			ŧ ЕИСЕ	
	DATE	TIME	MATRIX	FIELD ID		OF C		ат Адэ Т8				ŧ seon	REMARKS
970795	8/197	8/197 1315	(L) area	ST2-29	N	2		×:			- <u></u>	į	72-05, Standard On Com#1, 20445
9707 96 8/1/97 1335 WATER 577-30	<u>11/18/11/8</u>	1355	WATER	577.30		7	 	\times					PZ c le, Stanman Du Contel, 70445
9707 97 8/1/97 1425 WATER 517-31	8/1/12	1425	WATER	517-31		2							7707, Stansac Du Cam#1, 70445
970799811417	81.137		K14152	1815				X .			, , , , ,		
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RELINQUISKED BY: (Signalufe)	nature)		DATE	DATE/TIME RECEIVED	RECEIVED BY: (Signature)	(e)		REL	INDUISHE	RELINQUISHED BY: (Synature)	ature)		DATE/TIME RECEIVED BY: (Signature)
X - X	J.	N N	1.61	1600				$\underline{\bigcirc}$	ہے. ص	Ś	and ill	Sing	20
RELINGUISHED BY: (Signature)	nature)	1	DATE	DATE/TIME RECEIVED	RECEIVED BY: (Signature)	10)		REI	INQUISHE	RELINQUISHLD BY: (Signature)	ature)		DATE/IME RECEIVED OF LABORATORY BY: (Signal Jra)
													8/4/97/1106 Marle Womente
REQUESTED TURNAROUND TIME:	UND TIME: ISH			SAMPLE	SAMPLE RECEIPT REMARKS	AARKS					HESU	JLTS & INV	
CARRIER CO.													EL PASO NATURAL GAS COMPANY P. O. BOX 4990
:'ON THE				CHARGE CODE	CODE						505-1	505-599-2144	FARMINGTON, NEW MEXICO 87499 FAX: 505-599-2261
White - Testing Laboratory		Canary - EPNG Lab		Pink - Field Sampler									FM-08-0565 A (Rev. 05-94)

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FIELD SERVICES LABORATORY ANALYTICAL REPORT

FIELD SERVICES

EL PASO

PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	STP29	970795
MTR CODE SITE NAME:	70445	Standard Oil Com #1
SAMPLE DATE TIME (Hrs):	8/1/97	1315
PROJECT:	W	ellPoints
DATE OF BTEX EXT. ANAL.:	8/6/97	8/6/97
TYPE DESCRIPTION:	PZ-5	Water

Field Remarks:

		RESULTS				
PARAMETER	RESULT	UNITS	DF	QUALIFI	ERS	
BENZENE	10400	РРВ	50	D		
TOLUENE	< 50	PPB	50	D		
ETHYL BENZENE	746	PPB	50	D		
TOTAL XYLENES	5500	РРВ	50	D		
TOTAL BTEX	16700	PPB		<u> </u>		

--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.

95.0

Hen Jabola

Narrative:

Approved By:

Date:	8/7/97	

970795.XLS,8/6/97

FIELD SERVICES LABORATORY ANALYTICAL REPORT PIT CLOSURE PROJECT

FIELD SERVICES

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SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	STP30	970796
MTR CODE SITE NAME:	70445	Standard Oil Com #1
SAMPLE DATE TIME (Hrs):	8/1/97	1355
PROJECT:	Wel	Points
DATE OF BTEX EXT. ANAL.:	8/6/97	8/6/97
TYPE DESCRIPTION:	PZ-6	Water

Field Remarks:

		RESULTS				
PARAMETER	RESULT	UNITS		QUALIFI	ERS	<u></u>
		<u> </u>	DF	0	<u> </u>	
BENZENE	1420	PPB	50	D		
TOLUENE	1740	РРВ	50	D		
ETHYL BENZENE	579	РРВ	50	D		ļ
TOTAL XYLENES	4320	PPB	50	D		
TOTAL BTEX	8060	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.

