3R - 164

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

COLDIRON COM A #1
Meter/Line ID - 73551

SITE DETAILS

Legals - Twn: 30N **Rng:** 11W **Sec:** 2 **Unit:** K
NMOCD Hazard Ranking: 40 **Land Type:** FEE
Operator: AMOCO PRODUCTION COMPANY

PREVIOUS ACTIVITIES

Site Assessment: Mar-94 **Excavation:** Apr-94 (50 cy) **Soil Boring:** Oct-95
Monitor Well: Oct-95

1997 ACTIVITIES

Quarterly Groundwater Monitoring - Quarterly groundwater monitoring was initiated on 4/17/96 and has continued into 1997. Groundwater analytical data are presented in Table 1.
Well Point Installation - Groundwater samples were collected from temporary monitoring wells. In addition, groundwater gradient was determined using the monitoring wells.

CONCLUSIONS

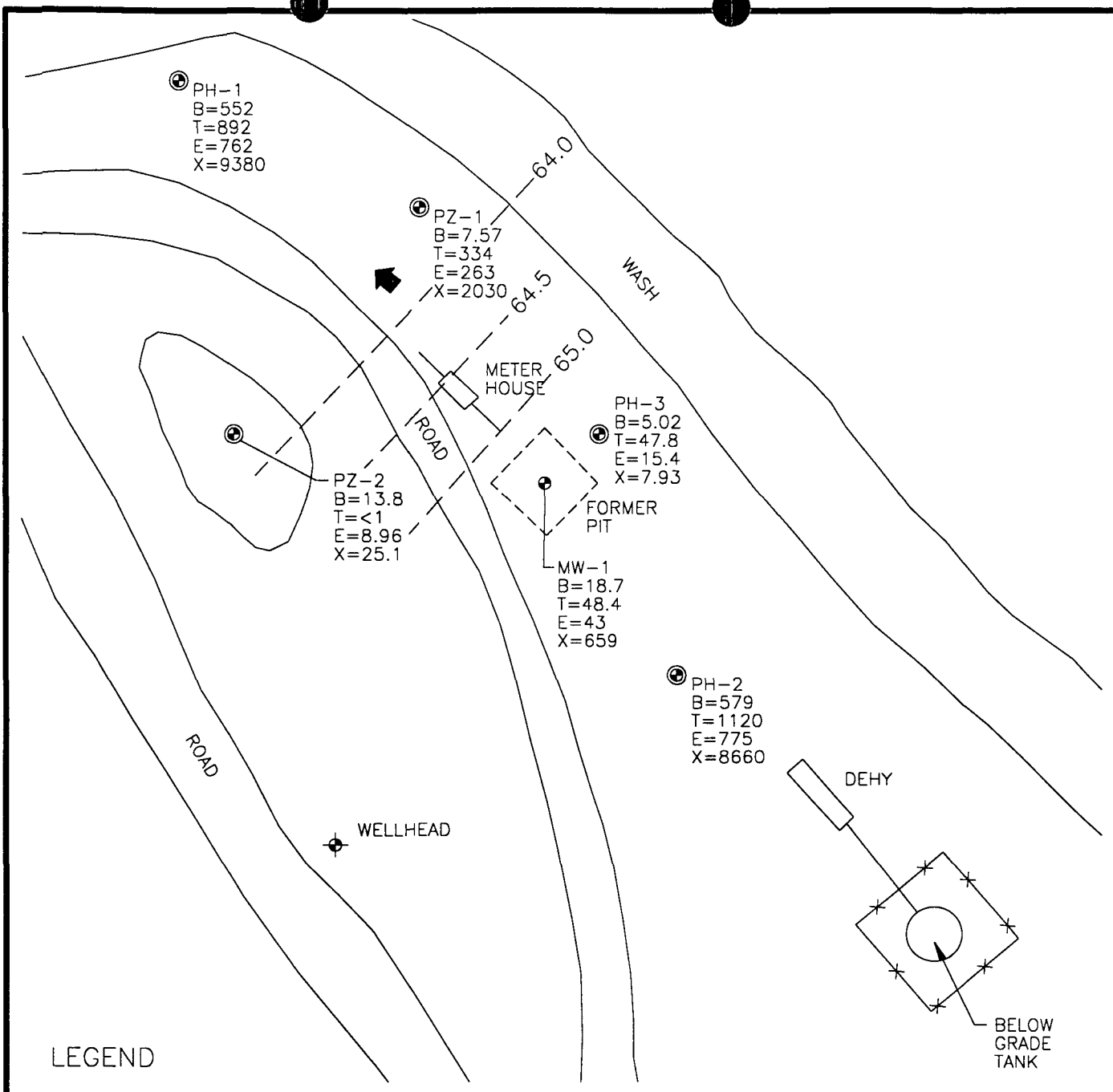
Based on groundwater levels collected from Wellpoint data, the groundwater flow trends to the northwest on this site, as presented in Figure 1. The pit is adjacent to a wash on the north side of the site. Product has been measured in MW-1 averaging 0.09 feet to 0.24 feet.

Groundwater samples were collected from five temporary monitoring wells, up and down gradient of MW-1. One cross-gradient groundwater sample collected from PH-3 was below standards for BTEX. A second cross-gradient groundwater sample collected from PZ-2 was slightly above standards for benzene at 13.8 ppb. Two downgradient groundwater samples were collected from PZ-1 and PH-1. Groundwater from PZ-1 was above standards for total xylenes only at 2,030 ppb. Farther downgradient, groundwater collected from PH-1 was above standards for BTEX.

One groundwater sample collected upgradient from MW-1 at PH-2 was in excess of standards for BTEX, and indicates the production pit upgradient may be an additional source.

RECOMMENDATIONS

- EPFS proposes no further activities at this site, until the operator commences with remediation of their production pit.
- Initiate product removal at MW-1.



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
84.0	GROUNDWATER POTENTIOMETRIC SURFACE
	APPROXIMATE GROUNDWATER GRADIENT

NOT TO SCALE

PHILIP SERVICES CORP.

