3R - 170

REPORTS

DATE:
1997

EL PASO ENERGY

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

February 27, 1998

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

Re: 1997 Groundwater Annual Report

Dear Mr. Olson:

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

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

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

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

Sincerely,

Sandra D. Miller
Environmental Manager

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

El Paso Energy Corporation 614 Reilly Avenue Farmington, New Mexico 87401 Phone (505) 325-2841 Fax (505) 599-2119

SAN JUAN BASIN PIT CLOSURES
San Juan Basin, New Mexico

El Paso Field Services Pit Project Groundwater Report
Annual Report

March 1998

Prepared For

El Paso Field Services
Farmington, New Mexico

Project 17520

PHILIP ENVIRONMENTAL

EPFS GROUNDWATER PITS
1997 ANNUAL GROUNDWATER REPORT

FIELDS A #7A
Meter/Line ID - 89961/97546

SITE DETAILS

Legals - Twn: 32N **Rng:** 11W **Sec:** 34 **Unit:** E
NMOCD Hazard Ranking: 40 **Land Type:** FEDERAL
Operator: AMOCO PRODUCTION COMPANY

PREVIOUS ACTIVITIES

Site Assessment: Aug-94 **Excavation:** Sep-94 (70 cy) **Soil Boring:** Jul-95
Monitor Well: Jul-95 **Additional MW's:** Dec-95

1997 ACTIVITIES

Quarterly Groundwater Monitoring - Quarterly groundwater monitoring was initiated on 4/18/96. Groundwater analytical data are presented in Table 1.
Well Point Installation - Groundwater samples were collected from temporary monitoring wells.
Product Removal - Product removal was initiated at MW-1 on 8/26/97.

CONCLUSIONS

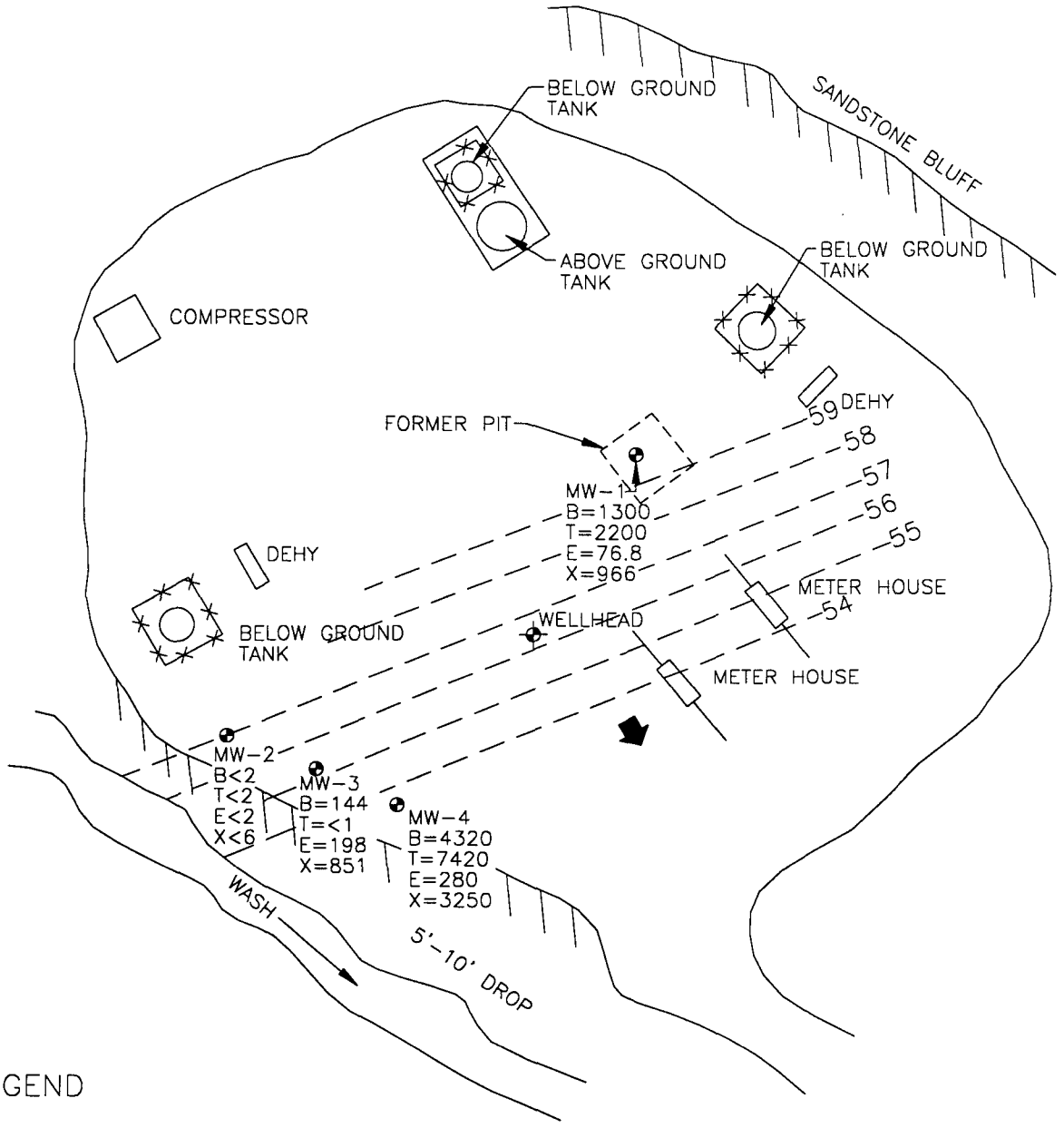
Based on groundwater levels collected from Well Point data, the groundwater flow trends to the southeast on this site, as presented in Figure 1. Product removal was initiated at MW-1 on 8/26/97, and approximately 0.65 gallons of product has been removed. Due to the presence of product in MW-1 and high dissolved phase in additional monitoring wells, quarterly sampling was discontinued as of 4/21/97. Product levels in MW-4 have declined to negligible measurements. MW-4 is cross-gradient of MW-1 and based on groundwater flow, appears to be down-gradient of a production pit on site. All product has been disposed of at EPFS's Kutz Separator in Bloomfield, NM.

Groundwater samples were collected from temporary monitoring wells at five locations on site. Groundwater samples collected cross and down-gradient of MW-1 were in excess of standards for BTEX. Offsite work will be required to determine the downgradient extent of migration.

One groundwater sample collected upgradient of MW-1 was in excess of standards for benzene, toluene, and xylenes, which indicates a potential upgradient source.

RECOMMENDATIONS

- EPFS proposes to conduct no further actions at this site, until the operator commences with remediation associated with their production pits.
- Continue with product removal as needed.
- Discontinue quarterly sampling at all monitoring wells until product removal is complete.
- Collect quarterly groundwater levels at four monitoring wells.



LEGEND

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

0 40
FEET

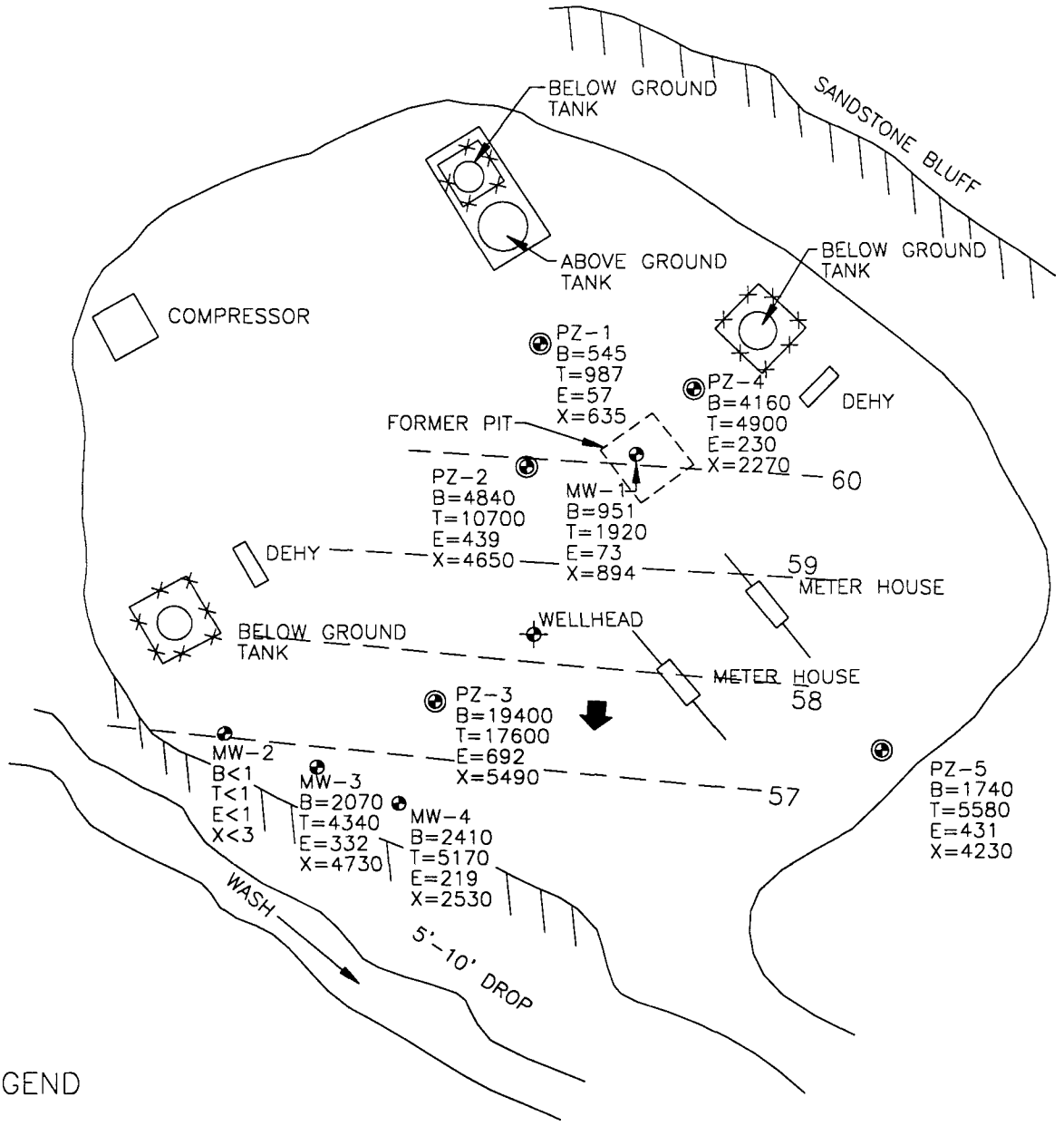
N

PHILIP SERVICES CORP

TITLE:
FIELDS A #7A 89961/97546
1/30/97

DWN:	DES.:	PROJECT NO.: 17520
TMM	CC	EPFS GW PITS
CHKD: CC	APPD:	
DATE: 1/20/98	REV.: 0	FIGURE 1

COL. 17520K-003



LEGEND

PZ-1	APPROXIMATE PIEZOMETER LOCATION AND NUMBER
MW-1	APPROXIMATE MONITORING WELL LOCATION AND NUMBER
B	BENZENE (ug\L)
T	TOLUENE (ug\L)
E	ETHYL BENZENE (ug\L)
X	XYLENE (ug\L)
ug\L	MICROGRAMS PER LITER
60	GROUNDWATER POTENTIOMETRIC SURFACE
	APPROXIMATE GROUNDWATER GRADIENT

0 40
FEET

N

PHILIP SERVICES CORP

TITLE:
FIELDS A #7A 89961/97546
4/21/97

DWN:	DES.:	PROJECT NO.: 17520
TMM	CC	EPFS GW PITS
CHKD: CC	APPD:	
DATE: 1/20/98	REV.: 0	FIGURE 2

COL 17520K-002

TABLE 1

Sample #	Meter/ Line #	Site Name	Sample Date	MW #	Project	Benzene (PPB)	Toluene (PPB)	Ethyl Benzene (PPB)	Total Xylenes (PPB)	Total BTEX
960370	89961	Fields A#7A	04/18/96	1	Sample 4 - 1st Qtr	= 1300	= 2140	= 119	= 1240	4799
960660	89961	Fields A#7A	07/29/96	1	Sample 4 - 2nd Qtr	= 503	= 804	= 28	= 363	1698
960875	89961	Fields A#7A	10/21/96	1	Sample 4 - 3rd Quarter	= 843	= 1300	= 26	= 422	= 2591
970033	89961	Fields A#7A	1/30/97	1	Sample 4 - 4th Quarter	= 1300	= 2200	= 76.8	= 966	= 4543
970324	89961	Fields A#7A	4/21/97	1	Sample 4 - 5th Quarter	= 951	= 1920	= 73	= 894	= 3838
960371	89961	Fields A#7A	04/18/96	2	Sample 4 - 1st Qtr	< 1	< 1	= 2.64	< 3	8
960661	89961	Fields A#7A	07/29/96	2	Sample 4 - 2nd Qtr	< 2	< 2	< 2	< 6	12
960877	89961	Fields A#7A	10/21/96	2	Sample 4 - 3rd Quarter	< 1	< 1	< 1	< 3	< 6
970034	89961	Fields A#7A	1/30/97	2	Sample 4 - 4th Quarter	< 2	< 2	< 2	< 6	< 12
970326	89961	Fields A#7A	4/21/97	2	Sample 4 - 5th Quarter	< 1	< 1	< 1	< 3	< 6
960372	89961	Fields A#7A	04/18/96	3	Sample 4 - 1st Qtr	= 129	< 2	= 212	= 463	806
960662	89961	Fields A#7A	07/29/96	3	Sample 4 - 2nd Qtr	= 212	< 2	= 167	= 393	774
960878	89961	Fields A#7A	10/21/96	3	Sample 4 - 3rd Quarter	= 165	< 1	= 157	= 467	= 790
970035	89961	Fields A#7A	1/30/97	3	Sample 4 - 4th Quarter	= 144	< 1	= 198	= 851	= 1194
970327	89961	Fields A#7A	4/21/97	3	Sample 4 - 5th Quarter	2070	4340	332	4730	11472
960373	89961	Fields A#7A	04/18/96	4	Sample 4 - 1st Qtr	4760	2460	235	1880	9335
960664	89961	Fields A#7A	07/29/96	4	Sample 4 - 2nd Qtr	= 1830	= 2380	= 106	= 967	5283
960879	89961	Fields A#7A	10/21/96	4	Sample 4 - 3rd Quarter	= 3320	= 4520	= 149	= 1680	= 9669
970036	89961	Fields A#7A	1/30/97	4	Sample 4 - 4th Quarter	= 4320	= 7420	= 280	= 3250	= 15270
970328	89961	Fields A#7A	4/21/97	4	Sample 4 - 5th Quarter	= 2410	= 5170	= 219	= 2530	= 10329

04-42 AzTec

RECORD OF SUBSURFACE EXP. ATION

Borehole # BH-1
Well #
Page 1 of 1

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

Project Name EPNG Pits
Project Number 14509 Phase ~~601~~ 6000
Project Location Fields A #6.7A, 89961497546

Elevation
Borehole Location T32, R11, S34, E
GWL Depth
Logged By S.Kelly
Drilled By M. Donohue
Date/Time Started 7/27/95, 0730
Date/Time Completed 7/27/95, 0930

Well Logged By S.Kelly
Personnel On-Site M.Donohue, J. O'Keefe, D. Charley
Contractors On-Site
Client Personnel On-Site

Drilling Method 4¼" ID HSA
Air Monitoring Method CGI, PID

Depth (Feet)	Sample Number	Sample Interval	Sample Type & Recovery (inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: NDU BZ	BH	S/HS	Drilling Conditions & Blow Counts
0				Backfill to 12'.						
5										
10										
15										
20	1	18-20	.9'	SAND, light brown with some black mottling, fine to med. sand, dense, damp.					86/100	0810
25	2	23-25	.7'	SAA, but mostly (40-65%) med. sand.					130/110	0815
30	3	28-30	.7'	SAA, but wet, measured water level after resting at 26.0'. Will drill to 36' and set 15' of screen.					—	0930 - wet sample, no PID readings.
35										
40				BOH - 36.0'						

Comments: Drilled down to 36.0'. Set well with 15' of screen. No sample taken due to groundwater.

Geologist Signature Sarah Kelly

6/14/95\DRILLOG.XLS

Screen to 24'

MONITORING WELL INSTALLATION RECORD

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

Borehole # BH-1
Well #
Page 1 of 1

Project Name EPNG Drip Pit Drilling
Project Number 14509 Phase 6000
Project Location Fields A No. 7A, 89961 97546

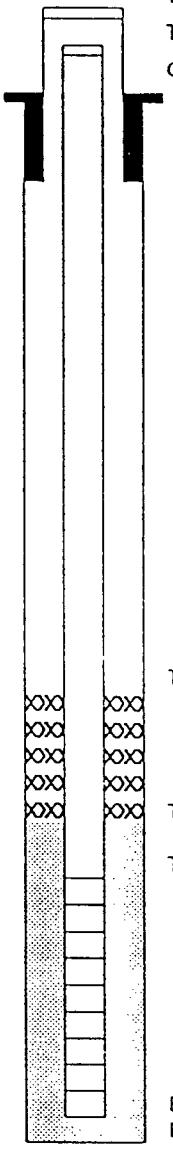
Elevation
Well Location T32, R11, S.34, E
GWL Depth
Installed By

On-Site Geologist S. Kelly
Personnel On-Site M. Donahue, D. Charley, J. Okan
Contractors On-Site
Client Personnel On-Site

Date/Time Started 7/27/95, 0930
Date/Time Completed 7/27/95, 1145

Depths in Reference to Ground Surface

Item	Material	Depth
Top of Protective Casing		
Bottom of Protective Casing		
Top of Permanent Borehole Casing		
Bottom of Permanent Borehole Casing		
Top of Concrete		
Bottom of Concrete		
Top of Grout to surface	Type I-II Cement 0.0' mixed w/ 5% bentonite	
Bottom of Grout	3-94# bags Cement	-15.5'
Top of Well Riser	4", Sch. 40 PVC	+4.3
Bottom of Well Riser		-20.7
Top of Well Screen		-20.70
Bottom of Well Screen	4" PVC .010 slot Sch. 40	-35.7
Top of ~~Peltonite~~ bentonite Seal	Enviroplug #8 50# bags-2	-15.5'
Bottom of ~~Peltonite~~ bentonite Seal		-18.0
Top of Gravel Pack	10-20 CSSI sand, 16-50# bags	-18.0
Bottom of Gravel Pack		-36.1
Top of Natural Cave-In		-N/A
Bottom of Natural Cave-In		-N/A
Top of Groundwater		-20.0'
Total Depth of Borehole		-36.1



Top of Protective Casing N/A
Top of Riser +4.3
Ground Surface 0.0
Top of Seal -15.5'
Top of Gravel Pack -18.0'
Top of Screen -20.7'
Bottom of Screen -35.7'
Bottom of Borehole -36.1'

Comments: End cap (PVC) is approx. .4' long. Final water level after well installation is 20.0' bgs.

Geologist Signature Sarah Kelly

There is ~~on~~ another monitoring well at this well site. It is not locked/secured. Well is located next to wash. Approx. 100-150' from the well installed today.

SK 7/27/95
SK 7/27/95

RECORD OF SUBSURFACE EXPLORATION

Borehole # BH-2
Well # MW-2
Page 1 of 1

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

Project Name EPNG PITS
Project Number 14509 Phase 6000 77
Project Location Fields A No. 7A 89961/97546

Elevation
Borehole Location QE - S34 - T32 - R11
GWL Depth 20.8'
Logged By CM CHANCE
Drilled By K Padilla
Date/Time Started 12/13/95 - 1000
Date/Time Completed 12/13/95 - 1120

Well Logged By CM Chance
Personnel On-Site K Padilla, F. Rivera
Contractors On-Site
Client Personnel On-Site

Drilling Method 8 1/4" ID HSA
Air Monitoring Method PID, CGI

Depth (Feet)	Sample Number	Sample Interval	Sample Type & Recovery (inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: PPM BZ	BH	S HS	Drilling Conditions & Blow Counts
0										Log Cuttings No sampling
5				lt br clayey SILT, loose, dry, str vF sand			0	0	0	
10				lt br silty SAND, vF sand, dry			0	0	0	
15				Br silty SAND, med-coarse sand, ~~dry~~ sl moist			0	0	0	
20				Br silty SAND, F-med sand, sl moist			0	0	0	- GW @ 20.8' BGS
25				Br SAND, Saturated, F-med sand			0	0	9	
30				lt gry SAND, Saturated, F-med sand			0	0	0	
35				TDB 30'						
40										

Comments: Will drill to 30' & set well. Boring is ~20 E. of pit w/tank, & ~40 E. of a non-EPNG monitor well.