93.8

John Taille

Narrative:

Approved By: ____

Date: <u>8/7/97</u>

970796.XLS,8/6/97

FIELD SERVICES LABORATORY ANALYTICAL REPORT PIT CLOSURE PROJECT

FIELD SERVICES

el paso



SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	STP31	970797
MTR CODE SITE NAME:	70445	Standard Oil Com #1
SAMPLE DATE TIME (Hrs):	8/1/97	1425
PROJECT:	W	ellPoints
DATE OF BTEX EXT. ANAL.:	8/6/97	8/6/97
TYPE DESCRIPTION:	PZ-7	Water

Field Remarks:

		RESULTS			<u> </u>
PARAMETER	RESULT	UNITS		QUALIFIE	 RS
			DF	0	
BENZENE	126	PPB	50	D	
TOLUENE	4590	PPB	50	D	
ETHYL BENZENE	1150	РРВ	50	D	
TOTAL XYLENES	11600	PPB	50	D	
TOTAL BTEX	17500	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.

96.1

John Lovel

Narrative:

Approved By:

Date: _____ 8/7/97

970797.XLS,8/6/97

FIELD SERVICES LABORATORY **ANALYTICAL REPORT**

LD SERVICES

PASO

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PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID			
SAMPLE NUMBER:	N/A	970798			
MTR CODE SITE NAME:	70445	Standard Oil Com #1			
SAMPLE DATE TIME (Hrs):	8/1/97	1425			
PROJECT:	WellPoints				
DATE OF BTEX EXT. ANAL.:	8/5/97	8/5/97			
TYPE DESCRIPTION:	Blank	Water			

Field Remarks: ______ Field Remarks:

100

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	<u> </u>		<u> </u>
BENZENE	< 1	РРВ				
TOLUENE	<1	PPB				
ETHYL BENZENE	<1	PPB				
TOTAL XYLENES	< 3	РРВ				
TOTAL BTEX	< 6	РРВ				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at DF = Dilution Factor Used

for this sample All QA/QC was acceptable.

Narrative:

John Londh Date: 8/7/97 Approved By: _ 970798.XLS,8/6/97

QUALITY CONTROL REPORT EPA METHOD 8020 - BTEX

EL PASO FIELD SERVICES

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	ILE
NUMBER	ТҮРЕ	RESULT	RESULT	%R			
LCS LA-45476		PPB	РРВ			YES	NO
25 PPB					RANGE		
Benzene	Standard	25.0	24.1	96.4	39 - 150	Х	
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	СЕРТАВ	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		AC	CEPTAE	BLE
NUMBER	ТҮРЕ	RESULT	RESULT	%R			
CCV LA-52589		РРВ	РРВ			YES	NO
50 PPB		L			RANGE		
Benzene	Standard	50.0	47.9	95.8	75 - 125 %	Х	
Toluene	Standard	50.0	47.6	95.2	75 - 125 %	Х	
Ethylbenzene	Standard	50.0	47.3	94.6	75 - 125 %	Х	
m & p - Xylene	Standard	100	92.8	92.8	75 - 125 %	Х	
o - Xylene	Standard	50.0	47.9	95.8	75 - 125 %	Х	

Narrative: Acceptable.



EL PASO FIELD SERVICES LAB QUALITY CONTROL REPORT EPA METHOD 8020 - BTEX

Samples: 970790, 970794-970798, 970804-970807

DRATORY DUPLICA SAMPLE		SAMPLE	DUPLICATE		AC	CEPTABLE
ID 970804	TYPE	RESULT PPB	RESULT PPB	RPD	RANGE	YES NO
Benzene	Matrix Duplicate	<1	<1	0.00	+/- 20 %	X
Toluene	Matrix Duplicate	<1	<1	0.00	+/-20 %	Х
Ethylbenzene	Matrix Duplicate	<1	<1	0.00	+/-20 %	Х
m & p - Xylene	Matrix Duplicate	<2	<2	0.00	+/-20 %	Х
o - Xylene	Matrix Duplicate	<1	<1	0.00	+/- 20 %	Х

Narrative: Acceptable.

LABORATORY SPIKES:

SAMPLE ID 2nd Analysis 970804	SPIKE ADDED PPB	SAMPLE RESULT PPB	SPIKE SAMPLE RESULT PPB	%R	ACCEPTABLE 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

ative: Acceptable

ADDITIONAL ANALYTICAL BLANKS:

	SOURCE	РРВ	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	PP8 (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

ative: Acceptable.