TITLE:

COLDIRON COM A#1

73551

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

COL_17520AY-001

TABLE 1

Sample #	Meter/ Line #	Site Name	Sample Date	MW #	Project	Benzene (PPB)	Toluene (PPB)	Ethyl Benzene (PPB)	Total Xylenes (PPB)	Total BTEX
960355	73551	Coldiron A #1	04/17/96	1	Sample 4 - 1st Qtr	= 79.5	= 464	= 281	= 3050	3875
960653	73551	Coldiron A #1	07/25/96	1	Sample 4 - 2nd Qtr	= 14.6	= 139	= 54.1	= 581	789
960880	73551	Coldiron A #1	10/22/96	1	Sample 4 - 3rd Quarter	= 22.6	= 34.8	= 75.7	= 608	= 741
970011	73551	Coldiron A #1	1/21/97	1	Sample 4 - 4th Qtr	= 33.9	= 143	= 90.4	= 882	= 1149
970317	73551	Coldiron A #1	4/17/97	1	Sample 4 - 5th Quarter	18.7	48.4	43	659	769

02-72 KUTZ

RECORD OF SUBSURFACE EXPLORATION

Borehole # BH-1
Well #
Page 1 of 2

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

Project Name EPNG PITS
Project Number 14509 Phase 6000 77
Project Location Coldiron Com A#1 73551

Elevation
Borehole Location QK - S2 - T30 - R11
GWL Depth GW 35.4'
Logged By CM CHANCE
Drilled By ~~K Padilla~~ F. Rivera
Date/Time Started 10/20/95 - 0935
Date/Time Completed 10/20/95 - 1204

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

Drilling Method 4 1/4" ID HSA / 6 1/4 I.D. 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				Backfill to 12'						
5										
10										
15	1	15-17	10	Br SAND, F-med sand, tr gravel, v. loose, moist, odor	SW		0	8	66/61	0946hrs
20	2	20-22	10	AA			0	0	68/167	0953
25	3	25-27	9	Lt Br SAND, F-med sand, v. loose, moist, odor			0	0	605/819	1000
30	4	30-32	4	Blk SAND, F-med sand, v. loose, moist, tr gravel, odor			0	2	701/926	1009
35	5	35-37	3	DK gry clayey SAND, vf-F sand, loose, moist, odor			4	50	721/451	1021
40	6	40-42	8	lt ~~DK~~ gry SAND, vf-F sand, tr clay, loose, wet lt gry sandy CLAY, tr f sand, med stiff, low plasticity, moist	CL	41	0	38	2/NA	1030

Comments: Water @ 35.4' After setting 15 min. ~~Clay below sand had headspace~~ CMC159 (35-37') sent to lab (BTEX, TPH). Pull 4¼ augers & go back down w/ 6¼ I.D. augers

Geologist Signature Cory Chance

RECORD OF SUBSURFACE EXPLORATION

Borehole # BH-1
Well #
Page 2 of 2

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

Project Name EPNG PITS
Project Number 14509 Phase 6000 77
Project Location Coldiron Com A #1 73551

Elevation
Borehole Location QK - S2 - T30 - R11
GWL Depth
Logged By CM CHANCE
Drilled By ~~K Padilla~~ F. Rivera
Date/Time Started 10/20/95 - 0935
Date/Time Completed 10/20/95 - 1209

Well Logged By CM Chance
Personnel On-Site K Padilla, D. Charlie
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
40	6	40-42		CTNGS - DK Gry Sand, wet						
45	7			TOB 45'						
50										
55										
60										
65										
70										
75										
80										

Comments:

Geologist Signature

MONITORING WELL INSTALLATION RECORD

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

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

Project Name EPNG PITS

Project Number 14509 Phase 6001.77
Project Location Coldiron Com A#1 73551

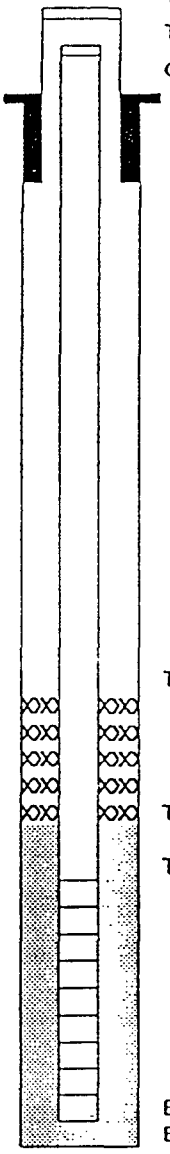
Elevation
Well Location QK-S2-T30-R11
GWL Depth 34.91'
Installed By F. Rivera

Date/Time Started 10/20/95 - 1230
Date/Time Completed 10/20/95 - 1430

On-Site Geologist CM Chance
Personnel On-Site K. Pablo, D. Charlie
Contractors On-Site
Client Personnel On-Site

Depths in Reference to Ground Surface

Item	Material	Depth
Top of Protective Casing		NA
Bottom of Protective Casing		NA
Top of Permanent Borehole Casing		NA
Bottom of Permanent Borehole Casing		NA
Top of Concrete		NA
Bottom of Concrete		NA
Top of Grout	~94# Type I-II Portland	0'
Bottom of Grout	~50# Powdered Bentonite	22.5
Top of Well Riser	4" dia SCH40	+3
Bottom of Well Riser	Flush Thread PVC	27.5
Top of Well Screen	4" dia SCH40	27.5
Bottom of Well Screen	Flush Thread 0.01 slot PVC	42.5
Top of Peltonite Seal	~50# Enviro plug	22.5
Bottom of Peltonite Seal	Bentonite	24.5
Top of Gravel Pack	~50# 10-20	24.5
Bottom of Gravel Pack	Silica Sand	44'
Top of Natural Cave-In		42.5'
Bottom of Natural Cave-In		45'
Top of Groundwater		
Total Depth of Borehole		45'



Top of Protective Casing NA
Top of Riser +3'
Ground Surface 0'
Top of Seal 22.5
Top of Gravel Pack 24.5
Top of Screen 27.5'
Bottom of Screen 42.5'
Bottom of Borehole 45'

Comments: Bentonite hydrated w/ 5 gal potable water. GW @ 34.9' after well installed. GW has no odor or visible contamination.