Geologist Signature Cory Chance

MONITORING WELL INSTALLATION RECORD

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

Borehole # BH-2
Well # MW-2
Page 1 of 1

Project Name EPNG PITS

Project Number 14509 Phase 6001
Project Location Fields A No. 7A 89961/97546

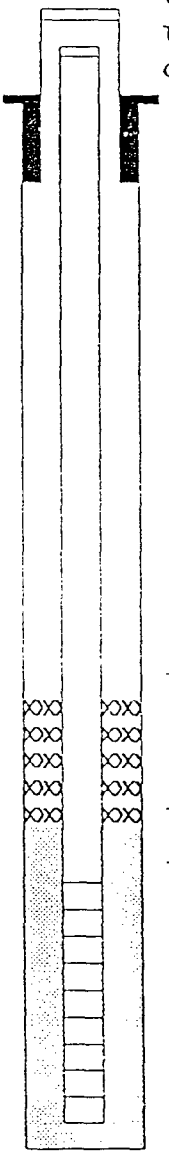
Elevation
Well Location QE -SJ4 -T32 -R11
GWL Depth 21.15 BGS
Installed By F. Rivera

Date/Time Started 12/13/95 - 1120
Date/Time Completed 12/13/95 - 1300

On-Site Geologist CM Chance
Personnel On-Site K. Padilla
Contractors On-Site
Client Personnel On-Site

Depths in Reference to Ground Surface

Item	Material	Depth
Top of Protective Casing	6"x5' steel	
Bottom of Protective Casing	Casing	
Top of Permanent Borehole Casing		NA
Bottom of Permanent Borehole Casing		NA
Top of Concrete	Quicrete	
Bottom of Concrete	Cement Mix	
Top of Grout	5% Bentonite	0'
Bottom of Grout	Cement slurry	8.5'
Top of Well Riser	4" Sch 40	+3'
Bottom of Well Riser	Flush Thread PVC	13.5'
Top of Well Screen	4" 0.01 slot Sch 40	13.5'
Bottom of Well Screen	Flush Thread PVC	28.5'
Top of Peltonite Seal	Enviroplug	8.5'
Bottom of Peltonite Seal	Pellets	10.5'
Top of Gravel Pack	10-20 Grade Colorado	10.5'
Bottom of Gravel Pack	Silica Sand	28.5'
Top of Natural Cave-In		28.5'
Bottom of Natural Cave-In		30'
Top of Groundwater		21.15
Total Depth of Borehole		30'



Top of Protective Casing
Top of Riser 3.0'
Ground Surface 0'

Top of Seal -8.5'

Top of Gravel Pack -10.5'

Top of Screen -13.5'

Bottom of Screen -28.5'
Bottom of Borehole -30.0'

Comments: Well will be completed at later date. Bentonite hydrated w/potable water.

Geologist Signature Cory Chance

RECORD OF SUBSURFACE EXPLORATION

Borehole # BH-B
Well # MW-3
Page 1 of 1

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

Project Name EPNG PITS
Project Number 14509 Phase 6000 77
Project Location Field A No. 7A 89961/97548

Elevation
Borehole Location QE - S34 - T32 - R11
GWL Depth 21.8' BGS
Logged By CM CHANCE
Drilled By ~~K Padilla~~ F. Rivera
Date/Time Started 12/13/95 - 1330
Date/Time Completed 12/13/95 - 1421

Well Logged By CM Chance
Personnel On-Site K Padilla, F. Rivera
Contractors On-Site
Client Personnel On-Site

Drilling Method 8 1/4" ID HSA
Air Monitoring Method PID, CGI

Depth (Feet)	Sample Number	Sample Interval	Sample Type & Recovery (inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: PPM BZ	BH	S HS	Drilling Conditions & Blow Counts
0										Lag Cuttings No sampling
5				Br sandy SILT, tr vF sand, loose, dry			0	0	0	
10				A/A			0	0	0	
15				Br silty SAND, f-med sand, dry			0	0	0	
20				Br silty SAND, med-coarse sand, sl moist			0	0	0	Drlg hard - GW @ 21.8' after setting overnight - Add 5gal potable water to help drilling.
25				Gry silty SAND, f-med, saturated			0	0	0	- Rig down 12/14/95
30				AA TD 30			0	0	0	- V. hard drlg
35										
40										

Comments: Boring is 20' E. of MW-2. Will set well @ 30'.

Geologist Signature Cm Chance

MONITORING WELL INSTALLATION RECORD

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

Borehole # BH-3
Well # MW-3
Page 1 of 1

Project Name EPNG PITS

Project Number 14509 Phase 6001
Project Location Fields A No 7A 89961/97514

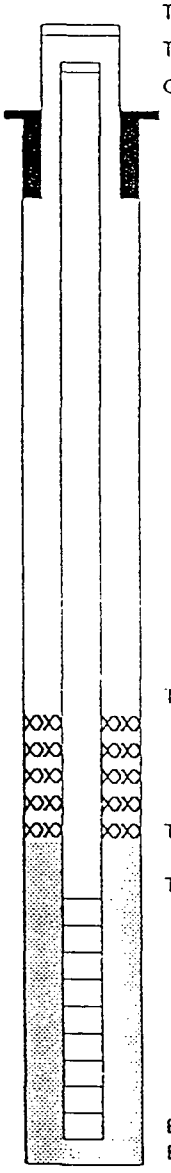
Elevation
Well Location QE-S34-T32-R11
GWL Depth
Installed By F. Rivera

Date/Time Started 12/14/95 - 1200
Date/Time Completed 12/14/95 - 1348

On-Site Geologist CM Chance
Personnel On-Site K. Padilla
Contractors On-Site
Client Personnel On-Site

Depths in Reference to Ground Surface

Item	Material	Depth
Top of Protective Casing	6"x5' steel	
Bottom of Protective Casing	casing	
Top of Permanent Borehole Casing		NA
Bottom of Permanent Borehole Casing		NA
Top of Concrete	Quicrete	
Bottom of Concrete	Cement Mix	
Top of Grout	5% Bentonite	
Bottom of Grout	Cement slurry	
Top of Well Riser	4" Sch 40	
Bottom of Well Riser	Flush Thread PVC	
Top of Well Screen	4" 0.01 slot Sch 40	
Bottom of Well Screen	Flush Thread PVC	
Top of Peltonite Seal	Enviroplug	
Bottom of Peltonite Seal	Pellets	
Top of Gravel Pack	10-20 Grade Colorado	
Bottom of Gravel Pack	Silica Sand	
Top of Natural Cave-In		
Bottom of Natural Cave-In		
Top of Groundwater		
Total Depth of Borehole		30'



Top of Protective Casing
Top of Riser +3
Ground Surface 0'

Top of Seal -8.75

Top of Gravel Pack -10.75

Top of Screen -13.75

Bottom of Screen -28.75
Bottom of Borehole -30.0'

Comments: Well will be be completed on later date. Bentonite hydrated w/ potable water

Geologist Signature Cory Chance

RECORD OF SUBSURFACE EXPLORATION

Borehole # BH4
Well # ~~MW-2~~ MW-4
Page 1 of 1

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

Project Name EPNG PITS
Project Number 14509 Phase 6000 77
Project Location Field A No. 7A 89961/97546

Elevation
Borehole Location QE - S34 - T32 - R11
GWL Depth
Logged By CM CHANCE
Drilled By K Padilla
Date/Time Started 12/14/95 - 1415
Date/Time Completed 12/19/95 - 1233

Well Logged By CM Chance
Personnel On-Site K Padilla
Contractors On-Site
Client Personnel On-Site

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

Depth (Feet)	Sample Number	Sample Interval	Sample Type & Recovery (inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: PPM BZ	BH	S HS	Drilling Conditions & Blow Counts
0										Log Cuttings No sampling
5				Lt Br. SILT, Loose, dry			0	0	0	
10				A/A			0	0	0	
15				lt Br silty SAND, f-med sand dry			0	0	0	
20				Br silty SAND, med-coarse, dry			0	0	0	-hard drlng
25				Br clayey SAND, f-med sand moist			0	5	18	-odor 12/19/95 -Drlng hard -v.hard drlng
30				TOB 29'						
35										
40										

Comments: Access to site poor due to muddy roads. Finish drilling on 12/19/95 after road dries out. Willset well @ 29' BGS

Geologist Signature Tom Chance

MONITORING WELL INSTALLATION RECORD

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

Borehole # BH4
Well # MW-4
Page 1 of 1

Project Name EPNG PITS

Project Number 14509 Phase 6001
Project Location Fields A No. 7A 89961/97546

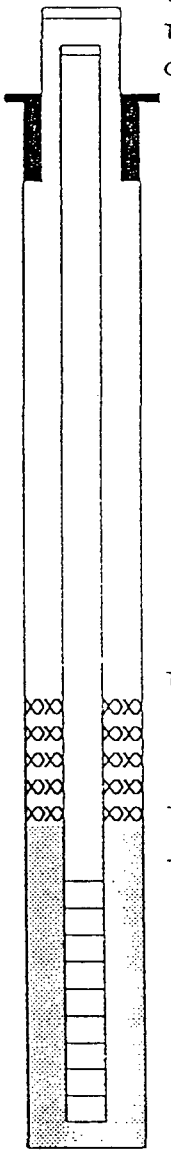
Elevation
Well Location Q6 -S24 -T32 -R11
GWL Depth
Installed By ~~K. Padilla~~ F. Rivera

Date/Time Started 12/19/95 -1205
Date/Time Completed 12/19/95 -1600

On-Site Geologist CM Chance
Personnel On-Site ~~F. Rivera~~ K. Padilla
Contractors On-Site
Client Personnel On-Site

Depths in Reference to Ground Surface

Item	Material	Depth
Top of Protective Casing	6"x5' steel	
Bottom of Protective Casing	Casing	
Top of Permanent Borehole Casing		NA
Bottom of Permanent Borehole Casing		NA
Top of Concrete	Quicrete	
Bottom of Concrete	Cement Mix	
Top of Grout	5% Bentonite	0'
Bottom of Grout	Cement slurry	7.9
Top of Well Riser	4" Sch 40	+3.0
Bottom of Well Riser	Flush Thread PVC	12.9
Top of Well Screen	4" 0.01 slot Sch 40	12.9
Bottom of Well Screen	Flush Thread PVC	27.9
Top of Peltonite Seal	Enviroplug	7.9
Bottom of Peltonite Seal	Pellets	9.9
Top of Gravel Pack	10-20 Grade Colorado	9.9
Bottom of Gravel Pack	Silica Sand	27.9
Top of Natural Cave-In		27.9
Bottom of Natural Cave-In		29.0
Top of Groundwater		
Total Depth of Borehole		29.0



Top of Protective Casing
Top of Riser +3.0'
Ground Surface 0'

Top of Seal -7.9

Top of Gravel Pack -9.9

Top of Screen -12.9'

Bottom of Screen -27.9'
Bottom of Borehole -29.0'

Comments: Bentonite hydrated w/potable water.

Geologist Signature Cory Chance

WELLPOINTS

TEMPORARY PIEZOMETER INSTALLATION

Borehole #
Well # PZ-1
Pag 1 of 1

Philip Services Corp.
4000 Monroe Rd.
Farmington, NM 87401
(505) 326-2262 FAX (505) 326-2388

Project Name EPFS GW PITS
Project Numbe 17520 Phase 6006
Site Location Fields A #7A 89961

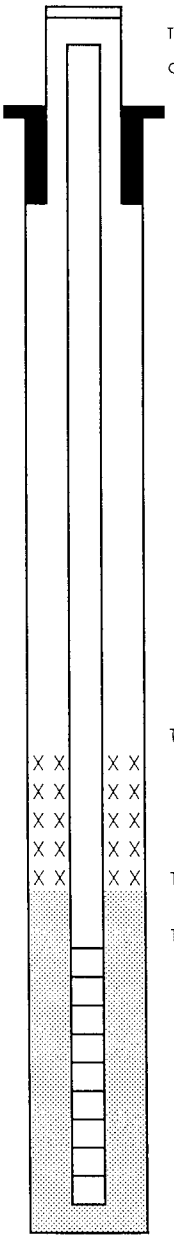
Elevation
Well Location Ltr E -S34 -T32 -R11
GWL Depth ~21.98' BGS
Installed By M. Donahue

On-Site Geologist C CHANCE
Personnel On-Site C Gomez, DChadey
Contractors On-Site
Client Personnel On-Site

Date/Time Started 9/17/97
Date/Time Complete 9/18/97

COMMENTS

PZ1 is 34' ∢ 320° From MW1
-Contaminated cuttings @ ~ 7' BGS (DK BLK)
-Soil sample 14-15': ltbr clayey SAND, vF-F sand, tr $CaCO_3$ xtln, dense, dry (106ppm H_2S)
-Collect GW sample From PZ1 (CMC347)



Top of Protective Casing NA
Top of Riser (survey elev.) NA
Ground Surface NA
Top of Seal NA
Top of Gravel Pack NA
Top of Screen 18
Bottom of Screen 28
Bottom of Borehole 28.5'

Water levels for MWs: MW2 GW 27.14 TOR, MW3 GW 27.45 TOR, MW4 Prod 28.15 GW 28.24 TOR. MW1 has skimmer in it

MWINSTAL.wk1

Geologist Signature

TEMPORARY PIEZOMETER INSTALLATION

Borehole #
Well # PZ- 2
Pag 1 of 1

Philip Services Corp.
4000 Monroe Rd.
Farmington, NM 87401
(505) 326-2262 FAX (505) 326-2388

Project Name EPFS GW PITS
Project Numbe 17520 Phase 6006
Site Location Field. A#7A 89961

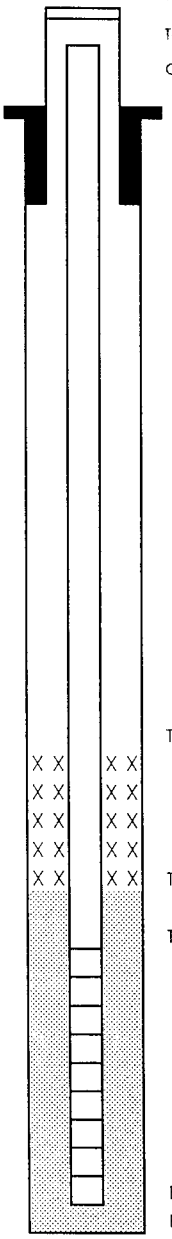
Elevation
Well Location Ltr E -S34-T32-R11
GWL Depth
Installed By M. Donahue

Date/Time Started 9/12/97
Date/Time Complete 9/12/97

On-Site Geologist C CHANCE
Personnel On-Site C. Gomez, D. Charley
Contractors On-Site
Client Personnel On-Site

COMMENTS

~~PZ2 is 40° @ 24' From MW1~~
PZ2 is 265° @25' From MW1
Will install wellpoint
-Sample GW CMC348
Sent to lab
-Sample collected thru
stainless steel wellpoint.
Well pt. pulled & BH
grouted



Top of Protective Casing NA
Top of Riser (survey elev.) NA
Ground Surface NA

Top of Seal NA

Top of Gravel Pack NA

Top of Screen 19'

Bottom of Screen 24'
Bottom of Borehole 25'

MWINSTAL.wk1

Geologist Signature Cory Chance

TEMPORARY PIEZOMETER INSTALLATION

Borehole #
Well # PZ- 3
Pag 1 of 1

Philip Services Corp.
4000 Monroe Rd.
Farmington, NM 87401
(505) 326-2262 FAX (505) 326-2388

Project Name EPFS GW PITS
Project Numbe 17520 Phase 6006
Site Location Fields A #7A 89961

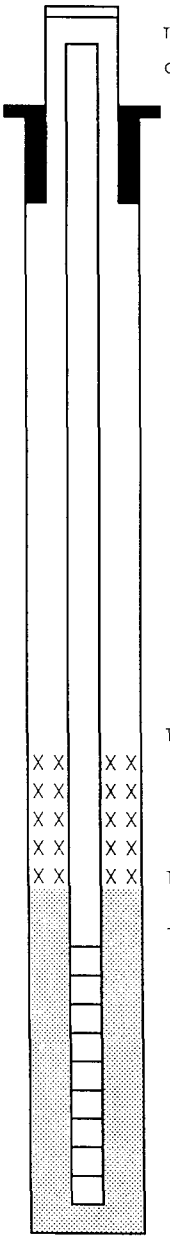
Elevation
Well Location Ltr E -S34-T32-R11
GWL Depth
Installed By M. Donohue

Date/Time Started 9/18/97
Date/Time Complete 9/18/97

On-Site Geologist C CHANCE
Personnel On-Site C Gomez D Chacon
Contractors On-Site
Client Personnel On-Site

COMMENTS

PZ3 is 220° 47' from MW1
-Soil sample 17-18.5': DK gry clayey SAND, F-med sand, dense, tr gypsum, dry (800 ppm)
-Install stainless steel well point & collect GW sample CMC 349. Pull well pt & grout BH



Top of Protective Casing NA
Top of Riser (survey elev.) NA
Ground Surface NA
Top of Seal NA
Top of Gravel Pack NA
Top of Screen 23
Bottom of Screen 28.0
Bottom of Borehole 28.5

MWINSTAL.wk1

Geologist Signature

TEMPORARY PIEZOMETER INSTALLATION

Borehole #
Well # PZ- 4
Pag 1 of 1

Philip Services Corp.
4000 Monroe Rd.
Farmington, NM 87401
(505) 326-2262 FAX (505) 326-2388

Project Name EPFS GW PITS
Project Numbe 17520 Phase 6006
Site Location Fields AZA 89961

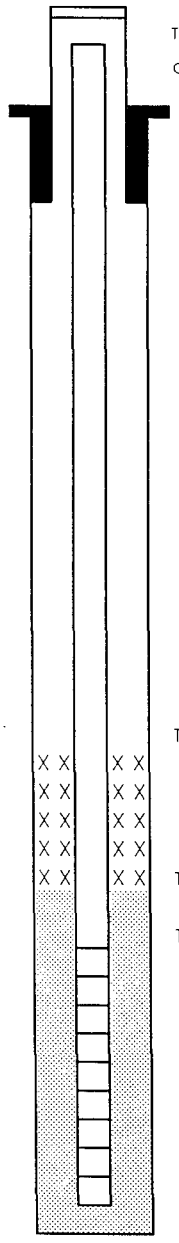
Elevation
Well Location Ltr E -S34-T32-R11
GWL Depth
Installed By M. Donahue

Date/Time Started 9/24/97
Date/Time Complete 9/24/97

On-Site Geologist C CHANCE
Personnel On-Site C Gomez
Contractors On-Site
Client Personnel On-Site

COMMENTS

- PZ4 is 40° & 20' from MW4
- Will install stainless steel well pt to collect GW sample
- DK black cuttings start @ ~3' BGS
- Collect soil sample from 18.5'-20' BGS: Lt Brown clayey SAND, vF-F sand, dense, dry, tr gypsum parting PID = 154 ppm
- Collect GW sample (CMC350) & send to lab.
- Pull well pt & grout BH



Top of Protective Casing NA
Top of Riser (survey elev.) NA
Ground Surface NA
Top of Seal NA
Top of Gravel Pack NA
Top of Screen 23
Bottom of Screen 28
Bottom of Borehole 28

MWINSTAL.wk1

Geologist Signature Cory Chance

TEMPORARY PIEZOMETER INSTALLATION

Borehole #
Well # PZ- 5
Pag 1 of 1

Philip Services Corp.
4000 Monroe Rd.
Farmington, NM 87401
(505) 326-2262 FAX (505) 326-2388

Project Name EPFS GW PITS
Project Numbe 17520 Phase 6006
Site Location Fields A7A 89961

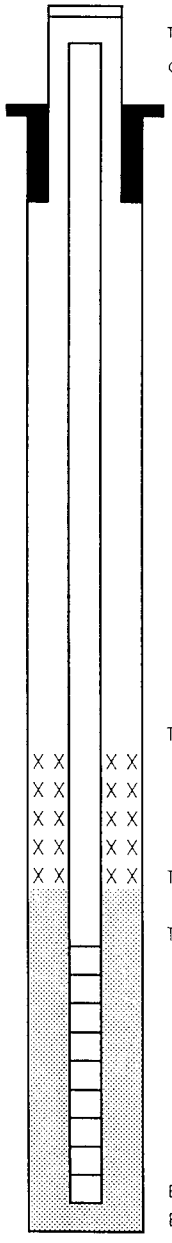
Elevation
Well Location Ltr ≅ -S34-T32-R11
GWL Depth
Installed By M Deaphue

Date/Time Started 9/24/97
Date/Time Complete 9/24/97

On-Site Geologist C CHANCE
Personnel On-Site S Gomez
Contractors On-Site
Client Personnel On-Site

COMMENTS

- PZ5 is 89' @ 141° from MW1
- Collect soil sample from 18.5-20': Lt br clayey SAND, VF-F sand, dense, dry, tr med sand. PID = 4 ppm
- Cuttings black @ ~ 24'
- Collect GW sample from Wellpt (CMC351)
- Pull wellpt. & grout BH



Top of Protective Casing NA
Top of Riser (survey elev.) NA
Ground Surface NA
Top of Seal NA
Top of Gravel Pack NA
Top of Screen 25
Bottom of Screen 28
Bottom of Borehole 28

MWINSTAL.WKT

Geologist Signature

El Paso Natural Gas Company

CHAIN OF CUSTODY RECORD

Page _____ of _____

Well Points

PROJECT NUMBER	PROJECT NAME
# 24324	Pit Closure Project

SAMPLERS: (Signature) Cory Cloud DATE: 9/18/97

LAB ID	DATE	TIME	MATRIX	FIELD ID	TOTAL NUMBER OF CONTAINERS	SAMPLE TYPE	TPH EPA 418.1	BTEX EPA 8020	LAB PID			SEQUENCE #	REMARKS
971001	9/18/97	—	Water	Trip Blank	1	TB		✓					Trip Blank
971002		1000		CMC247	2	VG		✓					Fields A 7A 89961 PZ1
971003		1325		CMC348	2	VG		✓					" PZ2
971004	↓	1448	↓	CMC349	2	VG							" PZ3

REQUESTED ANALYSIS

CONTRACT LABORATORY P. O. NUMBER

RECEIVED
SEP 30 1997

34° F

Cory 9/18/97

Note PZ1, PZ3 reacted vigorously w/ HCl Could not remove all bubbles. May also be very high contam.

RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)
Cory Cloud	9/18/97 1700	Cwilliams	Cwilliams	9-19-97 9:10	
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED OF LABORATORY BY: (Signature)
				9/19/97 9:10	Maria Hoppe

REQUESTED TURNAROUND TIME:
☐ ROUTINE ☐ RUSH _____

CARRIER CO.

BILL NO.:

SAMPLE RECEIPT REMARKS

CHARGE CODE

RESULTS & INVOICES TO:

FIELD SERVICES LABORATORY
EL PASO NATURAL GAS COMPANY
P. O. BOX 4990
FARMINGTON, NEW MEXICO 87499
505-599-2144 FAX: 505-599-2261

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

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	Trip Blank	971001
MTR CODE | SITE NAME:	89961	Fields A #7A
SAMPLE DATE | TIME (Hrs):	9/18/97	1000
PROJECT:	Well Points	
DATE OF BTEX EXT. | ANAL.:	9/23/97	9/23/97
TYPE | DESCRIPTION:	Trip Blank	Water

Field Remarks: _____

RESULTS

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

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 101.6 % for this sample All QA/QC was acceptable.

DF = Dilution Factor Used

Narrative:

Approved By: Marion Hopper Date: 9/24/97

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	CMC347	971002
MTR CODE | SITE NAME:	89961	Fields A #7A
SAMPLE DATE | TIME (Hrs):	9/18/97	1000
PROJECT:	Well Points	
DATE OF BTEX EXT. | ANAL.:	9/23/97	9/23/97
TYPE | DESCRIPTION:	PZ-1	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	545	PPB	5	D		
TOLUENE	987	PPB	5	D		
ETHYL BENZENE	57.0	PPB	5	D		
TOTAL XYLENES	635	PPB	5	D		
TOTAL BTEX	2225	PPB				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 99.0 % 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: Madonna E Happe

Date: 9/24/97

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	CMC348	971003
MTR CODE | SITE NAME:	89961	Fields A #7A
SAMPLE DATE | TIME (Hrs):	9/18/97	1325
PROJECT:	Well Points	
DATE OF BTEX EXT. | ANAL.:	9/23/97	9/23/97
TYPE | DESCRIPTION:	PZ-2	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	4840	PPB	100	D		
TOLUENE	10700	PPB	100	D		
ETHYL BENZENE	439	PPB	100	D		
TOTAL XYLENES	4650	PPB	100	D		
TOTAL BTEX	20629	PPB				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 92.0 % 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: Marion E Hoffer Date: 9/24/97

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	CMC349	971004
MTR CODE | SITE NAME:	89961	Fields A #7A
SAMPLE DATE | TIME (Hrs):	9/18/97	1448
PROJECT:	Well Points	
DATE OF BTEX EXT. | ANAL.:	9/23/97	9/23/97
TYPE | DESCRIPTION:	PZ-3	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	19400	PPB	100	D		
TOLUENE	17600	PPB	100	D		
ETHYL BENZENE	692	PPB	100	D		
TOTAL XYLENES	5490	PPB	100	D		
TOTAL BTEX	43182	PPB				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 98.7 % 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: Marion E Hopper Date: 9/24/97

EL PASO FIELD SERVICES

QUALITY CONTROL REPORT
EPA METHOD 8020 - BTEX

Samples: 970999 to 971007, 971042, 971043, 971045

QA/QC for 9/23/97 Sample Set

LABORATORY CALIBRATION CHECKS / LABORATORY CONTROL SAMPLES:

SAMPLE NUMBER ICV LA-52589 50 PPB	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE RANGE	YES	NO
Benzene	Standard	50.0	50.5	101.0	75 - 125 %	X	
Toluene	Standard	50.0	50.6	101	75 - 125 %	X	
Ethylbenzene	Standard	50.0	50.6	101	75 - 125 %	X	
m & p - Xylene	Standard	100	101.4	101.4	75 - 125 %	X	
o - Xylene	Standard	50.0	50.1	100	75 - 125 %	X	

SAMPLE NUMBER LCS LA-45476 25 PPB	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE RANGE	YES	NO
Benzene	Standard	25.0	25.1	100.2	39 - 150	X	
Toluene	Standard	25.0	25.1	101	46 - 148	X	
Ethylbenzene	Standard	25.0	25.1	100	32 - 160	X	
m & p - Xylene	Standard	50.0	50.5	101	Not Given	X	
o - Xylene	Standard	25.0	25.0	100	Not Given	X	

SAMPLE NUMBER CCV LA-52589 50 PPB	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE RANGE	YES	NO
Benzene	Standard	50.0	50.2	100.4	75 - 125 %	X	
Toluene	Standard	50.0	49.7	99.4	75 - 125 %	X	
Ethylenzene	Standard	50.0	49.4	98.7	75 - 125 %	X	
m & p - Xylene	Standard	100	98.7	98.7	75 - 125 %	X	
o - Xylene	Standard	50.0	49.5	99	75 - 125 %	X	

SAMPLE NUMBER CCV LA-52589 50 PPB	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE RANGE	YES	NO
Benzene	Standard	50.0	49.8	99.5	75 - 125 %	X	
Toluene	Standard	50.0	49.2	98.4	75 - 125 %	X	
Ethylbenzene	Standard	50.0	48.7	97.4	75 - 125 %	X	
m & p - Xylene	Standard	100	97.4	97.4	75 - 125 %	X	
o - Xylene	Standard	50.0	48.9	97.8	75 - 125 %	X	

Narrative: Acceptable.

SAMPLE NUMBER CCV LA-52589 50 PPB	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE RANGE	YES	NO
Benzene	Standard	50.0	49.2	98.4	75 - 125 %	X	
Toluene	Standard	50.0	48.6	97.2	75 - 125 %	X	
Ethylbenzene	Standard	50.0	48.0	96.0	75 - 125 %	X	
m & p - Xylene	Standard	100	95.6	95.6	75 - 125 %	X	
o - Xylene	Standard	50.0	48.2	96.4	75 - 125 %	X	

LABORATORY DUPLICATES:

SAMPLE ID 971000	TYPE	SAMPLE RESULT PPB	DUPLICATE RESULT PPB	RPD	ACCEPTABLE RANGE	YES	NO
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 ID 2nd Analysis 971000	SPIKE ADDED PPB	SAMPLE RESULT PPB	SPIKE SAMPLE RESULT PPB	%R	ACCEPTABLE RANGE	YES	NO
Benzene	50	<1	50.3	100.7	75 - 125 %	X	
Toluene	50	<1	49.7	99	75 - 125 %	X	
Ethylbenzene	50	<1	49.7	99	75 - 125 %	X	
m & p - Xylene	100	<2	99.5	99.5	75 - 125 %	X	
o - Xylene	50	<1	49.4	99	75 - 125 %	X	

Narrative: Acceptable

AUTO BLANK 9/23/97	SOURCE	PPB (4 analyzed with set)	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 set)	STATUS
Benzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Toluene	Vial + Boiled Water	<1.0	ACCEPTABLE
Ethylbenzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Total Xylenes	Vial + Boiled Water	<3.0	ACCEPTABLE

Narrative: Acceptable.

CONTAMINATION CARRYOVER CHECK	SOURCE	PPB (None analyzed with this set)	STATUS
Benzene	Vial + Boiled Water	<1.0	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.

9/23/97 TRIP BLANK	SOURCE	PPB (3 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.

Reported By: CV Approved By: John Fabian Date: 9-29-97

El Paso Natural Gas Company

CHAIN OF CUSTODY RECORD

Well Points

Page _____ of _____

PROJECT NUMBER	PROJECT NAME	DATE
# 24324	Pit Closure Project	9/24/97

SAMPLERS: (Signature) Cory Chance

LAB ID	DATE	TIME	MATRIX	FIELD ID	TOTAL NUMBER OF CONTAINERS	SAMPLE TYPE	REQUESTED ANALYSIS: TPH EPA 418.1	BTEX EPA 8020	LAB PID			SEQUENCE #	REMARKS
971049	9/24/97	-	Water	Trip Blank	1	TB		✓					Trip Blank
971050	9/24/97	1030		CMC350	2	VG		✓					Fields AZA 89961 PZ 4
971051	9/24/97	1315	↓	CMC351	2	VG		✓					" PZ 5

CMC 9/24/97

36° F

Note: HCL reacted vigorously w/ water. Difficult to remove all bubbles

CONTRACT LABORATORY P. O. NUMBER

REMARKS

RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)
Cory Chance	9/24/97 17 00	C Williams	Cari Williams	9-25-97 10:00	
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	RELINQUISHED BY: (Signature)	9/25/97 1005	RECEIVED OF LABORATORY BY: (Signature) Marla Hoppe

REQUESTED TURNAROUND TIME:
☐ ROUTINE ☐ RUSH

CARRIER CO.

BILL NO.:

SAMPLE RECEIPT REMARKS

CHARGE CODE

RESULTS & INVOICES TO:

FIELD SERVICES LABORATORY
EL PASO NATURAL GAS COMPANY
P. O. BOX 4990
FARMINGTON, NEW MEXICO 87499
505-599-2144 FAX: 505-599-2261

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

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

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	Trip Blank	971049
MTR CODE | SITE NAME:	89961	Fields A #7A
SAMPLE DATE | TIME (Hrs):	9/24/97	1030
PROJECT:	Well Points	
DATE OF BTEX EXT. | ANAL.:	9/26/97	9/26/97
TYPE | DESCRIPTION:	Trip Blank	Water

Field Remarks: _____

RESULTS

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

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 101.7 % for this sample All QA/QC was acceptable.

DF = Dilution Factor Used

Narrative:

Approved By: _____ Date: 10-1-97

BTEXWellPointsTripBlankTemplate,9/29/97

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	CMC350	971050
MTR CODE | SITE NAME:	89961	Fields A #7A
SAMPLE DATE | TIME (Hrs):	9/24/97	1030
PROJECT:	Well Points	
DATE OF BTEX EXT. | ANAL.:	9/26/97	9/26/97
TYPE | DESCRIPTION:	PZ-4	Water

Field Remarks: ______

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	4160	PPB	100	D		
TOLUENE	4900	PPB	100	D		
ETHYL BENZENE	230	PPB	100	D		
TOTAL XYLENES	2270	PPB	100	D		
TOTAL BTEX	11560	PPB				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 101.5 % for this sample All QA/QC was acceptable.

DF = Dilution Factor Used

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

Narrative:

Approved By: John Lambdin Date: 10-6-97

971050BTEXWP,10/3/97

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	CMC351	971051
MTR CODE | SITE NAME:	89961	Fields A #7A
SAMPLE DATE | TIME (Hrs):	9/24/97	1315
PROJECT:	Well Points	
DATE OF BTEX EXT. | ANAL.:	9/26/97	9/26/97
TYPE | DESCRIPTION:	PZ-5	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	1740	PPB	100	D		
TOLUENE	5580	PPB	100	D		
ETHYL BENZENE	431	PPB	100	D		
TOTAL XYLENES	4230	PPB	100	D		
TOTAL BTEX	11981	PPB				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 101.1 % 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: _____ Date: 10-1-97

971051BTEXWP,9/29/97

EL PASO FIELD SERVICES

QUALITY CONTROL REPORT
EPA METHOD 8020 - BTEX

Samples: 971025 to 971041, 971049 to 971051

QA/QC for 9/25/97 Sample Set

LABORATORY CALIBRATION CHECKS / LABORATORY CONTROL SAMPLES:

SAMPLE NUMBER ICV LA-52589 50 PPB	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE RANGE	YES	NO
Benzene	Standard	50.0	44.6	89.1	75 - 125 %	X	
Toluene	Standard	50.0	45.0	90	75 - 125 %	X	
Ethylbenzene	Standard	50.0	44.5	89	75 - 125 %	X	
m & p - Xylene	Standard	100	88.3	88.3	75 - 125 %	X	
o - Xylene	Standard	50.0	45.1	90	75 - 125 %	X	

SAMPLE NUMBER LCS LA-45476 25 PPB	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE RANGE	YES	NO
Benzene	Standard	25.0	22.8	91.1	39 - 150	X	
Toluene	Standard	25.0	23.3	93	46 - 148	X	
Ethylbenzene	Standard	25.0	23.0	92	32 - 160	X	
m & p - Xylene	Standard	50.0	45.5	91	Not Given	X	
o - Xylene	Standard	25.0	23.4	93	Not Given	X	

SAMPLE NUMBER CCV LA-52589 50 PPB	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE RANGE	YES	NO
Benzene	Standard	50.0	45.7	91.3	75 - 125 %	X	
Toluene	Standard	50.0	45.9	91.8	75 - 125 %	X	
Ethylenzene	Standard	50.0	45.4	90.8	75 - 125 %	X	
m & p - Xylene	Standard	100	89.5	89.5	75 - 125 %	X	
o - Xylene	Standard	50.0	46.0	92	75 - 125 %	X	

SAMPLE NUMBER CCV LA-52589 50 PPB	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE RANGE	YES	NO
Benzene	Standard	50.0	45.6	91.1	75 - 125 %	X	
Toluene	Standard	50.0	45.9	91.7	75 - 125 %	X	
Ethylbenzene	Standard	50.0	44.7	89.4	75 - 125 %	X	
m & p - Xylene	Standard	100	88.0	88.0	75 - 125 %	X	
o - Xylene	Standard	50.0	45.4	90.8	75 - 125 %	X	

Narrative: Acceptable.

SAMPLE NUMBER CCV LA-52589 50 PPB	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE RANGE	YES	NO
Benzene	Standard	50.0	45.4	90.8	75 - 125 %	X	
Toluene	Standard	50.0	44.9	89.9	75 - 125 %	X	
Ethylbenzene	Standard	50.0	43.9	87.8	75 - 125 %	X	
m & p - Xylene	Standard	100	85.9	85.9	75 - 125 %	X	
o - Xylene	Standard	50.0	44.6	89.3	75 - 125 %	X	

LABORATORY DUPLICATES:

SAMPLE ID 971026	TYPE	SAMPLE RESULT PPB	DUPLICATE RESULT PPB	RPD	ACCEPTABLE RANGE	YES	NO
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 ID 2nd Analysis 971026	SPIKE ADDED PPB	SAMPLE RESULT PPB	SPIKE SAMPLE RESULT PPB	%R	ACCEPTABLE RANGE	YES	NO
Benzene	50	<1	46.7	93.3	75 - 125 %	X	
Toluene	50	<1	45.6	91	75 - 125 %	X	
Ethylbenzene	50	<1	45.2	90	75 - 125 %	X	
m & p - Xylene	100	<2	89.3	89.3	75 - 125 %	X	
o - Xylene	50	<1	45.8	92	75 - 125 %	X	

Narrative: Acceptable

AUTO BLANK	SOURCE	PPB (2 analyzed with set)	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 set)	STATUS
Benzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Toluene	Vial + Boiled Water	<1.0	ACCEPTABLE
Ethylbenzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Total Xylenes	Vial + Boiled Water	<3.0	ACCEPTABLE

Narrative: Acceptable.

CONTAMINATION CARRYOVER CHECK	SOURCE	PPB (None analyzed with this set)	STATUS
Benzene	Vial + Boiled Water	<1.0	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.

TRIP BLANK	SOURCE	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.

Reported By: CV Approved By: John Todd Date: 10-1-97

1997 GROUNDWATER ANALYTICAL

El Paso Natural Gas Company

CHAIN OF CUSTODY RECORD

Project No.	Project Name	Total No. of Containers	Chain of Custody Seals	Intact?	Requested Analysis					Contract Laboratory
	AZTEC PIPELINE									EL PASO FIELD SERVICE
Samplers: (Signature)	Date / Receiving Temp. (°F)									770 WEST NAVAJO
Dennis Bird	4-18-96 / 34									FARMINGTON N.M. 87401

Lab ID	Date	Time	Matrix	Sample Number	Total No. of Containers	Chain of Custody Seals	Intact?	Composite or Grab	See Attached	BTXE	GENERAL CHEMISTRY	8 RCRA METALS	Remarks
	4-18-96	1234	WATER	960370	4			G		X	X	X	FIELDS A *7A MW-1 (MC 8996)
	4-18-96	1434	WATER	960371	4			G		X	X	X	FIELDS A *7A MW-2 (MC 8996)
	4-18-96	1454	WATER	960372	4			G		X	X	X	FIELDS A *7A MW-3 (MC 8996)
	4-18-96	1512	WATER	960373	4			G		X	X	X	FIELDS A *7A MW-4 (MC 8996)
	4-18-96	—	WATER	———	1			G		X			TRIP BLANK

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Dennis Bird	4-18-96 / 1705				
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks:	
		Marlon Hooper	4/19/96 0830		
...ces to::		Charge Code		Date Results Reported / by: (Signature)	

EPFS

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT

SAMPLE IDENTIFICATION

SAMPLE NUMBER:	960370
METER CODE:	89961
SITE NAME:	Aztec Pipeline
SAMPLE SITE:	Fields A #7A MW-1
SAMPLE DATE:	04/18/96
MPLE TIME (Hrs):	1234
SAMPLED BY:	D. Bird
BTEX ANALYSIS:	04/19/96
SAMPLE TYPE:	Water

REMARKS: _____

EPA Method 8020 (BTEX) RESULTS

PARAMETER	RESULT PPB	QUALIFIER	WQCC LIMIT PPB
BENZENE	1300	D (X20)	10
TOLUENE	2140	D (X20)	740
ETHYL BENZENE	119	D (X20)	750
TOTAL XYLENES	1240	D (X20)	620
SURROGATE % RECOVERY	98.2	Allowed Range 80 to 120 %	

lifier indicates that the reported result for this analyte is calculated based on the secondary
r shown.

mh

Approved By: _____ Date: 4/30/96

EPFS
EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT

SAMPLE IDENTIFICATION

SAMPLE NUMBER:	960370
LOCATION:	Aztec Pipeline
SAMPLE SITE:	Fields A #7A MW-1
METER CODE:	89961
SAMPLE DATE:	04/18/96
SAMPLE TIME (Hrs):	1234
SAMPLED BY:	D. Bird

REMARKS: _____

RESULTS

PARAMETER	TOTAL RESULT (mg/L)	N. M. WQCC LIMIT (mg/L)
ARSENIC	<0.025	0.100
BARIUM	<0.5	1.00
CADMIUM	<0.0005	0.010
CHROMIUM	0.018	0.050
LEAD	<0.004 *	0.050
MERCURY	<0.00024	0.002
SELENIUM	<0.005	0.050
SILVER	0.0007	0.050

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

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

References:

Method 3015, Microwave Assisted Acid Digestion of Aqueous Samples and Extracts, Test Methods for Evaluating Solid Waste, SW-846, Sept., 1994.