Reported By: Mda

Approved By:

2 Au Holla

Date

1997 GROUNDWATER ANALYTICAL

Project No. Projec Samplers: (Signatura) Samplers: (Signatura) LL-TR-R (N-7-76 /// LL-TR-R (N-76 /// Relinguished by: (Signature) Relinquished by: (Signature) Relinquished by: (Signature) Ar Bili No: Carrier Co:
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FIELD SERVICES LABORATORY

ANALYTICAL REPORT

PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	960926
MTR CODE SITE NAME:	70445	Standard Oil Com #1
SAMPLE DATE TIME (Hrs):	11/7/96	1142
PROJECT:	Sample 4	- 1st Quarter
DATE OF BTEX EXT. ANAL.:	11/11/96	11/11/96
TYPE DESCRIPTION:	Monitor Well	Water

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS	DF	QUALIFI	ERS
BENZENE	277	PPB	10	D	
TOLUENE	121	РРВ	10	D	
ETHYL BENZENE	161	РРВ	10	D	
TOTAL XYLENES	1590	РРВ	10	D	
TOTAL BTEX	2150	PPB			

-BTEX is by EPA Method 8020 -

The Surrogate Recovery was at 106 % 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 Tall

Date: ______

960920BT.XLS,11/13/96





Field Services Laboratory

Analytical Report

SAMPLE IDENTIFICATION

EPFS LAB ID: DATE SAMPLED: TIME SAMPLED (Hrs): SAMPLED BY: MATRIX: METER CODE: SAMPLE SITE NAME: SAMPLE POINT:

 AB ID:
 960926

 IPLED:
 11/07/96

 (Hrs):
 1142

 ED BY:
 D. Bird

 ATRIX:
 Water

 CODE:
 70445

 NAME:
 Huerfano Pipeline

 POINT:
 Standard Oil Com #1 MW-1

FIELD REMARKS:

GENERAL CHEMISTRY WATER ANALYSIS RESULTS

PARAMETER	RESULT	UNITS	DATE ANALYZED
Laboratory pH	8.3	Units	11/06/96
Alkalinity as C0 ₃	0.0	PPM ·	11/06/96
Alkalinity as HC03	521	РРМ	11/06/96
Calcium as Ca	432	PPM	11/07/96
Magnesium as Mg	57	PPM	11/07/96
Total Hardness as CaC03	1,314	PPM	11/07/96
Chloride as Cl	74	PPM	11/06/96
Sulfate as S04	2,420	PPM	11/06/96
Fluoride as F	0.6	PPM	11/07/96
Nitrate as N03-N*	< 0.6	PPM	11/06/96
Nitrite as N02-N	< 0.6	PPM	11/06/96
Ammonium as NH4 ⁺	<0.6	PPM	11/07/96
Phosphate as PO ₄	< 0.6	PPM	11/06/96
Potassium as K	1.8	PPM	11/07/96
Sodium as Na	710	PPM	11/07/96
Total Dissolved Solids	3,980	PPM	11/06/96
Conductivity	3,940	umhos/cm	11/06/96
Anion/Cation %	3.3%	%, <5.0 Accepted	11/20/96

Lab Remarks:

itrate was analyzed outside of holding limits.

Reported By: Mda

Approved By: John Table

Date: 1/20/46





FIELD SERVICES LABORATORY ANALYTICAL REPORT

SAMPLE IDENTIFICATION

SAMPLE NUMBER:	960926			
SAMPLE DATE:	11/07/96			
SAMPLE TIME (Hrs):	1142			
SAMPLED BY:	D. Bird			
MATRIX:	Water			
METER CODE:	70445			
SAMPLE SITE NAME:	Huerfano Pipeline			
SAMPLE POINT:	Standard Oil Com #1 MW-1			

REMARKS:

	RESULTS						
PARAMETER	TOTAL RESULT (mg/L)	N. M. WQCC LIMIT (mg/L)					
ARSENIC	<.010	0.100					
BARIUM	0.07	1.00					
CADMIUM	<.0002	0.010					
CHROMIUM	0.003	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.