Geologist Signature CM Chance

WELLPOINTS

TEMPORARY PIEZOMETER INSTALLATION

Borehole # 2
Well # PZ- 1
Page 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 Number 17520 Phase 6006
Site Location COLDIRON COM A #1 - 7355'

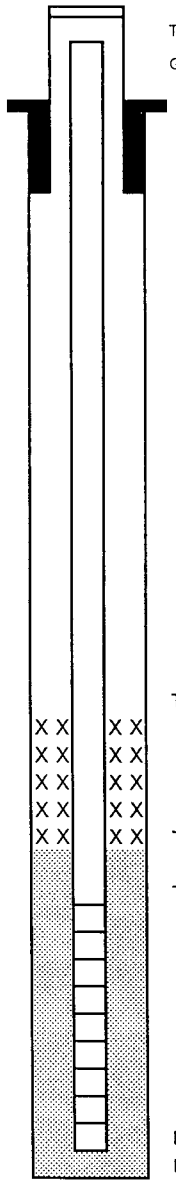
Elevation 104.47'
Well Location Ltr K -S 2 -T30-R 11
GWL Depth ~~40.57'~~ 63.53' ELEV
Installed By M DONOHUE

On-Site Geologist D CESARK
Personnel On-Site M DONOHUE, C GOMEZ
Contractors On-Site
Client Personnel On-Site

Date/Time Started 8/28/97 - 0955
Date/Time Completed " - 1145

Depths in Reference to Ground Surface

Item	Material	Depth (feet)
Top of Protective Casing		
Bottom of Protective Casing		
Top of Permanent Borehole Casing		
Bottom of Permanent Borehole Casing		
Top of Concrete		
Bottom of Concrete		
Top of Grout		
Bottom of Grout		
Top of Well Riser		
Bottom of Well Riser		
Top of Well Screen		
Bottom of Well Screen		
Top of Peltonite Seal		
Bottom of Peltonite Seal		
Top of Gravel Pack		
Bottom of Gravel Pack		
Top of Natural Cave-In		
Bottom of Natural Cave-In		
Top of Groundwater		~37.90
Total Depth of Borehole		~42'



Top of Protective Casing
Top of Riser (survey elev.) ~~63.53'~~ 104.47
Ground Surface
Top of Seal N/A
Top of Gravel Pack N/A
Top of Screen ~32'
Bottom of Screen ~42'
Bottom of Borehole ~42'

Comments MW-1 (TOR) HC = 36.63', WTR = 36.71' (0930)
30'-32' HH = 258 ppm, 35'-37' HH = 5,000 ppm +

Geologist Signature

MWINSTAL.wk1

TEMPORARY PIEZOMETER INSTALLATION

Borehole # 3
Well # PZ-2
Page 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 Number 17520 Phase 6006
Site Location COLDIRON COM A #1 - 73551

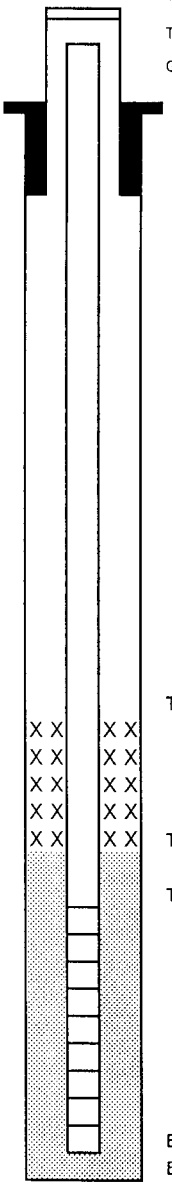
Elevation (100.20')
Well Location Ltr K -S 2-T30-R 11
GWL Depth ~~58.30'~~ 63.80 Elev.
Installed By M DONOHUE

On-Site Geologist D CESARK
Personnel On-Site M DONOHUE, C GOMEZ
Contractors On-Site
Client Personnel On-Site

Date/Time Started 8/28/97 - 1240
Date/Time Completed " - 1420

Depths in Reference to Ground Surface

Item	Material	Depth (feet)
Top of Protective Casing		
Bottom of Protective Casing		
Top of Permanent Borehole Casing		
Bottom of Permanent Borehole Casing		
Top of Concrete		
Bottom of Concrete		
Top of Grout		
Bottom of Grout		
Top of Well Riser		
Bottom of Well Riser		
Top of Well Screen		
Bottom of Well Screen		
Top of Peltonite Seal		
Bottom of Peltonite Seal		
Top of Gravel Pack		
Bottom of Gravel Pack		
Top of Natural Cave-In		
Bottom of Natural Cave-In		
Top of Groundwater	-	41.90
Total Depth of Borehole	-	47'



Top of Protective Casing
Top of Riser (survey elev.) ~~100.20~~ 105.70
Ground Surface
Top of Seal N/A
Top of Gravel Pack N/A
Top of Screen -37' BGS
Bottom of Screen -47' BGS
Bottom of Borehole -47' BGS

Comments MW-1 (TOR) HC = 36.63', WTR = 36.71' (0930)
35'-37' HH = 1.9 ppm, 40'-42' HH = 24.1 ppm

Geologist Signature

MWINSTAL.wk1

TEMPORARY PIEZOMETER INSTALLATION

Borehole # 4
Well # ~~PZ~~ PH-1
Page 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 Number 17520 Phase 6006
Site Location COLDIRON COM A #1 - 73551