Method 7061A, Arsenic (Atomic Absorption, Gaseous Hydride), Test Methods for Evaluating Solid Waste, SW-846, USEPA, July, 1992.

Method 7080A, Barium (Atomic Absorption, Direct Aspiration), Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept., 1994.

Method 7131, Cadmium (Atomic Absorption, Furnace Technique), Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept., 1986.

Method 7191, Chromium (Atomic Absorption, Furnace Technique), Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept., 1986.

Method 7421, Lead (Atomic Absorption, Furnace Technique), Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept., 1986.

Method 245.5, Mercury (Automated Cold Vapor Technique), Methods for the Determination of Metals in Environmental Samples, EPA 600/4-91/010, USEPA, June, 1991.

Method 7741A, Selenium (Atomic Absorption, Gaseous Hydride), Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept., 1994.

Method 7761, Silver (Atomic Absorption, Furnace Technique), Test Methods for Evaluating Solid Waste, SW-846, USEPA, July, 1992.

Reported By: mh Approved By: John Gardner Date: 10/5/96

EPFS
EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT

SAMPLE IDENTIFICATION

SAMPLE NUMBER:	960371
METER CODE:	89961
SITE NAME:	Aztec Pipeline
SAMPLE SITE:	Fields A #7A MW-2
SAMPLE DATE:	04/18/96
SAMPLE TIME (Hrs):	1434
SAMPLED BY:	D. Bird
DATE OF BTEX ANALYSIS:	04/19/96
SAMPLE TYPE:	Water

REMARKS:

EPA Method 8020 (BTEX) RESULTS

PARAMETER	RESULT PPB	QUALIFIER	WQCC LIMIT PPB
BENZENE	<1.0		10
TOLUENE	<1.0		740
ETHYL BENZENE	2.64		750
TOTAL XYLENES	<3.0		620
SURROGATE % RECOVERY	101	Allowed Range 80 to 120 %	

NOTES:

Reported By: mh Approved By: John Saul Date: 4/30/96

EPFS

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT

SAMPLE IDENTIFICATION

SAMPLE NUMBER:	960371
LOCATION:	Aztec Pipeline
SAMPLE SITE:	Fields A #7A MW-2
METER CODE:	89961
SAMPLE DATE:	04/18/96
SAMPLE TIME (Hrs):	1434
SAMPLED BY:	D. Bird

REMARKS: _____

RESULTS

PARAMETER	TOTAL RESULT (mg/L)	N. M. WQCC LIMIT (mg/L)
ARSENIC	<0.025	0.100
BARIUM	<0.5	1.00
CADMIUM	<0.0005	0.010
CHROMIUM	0.004	0.050
LEAD	<0.004 *	0.050
MERCURY	<0.00024	0.002
SELENIUM	<0.005	0.050
SILVER	0.0005	0.050

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

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

References:

Method 3015, Microwave Assisted Acid Digestion of Aqueous Samples and Extracts, Test Methods for Evaluating Solid Waste, SW-846, Sept., 1994.

Method 7061A, Arsenic (Atomic Absorption, Gaseous Hydride), Test Methods for Evaluating Solid Waste, SW-846, USEPA, July, 1992.

Method 7080A, Barium (Atomic Absorption, Direct Aspiration), Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept., 1994.

Method 7131, Cadmium (Atomic Absorption, Furnace Technique), Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept., 1986.

Method 7191, Chromium (Atomic Absorption, Furnace Technique), Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept., 1986.

Method 7421, Lead (Atomic Absorption, Furnace Technique), Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept., 1986.

Method 245.5, Mercury (Automated Cold Vapor Technique), Methods for the Determination of Metals in Environmental Samples, EPA 600/4-91/010, USEPA, June, 1991.

Method 7741A, Selenium (Atomic Absorption, Gaseous Hydride), Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept., 1994.

Method 7761, Silver (Atomic Absorption, Furnace Technique), Test Methods for Evaluating Solid Waste, SW-846, USEPA, July, 1992.

Reported By: mh Approved By: John Labrucherie Date: 10/5/96

EPFS
EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT

SAMPLE IDENTIFICATION

SAMPLE NUMBER:	960372
METER CODE:	8996 1
SITE NAME:	Aztec Pipeline
SAMPLE SITE:	Fields A #7A MW-3
SAMPLE DATE:	04/18/96
SAMPLE TIME (Hrs):	1454
SAMPLED BY:	D. Bird
TE OF BTEX ANALYSIS:	04/19/96
SAMPLE TYPE:	Water

REMARKS: _____

EPA Method 8020 (BTEX) RESULTS

PARAMETER	RESULT PPB	QUALIFIER	WQCC LIMIT PPB
BENZENE	129	D (X10)	10
TOLUENE	<2.0	D (X10)	740
ETHYL BENZENE	212	D (X10)	750
TOTAL XYLENES	463	D (X10)	620
SURROGATE % RECOVERY	92.9	Allowed Range 80 to 120 %	

:S:
D" Qualifier indicates that the reported result for this analyte is calculated based on the secondary
)n factor shown.

ted By: mh Approved By: John Seldon Date: 4/30/96

EPFS

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT

SAMPLE IDENTIFICATION

SAMPLE NUMBER:	960372
LOCATION:	Aztec Pipeline
SAMPLE SITE:	Fields A #7A MW-3
METER CODE:	89961
SAMPLE DATE:	04/18/96
SAMPLE TIME (Hrs):	1454
SAMPLED BY:	D. Bird

REMARKS: _____

RESULTS

PARAMETER	TOTAL RESULT (mg/L)	N. M. WQCC LIMIT (mg/L)
ARSENIC	<0.025	0.100
BARIUM	<0.5	1.00
CADMIUM	<0.0005	0.010
CHROMIUM	0.011	0.050
LEAD	<0.004 *	0.050
MERCURY	<0.00024	0.002
SELENIUM	<0.005	0.050
SILVER	<0.0004	0.050

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

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

References:

Method 3015, Microwave Assisted Acid Digestion of Aqueous Samples and Extracts, Test Methods for Evaluating Solid Waste, SW-846, Sept., 1994.

Method 7061A, Arsenic (Atomic Absorption, Gaseous Hydride), Test Methods for Evaluating Solid Waste, SW-846, USEPA, July, 1992.

Method 7080A, Barium (Atomic Absorption, Direct Aspiration), Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept., 1994.

Method 7131, Cadmium (Atomic Absorption, Furnace Technique), Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept., 1986.

Method 7191, Chromium (Atomic Absorption, Furnace Technique), Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept., 1986.

Method 7421, Lead (Atomic Absorption, Furnace Technique), Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept., 1986.

Method 245.5, Mercury (Automated Cold Vapor Technique), Methods for the Determination of Metals in Environmental Samples, EPA 600/4-91/010, USEPA, June, 1991.

Method 7741A, Selenium (Atomic Absorption, Gaseous Hydride), Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept., 1994.

Method 7761, Silver (Atomic Absorption, Furnace Technique), Test Methods for Evaluating Solid Waste, SW-846, USEPA, July, 1992.

Reported By: mh Approved By: John Zambrano Date: 04/5/96

EPFS

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT

SAMPLE IDENTIFICATION

SAMPLE NUMBER:	960373
METER CODE:	89961
SITE NAME:	Aztec Pipeline
SAMPLE SITE:	Fields A #7A MW-4
SAMPLE DATE:	04/18/96
SAMPLE TIME (Hrs):	1522
SAMPLED BY:	D. Bird
DATE OF BTEX ANALYSIS:	04/19/96
SAMPLE TYPE:	Water

REMARKS: _____

EPA Method 8020 (BTEX) RESULTS

PARAMETER	RESULT PPB	QUALIFIER	WQCC LIMIT PPB
BENZENE	4760	D (X50)	10
TOLUENE	2460	D (X50)	740
ETHYL BENZENE	235	D (X50)	750
TOTAL XYLENES	1880	D (X50)	620
SURROGATE % RECOVERY	96.5	Allowed Range 80 to 120 %	

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

Reported By: mh Approved By: John Laskar Date: 4/30/96

EPFS

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT

SAMPLE IDENTIFICATION

SAMPLE NUMBER:	960373
LOCATION:	Aztec Pipeline
SAMPLE SITE:	Fields A #7A MW-4
METER CODE:	89961
SAMPLE DATE:	04/18/96
SAMPLE TIME (Hrs):	1522
SAMPLED BY:	D. Bird

REMARKS: _____

RESULTS

PARAMETER	TOTAL RESULT (mg/L)	N. M. WQCC LIMIT (mg/L)
ARSENIC	<0.025	0.100
BARIUM	<0.5	1.00
CADMIUM	<0.0005	0.010
CHROMIUM	0.008	0.050
LEAD	<0.004 *	0.050
MERCURY	<0.00024	0.002
SELENIUM	<0.005	0.050
SILVER	<0.0004	0.050

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

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

eferences:

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

Reported By: mh Approved By: John Fowler Date: 4/5/96

EPFS

EL PASO FIELD SERVICES

QUALITY CONTROL REPORT

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

Date Reported: 05/10/96

TOTAL METALS

LABORATORY CONTROL SAMPLE

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

LABORATORY CONTROL SAMPLE (2nd run)

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

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

Reported By: M/1 Approved By: John Todd Date: 10/5/96

EPFS

EL PASO FIELD SERVICES

QUALITY CONTROL REPORT

TOTAL METALS, DUPLICATE ANALYSIS

SAMPLE ID: 960321

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

SAMPLE ID: 960343

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

SAMPLE ID: 960375

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

ND: Analyte Not Detected at stated detection level.

NA: Not Applicable.

Reported By: mh Approved By: [signature] Date: 10/7/96

(2)

EL PASO FIELD SERVICES

QUALITY CONTROL REPORT

TOTAL METALS, SPIKE ANALYSIS

SAMPLE ID: 960321

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

SAMPLE ID: 960343

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

SAMPLE ID: 960375

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

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

Reported By: mh Approved By: John Taylor Date: 10/5/96

(3)

EL PASO FIELD SERVICES

QUALITY CONTROL REPORT

TOTAL METALS, METHOD BLANK ANALYSIS

04/24/96 METHOD BLANK

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

04/25/96 METHOD BLANK

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

ND: Not Detected at stated detection level.

NA: Not Applicable.

NOTE: All detection levels except Hg are 5X MDL.
Hg detection level is based on a Practical Quantitation Level (PQL) of 10X MDL.

Reported By: mh Approved By: Date: 4/5/96

EPFS

EL PASO FIELD SERVICES

MEMORANDUM

To: John Lambdin **Date:** May 8, 1996

From: Dennis Bird **Place:** Laboratory Services

Subject: Aztec Pipeline Pit Monitor Wells

On Thursday, April 18, 1996, I went to the Aztec Pipeline and sampled the following pit monitor wells. The following analytical parameters are to be performed on these groundwater samples: BTXE, 8 RCRA Metals, General Chemistry to include Nitrate as NO3 and Dissolved Oxygen. The samples were assigned the laboratory numbers 960370 to 960373. The dissolved oxygen results were taken at the time of sampling with a ChemMets kit. Monitor Well MW-4 was sampled for Polynuclear Aromatics and sent to American Environmental Network in Pensacola Florida for analysis. The Field Service Laboratory will be performing all of the other analysis.

The following information was collected on each well.

Well Name	Monitor Well#	Pipe ID	Static Level	Total Depth	Gallons Bailed	Dissolved Oxygen
960370 Fields A #7A	MW-1	4"	24.20'	39.10'	34.0	1.5 ppm
960371 Fields A #7A	MW-2	4"	25.53'	31.50'	10.0	2.5 ppm
960372 Fields A #7A	MW-3	4"	25.75'	31.91'	15.0	2.5 ppm
960373 Fields A #7A	MW-4	4"	26.42'	31.62'	13.0	2.5 ppm

Monitor Well MW-4 had a 0.59' of free floating hydrocarbon.

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

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

Dennis P. Bird

cc: Nancy Prince
Sandra Miller

Sample 4 - 2nd Qtr

El Paso Natural Gas Company

A 2599

CHAIN OF CUSTODY RECORD

Project No.	Project Name	Type and No. of Sample Containers	Preservation Technique	Requested Analysis				Remarks
	AZTEC PIPELINE			B+TE				
Samplers: (Signature) Dennis Bird	Date: 7-29-96							

Date	Time	Comp.	GRAB	Sample Number							
7-29-96	1225		X	960660	G-2		X				FIELDS A #1A MW-1 MC 8996
7-29-96	1354		X	960661	G-2		X				FIELDS A #2A MW-2 MC 8996
7-29-96	1501		X	960662	G-2		X				FIELDS A #3A MW-3 MC 8996
7-29-96	1501		X	960663	G-2		X				FIELDS A #3A MW-3 MC 8996
7-29-96	1521		X	960664	G-2		X				FIELDS A #4A MW-4 MC 8996
7-29-96	—		X	—	G-1		X				TRIP BLANK

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Dennis Bird	7-29-96 1649				
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks:	
		Marsha Kopper	7/30/96 0730		
Carrier Co:		Carrier Phone No.		Date Results Reported / by: (Signature)	

EPFS

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT

SAMPLE IDENTIFICATION

SAMPLE NUMBER:	960660
SITE NAME:	Aztec Pipeline
SAMPLE SITE:	Fields A #7A MW-1
METER CODE:	97546
SAMPLE DATE:	07/29/96
SAMPLE TIME (Hrs):	1225
SAMPLED BY:	D. Bird
DATE OF BTEX ANALYSIS:	07/31/96
SAMPLE TYPE:	Water

REMARKS: _____

EPA Method 8020 (BTEX) RESULTS

PARAMETER	RESULT PPB	QUALIFIER	WQCC LIMIT PPB
BENZENE	503	D (X50)	10
TOLUENE	804	D (X50)	740
ETHYL BENZENE	28	D (X50)	750
TOTAL XYLENES	363	D (X50)	620
SURROGATE % RECOVERY	97.6	Allowed Range 80 to 120 %	

NOTES:

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

Reported By: mh Approved By: _____ Date: 8/13/96

EPFS

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT

SAMPLE IDENTIFICATION

SAMPLE NUMBER:	960661
SITE NAME:	Aztec Pipeline
SAMPLE SITE:	Fields A #7A MW-2
METER CODE:	97546
SAMPLE DATE:	07/29/96
SAMPLE TIME (Hrs):	1354
SAMPLED BY:	D. Bird
DATE OF BTEX ANALYSIS:	07/31/96
SAMPLE TYPE:	Water

REMARKS:

EPA Method 8020 (BTEX) RESULTS

PARAMETER	RESULT PPB	QUALIFIER	WQCC LIMIT PPB
BENZENE	<2.0	D (X2)	10
TOLUENE	<2.0	D (X2)	740
ETHYL BENZENE	<2.0	D (X2)	750
TOTAL XYLENES	<6.0	D (X2)	620
SURROGATE % RECOVERY	99.2	Allowed Range 80 to 120 %	

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

Reported By: mh Approved By: John Faldh Date: 8/15/96

EPFS

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT

SAMPLE IDENTIFICATION

SAMPLE NUMBER:	960662
SITE NAME:	Aztec Pipeline
SAMPLE SITE:	Fields A #7A MW-3
METER CODE:	97546
SAMPLE DATE:	07/29/96
SAMPLE TIME (Hrs):	1501
SAMPLED BY:	D. Bird
DATE OF BTEX ANALYSIS:	07/31/96
SAMPLE TYPE:	Water

REMARKS: _____

EPA Method 8020 (BTEX) RESULTS

PARAMETER	RESULT PPB	QUALIFIER	WQCC LIMIT PPB
BENZENE	212	D (X2)	10
TOLUENE	<2.0	D (X2)	740
ETHYL BENZENE	167	D (X2)	750
TOTAL XYLENES	393	D (X2)	620
SURROGATE % RECOVERY	83.0	Allowed Range 80 to 120 %	

NOTES:

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

Reported By: MH Approved By: John Zaela Date: 8/15/96

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT

SAMPLE IDENTIFICATION

SAMPLE NUMBER:	960664
SITE NAME:	Aztec Pipeline
SAMPLE SITE:	Fields A #7A MW-3
METER CODE:	97546
SAMPLE DATE:	07/29/96
SAMPLE TIME (Hrs):	1521
SAMPLED BY:	D. Bird
DATE OF BTEX ANALYSIS:	07/31/96
SAMPLE TYPE:	Water

REMARKS: ______________________

EPA Method 8020 (BTEX) RESULTS

PARAMETER	RESULT PPB	QUALIFIER	WQCC LIMIT PPB
BENZENE	1830	D (X50)	10
TOLUENE	2380	D (X50)	740
ETHYL BENZENE	106	D (X50)	750
TOTAL XYLENES	967	D (X50)	620
SURROGATE % RECOVERY	96.8	Allowed Range 80 to 120 %	

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

Reported By: mh

Approved By: John Lodd

Date: 8/15/96

EPFS
EL PASO FIELD SERVICES

Well Development and Purging Data

[ ] Development
[X] Purging

Well Number MW-1

Meter Code 89961

Site Name FIELDS A #7A

Development Criteria

- [X] 3 to 5 Casing Volumes of Water Removel
- [ ] Stabilization of Indicator Parameters
- [ ] Other

Methods of Development

Pump	Bailer
[ ] Centrifugal	[X] Bottom Valve
[ ] Submersible	[ ] Double Check Valve
[ ] Peristaltic	[ ] Stainless-steel Kemmerer

[ ] Other

Water Volume Calculation

Initial Depth of Well (feet) 39.10
Initial Depth to Water (feet) 25.07
Height of Water Column in Well (feet) 14.03
Diameter (Inches): Well 4 Gravel Pack

Item	Water Volume in Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing			28.2
Gravel Pack			
Drilling Fluids			
Total			

Instruments

- [X] pH Meter
- [ ] DO Monitor
- [X] Conductivity Meter
- [X] Temperature Meter
- [X] Other O.O. CHEMETS KIT

Water Disposal

FIELDS A #7A SEPARATOR TANK

Water Removal Data

Date	Time	Development Method		Removal Rate	Intake Depth	Ending Water Depth	Water Volume Removed (gal)		Product Volume Removed (gallons)		Temperature °C	pH	Conductivity µmho/cm	Dissolved Oxygen mg/L	Comments
		Pump	Bailer	(gal/min)	(feet)	(feet)	Increment	Cumulativ	Increment	Cumulative					
7-29-96	1100										20.0	5.80	6760		
7-29-96	1107						5.0	5.0			19.0	5.82	6780		
7-29-96	1117						5.0	10.0			19.7	6.77	6850		
7-29-96	1128						5.0	15.0			19.0	6.96	6840		
7-29-96	1136						5.0	20.0			19.4	7.10	6970		
7-29-96	1145						5.0	25.0			18.9	7.16	6850		
7-29-96	1155						5.0	30.0			19.1	7.24	6910		
7-29-96	1205						5.0	35.0			19.0	7.24	6900	1.5	

Comments 0.05' OF HYDROCARBON SHEEN. STRONG HYDROCARBON SMELL.