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

Reported By: Mdu

Approved By:_____

Date: 12/18/96



QUALITY CONTROL REPORT

Sample ID: 960926 Date Sampled: 11/07/96

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 Résult	% RPD
Arsenic	ND	ND	NA NA
Barium	0.58	0.55	5.3%
Cadmium	ND	ND	NA NA
Chromium	0.002	0.002	0.0%
Lead	ND	ND	NA
Mercury	ND	ND	NA NA
Selenium	ND	ND	NA
Silver	ND	ND	NA

SPIKE ANALYSIS (µg/L)

	Original	Spike		
Analyte	Sample Result	Sample Result	Spike Added	Recovery Percent
Arsenic	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	9 6%
Silver	ND	49.6	50.0	99%

METHOD BLANK

Analyte	Found Result (µg/L)	Detection Level (ug/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	

ND: Not Detected at stated detection level.

NA: Not Applicable.

ml Reported By:_

Approved By: John Labal

Date: 12/18/96

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	- 20		ty Meter Jre Meter	ssal SEDARATOR			<u>ہ</u>					15		PON 5.
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ŋ	Well Number Meter Code	Instruments		Water Dis Kv73			Hd	582	513	25	-5.54	- 579		ANDRO
ing Dat	Well Nu Meter C			r	·····	I	Temperature °C	161	16.5	18.4	1813	16.5		
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ient an	Development Purging			7										Nov.
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Well Development and Purging Data		ume Cal Vell (feet)	ar Column in Well (feet) ////C es): Well // Gravel Pack Water Volume in Well Cubic Feet Galions			-	Water Remo	Increment	50	n n n	20	20		HYOK
-	ちも	Water Volume Calculation Initial Depth of Well (feet) 37.93 Initial Depth to Water (feet) 37.93	Height of Water Column in Well (feet)_ Diameter (Inches): Well <u>CP</u> Grav Water Volume in W Item Cubic Feet Gallo	ack in g	Drilling Fluids Total		Ending Water Depth	(reet)						ioMTING
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EL PASO FIELD SERVICES	Site Name <i>STAWOARD</i>	Development Criteria X 3 to 5 Casing Volumes of Water Removel Stabilization of Indicator Parameters Other	Methods of Development Pump Baller Centriugel X Bottol	Submersible Peristattic	Other	Water Removal Data	D E E	1053 rump	1100	11100	121	1130		T T \
M	e Name		ethods (ater Rei	Date			11-7-96 1				comments 0.06

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FIELD SERVICES LABORATORY

ANALYTICAL REPORT

PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	970075
MTR CODE SITE NAME:	70445	Standard Oil Com #1 MW-1
SAMPLE DATE TIME (Hrs):	2/7/97	1526
PROJECT:	Sample 4	- 2nd Quarter
DATE OF BTEX EXT. ANAL.:	2/13/97	2/13/97
TYPE DESCRIPTION:	Monitor Well	Water

Field Remarks:

RESULTS PARAMETER RESULT UNITS QUALIFIERS DF 0 BENZENE PPB 119 5 D TOLUENE 20.2 PPB 5 D ETHYL BENZENE 139 PPB 5 D TOTAL XYLENES 1490 **PPB** 5 D TOTAL BTEX 1770 PPB

-BTEX is by EPA Method 8020 -

The Surrogate Recovery was at 96.8 % 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 Falch	970075.XLS,2/18/97	Date:	2-19-97

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A 2454	Remarks	11-1/20	STANDARD ON CONTANN MC/PH					Date/Time Received by: (Signature)	Date/Time Received by: (Signature)		Date Results Reported / by: (Signature)	ע איז אל איז
AIN OF CUSTODY RECORD		ALC X	2					Relinquished by: (Signature)	Relinquished by: (Signature)	<u> </u>	0011 26/21	
Squiple 4 -	405RFAND PIDELINE Ver Clind Date 5-9-97	B Sample Number タアクギスア ロ・フォビフロ						Date/Time Received by: (Signature)	Date/Time	Date/Time Received for Laboratory by: (Signature)	11/10/00 Carrier Phy	
	Signature)	MTRY Date Time Comp. GRAB LIPACH SAPT 1575 X						Relinquished by: (Signature)	Relinquished by: (Signature)	Relinquished by: (Signature)	Carrier Co:	Air Bili No.:

FIELD SERVICES



FIELD SERVICES LABORATORY ANALYTICAL REPORT PIT CLOSURE PROJECT

EL PASO

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	970427
MTR CODE SITE NAME:	70445	Standard Oil Com #1 MW-1
SAMPLE DATE TIME (Hrs):	5/9/97	1523
PROJECT:	Sample 4	4 - <u>3r</u> d Quarter
DATE OF BTEX EXT. ANAL.:	5/14/97	5/14/97
TYPE DESCRIPTION:	Monitor Well	Water