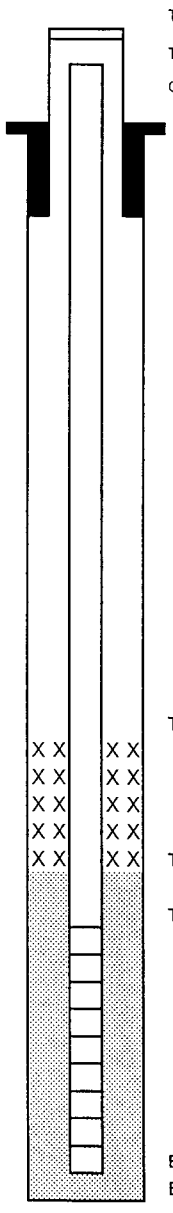
Elevation
Well Location Ltr K -S 2 -T 30 -R 11
GWL Depth ~35' BGS
Installed By M DONOHUE

On-Site Geologist D CESARK
Personnel On-Site M DONOHUE, C GOMEZ
Contractors On-Site
Client Personnel On-Site

Date/Time Started 8-29-97 / 1100
Date/Time Completed " / 1330

Depths in Reference to Ground Surface

Item	Material	Depth (feet)
Top of Protective Casing		
Bottom of Protective Casing		
Top of Permanent Borehole Casing		
Bottom of Permanent Borehole Casing		
Top of Concrete		
Bottom of Concrete		
Top of Grout		
Bottom of Grout		
Top of Well Riser		
Bottom of Well Riser		
Top of Well Screen		
Bottom of Well Screen		
Top of Peltonite Seal		
Bottom of Peltonite Seal		
Top of Gravel Pack		
Bottom of Gravel Pack		
Top of Natural Cave-In		
Bottom of Natural Cave-In		
Top of Groundwater	~35'	
Total Depth of Borehole		37'



Top of Protective Casing
Top of Riser (survey elev.)
Ground Surface
Top of Seal N/A
Top of Gravel Pack N/A
Top of Screen 32'
Bottom of Screen 37'
Bottom of Borehole 37'

Comments PZ-1 = 37.89' - HC, 37.90' WTR
35-37' HH = 1,000+ ppm

Geologist Signature

MWINSTAL.wk1

TEMPORARY PIEZOMETER INSTALLATION

Borehole # 5
Well # ~~PZ~~ PH-2
Page 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 Number 17520 Phase 6006
Site Location COLDIRON COM A #1 - 73551

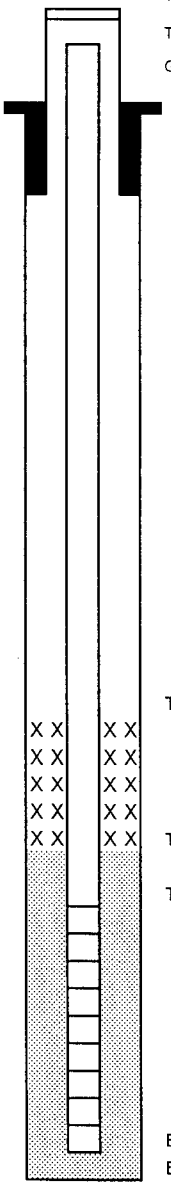
Elevation
Well Location Ltr K -S 2 -T30-R11
GWL Depth ~ 33' BGS
Installed By M DONOHUE

On-Site Geologist D CESARK
Personnel On-Site M DONOHUE, C GOMEZ
Contractors On-Site
Client Personnel On-Site

Date/Time Started 8-29-97 1330
Date/Time Completed 11 / /

Depths in Reference to Ground Surface

Item	Material	Depth (feet)
Top of Protective Casing		
Bottom of Protective Casing		
Top of Permanent Borehole Casing		
Bottom of Permanent Borehole Casing		
Top of Concrete		
Bottom of Concrete		
Top of Grout		
Bottom of Grout		
Top of Well Riser		
Bottom of Well Riser		
Top of Well Screen		
Bottom of Well Screen		
Top of Peltonite Seal		
Bottom of Peltonite Seal		
Top of Gravel Pack		
Bottom of Gravel Pack		
Top of Natural Cave-In		
Bottom of Natural Cave-In		
Top of Groundwater	~	33'
Total Depth of Borehole		35'



Top of Protective Casing
Top of Riser (survey elev.)
Ground Surface
Top of Seal N/A
Top of Gravel Pack N/A
Top of Screen 30'
Bottom of Screen 35'
Bottom of Borehole 35'

Comments MW-1 → HC = 36.62', WTR = 36.70'
35'-35' HH = 1,397 ppm +

Geologist Signature

MWINSTAL.wk1

TEMPORARY PIEZOMETER INSTALLATION

Borehole # _____
Well # PZ PH3
Page 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 Number 17520 Phase 6006
Site Location Coldiron Com A#1 7355'

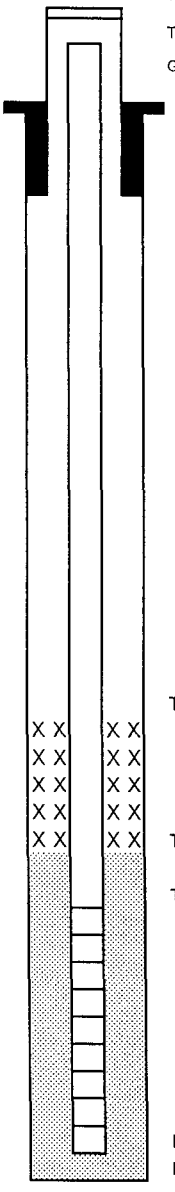
Elevation _____
Well Location Ltr K -S 2 -T30 -R1
GWL Depth _____
Installed By M. Donahue

Date/Time Started 9/2/97
Date/Time Completed 9/2/97

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

Depths in Reference to Ground Surface

Item	Material	Depth (feet)
Top of Protective Casing		
Bottom of Protective Casing		
Top of Permanent Borehole Casing		
Bottom of Permanent Borehole Casing		
Top of Concrete		
Bottom of Concrete		
Top of Grout		
Bottom of Grout		
Top of Well Riser		
Bottom of Well Riser		
Top of Well Screen		
Bottom of Well Screen		
Top of Peltonite Seal		
Bottom of Peltonite Seal		
Top of Gravel Pack		
Bottom of Gravel Pack		
Top of Natural Cave-In		
Bottom of Natural Cave-In		
Top of Groundwater		
Total Depth of Borehole		