Developer's Signature Dennis Bird Date 7-29-96 Reviewer JR Date 8/15/96

EPFS
EL PASO FIELD SERVICES

Well Development and Purging Data

☐ Development
☒ Purging

Well Number MW-2

Site Name FIELDS A #7A

Meter Code 89961

Development Criteria

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

Water Volume Calculation

Initial Depth of Well (feet) 31.50
Initial Depth to Water (feet) 26.48
Height of Water Column in Well (feet) 5.02
Diameter (inches): Well 4 Gravel Pack_____

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing			10.1
Gravel Pack			
Drilling Fluids			
Total			

Instruments

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

Methods of Development

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

☐ Other_____

Water Disposal

FIELDS A #7A SEPARATOR TANK

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gal): Increment	Water Volume Removed (gal): Cumulativ	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature °C	pH	Conductivity µmho/cm	Dissolved Oxygen mg/L	Comments
7-29-96	1245										20.3	7.16	5810		
7-29-96	1251						3.0	3.0			20.1	7.04	5770		
7-29-96	1318						1.0	4.0			20.1	6.94	5800	2.5	

Comments BAILED DRY @ 4.0 gals

Developer's Signature Dennis Bird Date 7-29-96 Reviewer J.S. Date 8/15/96

EPFS
EL PASO FIELD SERVICES

Well Development and Purging Data

☐ Development
☒ Purging

Well Number MW-3

Meter Code 89961

Site Name FIELDS A #7A

Development Criteria

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

Methods of Development

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

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 31.91
Initial Depth to Water (feet) 26.64
Height of Water Column in Well (feet) 5.27
Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing			10.6
Gravel Pack			
Drilling Fluids			
Total			

Instruments

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

Water Disposal

FIELDS A #7A SEPARATOR TANK

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gal): Increment	Water Volume Removed (gal): Cumulativ	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature °C	pH	Conductivity µmho/cm	Dissolved Oxygen mg/L	Comments
7-29-96	1328										19.9	7.03	4030		
7-29-96	1334						4.0	4.0			19.7	7.06	4060		
7-29-96	1348						3.0	7.0			20.0	7.04	4560		
7-29-96	1416						3.0	10.0			21.0	7.24	5290	1.5	

Comments

Developer's Signature Dennis Bird Date 7-29-96 Reviewer J.S Date 8/15/96

EPFS
EL PASO FIELD SERVICES

Well Development and Purging Data

☐ Development
☒ Purging

Well Number MW-4

Site Name FIELDS A #7A

Meter Code 89961

Development Criteria

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

Methods of Development

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

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 31.62
Initial Depth to Water (feet) 28.65
Height of Water Column in Well (feet) 2.97
Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing			6.0
Gravel Pack			
Drilling Fluids			
Total			

Instruments

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

Water Disposal

FIELDS A #7A SEPARATOR TANK

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gal): Increment	Water Volume Removed (gal): Cumulativ	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature °C	pH	Conductivity µmho/cm	Dissolved Oxygen mg/L	Comments
7-29-96	1422										19.2	6.81	4140		
7-29-96	1433						3.0	3.0			19.3	6.73	4350		
7-29-96	1452						3.0	6.0			19.6	6.92	4710	1.5	

Comments 0.83' OF FREE FLOATING HYDROCARBON. STRONG HYDROCARBON SMELL.

Developer's Signature Dennis Bird Date 7-29-96 Reviewer J.P. Date 8/15/96

American Environmental Network, Inc.

AEN I.D. **607368**

August 14, 1996

El Paso Field Service Co.
P.O. Box 4990
Farmington, NM 87499

Project Name/Number: FIELDS A #7A MW-1 (NONE)

Attention: John Lambdin

On **07/30/96**, American Environmental Network (NM), Inc., (ADHS License No. AZ0015) received a request to analyze **aqueous** sample(s). The sample(s) were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

All analyses were performed by American Environmental Network (FL) Inc., 11 east East Olive Road, Pensacola, FL.

If you have any questions or comments, please do not hesitate to contact us at (505) 344-3777.

Kimberly D. McNeill
Project Manager

H. Mitchell Rubenstein, Ph.D.
General Manager

MR:ft

Enclosure

2709-D Pan American Freeway, NE • Albuquerque, NM 87107 • (505) 344-3777 • Fax (602) 344-4413

American Environmental Network, Inc.

CLIENT	**: EL PASO FIELD SERVICE**	DATE RECEIVED	: 07/30/96
PROJECT #	**: (NONE)**		
PROJECT NAME	**: FIELDS A #7A MW-1**	REPORT DATE	: 08/14/96

AEN ID: 607368

	AEN ID #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	607368-01	960660	AQUEOUS	07/29/96

Fields A #7A

MW-1

Matrix Code 8996/

---TOTALS---

MATRIX	#SAMPLE(S)
AQUEOUS	1

AEN STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in thirty (30) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

American Environmental Network, Inc.

"FINAL REPORT FORMAT - SINGLE"

Accession:	608079
Client:	AMERICAN ENVIRONMENTAL NETWORK OF NEW MEXICO
Project Number:	607368
Project Name:	EPNG
Project Location:	N/S
Test:	POLYNUCLEAR AROMATICS BY 8310
Analysis Method:	8310/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
Extraction Method:	3510/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
Matrix:	WATER
QC Level:	II

Lab Id:	001	Sample Date/Time:	29-JUL-96 1225
Client Sample Id:	607368-01	Received Date:	31-JUL-96
Batch: PAW137		Extraction Date:	01-AUG-96
Blank: B	Dry Weight %: N/A	Analysis Date:	03-AUG-96

Parameter:	Units:	Results:	Rpt Lmts:	Q:
ACENAPHTHENE	UG/L	ND	1	
ACENAPHTHYLENE	UG/L	ND	1	
ANTHRACENE	UG/L	ND	1	
BENZO(a)ANTHRACENE	UG/L	ND	1	
BENZO(a)PYRENE	UG/L	ND	1	
BENZO(b)FLUORANTHENE	UG/L	ND	1	
BENZO(g,h,i)PERYLENE	UG/L	ND	1	
BENZO(k)FLUORANTHENE	UG/L	ND	1	
CHRYSENE	UG/L	ND	1	
DIBENZO(a,h)ANTHRACENE	UG/L	ND	1	
FLUORANTHENE	UG/L	ND	1	
FLUORENE	UG/L	ND	1	
INDENO(1,2,3-cd)PYRENE	UG/L	ND	1	
NAPHTHALENE	UG/L	4	1	
PHENANTHRENE	UG/L	ND	1	
PYRENE	UG/L	ND	1	
1-METHYLNAPHTHALENE	UG/L	ND	1	
2-METHYLNAPHTHALENE	UG/L	2	1	
2-CHLOROANTHRACENE	%REC/SURR	84	28-138	
ANALYST	INITIALS	BV		

Comments:

American Environmental Network, Inc.

"Method Report Summary"

Accession Number: 608079
Client: AMERICAN ENVIRONMENTAL NETWORK OF NEW MEXICO
Project Number: 607368
Project Name: EPNG
Project Location: N/S
Test: POLYNUCLEAR AROMATICS BY 8310

Client Sample Id:	Parameter:	Unit:	Result:
607368-01	NAPHTHALENE	UG/L	4
	2-METHYLNAPHTHALENE	UG/L	2

TOTAL UG/L 6

American Environmental Network, Inc.

"QC Report"

Title: Water Blank
Batch: PAW137
Analysis Method: 8310/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
Extraction Method: 3510/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.

Blank Id: B Date Analyzed: 03-AUG-96 Date Extracted: 01-AUG-96

Parameters:	Units:	Results:	Reporting Limits:
ACENAPHTHENE	UG/L	ND	1
ACENAPHTHYLENE	UG/L	ND	1
ANTHRACENE	UG/L	ND	1
BENZO(a)ANTHRACENE	UG/L	ND	1
BENZO(a)PYRENE	UG/L	ND	1
BENZO(b)FLUORANTHENE	UG/L	ND	1
BENZO(g,h,i)PERYLENE	UG/L	ND	1
BENZO(k)FLUORANTHENE	UG/L	ND	1
CHRYSENE	UG/L	ND	1
DIBENZO(a,h)ANTHRACENE	UG/L	ND	1
FLUORANTHENE	UG/L	ND	1
FLUORENE	UG/L	ND	1
INDENO(1,2,3-cd)PYRENE	UG/L	ND	1
NAPHTHALENE	UG/L	ND	1
PHENANTHRENE	UG/L	ND	1
PYRENE	UG/L	ND	1
1-METHYLNAPHTHALENE	UG/L	ND	1
2-METHYLNAPHTHALENE	UG/L	ND	1
2-CHLOROANTHRACENE	%REC/SURR	55	28-138
ANALYST	NITIALS	BV	

Comments:

3/15/96

American Environmental Network, Inc.

"QC Report"

Title: Water Reagent
Batch: PAW137
Analysis Method: 8310/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
Extraction Method: 3510/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.

RS Date Analyzed: 01-AUG-96 RS Date Extracted: 31-JUL-96
RSD Date Analyzed: 01-AUG-96 RSD Date Extracted: 31-JUL-96

Parameters:	Spike Added	Sample Conc	RS Conc	RS %Rec	RSD Conc	RSD %Rec	RPD	RPD Lmts	Rec Lmts
ACENAPHTHYLENE	10.0	<1	6.7	67	7.0	70	4	46	46-110
BENZO(k)FLUORANTHENE	10.0	<1	8.9	89	9.6	96	8	30	58-128
CHRYSENE	10.0	<1	9.1	91	9.7	97	6	29	62-129
PHENANTHRENE	10.0	<1	8.2	82	8.9	89	8	28	61-116
PYRENE	10.0	<1	8.3	83	8.9	89	7	26	62-120
Surrogates:									
5-CHLOROANTHRACENE				89		97			28-138

Comments:

Notes:
N/S = NOT SUBMITTED N/A = NOT APPLICABLE D = DILUTED OUT
UG/L = PARTS PER BILLION. < = LESS THAN REPORTING LIMIT.
* = VALUES OUTSIDE OF QUALITY CONTROL LIMITS.
SOURCES FOR CONTROL LIMITS ARE INTERNAL LABORATORY QUALITY ASSURANCE PROGRAM AND REFERENCED METHOD.

8/15/96

American Environmental Network, Inc.

"QC Report"

itle: Water Matrix
atch: PAW137
nalysis Method: 8310/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
xtraction Method: 3510/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.

ry Weight %: N/A
ample Spiked: 608028-4

MS Date Analyzed: 03-AUG-96
MSD Date Analyzed: 03-AUG-96
MS Date Extracted: 31-JUL-96
MSD Date Extracted: 31-JUL-96

arameters:	Spike Added	Sample Conc	MS Conc	MS %Rec	MSD Conc	MSD %Rec	RPD	RPD Lmts	Rec Lmts
CENAPHTHYLENE	10.0	8.9	9.6	7*	12.8	39	139*	42	14-135
ENZO(k)FLUORANTHENE	10.0	<1	5.3	53	5.5	55	4	58	25-142
HRYSENE	10.0	<1	6.1	61	6.1	61	0	51	3-176
HENANTHRENE	10.0	<1	3	73	7.6	76	4	55	27-146
YRENE	10.0	<1	5	65	6.7	67	3	47	15-157
urrogates:									
-CHLOROANTHRACENE				62		63			28-138

omments:
MATRIX SPIKE/MATRIX SPIKE DUPLICATE HAD RECOVERY(S) AND/OR
RPD(S) OUTSIDE ACCEPTANCE LIMITS DUE TO MATRIX INTERFERENCE.
REFER TO REAGENT SPIKE/REAGENT SPIKE DUPLICATE DATA.

o
/S = NOT SUBMITTED N/A = NOT APPLICABLE D = DILUTED OUT
UG/L = PARTS PER BILLION. < = LESS THAN REPORTING LIMIT.
* = VALUES OUTSIDE OF QUALITY CONTROL LIMITS.
SOURCES FOR CONTROL LIMITS ARE INTERNAL LABORATORY QUALITY ASSURANCE
PROGRAM AND REFERENCED METHOD.

8/15/96

American Environmental Network, Inc.

Common notation for Organic reporting

N/S = NOT SUBMITTED
N/A = NOT APPLICABLE
D = DILUTED OUT
UG = MICROGRAMS
UG/L = PARTS PER BILLION.
UG/KG = PARTS PER BILLION.
MG/M3 = MILLIGRAM PER CUBIC METER.
PPMV = PART PER MILLION BY VOLUME.
MG/KG = PARTS PER MILLION.
MG/L = PARTS PER MILLION.
< = LESS THAN DETECTION LIMIT.
* = VALUES OUTSIDE OF QUALITY CONTROL LIMITS

SOURCES FOR CONTROL LIMITS ARE INTERNAL LABORATORY QUALITY ASSURANCE PROGRAM AND REFERENCED METHOD.

ORGANIC SOILS ARE REPORTED ON A DRYWEIGHT BASIS.

ND = NOT DETECTED ABOVE REPORTING LIMIT.

RPT LIMIT = REPORTING LIMITS BASED ON METHOD DETECTION LIMIT STUDIES.

RPD = RELATIVE PERCENT DIFFERENCE (OR DEVIATION)

ATI/GC/FID
ATI GAS CHROMATOGRAPHIC METHOD EMPLOYING DIRECT INJECTION ON COLUMN WITH FLAME IONIZATION DETECTOR (FID).

ATI/GC/FIX
ATI GAS CHROMATOGRAPHIC METHOD FOR ANALYSIS OF FIXED GASES EMPLOYING DIRECT INJECTION ON COLUMN WITH THERMAL CONDUCTIVITY DETECTOR (TCD) AND FLAME IONIZATION DETECTOR (FID).

ATI/GC/FPD
ATI GAS CHROMATOGRAPHIC METHOD EMPLOYING DIRECT INJECTION ON COLUMN WITH FLAME PHOTOMETRIC DETECTOR (FPD) IN SULFUR-SPECIFIC MODE.

ATI/GC/PID
ATI GAS CHROMATOGRAPHIC METHOD EMPLOYING DIRECT INJECTION ON COLUMN WITH PHOTOIONIZATION DETECTOR (PID).

ATI/GC/TCD
ATI GAS CHROMATOGRAPHIC METHOD EMPLOYING DIRECT INJECTION ON COLUMN WITH THERMAL CONDUCTIVITY DETECTOR (TCD).

SW = STEVE WILHITE
PL = PAUL LESCHENSKY
RW = ROBERT WOLFE
BV = BEN VAUGHN
BC = BETH COLEMAN
KS = KENDALL SMITH
KK = KERRY KUST
DWB = DAVID W. BOWERS
RP = ROB PEREZ
JBT = JENNIFER TORRANCE

AnalyticalTechnologies of New Mexico, Inc., Albuquerque, NM
San Diego • Phoenix • Seattle • Pensacola • Ft. Collins • Portland • Albuquerque • Anchorage

CHAIN OF CUSTODY

DATE: 7-29-96 PAGE: 1 OF 1

AT LAB ID

PROJECT MANAGER: JOHN LAMBOIN

COMPANY: EL PASO FIELD SERVICES CO.
ADDRESS: P.O. BOX 4990
FARMINGTON N.M. 87499
PHONE: (505) 599-2144
FAX: (505) 599-2261

BILL TO: SAME AS ABOVE
COMPANY:
ADDRESS:

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	LAB I.D.
960660	7-29-96	1225	WATER	

Petroleum Hydrocarbons (418.1) TRPH	
(MOD.8015) Diesel/Direct/Inject	
(M8015) Gas/Purge & Trap	
Gasoline/BTEX & MTBE (M8015/8020)	
BTXE/MTBE (8020)	
BTEX & Chlorinated Aromatics (602/8020)	
BTEX/MTBE/EDC & EDB (8020/8010/Short)	
Chlorinated Hydrocarbons (601/8010)	
504 EDB ☐ / DBCP ☐	
Polynuclear Aromatics (610/8310)	X
Volatile Organics (624/8240) GC/MS	
Volatile Organics (8260) GC/MS	
Pesticides/PCB (608/8080)	
Herbicides (615/8150)	
Base/Neutral/Acid Compounds GC/MS (625/8270)	
General Chemistry	
Priority Pollutant Metals (13)	
Target Analyte List Metals (23)	
RCRA Metals (8)	
RCRA Metals by TCLP (Method 1311)	

PLEASE FILL THIS FORM IN COMPLETELY.

PROJECT INFORMATION

PROJ. NO.:
PROJ. NAME: 96105 A 7A MW
P.O. NO.:
SHIPPED VIA: FED EX

PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS

(RUSH) ☐ 24hr ☐ 48hr ☐ 72hr ☒ 1 WEEK (NORMAL) ☐ 2 WEEK

CERTIFICATION REQUIRED: ☐ NM ☐ OTHER

METHANOL PRESERVATION ☐

COMMENTS: CHARGE #
6138 - 6113 - 6115 - 98002 - 515
LOW LEVEL BENZO(A) PAYABLE TO 7 PPB

RELINQUISHED BY: 1.
Signature: Dennis Bird Time: 1653
Printed Name: DENNIS BIRD Date: 7-29-96
Company: EL PASO FIELD SERVICE

RECEIVED BY: 1.
Signature: Time:
Printed Name: Date:
Company:

RELINQUISHED BY: 2.
Signature: Time:
Printed Name: Date:
Company:

RECEIVED BY (LAB): 2.
Signature:

AnalyticalTechnologies of New Mexico, Inc., Albuquerque, NM
San Diego • Phoenix • Seattle • Pensacola • Ft. Collins • Portland • Albuquerque • Anchorage

CHAIN OF CUSTODY

DATE: 7-29-96 PAGE: 1 OF 1

ATI LAB I.D. 607368

PLEASE FILL THIS FORM IN COMPLETELY.