Field Remarks:

RESULTS RESULT UNITS PARAMETER QUALIFIERS **. C** DF BENZENE 105 PPM 5 D TOLUENE 14.2 5 PPM D ETHYL BENZENE 145 PPM 5 D TOTAL XYLENES 1480 PPM 5 D TOTAL BTEX 1740 PPM

The Surrogate Recovery was at 95.6 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:

John Latch. Date: 5/21 97 Approved By: __ 970427,5/19/97

	Iments ≥ pH Meter Do Monthor © Conductivity Meter © Temperature Meter © Other C.	de	Comments							79/47 ma
	Meter Meter A. CHCA,	14440	Dissolved Oxygen mg/L		_			02		
-Mn 	uments Meter Do Monitor Conductivity Meter Temperature Meter Other	isposal	Conductivity Dissolved µmho/cm Oxygen mg/L	42.70	4530	4710	4720	222		Jes In
	Instruments PH Met Do Mo Condure Tempe	Water Disposal KUTC 59	E E	50%	1252	737	7.45	7:51		
ing Data Well Number	_		Temperature °C	18,0	11.5	170	18.7	[7]		Reviewer
Purgin v	a a								L	JUCHUC JUCUL
ent and Development Purging	3	Alt	Product Volume Removed (gallons) Increment [Cumulative							S - S
	Culation 22,23 22,23 22,23 22,23 Cavel Pack			l.	200 100	15.0	200	55		S S
Well Development and Purging Data			Water Volume Removed (gal) Increment Cumulativ	Ĩ	r n n	50	20	20	10-14-	UNDSCA
	Water Volume Ca Initial Depth of Well (feet) Initial Depth to Water (feet) Height of Water Column in V Diameter (inchea): Well C	Weil Casing Gravel Pack Drilling Fluids Total	Ending Water Depth (feet)							Î
CON CON	B ⊈ ± ± <		Intake En Depth (feet)							PURH Pros
	er Removel leters	check Valve s-steel Kemr	Removal Rate (gal/mln)						1	140 B
ELPASO FIELD SERVICES	ment Criteria 3 to 5 Casing Volumes of Water Removel Stabilization of Indicator Parameters Other of Development Pump Baller	Double Check Valve Stainless-steel Kemmerer	Data Development Method Jmp Baller							PMN Lain
ELMSO FIELD SERVICES	Development Criteria Development Criteria Stabilization of Indicator Pa Other Methods of Development Pump Pump Baller	Centrugal Submersible Peristattic Other	Water Removal Data Devoic Date Time Met	1434	6000	22	33	216		10 WHICK
	elopment stabiliz Stabiliz other nods of C	_	Later Rem Date Tim		14 46	R	-915	22	┼┤ᡟ	Comments ///C

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	4055579000000000000000000000000000000000	9710832 651 		Date/Time Received by: (Signature)	S-S-GPT / 1845 Date/Time Received by: (Signature)	Date/Time Received for Laboratory by: (Signature)	Carrier Phone No.
Sample 4 - 4th QuARTER	Project No. Project Name Samplere: (Signature) Comp. Comp. GRAB	x 1022 5599 1057 X		Relinguisted by: (Signature)	1 int	Relinquished by: (Signature)	Carrier Co: Air Bill No.:

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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	970832
MTR CODE SITE NAME:	70445	Standard Oil Com #1 MW-1
SAMPLE DATE TIME (Hrs):	8/8/97	1057
PROJECT:	Sample	4 - 4th Quarter
DATE OF BTEX EXT. ANAL.:	8/12/97	8/12/97
TYPE DESCRIPTION:	Monitor Well	Water

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS					
			DF	<u> </u>				
BENZENE	82.6	РРВ	2	D				
TOLUENE	15.6	РРВ	2	D				
ETHYL BENZENE	140	PPB	2	D				
TOTAL XYLENES	1400	РРВ	5	D				
TOTAL BTEX	1638	РРВ						

--BTEX is by EPA Method 8020 --

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

 $DF \approx Dilution Factor Used$

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

Narrative:

	····	 	······	
Approved By:	John Fardi:	 Date:	8/27/97	

970832BTEX,8/25/97

7		ster ter	X The D. D. CHEMETS RU	SEAR DR TOP				Dissolved Oxygen Comments					25	2		L: Date 0/25/97
ng Data	Well Number MW-/ Meter Code 70445	Instruments X JH Meter D Monitor X Conductivity Meter X Cemperature Meter	X) Ther & O	Water Disposal				Temperature Conductivity Dis C pH µmho/cm O	19/ 7.23 4030	7 708 39	17.4 6.60 4090	6 23 43	175 71 9910		HUDROSEN SULFIDE UMELL.	Reviewer Alin Clink
Well Development and Purging Data	Development Purging	n 17.20 Pack	Gallo Ren	23.4				Water Volume Product Volume Removed (gal) Removed (gallons)					_		DROSEN 3	Date & & 97 Reviewer
Vell Developm		Icylatig 32.93 All (feet) Gave	lolum eet	28				Water Volume Removed (gal)		50 50	50 190		50 700	\dagger	TRONG HV	
-	1 the	Water Volume Cal Initial Depth of Well (feet) Initial Depth to Water (feet) Height of Water Column in W Diameter (inches): Well	Item	Well Casing	Gravel Pack Drilling Fluids	Total									× 57	ieg
	400 DIL COMITY	of Water Removel r Parameters Int	Bailer Bottorn Valve	Double Check Valve	Stainless-steel Kemmerer				(Jainin)						 HTER HAO	mmi E
	Site Name_S774W04R0	Development Criteria X 3 to 5 Casing Volumes of Water Removel Stabilization of Indicator Parameters Other Methods of Development	Pump Bt Centrifugal X B			Other	Water Removal Data	\$ 동 동 문	10/0	2/0/2	7 1023	-	7/036		THE W	Developer's Signature
	Site Na	Develo]		Water	Date	8-8-97	29-2-5	422	4-2-2	222	0	Comments	Developer

A 2124	Remarks	STANDARD DIL COM. #1 MW-1		Date/Time Received by: (Signature)	Date/Time Received by: (Signature)		ed / by: (Signature) an lun nepro Form 71-65 A
CHAIN OF CUSTODY RECORD	Analysis Analysis	LS X Joh		Relinquished by: (Signature)	Relinquished by: (Signature)	u/ DeterTime Remarks: /5/47 p730	Date Results Reported / by: (Signature)
	MC#70445 Type and No. Budd Date: 1/-4-97 No. of Sample Contain- ers	97/186 6-1		Date/Time Received by: (Signature)	Date/Time Received by: (Signature)	y: (S	Carrier Poone No.
SAMPLU	Project No. Project Name Semplers: (Signature) NOTRI Date Time Comp. GRAB S	X 5251 1.6.6.1 17.2.		Religauished by: (Signature) D		d by: (Signature)	Carrier Co: Air Bill No.:

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FIELD SERVICES LABORATORY ANALYTICAL REPORT

PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	971186
MTR CODE SITE NAME:	70445	Standard Oil Com. #1
SAMPLE DATE TIME (Hrs):	11/4/97	1535
PROJECT:	Sample	4 5th Quarter
DATE OF BTEX EXT. ANAL.:	11/6/97	11/6/97
TYPE DESCRIPTION:	MW-1	Water

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS	DF	QUALIF	ERS	
BENZENE	91.4	РРВ	2	D		
TOLUENE	32.4	РРВ	2	D		
ETHYL BENZENE	141	РРВ	2	D		
TOTAL XYLENES	1320	РРВ	2	D		
TOTAL BTEX	1585	РРВ				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 91.0 % 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 Harch

971186BTEXMW,11/10/97

Date: 11/12/47

g Data	Well Number <u>MW-/</u> Meter Code <u>70445</u>	Instruments Image: Second control Image: Second contro <tr< th=""><th></th></tr<>	
Well Development and Purging Data	Development Development W	Water Volume Calculation Initial Depth of Weil (feet) Initial Depth to Water Column In Weil (feet) Height of Water Column In Weil (feet) Dameter (inches): Weil Immerer Immerer <td></td>	
FIELD SERVICES	Site Name STRINDARD OIL COM ⁷	ing Volumes of Water Removel ing Volumes of Water Removel on of indicator Parameters velopment Bailer all Sottom Valve bis Double Check Valve control Removal Method Rate Pump Bailer find Introd find Introd	

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