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 33
Bottom of Screen 38
Bottom of Borehole 35

Comments PH3 is 45° ± 20' from MW1. Installed stainless steel well pt & sampled (CMC341). Pushed well pt 3' past bottom of boring. Pulled well pt after sampling

Geologist Signature Cory Chance

MWINSTAL.wk1

"WELL POINTS"

El Paso Natural Gas Company

CHAIN OF CUSTODY RECORD

Page 1 of 1

PROJECT NUMBER	PROJECT NAME												CONTRACT LABORATORY P. O. NUMBER
# 24324	Pit Closure Project												
SAMPLERS: (Signature)				DATE: 8-28-97									
LAB ID	DATE	TIME	MATRIX	FIELD ID	TOTAL NUMBER OF CONTAINERS	SAMPLE TYPE	TPH EPA 418.1	BTEX EPA 8020	LAB PID			SEQUENCE #	REMARKS
970938	8/28	1052	B	DRC 41	1	B		X				30	TRIP BLANK
970939	8/28	1105	W	DRC 42	2	VG		X				30	COLDIRON COM A #1-73551 (PZ-1)
970940	8/28	1348	W	DRC 43	2	VG		X				31	" (PZ-2)
													DC 8/28/97

RECEIVED
SEP - 9 1997

42° F

RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)
	8/28/97 1515		Cari Williams	8/29/97 10:15	
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED OF LABORATORY BY: (Signature)
				8/29/97 1015	

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:	DRC41	970938
MTR CODE | SITE NAME:	73551	Coldiron Com. A #1
SAMPLE DATE | TIME (Hrs):	8/28/97	1052
PROJECT:	Well Points	
DATE OF BTEX EXT. | ANAL.:	8/29/97	8/29/97
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 102.6 % for this sample All QA/QC was acceptable.

DF = Dilution Factor Used

Narrative:

Approved By: _____ Date: 9-8-97

970938TripBlankBTEX,9/3/97

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	DRC42	970939
MTR CODE | SITE NAME:	73551	Coldiron Com. A #1
SAMPLE DATE | TIME (Hrs):	8/28/97	1105
PROJECT:	Well Points	
DATE OF BTEX EXT. | ANAL.:	8/29/97	8/29/97
TYPE | DESCRIPTION:	PZ-1	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	7.57	PPB	2	D		
TOLUENE	334	PPB	2	D		
ETHYL BENZENE	263	PPB	2	D		
TOTAL XYLENES	2030	PPB	5	D		
TOTAL BTEX	2634	PPB				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 101.4 % 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: 9-8-97

970939BTEX,9/3/97

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	DRC43	970940
MTR CODE | SITE NAME:	73551	Coldiron Com. A #1
SAMPLE DATE | TIME (Hrs):	8/28/97	1348
PROJECT:	Well Points	
DATE OF BTEX EXT. | ANAL.:	8/29/97	8/29/97
TYPE | DESCRIPTION:	PZ-2	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	13.8	PPB				
TOLUENE	<1	PPB				
ETHYL BENZENE	8.96	PPB				
TOTAL XYLENES	25.1	PPB				
TOTAL BTEX	48	PPB				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 99.4 % for this sample All QA/QC was acceptable.

DF = Dilution Factor Used

Narrative:

Approved By: John Fowler Date: 9-8-97

970940BTEX,9/3/97

EL PASO FIELD SERVICES

QUALITY CONTROL REPORT
EPA METHOD 8020 - BTEX

Samples: 970931 to 970933, 970938 to 970943

QA/QC for 8/29/97 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	49.9	99.9	75 - 125 %	X	
Toluene	Standard	50.0	49.6	99	75 - 125 %	X	
Ethylbenzene	Standard	50.0	49.5	99	75 - 125 %	X	
m & p - Xylene	Standard	100	99.1	99.1	75 - 125 %	X	
o - Xylene	Standard	50.0	49.2	98	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	25.6	102.2	39 - 150	X	
Toluene	Standard	25.0	25.6	102	46 - 148	X	
Ethylbenzene	Standard	25.0	25.3	101	32 - 160	X	
m & p - Xylene	Standard	50.0	50.8	102	Not Given	X	
o - Xylene	Standard	25.0	25.5	102	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	50.5	101.0	75 - 125 %	X	
Toluene	Standard	50.0	49.8	99.6	75 - 125 %	X	
Ethylenzene	Standard	50.0	49.7	99.4	75 - 125 %	X	
m & p - Xylene	Standard	100	99.5	99.5	75 - 125 %	X	
o - Xylene	Standard	50.0	49.7	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	50.3	100.6	75 - 125 %	X	
Toluene	Standard	50.0	49.3	98.7	75 - 125 %	X	
Ethylbenzene	Standard	50.0	48.8	97.5	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.

LABORATORY DUPLICATES:

SAMPLE ID 970943	TYPE	SAMPLE RESULT PPB	DUPLICATE RESULT PPB	RPD	ACCEPTABLE RANGE	YES	NO
Benzene	Matrix Duplicate	3.8	3.9	2.25	+/- 20 %	X	
Toluene	Matrix Duplicate	<1	1.0	200.00	+/- 20 %		X
Ethylbenzene	Matrix Duplicate	<1	<1	0.00	+/- 20 %	X	
m & p - Xylene	Matrix Duplicate	3.59	3.7	3.64	+/- 20 %	X	
o - Xylene	Matrix Duplicate	<1	<1	0.00	+/- 20 %	X	

Narrative: Acceptable.

LABORATORY SPIKES:

SAMPLE ID 2nd Analysis 970943	SPIKE ADDED PPB	SAMPLE RESULT PPB	SPIKE SAMPLE RESULT PPB	%R	ACCEPTABLE RANGE	YES	NO
Benzene	50	3.8	54.4	101.2	75 - 125 %	X	
Toluene	50	<1	51.6	103	75 - 125 %	X	
Ethylbenzene	50	<1	50.5	101	75 - 125 %	X	
m & p - Xylene	100	3.59	103.7	100.1	75 - 125 %	X	
o - Xylene	50	<1	50.1	100	75 - 125 %	X	

Narrative: Acceptable

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

Narrative: Acceptable.