PROJECT MANAGER:	JOHN CAMBOIN
COMPANY:	EL PASO FIELD SERVICES CO.
ADDRESS:	P.O. BOX 4990 FARMINGTON N.M. 87499
PHONE:	(505) 599-2144
FAX:	(505) 599-2261
BILL TO:	SAME AS ABOVE
COMPANY:	
ADDRESS:	

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	LAB I.D.
960660	7-29-96	1225	WATER	-01

Petroleum Hydrocarbons (418.1) TRPH: —
(MOD.8015) Diesel/Direct/Inject: —
(M8015) Gas/Purge & Trap: —
Gasoline/BTEX & MTBE (M8015/8020): —
BTXE/MTBE (8020): —
BTEX & Chlorinated Aromatics (602/8020): —
BTEX/MTBE/EDC & EDB (8020/8010/Short): —
Chlorinated Hydrocarbons (601/8010): —
504 EDB ☐ / DBCP ☐: —
Polynuclear Aromatics (610/8310): X
Volatile Organics (624/8240) GC/MS: —
Volatile Organics (8260) GC/MS: —
Pesticides/PCB (608/8080): —
Herbicides (615/8150): —
Base/Neutral/Acid Compounds GC/MS (625/8270): —
General Chemistry: —
Priority Pollutant Metals (13): —
Target Analyte List Metals (23): —
RCRA Metals (8): —
RCRA Metals by TCLP (Method 1311): —

PROJECT INFORMATION	
PROJ. NO.:	
PROJ. NAME:	AZTEC A"TA MV
P.O. NO.:	
SHIPPED VIA:	FED EX

RECEIPT	
	2.1
	YES/NO
	YES
	6°C

PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS

(RUSH) [ ] 24hr [ ] 48hr [ ] 72hr [X] 1 WEEK (NORMAL) [ ] 2 WEEK

CERTIFICATION REQUIRED: [ ] NM [ ] OTHER

METHANOL PRESERVATION ☐

COMMENTS: CHARGE #
6138 - 6113 - 6115 - 70002 - 515
LOW LEVEL BENZO(A) PAYABLE LOT PPB

RELINQUISHED BY: 1.	RELINQUISHED BY:
Signature: Dennis Bird Time: 1653	Signature: Time:
Printed Name: DENNIS BIRD Date: 7-29-96	Printed Name: Date:
Company: EL PASO FIELD SERVICE	Company:
RECEIVED BY: 1.	**RECEIVED BY: (LAB)**
Signature: Time:	Signature: Time:
Printed Name: Date:	Printed Name:
Company:	Analytical Technologies of New Mexico

EPFS
EL PASO FIELD SERVICES

Well Development and Purging Data

☐ Development
☒ Purging

Well Number MW-2

Site Name FIELDS A #7A

Meter Code 89961

Development Criteria

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

Methods of Development

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

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 31.50
Initial Depth to Water (feet) 26.48
Height of Water Column in Well (feet) 5.02
Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing			10.1
Gravel Pack			
Drilling Fluids			
Total			

Instruments

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

Water Disposal

FIELDS A #7A SEPARATOR TANK

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gal): Increment	Water Volume Removed (gal): Cumulativ	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature °C	pH	Conductivity µmho/cm	Dissolved Oxygen mg/L	Comments
7-29-96	1245										20.3	7.16	5810		
7-29-96	1251						3.0	3.0			20.1	7.04	5770		
7-29-96	1318						1.0	4.0			20.1	6.94	5800	2.5	

Comments BAILED DRY @ 4.0 gals

Developer's Signature Dennis Bird Date 7-29-96 Reviewer J.P. Date 8/15/96

EPFS
EL PASO FIELD SERVICES

Well Development and Purging Data

☐ Development
☒ Purging

Well Number MW-3

Meter Code 89961

Site Name FIELDS A #7A

Development Criteria

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

Methods of Development

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

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 31.91
Initial Depth to Water (feet) 26.64
Height of Water Column in Well (feet) 5.27
Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing			10.6
Gravel Pack			
Drilling Fluids			
Total			

Instruments

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

Water Disposal

FIELDS A #7A SEPARATOR TANK

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Baller	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gal): Increment	Water Volume Removed (gal): Cumulativ	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature °C	pH	Conductivity µmho/cm	Dissolved Oxygen mg/L	Comments
7-29-96	1328										19.9	7.03	4030		
7-29-96	1334						4.0	4.0			19.7	7.06	4060		
7-29-96	1348						3.0	7.0			20.0	7.04	4560		
7-29-96	1416						3.0	10.0			21.0	7.24	5290	1.5	

Comments

Developer's Signature Dennis Bird Date 7-29-96 Reviewer J.L Date 8/15/96

EPFS
EL PASO FIELD SERVICES

Well Development and Purging Data

☐ Development
☒ Purging

Well Number MW-4

Site Name FIELDS A #7A

Meter Code 89961

Development Criteria

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

Methods of Development

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

☐ Other_____

Water Volume Calculation

Initial Depth of Well (feet) 31.62
Initial Depth to Water (feet) 28.65
Height of Water Column in Well (feet) 2.97
Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing			6.0
Gravel Pack			
Drilling Fluids			
Total			

Instruments

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

Water Disposal

FIELDS A #7A SEPARATOR TANK

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gal): Increment	Water Volume Removed (gal): Cumulativ	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature °C	pH	Conductivity µmho/cm	Dissolved Oxygen mg/L	Comments
7-29-96	1422										19.2	6.81	4140		
7-29-96	1433						3.0	3.0			19.3	6.73	4350		
7-29-96	1452						3.0	6.0			19.6	6.92	4710	1.5	

Comments 01.83' OF FREE FLOATING HYDROCARBON. STRONG HYDROCARBON SMELL.

Developer's Signature Dennis Bird Date 7-29-96 Reviewer JP Date 8/15/96

El Paso Natural Gas Company

A 2296

CHAIN OF CUSTODY RECORD

Project No.	Project Name	Type and No. of Sample Containers	Preservation Technique	Requested Analysis			Remarks
	AZTEC PIPELINE		BTXE				
Samplers: (Signature) Dennis Bird	Date: 10-21-96						

Date	Time	Comp.	GRAB	Sample Number							
10-21-96	1209		X	960875	G-2		X				FIELDS A #7B MW-1 MC 87761
10-21-96	1209		X	960876	G-2		X				FIELDS A #7A MW-1 MC 87761
10-21-96	1351		X	960877	G-2		X				FIELDS A #7A MW-2 MC 87761
10-21-96	1506		X	960878	G-2		X				FIELDS A #7A MW-3 MC 87761
10-21-96	1525		X	960879	G-2		X				FIELDS A #7A MW-4 MC 87761
10-21-96	—		X	—	G-1		X				TRIP BLANK

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Dennis Bird	10-21-96 1847				
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks:	
		Marlon E. Hoppe	10/22/96 0720		
Carrier Co:		Carrier Phone No.		Date Results Reported / by: (Signature)	

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	960875
MTR CODE | SITE NAME:	89961	Fields A #7A MW-1
SAMPLE DATE | TIME (Hrs):	10/21/96	1209
PROJECT:	Sample 4 - 3rd Quarter	
DATE OF BTEX EXT. | ANAL.:	10/23/96	10/23/96
TYPE | DESCRIPTION:	Monitor ~~Grab~~ Well	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	843 ~~840~~	PPB	50	D		
TOLUENE	1300	PPB	50	D		
ETHYL BENZENE	26.0 ~~28.6~~	PPB	50	D		
TOTAL XYLENES	422 ~~420~~	PPB	50	D		
TOTAL BTEX	2590	PPB				

–BTEX is by EPA Method 8020 –

The Surrogate Recovery was at 90.8 % 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 Sarber Date: 10/29/96

960885.XLS,10/25/96

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	960877
MTR CODE | SITE NAME:	89961	Fields A #7A MW-2
SAMPLE DATE | TIME (Hrs):	10/21/96	1351
PROJECT:	Sample 4 - 3rd Quarter	
DATE OF BTEX EXT. | ANAL.:	10/24/96	10/24/96
TYPE | DESCRIPTION:	Monitor ~~Grab~~ Well	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	<1	PPB	2	D		
TOLUENE	<1	PPB	2	D		
ETHYL BENZENE	<1	PPB	2	D		
TOTAL XYLENES	<3	PPB	2	D		
TOTAL BTEX	<6	PPB				

–BTEX is by EPA Method 8020 –

The Surrogate Recovery was at 86.5 % 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 Kelch Date: 10/29/96

960885.XLS,10/25/96

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	960878
MTR CODE | SITE NAME:	89961	Fields A #7A MW-3
SAMPLE DATE | TIME (Hrs):	10/21/96	1506
PROJECT:	Sample 4 - 3rd Quarter	
DATE OF BTEX EXT. | ANAL.:	10/24/96	10/24/96
TYPE | DESCRIPTION:	Monitor ~~Grab~~ Well	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	165	PPB	2	D		
TOLUENE	<1	PPB	2	D		
ETHYL BENZENE	157	PPB	2	D		
TOTAL XYLENES	467	PPB	2	D		
TOTAL BTEX	789	PPB				

–BTEX is by EPA Method 8020 –

The Surrogate Recovery was at 82.5 % 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 Fowler Date: 10/29/96

960877.XLS,10/25/96

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	960879
MTR CODE | SITE NAME:	89961	Fields A #7A MW-4
SAMPLE DATE | TIME (Hrs):	10/21/96	1525
PROJECT:	Sample 4 - 3rd Quarter	
DATE OF BTEX EXT. | ANAL.:	10/24/96	10/24/96
TYPE | DESCRIPTION:	Monitor ~~Grab~~ Well	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	3320	PPB	25	D		
TOLUENE	4520	PPB	25	D		
ETHYL BENZENE	149 ~~187~~	PPB	25	D		
TOTAL XYLENES	1680 ~~487~~	PPB	25	D		
TOTAL BTEX	~~8464~~	PPB				

–BTEX is by EPA Method 8020 –

The Surrogate Recovery was at 82.5 % 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 Sanchez Date: 10/29/96

960878.XLS,10/25/96

EPFS
EL PASO FIELD SERVICES

Well Development and Purging Data

☐ Development
☒ Purging

Well Number MW-1

Site Name FIELDS A #7A

Meter Code 89961

Development Criteria

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

Water Volume Calculation

Initial Depth of Well (feet) 39.10
Initial Depth to Water (feet) 25.45
Height of Water Column in Well (feet) 13.65
Diameter (inches): Well 4 Gravel Pack_____

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing		9.0	27.1
Gravel Pack			
Drilling Fluids			
Total			

Instruments

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

Methods of Development

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

☐ Other_____

Water Disposal

FIELDS A #7A SEPARATOR

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gal): Increment	Water Volume Removed (gal): Cumulativ	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature °C	pH	Conductivity µmho/cm	Dissolved Oxygen mg/L	Comments
10-21-96	1107										12.9	6.08	10080		
10-21-96	1109						5.0	5.0			14.4	5.94	10810		
10-21-96	1116						5.0	10.0			14.5	6.45	11090		
10-21-96	1125						5.0	15.0			14.7	6.86	11140		
10-21-96	1133						5.0	20.0			15.0	6.92	11030		
10-21-96	1142						5.0	25.0			15.6	7.02	11270		
10-21-96	1149						5.0	30.0			15.9	7.06	11500		
10-21-96	1159						5.0	35.0			14.1	7.15	10990	1.0	

Comments 0.07' OF HYDROCARBON SHEEN. STRONG HYDROCARBON SMELL

Developer's Signature Dennis Bird Date 10-21-96 Reviewer John Loehr Date 10/29/96

EPFS
EL PASO FIELD SERVICES

Well Development and Purging Data

☐ Development
☒ Purging

Well Number MW-2

Site Name FIELDS A #7A

Meter Code 89961

Development Criteria

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

Methods of Development

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

☐ Other_____

Water Volume Calculation

Initial Depth of Well (feet) 31.50
Initial Depth to Water (feet) 26.96
Height of Water Column in Well (feet) 4.54
Diameter (inches): Well 4 Gravel Pack_____

Item	Water Volume in Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing		3.0	9.0
Gravel Pack			
Drilling Fluids			
Total			

Instruments

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

Water Disposal

FIELDS A #7A SEPARATOR

Water Removal Data

Date	Time	Development Method		Removal Rate	Intake Depth	Ending Water Depth	Water Volume Removed (gal)		Product Volume Removed (gallons)		Temperature °C	pH	Conductivity µmho/cm	Dissolved Oxygen mg/L	Comments
		Pump	Bailer	(gal/min)	(feet)	(feet)	Increment	Cumulativ	Increment	Cumulative					
10-21-96	1238										14.4	7.36	10280		
10-21-96	1245						3.0	3.0			14.3	7.00	10270		
10-21-96	1323						1.0	4.0			14.0	6.92	10540	2.5	

Comments BAILED DRY @ 3.0 GALLONS.

Developer's Signature Dennis Bird Date 10-21-96 Reviewer John Loller Date 10/29/96

EPFS
EL PASO FIELD SERVICES

Well Development and Purging Data

☐ Development
☒ Purging

Well Number MW-3

Site Name FIELDS A #7A

Meter Code 89961

Development Criteria

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

Methods of Development

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

☐ Other_____

Water Volume Calculation

Initial Depth of Well (feet) 31.91
Initial Depth to Water (feet) 22.16
Height of Water Column in Well (feet) 4.75
Diameter (inches): Well 4 Gravel Pack_____

Item	Water Volume in Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing		3.1	9.4
Gravel Pack			
Drilling Fluids			
Total			

Instruments

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

Water Disposal

FIELDS A #7A SEPARATOR

Water Removal Data

Date	Time	Development Method		Removal Rate	Intake Depth	Ending Water Depth	Water Volume Removed (gal)		Product Volume Removed (gallons)		Temperature °C	pH	Conductivity µmho/cm	Dissolved Oxygen mg/L	Comments
		Pump	Bailer	(gal/min)	(feet)	(feet)	Increment	Cumulativ	Increment	Cumulative					
10-21-96	1329										15.6	6.72	6120		
10-21-96	1334						3.0	3.0			16.3	6.84	7000		
10-21-96	1342						2.0	5.0			16.8	6.94	7350		
10-21-96	1423						2.0	7.0			11.0	7.23	7890	1.0	

Comments_____

Developer's Signature Dennis Bird Date 10-21-96 Reviewer John Boldon Date 10/29/96

EPFS
EL PASO FIELD SERVICES

Well Development and Purging Data

☐ Development
☒ Purging

Well Number MW-4

Site Name FIELDS A #7A

Meter Code 89961

Development Criteria

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

Methods of Development

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

☐ Other_____

Water Volume Calculation

Initial Depth of Well (feet) 31.62
Initial Depth to Water (feet) 28.84
Height of Water Column in Well (feet) 2.78
Diameter (inches): Well 4 Gravel Pack_____

Item	Water Volume in Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing		1.8	5.5
Gravel Pack			
Drilling Fluids			
Total			

Instruments

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

Water Disposal

FIELDS A #7A SEPARATOR

Water Removal Data

Date	Time	Development Method		Removal Rate	Intake Depth	Ending Water Depth	Water Volume Removed (gal)		Product Volume Removed (gallons)		Temperature °C	pH	Conductivity µmho/cm	Dissolved Oxygen mg/L	Comments
		Pump	Bailer	(gal/min)	(feet)	(feet)	Increment	Cumulativ	Increment	Cumulative					
10-21-96	1432										10.9	6.82	5980		
10-21-96	1443						2.0	2.0			10.1	6.72	6390		
10-21-96	1457						3.0	5.0			9.6	6.78	6730	1.5	

Comments 1.39' OF FREE FLOATING HYDROCARBON.

Developer's Signature Dennis Bird Date 10-21-96 Reviewer John Ludlow Date 10/29/96

El Paso Natural Gas Company

A 1992

CHAIN OF CUSTODY RECORD

Project No.	Project Name	Type and No. of Sample Containers	Preservation Technique	Requested Analysis: BTXE			Remarks
	METEC PIPELINE						
Samplers: (Signature) Dennis Bird	Date: 1-30-97						

	Date	Time	Comp.	GRAB	Sample Number							
	1-30-97	1221		X	970033	6-2	4°C	X				FIELDS A #7A MW-1 MC 87961
	1-30-97	1435		X	970034	6-2	4°C	X				FIELDS A #7A MW-2 MC 87961
	1-30-97	1447		X	970035	6-2	4°C	X				FIELDS A #7A MW-3 MC 87961
	1-30-97	1455		X	970036	6-2	4°C	X				FIELDS A #7A MW-4 MC 87961
	1-30-97	—		X	—	6-1	4°C	X				TRIP BLANK

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Dennis Bird	1-30-97 1724				
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks:	
		Marion Hopper	1/31/97 0730		

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

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	970033
MTR CODE | SITE NAME:	89961	Fields A #7A MW-1
SAMPLE DATE | TIME (Hrs):	1/30/97	1221
PROJECT:	Sample 4 - 4th Quarter	
DATE OF BTEX EXT. | ANAL.:	2/4/97	2/4/97
TYPE | DESCRIPTION:	Monitor Well	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	1300	PPB	10	D		
TOLUENE	2200	PPB	10	D,D1		
ETHYL BENZENE	76.8	PPB	10	D		
TOTAL XYLENES	966	PPB	10	D		
TOTAL BTEX	4540	PPB				

–BTEX is by EPA Method 8020 –

The Surrogate Recovery was at 95.4 % for this sample All QA/QC was acceptable.

DF = Dilution Factor Used

The "D1" qualifier indicates that the analyte concentration exceeded the calibration curve limit.

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

Narrative:

Approved By: _____ Date: 2-12-97

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	970034
MTR CODE | SITE NAME:	89961	Fields A #7A MW-2
SAMPLE DATE | TIME (Hrs):	1/30/97	1435
PROJECT:	Sample 4 - 4th Quarter	
DATE OF BTEX EXT. | ANAL.:	2/4/97	2/4/97
TYPE | DESCRIPTION:	Monitor Well	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	<2	PPB	2	D		
TOLUENE	<2	PPB	2	D		
ETHYL BENZENE	<2	PPB	2	D		
TOTAL XYLENES	<6	PPB	2	D		
TOTAL BTEX	<12	PPB				

–BTEX is by EPA Method 8020 –

The Surrogate Recovery was at 89.5 % for this sample All QA/QC was acceptable.

DF = Dilution Factor Used

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

Narrative:

Approved By: John Leach Date: 2-12-97

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	970035
MTR CODE | SITE NAME:	89961	Fields A #7A MW-3
SAMPLE DATE | TIME (Hrs):	1/30/97	1447
PROJECT:	Sample 4 - 4th Quarter	
DATE OF BTEX EXT. | ANAL.:	2/4/97	2/4/97
TYPE | DESCRIPTION:	Monitor Well	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	144	PPB	5	D		
TOLUENE	<1	PPB	5	D		
ETHYL BENZENE	198	PPB	5	D		
TOTAL XYLENES	851	PPB	5	D		
TOTAL BTEX	1190	PPB				

–BTEX is by EPA Method 8020 –

The Surrogate Recovery was at 89.6 % 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:

Approved By: _____ Date: 2-12-97

970035BT.XLS,2/10/97

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	970036
MTR CODE | SITE NAME:	89961	Fields A #7A MW-4
SAMPLE DATE | TIME (Hrs):	1/30/97	1458
PROJECT:	Sample 4 - 4th Quarter	
DATE OF BTEX EXT. | ANAL.:	2/4/97	2/4/97
TYPE | DESCRIPTION:	Monitor Well	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	4320	PPB	50	D		
TOLUENE	7420	PPB	50	D		
ETHYL BENZENE	280	PPB	50	D		
TOTAL XYLENES	3250	PPB	50	D		
TOTAL BTEX	15300	PPB				

–BTEX is by EPA Method 8020 –

The Surrogate Recovery was at 89.6 % 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:

Approved By: John Leach Date: 2-12-97

970036BT.XLS,2/10/97

EPFS
EL PASO FIELD SERVICES

Well Development and Purging Data

☐ Development
☒ Purging

Well Number MW-1

Site Name FIELDS A #7A

Meter Code 89961

Development Criteria

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

Water Volume Calculation

Initial Depth of Well (feet) 39.1
Initial Depth to Water (feet) 26.83
Height of Water Column in Well (feet) 12.27
Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well Cubic Feet	Water Volume in Well Gallons	Gallons to be Removed
Well Casing		8.1	243
Gravel Pack			
Drilling Fluids			
Total			

Instruments

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

Methods of Development

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

☐ Other

Water Disposal

FIELDS A #7A SEPARATOR TANK

Water Removal Data

Date	Time	Development Method Pump	Development Method Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gal) Increment	Water Volume Removed (gal) Cumulativ	Product Volume Removed (gallons) Increment	Product Volume Removed (gallons) Cumulative	Temperature °C	pH	Conductivity µmho/cm	Dissolved Oxygen mg/L	Comments
1-30-97	1123										14.5	9.23	7160		
1-30-97	1129						5.0	5.0			14.8	9.14	7070		
1-30-97	1137						5.0	10.0			15.0	8.43	7870		
1-30-97	1145						5.0	15.0			15.5	7.51	7160		
1-30-97	1153						5.0	20.0			15.3	8.21	7210		
1-30-97	1203						5.0	25.0			15.4	7.20	7370	6.5	

Comments 0.26' OF FREE FLOATING HYDROCARBON. REMOVED OXYGEN RELEASE COMPOUND SOCK BEFORE SAMPLING.

Developer's Signature Dennis Bird Date 1-30-97 Reviewer John Loehr Date 2-12-97

EPFS
EL PASO FIELD SERVICES

Well Development and Purging Data

☐ Development
☒ Purging

Well Number MW-2

Site Name FIELDS A #7A

Meter Code 89961

Development Criteria

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

Methods of Development

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

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 31.50
Initial Depth to Water (feet) 27.73
Height of Water Column in Well (feet) 3.77
Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing		2.5	7.5
Gravel Pack			
Drilling Fluids			
Total			

Instruments

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

Water Disposal

FIELDS A #7A SEPARATOR TANK

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gal): Increment	Water Volume Removed (gal): Cumulativ	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature °C	pH	Conductivity µmho/cm	Dissolved Oxygen mg/L	Comments
1-30-97	1243										14.7	7.10	6290		
1-30-97	1249						2.5	2.5			15.1	6.85	6500	1.5	

Comments BAILED DRY @ 2.5 GALLONS.