SOIL VIAL BLANK	SOURCE Lot MB1461	PPB	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: _____ Approved By: John Tallon Date: 9-8-97

"WELL POINTS"

El Paso Natural Gas Company

CHAIN OF CUSTODY RECORD

Page 1 of 1

PROJECT NUMBER	PROJECT NAME
# 24324	Pit Closure Project

SAMPLERS: (Signature) DATE: 8-29-97

LAB ID	DATE	TIME	MATRIX	FIELD ID	TOTAL NUMBER OF CONTAINERS	SAMPLE TYPE	TPH EPA 418.1	BTEX EPA 8020	LAB PID			SEQUENCE #	REMARKS
970948	8/29	1121	B	DRC 44	1	B		X				32	TRIP BLANK
970949	8/29	1230	W	DRC 45	2	VG		X				32	COLDIRON COM A #1-73551 (PH-1)
970950	8/29	1420	W	DRC 46	2	VG		X				33	" " (PH-2)

CONTRACT LABORATORY P. O. NUMBER

RECEIVED SEP 15 1997

RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)
	8/29/97 1553			9/2/97 1130	
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED OF LABORATORY BY: (Signature)
				9/2/97 1130	

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:	DRC44	970948
MTR CODE | SITE NAME:	73551	Coldiron Com. A #1
SAMPLE DATE | TIME (Hrs):	8/29/97	1121
PROJECT:	Well Points	
DATE OF BTEX EXT. | ANAL.:	9/3/97	9/3/97
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 97.6 % for this sample All QA/QC was acceptable.

DF = Dilution Factor Used

Narrative:

Approved By: _____ Date: 9-8-97

970948WellSiteTripBlank,9/8/97

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	DRC45	970949
MTR CODE | SITE NAME:	73551	Coldiron Com. A #1
SAMPLE DATE | TIME (Hrs):	8/29/97	1230
PROJECT:	Well Points	
DATE OF BTEX EXT. | ANAL.:	9/3/97	9/3/97
TYPE | DESCRIPTION:	PH-1	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	552	PPB	25	D		
TOLUENE	892	PPB	25	D		
ETHYL BENZENE	762	PPB	25	D		
TOTAL XYLENES	9380	PPB	25	D		
TOTAL BTEX	11586	PPB				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 97.1 % 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: John Saldi Date: 9-8-97

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	DRC46	970950
MTR CODE | SITE NAME:	73551	Coldiron Com. A #1
SAMPLE DATE | TIME (Hrs):	8/29/97	1420
PROJECT:	Well Points	
DATE OF BTEX EXT. | ANAL.:	9/3/97	9/3/97
TYPE | DESCRIPTION:	PH-2	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	579	PPB	25	D		
TOLUENE	1120	PPB	25	D		
ETHYL BENZENE	775	PPB	25	D		
TOTAL XYLENES	8660	PPB	25	D		
TOTAL BTEX	11134	PPB				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 95.9 % 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: 9-8-97

EL PASO FIELD SERVICES

QUALITY CONTROL REPORT
EPA METHOD 8020 - BTEX

Samples: 970946 to 970950

QA/QC for 9/03/97 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	48.0	96.0	75 - 125 %	X	
Toluene	Standard	50.0	47.6	95	75 - 125 %	X	
Ethylbenzene	Standard	50.0	47.6	95	75 - 125 %	X	
m & p - Xylene	Standard	100	95.5	95.5	75 - 125 %	X	
o - Xylene	Standard	50.0	47.3	95	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	24.3	97.1	39 - 150	X	
Toluene	Standard	25.0	24.1	96	46 - 148	X	
Ethylbenzene	Standard	25.0	23.9	96	32 - 160	X	
m & p - Xylene	Standard	50.0	48.2	96	Not Given	X	
o - Xylene	Standard	25.0	24.5	98	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	48.9	97.7	75 - 125 %	X	
Toluene	Standard	50.0	48.2	96.3	75 - 125 %	X	
Ethylenzene	Standard	50.0	47.9	95.8	75 - 125 %	X	
m & p - Xylene	Standard	100	96.1	96.1	75 - 125 %	X	
o - Xylene	Standard	50.0	47.9	96	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	48.2	96.3	75 - 125 %	X	
Toluene	Standard	50.0	47.6	95.2	75 - 125 %	X	
Ethylbenzene	Standard	50.0	47.3	94.6	75 - 125 %	X	
m & p - Xylene	Standard	100	94.9	94.9	75 - 125 %	X	
o - Xylene	Standard	50.0	47.4	94.8	75 - 125 %	X	

Narrative: Acceptable.

LABORATORY DUPLICATES:

SAMPLE ID 970946	TYPE	SAMPLE RESULT PPB	DUPLICATE RESULT PPB	RPD	ACCEPTABLE RANGE	YES	NO
Benzene	Matrix Duplicate	44.3	45.1	1.87	+/- 20 %	X	
Toluene	Matrix Duplicate	128.5	131.0	1.87	+/- 20 %	X	
Ethylbenzene	Matrix Duplicate	20.77	21.38	2.90	+/- 20 %	X	
m & p - Xylene	Matrix Duplicate	159.11	163.1	2.45	+/- 20 %	X	
o - Xylene	Matrix Duplicate	25.08	25.93	3.35	+/- 20 %	X	

Narrative: Acceptable.

LABORATORY SPIKES:

SAMPLE ID 2nd Analysis 970946	SPIKE ADDED PPB	SAMPLE RESULT PPB	SPIKE SAMPLE RESULT PPB	%R	ACCEPTABLE RANGE	YES	NO
Benzene	50	44.3	91.0	93.4	75 - 125 %	X	
Toluene	50	128.5	174.6	92	75 - 125 %	X	
Ethylbenzene	50	20.8	67.9	94	75 - 125 %	X	
m & p - Xylene	100	159.1	253.9	94.8	75 - 125 %	X	
o - Xylene	50	25.1	70.9	92	75 - 125 %	X	

Narrative: Acceptable

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

Narrative: Acceptable.

SOIL VIAL BLANK	SOURCE Lot MB1461	PPB (2 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: [signature] Date: 9-11-97

Well Points

El Paso Natural Gas Company

CHAIN OF CUSTODY RECORD

Page _____ of _____

PROJECT NUMBER	PROJECT NAME	SAMPLERS: (Signature)	DATE
# 24324	Pit Closure Project	Cory Clarke	9/3/97

LAB ID	DATE	TIME	MATRIX	FIELD ID	TOTAL NUMBER OF CONTAINERS	SAMPLE TYPE	TPH EPA 418.1	BTEX EPA 8020	LAB PID			SEQUENCE #	REMARKS
970952	9/3/97	~	Water	Trip Blank	1	TB		✓					Trip Blank
970953		1100		CMC 341	2	VG		✓					Coldiron Com A #1 73551 PH3
	CMC 9/3/97			CMC 342	2	VG		✓					" PH4
970954		1440		CMC 342	2	VG		✓					Johnston Fed #4 70194 PH1

CMC 9/3/97

NOTE: Septums are coming off of the bottles. They have a clay consistency

38° F

RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)
Cory Clarke	9/3/97 1700		Carl W Williams	9-4-97 1000	
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED OF LABORATORY BY: (Signature)
				9/4/97 1000	

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	970952
MTR CODE | SITE NAME:	73551	Coldiron Com. A #1
SAMPLE DATE | TIME (Hrs):	9/3/97	1100
PROJECT:	Well Points	
DATE OF BTEX EXT. | ANAL.:	9/9/97	9/9/97
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 113.7 % for this sample All QA/QC was acceptable.

DF = Dilution Factor Used

Narrative:

Approved By: John Ladd Date: 9-17-97

970952BTEXWPTB,9/16/97

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	CMC341	970953
MTR CODE | SITE NAME:	73551	Coldiron Com. #1
SAMPLE DATE | TIME (Hrs):	9/3/97	1100
PROJECT:	Well Points	
DATE OF BTEX EXT. | ANAL.:	9/9/97	9/9/97
TYPE | DESCRIPTION:	PH-3	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	5.02	PPB				
TOLUENE	47.8	PPB				
ETHYL BENZENE	15.4	PPB				
TOTAL XYLENES	7.93	PPB				
TOTAL BTEX	76	PPB				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 118.7 % 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 Loden Date: 9-17-97

EL PASO FIELD SERVICES

QUALITY CONTROL REPORT
EPA METHOD 8020 - BTEX

Samples: 970952 to 970960

QA/QC for 9/9/97 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	53.0	105.9	75 - 125 %	X	
Toluene	Standard	50.0	52.5	105	75 - 125 %	X	
Ethylbenzene	Standard	50.0	52.1	104	75 - 125 %	X	
m & p - Xylene	Standard	100	104.7	104.7	75 - 125 %	X	
o - Xylene	Standard	50.0	52.0	104	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	26.9	107.7	39 - 150	X	
Toluene	Standard	25.0	26.5	106	46 - 148	X	
Ethylbenzene	Standard	25.0	26.3	105	32 - 160	X	
m & p - Xylene	Standard	50.0	52.4	105	Not Given	X	
o - Xylene	Standard	25.0	26.2	105	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	53.6	107.2	75 - 125 %	X	
Toluene	Standard	50.0	52.9	105.9	75 - 125 %	X	
Ethylenzene	Standard	50.0	52.5	104.9	75 - 125 %	X	
m & p - Xylene	Standard	100	104.8	104.8	75 - 125 %	X	
o - Xylene	Standard	50.0	52.4	105	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	54.4	108.9	75 - 125 %	X	
Toluene	Standard	50.0	53.6	107.1	75 - 125 %	X	
Ethylbenzene	Standard	50.0	52.8	105.6	75 - 125 %	X	
m & p - Xylene	Standard	100	105.4	105.4	75 - 125 %	X	
o - Xylene	Standard	50.0	52.8	105.6	75 - 125 %	X	

Narrative: Acceptable.

LABORATORY DUPLICATES:

SAMPLE ID 970959	TYPE	SAMPLE RESULT PPB	DUPLICATE RESULT PPB	RPD	ACCEPTABLE RANGE	YES	NO
Benzene	Matrix Duplicate	<1	<1	0.00	+/- 20 %	X	
Toluene	Matrix Duplicate	5.4	5.3	3.28	+/- 20 %	X	
Ethylbenzene	Matrix Duplicate	1.92	1.78	7.28	+/- 20 %	X	
m & p - Xylene	Matrix Duplicate	<1	<1	0.00	+/- 20 %	X	
o - Xylene	Matrix Duplicate	<1	<1	0.00	+/- 20 %	X	

Narrative: Acceptable.

LABORATORY SPIKES:

SAMPLE ID 2nd Analysis 970959	SPIKE ADDED PPB	SAMPLE RESULT PPB	SPIKE SAMPLE RESULT PPB	%R	ACCEPTABLE RANGE	YES	NO
Benzene	50	<1	54.9	109.7	75 - 125 %	X	
Toluene	50	5.4	57.9	105	75 - 125 %	X	
Ethylbenzene	50	1.9	52.4	101	75 - 125 %	X	
m & p - Xylene	100	<1	107.6	107.6	75 - 125 %	X	
o - Xylene	50	<1	54.0	108	75 - 125 %	X	

Narrative: Acceptable

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

Narrative: Acceptable.

SOIL VIAL BLANK	SOURCE Lot MB1461	PPB (1 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.