Developer's Signature Dennis Bird Date 1-30-97 Reviewer John Landels Date 2-12-97

EPFS
EL PASO FIELD SERVICES

Well Development and Purging Data

☐ Development
☒ Purging

Well Number MW-3

Site Name FIELDS A #7A

Meter Code 89961

Development Criteria

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

Water Volume Calculation

Initial Depth of Well (feet) 31.91
Initial Depth to Water (feet) 27.92
Height of Water Column in Well (feet) 3.99

Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing		26	7.9
Gravel Pack			
Drilling Fluids			
Total			

Instruments

☒ pH Meter
☐ DO Monitor
☒ Conductivity Meter
☒ Temperature Meter
☒ Other O.9 CHEMETS KIT

Methods of Development

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

☐ Other

Water Disposal

FIELDS A #7A SEPARATOR TANK

Water Removal Data

Date	Time	Development Method		Removal Rate	Intake Depth	Ending Water Depth	Water Volume Removed (gal)		Product Volume Removed (gallons)		Temperature °C	pH	Conductivity µmho/cm	Dissolved Oxygen mg/L	Comments
		Pump	Bailer	(gal/min)	(feet)	(feet)	Increment	Cumulativ	Increment	Cumulative					
1-30-97	1336										16.3	6.81	3860		
1-30-97	1347						2.5	2.5			15.3	7.07	4370	1.5	

Comments BAILED DRY @ 2.5 GALLONS.

Developer's Signature Dennis Bird Date 1-30-97 Reviewer John Todd Date 2-12-97

EPFS
EL PASO FIELD SERVICES

Well Development and Purging Data

☐ Development
☒ Purging

Well Number MW-4

Site Name FIELDS A #7A

Meter Code 89961

Development Criteria

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

Water Volume Calculation

Initial Depth of Well (feet) 31.62
Initial Depth to Water (feet) 28.85
Height of Water Column in Well (feet) 2.77
Diameter (Inches): Well 4 Gravel Pack

Item	Water Volume in Well Cubic Feet	Water Volume in Well Gallons	Gallons to be Removed
Well Casing		1.8	5.5
Gravel Pack			
Drilling Fluids			
Total			

Instruments

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

Methods of Development

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

☐ Other

Water Disposal

~~FLOOR~~ FIELDS A #7A SEPARATOR TAN

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gal): Increment	Water Volume Removed (gal): Cumulativ	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature °C	pH	Conductivity µmho/cm	Dissolved Oxygen mg/L	Comments
1-30-97	1408										16.0	7.01	4710		
1-30-97	1417						3.0	3.0			16.5	6.77	4560		
1-30-97	1426						2.0	5.0			16.0	6.83	4950	0.5	

Comments 0.42' OF FREE FLOATING HYDROCARBON. STRONG HYDROCARBON SMELL.

Developer's Signature Dennis Bird Date 1-30-97 Reviewer Date 2-12-97

Sample - 5th Qtr

El Paso Natural Gas Company

A 1923

CHAIN OF CUSTODY RECORD

Project No.	Project Name: AZTEC PIPELINE
Samplers: (Signature) [signature]	Date: 4-21-97

Matrix	Date	Time	Comp.	GRAB	Sample Number	Type and No. of Sample Containers	Preservation Technique	BTXE	[illegible]	[illegible]		Remarks
WATER	4-21-97	1113		X	970324	[illegible]	4°C	X	X	X		FIELDS A #7A MW1 MC 87961
WATER	4-21-97	1112		X	970325	[illegible]	4°C	X	X	X		FIELDS A #7A MW1 MC 87961
WATER	4-21-97	1350		X	970326	[illegible]	4°C	X	X	X		FIELDS A #7A MW2 MC 87961
WATER	4-21-97	1415		X	970327	[illegible]	4°C	X	X	X		FIELDS A #7A MW3 MC 87961
WATER	4-21-97	1437		X	970328	[illegible]	4°C	X	X	X		FIELDS A #7A MW4 MC 87961
WATER	4-21-97	—		X	—	3-1	4°C	X				TRIP BLANK

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[signature]	4-21-97 / 1613				
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks:	
		[signature]	7/22/97 0810		

Carrier Co:

Carrier Phone No.

Date Results Reported / by: (Signature)

Air Bill No.:

EL PASO FIELD SERVICES

5-15-97

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	970324
MTR CODE | SITE NAME:	89961	Fields A #7A MW-1
SAMPLE DATE | TIME (Hrs):	4/21/97	1112
PROJECT:	Sample 4 - 5th Quarter	
DATE OF BTEX EXT. | ANAL.:	4/23/97	4/23/97
TYPE | DESCRIPTION:	Monitor Well	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	951	PPB	20	D		
TOLUENE	1920	PPB	20	D		
ETHYL BENZENE	73.0	PPB	20	D		
TOTAL XYLENES	894	PPB	20	D		
TOTAL BTEX	3840	PPB				

The Surrogate Recovery was at 88.0 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: _____ Date: 4/25/97

970324 btex,4/24/97

EL PASO FIELD SERVICES

5-15-97

Field Services Laboratory
Analytical Report

SAMPLE IDENTIFICATION

EPFS LAB ID:	970324
DATE SAMPLED:	04/21/97
TIME SAMPLED (Hrs):	1112
SAMPLED BY:	D. Bird
MATRIX:	Water
METER CODE:	89961
SAMPLE SITE NAME:	Aztec Pipeline
SAMPLE POINT:	Fields A #7A MW-1

FIELD REMARKS:

GENERAL CHEMISTRY WATER ANALYSIS RESULTS

PARAMETER	RESULT	UNITS	DATE ANALYZED
Laboratory pH	8.1	Units	04/22/97
Alkalinity as $C0_3$	0	PPM	04/22/97
Alkalinity as $HC0_3$	612	PPM	04/22/97
Calcium as Ca	265	PPM	04/22/97
Magnesium as Mg	38	PPM	04/22/97
Total Hardness as $CaC0_3$	817	PPM	04/22/97
Chloride as Cl	188	PPM	04/22/97
Sulfate as $S0_4$	4,360	PPM	04/22/97
Fluoride as F	2.1	PPM	04/23/97
Nitrate as $N0_3$-N	<1.1	PPM	04/22/97
Nitrite as $N0_2$-N	<1.1	PPM	04/22/97
Ammonium as NH_4^+	<0.6	PPM	04/22/97
Phosphate as PO_4	<1.1	PPM	04/22/97
Potassium as K	3.7	PPM	04/22/97
Sodium as Na	1990	PPM	04/22/97
Total Dissolved Solids	6,880	PPM	04/23/97
Calculated TDS	7,148	PPM	04/25/97
Conductivity	8,820	umhos/cm	04/22/97
Anion/Cation %	1.6%	%, <5.0 Accepted	04/25/97

Remarks:

Reported By: mh

Approved By: [signature]

Date: 5/6/97

EL PASO FIELD SERVICES

5-15-97

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	970326
MTR CODE | SITE NAME:	89961	Fields A #7A MW-2
SAMPLE DATE | TIME (Hrs):	4/21/97	1350
PROJECT:	Sample 4 - 5th Quarter	
DATE OF BTEX EXT. | ANAL.:	4/22/97	4/22/97
TYPE | DESCRIPTION:	Monitor Well	Water

Field Remarks: _____

RESULTS

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

The Surrogate Recovery was at 103 for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative:

Approved By: _____ Date: 4/25/97

EL PASO FIELD SERVICES

5-15-97

Field Services Laboratory
Analytical Report

SAMPLE IDENTIFICATION

EPFS LAB ID:	970326
DATE SAMPLED:	04/21/97
TIME SAMPLED (Hrs):	1350
SAMPLED BY:	D. Bird
MATRIX:	Water
METER CODE:	89961
SAMPLE SITE NAME:	Aztec Pipeline
SAMPLE POINT:	Fields A #7A MW-2

FIELD REMARKS: _____

GENERAL CHEMISTRY WATER ANALYSIS RESULTS

PARAMETER	RESULT	UNITS	DATE ANALYZED
Laboratory pH	7.6	Units	04/22/97
Alkalinity as $C0_3$	0	PPM	04/22/97
Alkalinity as $HC0_3$	760	PPM	04/22/97
Calcium as Ca	461	PPM	04/22/97
Magnesium as Mg	70	PPM	04/22/97
Total Hardness as $CaC0_3$	1,441	PPM	04/22/97
Chloride as Cl	227	PPM	04/22/97
Sulfate as $S0_4$	4,500	PPM	04/22/97
Fluoride as F	1.7	PPM	04/23/97
Nitrate as $N0_3$-N	<1.1	PPM	04/22/97
Nitrite as $N0_2$-N	<1.1	PPM	04/22/97
Ammonium as NH_4^+	<0.6	PPM	04/22/97
Phosphate as PO_4	<1.1	PPM	04/22/97
Potassium as K	3.3	PPM	04/22/97
Sodium as Na	1850	PPM	04/22/97
Total Dissolved Solids	7,290	PPM	04/23/97
Calculated TDS	7,487	PPM	04/25/97
Conductivity	8,770	umhos/cm	04/22/97
Anion/Cation %	1.5%	%, <5.0 Accepted	04/25/97

Remarks:

Reported By: mh Approved By: _____ Date: 5/6/97

EL PASO FIELD SERVICES

5-15-97

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	970327
MTR CODE | SITE NAME:	89961	Fields A #7A MW-3
SAMPLE DATE | TIME (Hrs):	4/21/97	1415
PROJECT:	Sample 4 - 5th Quarter	
DATE OF BTEX EXT. | ANAL.:	4/23/97	4/23/97
TYPE | DESCRIPTION:	Monitor Well	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	2070	PPB	20	D		
TOLUENE	4340	PPB	20	D		
ETHYL BENZENE	332	PPB	20	D		
TOTAL XYLENES	4730	PPB	20	D		
TOTAL BTEX	11500	PPB				

The Surrogate Recovery was at 89.7 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 Sanders Date: 4/25/97

970327 btex,4/24/97

EL PASO FIELD SERVICES

5-15-97

Field Services Laboratory
Analytical Report

SAMPLE IDENTIFICATION

EPFS LAB ID:	970327
DATE SAMPLED:	04/21/97
TIME SAMPLED (Hrs):	1415
SAMPLED BY:	D. Bird
MATRIX:	Water
METER CODE:	89961
SAMPLE SITE NAME:	Aztec Pipeline
SAMPLE POINT:	Fields A #7A MW-3

FIELD REMARKS: _____

GENERAL CHEMISTRY WATER ANALYSIS RESULTS

PARAMETER	RESULT	UNITS	DATE ANALYZED
Laboratory pH	7.9	Units	04/22/97
Alkalinity as $C0_3$	0	PPM	04/22/97
Alkalinity as $HC0_3$	1760	PPM	04/22/97
Calcium as Ca	288	PPM	04/22/97
Magnesium as Mg	46	PPM	04/22/97
Total Hardness as $CaC0_3$	908	PPM	04/22/97
Chloride as Cl	220	PPM	04/22/97
Sulfate as $S0_4$	2,420	PPM	04/22/97
Fluoride as F	1.2	PPM	04/23/97
Nitrate as $N0_3$-N	<1.1	PPM	04/22/97
Nitrite as $N0_2$-N	<1.1	PPM	04/22/97
Ammonium as NH_4^+	<0.6	PPM	04/22/97
Phosphate as PO_4	<1.1	PPM	04/22/97
Potassium as K	3.3	PPM	04/22/97
Sodium as Na	1530	PPM	04/22/97
Total Dissolved Solids	5,320	PPM	04/23/97
Calculated TDS	5,374	PPM	04/25/97
Conductivity	6,970	umhos/cm	04/22/97
Anion/Cation %	0.5%	%, <5.0 Accepted	04/25/97

Remarks:

Reported By: mh Approved By: _____ Date: 5/6/97

EL PASO FIELD SERVICES

5-15-97

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	970328
MTR CODE | SITE NAME:	89961	Fields A #7A MW-4
SAMPLE DATE | TIME (Hrs):	4/21/97	1437
PROJECT:	Sample 4 - 5th Quarter	
DATE OF BTEX EXT. | ANAL.:	4/23/97	4/23/97
TYPE | DESCRIPTION:	Monitor Well	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	2410	PPB	50	D		
TOLUENE	5170	PPB	50	D		
ETHYL BENZENE	219	PPB	50	D		
TOTAL XYLENES	2530	PPB	50	D		
TOTAL BTEX	10300	PPB				

The Surrogate Recovery was at 88.3 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 Sanders Date: 4/25/97

EL PASO FIELD SERVICES

5-15-97

Field Services Laboratory
Analytical Report

SAMPLE IDENTIFICATION

EPFS LAB ID:	970328
DATE SAMPLED:	04/21/97
TIME SAMPLED (Hrs):	1457
SAMPLED BY:	D. Bird
MATRIX:	Water
METER CODE:	89961
SAMPLE SITE NAME:	Aztec Pipeline
SAMPLE POINT:	Fields A #7A MW-4

FIELD REMARKS:

GENERAL CHEMISTRY WATER ANALYSIS RESULTS

PARAMETER	RESULT	UNITS	DATE ANALYZED
Laboratory pH	7.8	Units	04/22/97
Alkalinity as $C0_3$	0	PPM	04/22/97
Alkalinity as $HC0_3$	1354	PPM	04/22/97
Calcium as Ca	382	PPM	04/22/97
Magnesium as Mg	48	PPM	04/22/97
Total Hardness as $CaC0_3$	1,152	PPM	04/22/97
Chloride as Cl	206	PPM	04/22/97
Sulfate as $S0_4$	2,750	PPM	04/22/97
Fluoride as F	1.4	PPM	04/23/97
Nitrate as $N0_3$-N	<1.1	PPM	04/22/97
Nitrite as $N0_2$-N	<1.1	PPM	04/22/97
Ammonium as NH_4^+	<0.6	PPM	04/22/97
Phosphate as PO_4	<1.1	PPM	04/22/97
Potassium as K	3.0	PPM	04/22/97
Sodium as Na	1470	PPM	04/22/97
Total Dissolved Solids	5,470	PPM	04/23/97
Calculated TDS	5,527	PPM	04/25/97
Conductivity	6,980	umhos/cm	04/22/97
Anion/Cation %	1.0%	%, <5.0 Accepted	04/25/97

Remarks:

Reported By: mh Approved By: Date: 5/16/97

EPFS
EL PASO FIELD SERVICES

Well Development and Purging Data

☐ Development
☒ Purging

Well Number MW-1

Meter Code 89961

Site Name FIELDS A #7A

Development Criteria

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

Methods of Development

Pump
☐ Centrifugal
☐ Submersible
☐ Peristaltic

Bailer
☒ Bottom Valve
☐ Double Check Valve
☐ Stainless-steel Kemmerer

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 39.1
Initial Depth to Water (feet) 26.47
Height of Water Column in Well (feet) 12.63
Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing		8.3	25.0
Gravel Pack			
Drilling Fluids			
Total			

Instruments

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

Water Disposal

FIELDS A #7A SEPARATOR TANK

Water Removal Data

Date	Time	Development Method		Removal Rate	Intake Depth	Ending Water Depth	Water Volume Removed (gal)		Product Volume Removed (gallons)		Temperature °C	pH	Conductivity µmho/cm	Dissolved Oxygen mg/L	Comments
		Pump	Bailer	(gal/min)	(feet)	(feet)	Increment	Cumulativ	Increment	Cumulative					
4-21-97	1012										16.2	6.91	7540		
4-21-97	1019						5.0	5.0			15.9	7.46	7340		
4-21-97	1025						5.0	10.0			15.9	7.40	7310		
4-21-97	1034						5.0	15.0			16.1	7.34	7600		
4-21-97	1041						5.0	20.0			16.1	7.38	8160		
4-21-97	1049						5.0	25.0			16.2	7.39	7600		
4-21-97	1056						5.0	30.0			16.6	7.34	7790	1.0	

Comments 0.03' of FREE FLOATING HYDROCARBON. STRONG HYDROCARBON SMELL. REMOVED ORC 3 DAYS BEFORE SAMPLING

Developer's Signature Dennis Bird Date 4-21-97 Reviewer [signature] Date 4/25/97

EPFS
EL PASO FIELD SERVICES

Well Development and Purging Data

☐ Development
☒ Purging

Well Number MW-2

Site Name FIELDS A #7A

Meter Code 89961

Development Criteria

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

Water Volume Calculation

Initial Depth of Well (feet) 31.50
Initial Depth to Water (feet) 27.77
Height of Water Column in Well (feet) 3.73

Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well Cubic Feet	Water Volume in Well Gallons	Gallons to be Removed
Well Casing		2.5	7.4
Gravel Pack			
Drilling Fluids			
Total			

Instruments

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

Methods of Development

Pump
☐ Centrifugal
☐ Submersible
☐ Peristaltic

Bailer
☒ Bottom Valve
☐ Double Check Valve
☐ Stainless-steel Kemmerer

☐ Other

Water Disposal

FIELDS A #7A SEPARATOR TANK

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gal): Increment	Water Volume Removed (gal): Cumulativ	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature °C	pH	Conductivity µmho/cm	Dissolved Oxygen mg/L	Comments
4-21-97	1150										17.0	6.98	7260		
4-21-97	1155						2.0	2.0			16.2	6.92	6970	1.5	
4-21-97															

Comments BAILED DRY @ 2.5 GALLONS.

Developer's Signature Dennis Bird Date 4-21-97 Reviewer John Fuller Date 4/25/97

EPFS
EL PASO FIELD SERVICES

Well Development and Purging Data

☐ Development
☒ Purging

Well Number MW-3

Site Name FIELDS A #7A

Meter Code 89961

Development Criteria

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

Methods of Development

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

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 31.9
Initial Depth to Water (feet) 28.0
Height of Water Column in Well (feet) 3.90
Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing		2.6	7.8
Gravel Pack			
Drilling Fluids			
Total			

Instruments

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

Water Disposal

FIELDS A #7A SEPARATOR TANK

Water Removal Data

Date	Time	Development Method		Removal Rate	Intake Depth	Ending Water Depth	Water Volume Removed (gal)		Product Volume Removed (gallons)		Temperature °C	pH	Conductivity µmho/cm	Dissolved Oxygen mg/L	Comments
		Pump	Bailer	(gal/min)	(feet)	(feet)	Increment	Cumulativ	Increment	Cumulative					
4-21-97	1237										17.3	7.00	5200		
4-21-97	1244						2.0	2.0			16.4	7.05	5390	1.0	

Comments BAILED DRY @ 2.5 GALLONS. LIGHT HYDROCARBON SMELL.

Developer's Signature Dennis Bird Date 4-21-97 Reviewer John Boyle Date 4/25/97

EPFS
EL PASO FIELD SERVICES

Well Development and Purging Data

☐ Development
☒ Purging

Well Number MW-4

Site Name FIELDS A #7A

Meter Code 89961

Development Criteria

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

Methods of Development

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

☐ Other_____

Water Volume Calculation

Initial Depth of Well (feet) 31.62
Initial Depth to Water (feet) 28.68
Height of Water Column in Well (feet) 2.94
Diameter (inches): Well 4 Gravel Pack_____

Item	Water Volume in Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing		1.9	5.8
Gravel Pack			
Drilling Fluids			
Total			

Instruments

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

Water Disposal

FIELDS A #7A SEPARATOR TANK

Water Removal Data

Date	Time	Development Method		Removal Rate	Intake Depth	Ending Water Depth	Water Volume Removed (gal)		Product Volume Removed (gallons)		Temperature °C	pH	Conductivity µmho/cm	Dissolved Oxygen mg/L	Comments
		Pump	Bailer	(gal/min)	(feet)	(feet)	Increment	Cumulativ	Increment	Cumulative					
4-21-97	1305										16.8	6.84	5790		
4-21-97	1311						2.0	2.0			17.1	6.73	5010		
4-21-97	1323						3.0	5.0			17.4	6.78	5390		
4-21-97	1338						2.0	7.0			18.0	6.87	6570	0.5	

Comments 0.10' OF FREE FLOATING HYDROCARBON. STRONG HYDROCARBON SMELL.

Developer's Signature Dennis Bird Date 4-21-97 Reviewer [signature] Date 4/25/97

American Environmental Network, Inc.

AEN I.D. 704373

May 9, 1997

El Paso Field Service
P.O. Box 4990
Farmington, NM 87499

Project Name/Number: FIELDS A #7A MW-4 (NONE)

Attention: John Lambdin

On **04/23/97**, American Environmental Network (NM), Inc., (ADHS License No. AZ0015) received a request to analyze **aqueous** sample(s). The sample(s) were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

All analyses were performed by American Environmental Network (FL) Inc., 11 East Olive Road, Pensacola, FL.

If you have any questions or comments, please do not hesitate to contact us at (505) 344-3777.

Kimberly D. McNeill
Project Manager

H. Mitchell Rubenstein, Ph.D.
General Manager

MR:ft

Enclosure

Reviewed & Approved
JP. 5/13/97

2709-D Pan American Freeway, NE • Albuquerque, NM 87107 • (505) 344-3777 • Fax (602) 344-4413

American Environmental Network Inc

CLIENT	: EL PASO FIELD SERVICE CO.	DATE RECEIVED	: 04/23/97
PROJECT #	: (NONE)		
PROJECT NAME	: FIELDS A #7A MW-4	REPORT DATE	: 05/09/97

AEN ID: 704373

	AEN ID #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	704373-01	970328	AQUEOUS	04/21/97

---TOTALS---

MATRIX	#SAMPLE(S)
AQUEOUS	1

AEN STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in thirty (30) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

American Environmental Network Inc

"FINAL REPORT FORMAT - SINGLE"

Accession:	704374
Client:	AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number:	704373
Project Name:	EL PASO FIELD SERVICE
Project Location:	FIELDS A #7A
Test:	POLYNUCLEAR AROMATICS BY 8310
Analysis Method:	8310/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
Extraction Method:	3510/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
Matrix:	WATER
QC Level:	I

Lab Id:	001	Sample Date/Time:	21-APR-97 1437
Client Sample Id:	704373-01	Received Date:	24-APR-97
Batch: PAW084		Extraction Date:	25-APR-97
Blank: A	Dry Weight %: N/A	Analysis Date:	04-MAY-97

Parameter:	Units:	Results:	Rpt Lmts:	Q:
ACENAPHTHENE	UG/L	ND	1	
ACENAPHTHYLENE	UG/L	ND	1	
ANTHRACENE	UG/L	ND	1	
BENZO(a)ANTHRACENE	UG/L	ND	1	
BENZO(a)PYRENE	UG/L	ND	0.3	
BENZO(b)FLUORANTHENE	UG/L	ND	1	
BENZO(g,h,i)PERYLENE	UG/L	ND	1	
BENZO(k)FLUORANTHENE	UG/L	ND	1	
CHRYSENE	UG/L	12	1	
DIBENZO(a,h)ANTHRACENE	UG/L	ND	1	
FLUORANTHENE	UG/L	2.6	1	
FLUORENE	UG/L	1.4	1	
INDENO(1,2,3-cd)PYRENE	UG/L	ND	1	
NAPHTHALENE	UG/L	110	1	
PHENANTHRENE	UG/L	2.3	1	
PYRENE	UG/L	4.0	1	
1-METHYLNAPHTHALENE	UG/L	45	1	
2-METHYLNAPHTHALENE	UG/L	62	1	
2-CHLOROANTHRACENE	%REC/SURR	124	28-138	
ANALYST	INITIALS	JBT		

Comments:

American Environmental Network Inc

"Method Report Summary"

Accession Number: 704374
Client: AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number: 704373
Project Name: EL PASO FIELD SERVICE
Project Location: FIELDS A #7A
Test: POLYNUCLEAR AROMATICS BY 8310

Client Sample Id:	Parameter:	Unit:	Result:
704373-01	CHRYSENE	UG/L	12
	FLUORANTHENE	UG/L	2.6
	FLUORENE	UG/L	1.4
	NAPHTHALENE	UG/L	110
	PHENANTHRENE	UG/L	2.3
	PYRENE	UG/L	4.0
	1-METHYLNAPHTHALENE	UG/L	45
	2-METHYLNAPHTHALENE	UG/L	62

<0.3 PPB Benzo(a) Pyrene WQCC Limit = 0.7 PPB - PASS

217 PPB Naphthalenes WQCC Limit = 30 PPB - FAIL

American Environmental Network Inc

"QC Report"

Title: Water Blank
Batch: PAW084
Analysis Method: 8310/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
Extraction Method: 3510/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.

Blank Id: A Date Analyzed: 03-MAY-97 Date Extracted: 25-APR-97

Parameters:	Units:	Results:	Reporting Limits:
ACENAPHTHENE	UG/L	ND	1
ACENAPHTHYLENE	UG/L	ND	1
ANTHRACENE	UG/L	ND	1
BENZO(a)ANTHRACENE	UG/L	ND	1
BENZO(a)PYRENE	UG/L	ND	1
BENZO(b)FLUORANTHENE	UG/L	ND	1
BENZO(g,h,i)PERYLENE	UG/L	ND	1
BENZO(k)FLUORANTHENE	UG/L	ND	1
CHRYSENE	UG/L	ND	1
DIBENZO(a,h)ANTHRACENE	UG/L	ND	1
FLUORANTHENE	UG/L	ND	1
FLUORENE	UG/L	ND	1
INDENO(1,2,3-cd)PYRENE	UG/L	ND	1
NAPHTHALENE	UG/L	ND	1
PHENANTHRENE	UG/L	ND	1
PYRENE	UG/L	ND	1
1-METHYLNAPHTHALENE	UG/L	ND	1
2-METHYLNAPHTHALENE	UG/L	ND	1
2-CHLOROANTHRACENE	%REC/SURR	108	28-138
ANALYST	INITIALS	JBT	

Comments:

American Environmental Network Inc

"QC Report"

Title: Water Reagent
Batch: PAW084
Analysis Method: 8310/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
Extraction Method: 3510/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.

RS Date Analyzed: 03-MAY-97 RS Date Extracted: 25-APR-97
RSD Date Analyzed: 03-MAY-97 RSD Date Extracted: 25-APR-97

Parameters:	Spike Added	Sample Conc	RS Conc	RS %Rec	RSD Conc	RSD %Rec	RPD	RPD Lmts	Rec Lmts
ACENAPHTHYLENE	10.0	<1	11.3	113	9.5	95	17	35	45-127
BENZO(k)FLUORANTHENE	10.0	<1	10.9	109	10.1	101	8	23	68-131
CHRYSENE	10.0	<1	9.5	95	8.7	87	9	24	69-131
PHENANTHRENE	10.0	<1	10.2	102	9.5	95	7	26	63-124
PYRENE	10.0	<1	9.4	94	8.1	81	15	25	61-126
Surrogates:									
2-CHLOROANTHRACENE				109		102			28-138

Comments:
NOT ENOUGH SAMPLE SUBMITTED TO EXTRACT
MATRIX SPIKE/MATRIX SPIKE DUPLICATE.

Notes:
N/S = NOT SUBMITTED N/A = NOT APPLICABLE D = DILUTED OUT
UG/L = PARTS PER BILLION. < = LESS THAN REPORTING LIMIT.
* = VALUES OUTSIDE OF QUALITY CONTROL LIMITS.
SOURCES FOR CONTROL LIMITS ARE INTERNAL LABORATORY QUALITY ASSURANCE PROGRAM AND REFERENCED METHOD.

American Environmental Network Inc

Common notation for Organic reporting

N/S = NOT SUBMITTED
N/A = NOT APPLICABLE
D = DILUTED OUT
UG = MICROGRAMS
UG/L = PARTS PER BILLION.
UG/KG = PARTS PER BILLION.
MG/M3 = MILLIGRAM PER CUBIC METER.
PPMV = PART PER MILLION BY VOLUME.
MG/KG = PARTS PER MILLION.
MG/L = PARTS PER MILLION.
< = LESS THAN DETECTION LIMIT.
* = VALUES OUTSIDE OF QUALITY CONTROL LIMITS
Y = IMPROPER PRESERVATION, NO PRESERVATIVE PRESENT IN SAMPLE UPON RECEIPT.

SOURCES FOR CONTROL LIMITS ARE INTERNAL LABORATORY QUALITY ASSURANCE PROGRAM AND REFERENCED METHOD.

ORGANIC SOILS ARE REPORTED ON A DRYWEIGHT BASIS.

ND = NOT DETECTED ABOVE REPORTING LIMIT.

RPT LIMIT = REPORTING LIMITS BASED ON METHOD DETECTION LIMIT STUDIES.

RPD = RELATIVE PERCENT DIFFERENCE (OR DEVIATION)

AEN/GC/FID
AEN GAS CHROMATOGRAPHIC METHOD EMPLOYING DIRECT INJECTION ON COLUMN WITH FLAME IONIZATION DETECTOR (FID).

AEN/GC/FIX
AEN GAS CHROMATOGRAPHIC METHOD FOR ANALYSIS OF FIXED GASES EMPLOYING DIRECT INJECTION ON COLUMN WITH THERMAL CONDUCTIVITY DETECTOR (TCD) AND FLAME IONIZATION DETECTOR (FID).

AEN/GC/FPD
AEN GAS CHROMATOGRAPHIC METHOD EMPLOYING DIRECT INJECTION ON COLUMN WITH FLAME PHOTOMETRIC DETECTOR (FPD) IN SULFUR-SPECIFIC MODE.

AEN/GC/PID
AEN GAS CHROMATOGRAPHIC METHOD EMPLOYING DIRECT INJECTION ON COLUMN WITH PHOTOIONIZATION DETECTOR (PID).

AEN/GC/TCD
AEN GAS CHROMATOGRAPHIC METHOD EMPLOYING DIRECT INJECTION ON COLUMN WITH THERMAL CONDUCTIVITY DETECTOR (TCD).

SW-846 METHOD 9020
PARTICULATE MATTER IS REMOVED BY ALLOWING PARTICULATES TO SETTLE IN THE SAMPLE CONTAINER AND DECANTING THE SUPERNATANT LIQUID. EXCESSIVE PARTICULATES ARE REMOVED BY FILTRATION OF THE SUPERNATANT LIQUID.

AEN-PN USES THE MOST CURRENT PROMULGATED METHODS CONTAINED IN THE REFERENCE MANUALS.

SW = STEVE WILHITE
PL = PAUL LESCHENSKY
RW = ROBERT WOLFE
KS = KENDALL SMITH
KL = KERRY LEMONT
RP = ROB PEREZ
JBT = JENNIFER TORRANCE
LP = LAVERNE PETERSON
PLD = PAULA DOUGHTY

American Environmental Network
Albuquerque, New Mexico

Interlab Chain of Custody

DATE: 4/25 PAGE: 1 OF 1

NETWORK PROJECT MANAGER: KIMBERLY D. McNEILL

COMPANY: American Environmental Network
ADDRESS: 2709-D Pan American Freeway, NE
Albuquerque, NM 87107

CLIENT PROJECT MANAGER:

Kim McNeill

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	LAB ID
704373-01	4/21/97	1437	AQ	1

Metals - TAL; Metals - PP List; Metals - RCRA; RCRA Metals by TCLP (1311); TOX; TOC; Gen Chemistry; Oil and Grease; BOD; COD; Pesticides/PCB (608/8080); Herbicides (615/8150); Base/Neutral Acid Compounds GC/MS (625/8270); Volatile Organics GC/MS (624/8240); Polynuclear Aromatics (610/8310) X; 8240 (TCLP 1311) ZHE; 8270 (TCLP 1311); TO-14; Gross Alpha/Beta; NUMBER OF CONTAINERS

PROJECT INFORMATION

PROJECT NUMBER: 704373
PROJECT NAME: El Paso Field Service
QC LEVEL: (STD) IV
QC REQUIRED: MS MSD BLANK
TAT: (STANDARD) RUSH!

SAMPLE RECEIPT

TOTAL NUMBER OF CONTAINERS
CHAIN OF CUSTODY SEALS
INTACT?
RECEIVED GOOD COND./COLD
LAB NUMBER 704374

DUE DATE: 5/5 Low Level Benzo(A) Pyrene < 0.3 ppb
RUSH SURCHARGE:
CLIENT DISCOUNT:
SPECIAL CERTIFICATION REQUIRED: ☐YES ☐NO

SAMPLES SENT TO:

SAN DIEGO	
Paragon	
RENTON	
PENSACOLA	X
PORTLAND	
PHOENIX	

RELINQUISHED BY: 1.
Signature: John Caldwell Time: 1700
Printed Name: John Caldwell Date: 4/23/97
Albuquerque

RECEIVED BY: 1.
Signature: Time:
Printed Name: Date:
Company:

RELINQUISHED BY: 2.
Signature: Time:
Printed Name: Date: 4/24/97
Company: PLC

RECEIVED BY: (LAB) 2.
Signature: Rob Espen Time: 0810
Printed Name: R. ELSPERMAN Date: 4/24/97
Company: A[illegible]M

American Environmental Network (NM), Inc.
Albuquerque • Phoenix • Pensacola • Portland • Pleasant Hills • Columbia

CHAIN OF CUSTODY

DATE: 4-21-97 PAGE: 1 OF 1

AEN LAB I.D. [illegible]

SHADED AREAS ARE FOR LAB USE ONLY.

PROJECT MANAGER: JOHN LAMBDIN

COMPANY: EL PASO FIELD SERVICE CO.
ADDRESS: P.O. BOX 4990
FARMINGTON, NM 87499
PHONE: (505) 599-2144
FAX: (505) 599-2261
BILL TO: SAME AS ABOVE
COMPANY:
ADDRESS:

ANALYSIS REQUEST

SAMPLE I.D.	DATE	TIME	MATRIX	LAB I.D.	Petroleum Hydrocarbons (418.1) TRPH	(MOD.8015) Diesel/Direct/Inject	(M8015) Gas/Purge & Trap	Gasoline/BTEX & MTBE (M8015/8020)	BTXE/MTBE (8020)	BTEX & Chlorinated Aromatics (602/8020)	BTEX/MTBE/EDC & EDB (8020/8010/Short)	Chlorinated Hydrocarbons (601/8010)	504 EDB ☐ / DBCP ☐	Polynuclear Aromatics (610/8310)	Volatile Organics (624/8240) GC/MS	Volatile Organics (8260) GC/MS	Pesticides/PCB (608/8080)	Herbicides (615/8150)	Base/Neutral/Acid Compounds GC/MS (625/8270)	General Chemistry:	Priority Pollutant Metals (13)	Target Analyte List Metals (23)	RCRA Metals (8)	RCRA Metals by TCLP (Method 1311)	Metals	NUMBER OF CONTAINERS
970325	4-21-97	1431	WATER											X												2

PROJECT INFORMATION	PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS	RELINQUISHED BY: 1.	RELINQUISHED BY: 2.
PROJ. NO.:	(RUSH) ☐ 24hr ☐ 48hr ☐ 72hr ☐ 1 WEEK (NORMAL) ☒	Signature: [signature] Time: 1615	Signature: Time:
PROJ. NAME: PITS ANNUAL	CERTIFICATION REQUIRED: ☐ NM ☐ SDWA ☐ OTHER	Printed Name: DENNIS BIRD Date: 4-21-97	Printed Name: Date:
P.O. NO.:	METHANOL PRESERVATION ☐	Company: EL PASO FIELD SERVICE	Company:
SHIPPED VIA: FED-X	COMMENTS: FIXED FEE ☐ LOW LEVEL BENZO(A)PYRENE <0.7 PPB	RECEIVED BY: Signature: Time:	
		Printed Name: Date:	
		Company:	

PLEASE FILL THIS FORM IN COMPLETELY.

American Environmental Network of Florida
PROJECT SAMPLE INSPECTION FORM

Lab Accession #: 704374 | Date Received: 24 - apr - 97

1. Was there a Chain of Custody? (Yes) No*
2. Was Chain of Custody properly filled out and relinquished? (Yes) No*
3. Were samples received cold? (Yes) No* N/A
   (Criteria: 1° - 4°C: AEN-SOP 1055)
4. Were all samples properly labeled and identified? ~~Yes~~ (No*) AE 4/24/97
5. Did samples require splitting? Yes* (No)
   Req By: PM Client Other*
6. Were samples received in proper containers for analysis requested? (Yes) No*
7. Were all sample containers received intact? Yes (No*)
8. Were samples checked for preservative? (Check pH of all H_2O requiring preservative except VOA vials that require zero headspace)* (Yes) No* N/A
9. Is there sufficient volume for analysis requested? (Yes) No*
10. Were samples received within Holding Time? (REFER TO AEN-SOP 1040) (Yes) No*
11. Is Headspace visible > ¼" in diameter in VOA vials?** If any headspace is evident, comment in out-of-control section. Yes* No (N/A)
12. If sent, were matrix spike bottles returned? Yes No* (N/A)
13. Was Project Manager notified of problems? (initials:_______) Yes No* (N/A)

Airbill Number(s): 172 3598 572

Shipped By: FEDEX

Cooler Number(s): N/S

Shipping Charges: N/A

Cooler Weight(s): N/A

Cooler Temp(s) (°C): 1°C - CC#3
(LIST THERMOMETER NUMBER(S) FOR VERIFICATION)

Out of Control Events and Inspection Comments:

Client Cooler
7. For sample 704373-01 1 1L amber bottle was received broken (4.) This sample is labeled 704348-01, however, it is listed on the COC as 704373-01. Sample label was compared to original Clients COC and it matched the information listed on this COC.

(USE BACK OF PSIF FOR ADDITIONAL NOTES AND COMMENTS)

Inspected By: AE Date: 4/24/97 Logged By: AE Date: 4/24/97

* *Note all Out-of-Control and/or questionable events on Comment Section of this form.*
Note who requested the splitting of samples on the Comment Section of this form.
All preservatives for the State of North Carolina, the State of New York, and other requested samples are to be recorded on the sheet provided to record pH results (AEN-SOP 938, section 2.2.9).
** *According to EPA, ¼" of headspace is allowed in 40 ml vials requiring volatile analysis, however, AEN makes it policy to record any headspace as out-of-control (AEN-SOP 938, section 2.2.12).*

American Environmental Network (NM), Inc.

Albuquerque • Phoenix • Pensacola • Portland • Pleasant Hills • Columbia

CHAIN OF CUSTODY

DATE: 4-21-97 PAGE: 1 OF 1

AEN LAB I.D.: 7804 B F3

SHADED AREAS ARE FOR LAB USE ONLY

PLEASE FILL THIS FORM IN COMPLETELY.

PROJECT MANAGER: JOHN CAMBLIN

COMPANY: EL PASO FIELD SERVICE CO.

ADDRESS: P.O. BOX 4990
FARMINGTON, NM 87499

PHONE: (505) 599-2144

FAX: (505) 599-2261

BILL TO: SAME AS ABOVE

COMPANY:

ADDRESS:

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	LAB I.D.	Petroleum Hydrocarbons (418.1) TRPH	(MOD.8015) Diesel/Direct/Inject	(M8015) Gas/Purge & Trap	Gasoline/BTEX & MTBE (M8015/8020)	BTXE/MTBE (8020)	BTEX & Chlorinated Aromatics (602/8020)	BTEX/MTBE/EDC & EDB (8020/8010/Short)	Chlorinated Hydrocarbons (601/8010)	504 EDB ☐ / DBCP ☐	Polynuclear Aromatics (610/8310)	Volatile Organics (624/8240) GC/MS	Volatile Organics (8260) GC/MS	Pesticides/PCB (608/8080)	Herbicides (615/8150)	Base/Neutral/Acid Compounds GC/MS (625/8270)	General Chemistry:	Priority Pollutant Metals (13)	Target Analyte List Metals (23)	RCRA Metals (8)	RCRA Metals by TCLP (Method 1311)	Metals:	NUMBER OF CONTAINERS
970325	4-21-97	1430	WATER	-6										X												1

PROJECT INFORMATION

PROJ. NO.:

PROJ. NAME: FIELDS A #1A MV4

P.O. NO.:

SHIPPED VIA: FED-X

PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS

(RUSH) ☐ 24hr ☐ 48hr ☐ 72hr ☐ 1 WEEK (NORMAL) X

CERTIFICATION REQUIRED: ☐ NM ☐ SDWA ☐ OTHER

METHANOL PRESERVATION ☐

COMMENTS: FIXED FEE ☐

LOW LEVEL BENZO(A)PYRENE <0.7 PPB

RELINQUISHED BY: 1

Signature: Dennis Bird Time: 1615

Printed Name: DENNIS BIRD Date: 4-21-97

Company: EL PASO FIELD SERVICE

RECEIVED BY:

Signature: Time:

Printed Name: Date:

Company:

RELINQUISHED BY: 2

Signature: Time

Printed Name: Date:

Company:

RECEIVED BY: (LAB)

American Environmental Network (NM), Inc.