9/8/97 TRIP BLANK	SOURCE	PPB	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: CRV Approved By: John Latchi Date: 9-16-97

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: Composite or Grab	See Attached	BTXE	General Chemistry	8 RCRA Metals	Contract Laboratory	Remarks
	AZTEC PIL									EPFS	
Samplers: (Signature)	Date	Receiving Temp. (°F)									
Dennis Bird	4-17-96	38°									
Lab ID	Date	Time	Matrix	Sample Number							
	4-17-96	1113	WATER	960355	4			G		X	X	X	COLDIRON A #1 MW-1 (M/C 73551)
	4-17-96	1113	WATER	960356	4			G		X	X	X	COLDIRON A #1 MW-1 (M/C 7355[illegible])
	4-17-96		WATER		1			G		X	\		TRIP BLANK

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Dennis Bird	4-17-96 1542				
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:	
		Marla D. Armenta	4-17-96 1544		
		Charge Code		Date Results Reported / by: (Signature)	

EPFS

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT

SAMPLE IDENTIFICATION

SAMPLE NUMBER:	960355
METER CODE:	
SITE NAME:	Aztec Pipeline
SAMPLE SITE:	Coldiron A #1 MW-1
SAMPLE DATE:	04/17/96
SAMPLE TIME (Hrs):	1113
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	79.5	D (X10)	10
TOLUENE	464	D (X10)	740
ETHYL BENZENE	281	D (X10)	750
TOTAL XYLENES	3050	D (X10)	620
SURROGATE % RECOVERY	98.0	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: _____ Date: 4/30/96

EPFS

EL PASO FIELD SERVICES

Field Services Laboratory

Analytical Report

SAMPLE IDENTIFICATION

EPNG LAB ID:	960355
DATE SAMPLED:	04/17/96
TIME SAMPLED (Hrs):	1113
SAMPLED BY:	D. Bird
MATRIX:	Water
SAMPLE SITE NAME:	Aztec Pipeline
SAMPLE POINT:	Coldiron A#1 MW-1
METER CODE:	

FIELD REMARKS:

GENERAL CHEMISTRY WATER ANALYSIS RESULTS

PARAMETER	RESULT	UNITS	DATE ANALYZED
pH	7.7	Units	04/17/96
Alkalinity as $C0_3$	0.0	PPM	04/17/96
Alkalinity as $HC0_3$	409	PPM	04/17/96
Calcium as Ca	453	PPM	04/19/96
Magnesium as Mg	46	PPM	04/19/96
Total Hardness as $CaC0_3$	1,321	PPM	04/19/96
Chloride as Cl	63	PPM	04/17/96
Sulfate as $S0_4$	2,356	PPM	04/17/96
Fluoride as F	1.5	PPM	04/19/96
Nitrate as $N0_3$-N	<1.2	PPM	04/17/96
Potassium as K	<0.1	PPM	04/19/96
Sodium as Na	696	PPM	04/19/96
Total Dissolved Solids	4,174	PPM	04/19/96
Conductivity	4,340	umhos/cm	04/17/96
Anion/Cation %	0.9%	%, <5.0 Accepted	04/23/96

ab Remarks:

eported By: mh Approved By: John Faulkner Date: 4/30/96

EPFS

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT

SAMPLE IDENTIFICATION

SAMPLE NUMBER:	960355
LOCATION:	Aztec Pipeline
SAMPLE SITE:	Coldiron A #1 MW-1
METER CODE:	73551
SAMPLE DATE:	04/17/96
SAMPLE TIME (Hrs):	1113
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	<0.0004	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 Hobbs Date: 10/5/96

EPFS

EL PASO FIELD SERVICES

QUALITY CONTROL REPORT

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

Date Reported: 05/10/96

TOTAL METALS

LABORATORY CONTROL SAMPLE

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

LABORATORY CONTROL SAMPLE (2nd run)

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

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

Reported By: m/1 Approved By: [signature] 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: 10/5/96

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 Faulkner Date: 10/5/96

EPFS

EL PASO FIELD SERVICES

QUALITY CONTROL REPORT

TOTAL METALS, METHOD BLANK ANALYSIS

04/24/96 METHOD BLANK

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

04/25/96 METHOD BLANK

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

ND: Not Detected at stated detection level.

NA: Not Applicable.

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

Reported By: mh Approved By: Robert Sanders Date: 10/5/96

EPFS
EL PASO FIELD SERVICES

MEMORANDUM

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

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

Subject: Aztec Pipeline Pit Monitor Well

On Wednesday, April 17, 1996, I went to the Aztec Pipeline and sampled the following pit monitor well. The following analytical parameters are to be performed on this groundwater sample: BTXE, 8 RCRA Metals, General Chemistry to include Nitrate as NO3 and Dissolved Oxygen. The samples were assigned the laboratory numbers 960355 to 960356. The dissolved oxygen results were taken at the time of sampling with a ChemMets kit. A field duplicate was also collected on this well. The Field Service Laboratory will be performing all of the analysis.

The following information was collected on this well.

Well Name	Monitor Well#	Pipe ID	Static Level	Total Depth	Gallons Bailed	Dissolved Oxygen
960355 Coldiron A #1	MW-1	4"	37.78'	45.24'	20.0	1.5 ppm

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 2595

CHAIN OF CUSTODY RECORD

Project No.	Project Name
	AZTEC PIPELINE

Samplers: (Signature) Dennis Bird Date: 7-25-96

Date	Time	Comp.	GRAB	Sample Number	Type and No. of Sample Containers	Preservation Technique	BTXE				Remarks
~~7-25-96~~	~~1125~~		~~X~~	~~960651~~	~~G-2~~		~~X~~				~~JOHNSTON FED [illegible]~~
~~7-25-96~~	~~1235~~		~~X~~	~~960652~~	~~G-2~~		~~X~~				~~JOHNSTON FED [illegible]~~
7-25-96	1523		X	960653	G-2		X				COLDIRON A#4 MW-1 MC 73551
7-25-96	—		X	—	G-1		X				TRIP BLANK

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Dennis Bird	7-25-96 1645				

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:
		Marlin Hopper	7/26/96 0815	

Carrier Co:

Carrier Phone No.

Date Results Reported / by: (Signature)

Air Bill No.:

EPFS

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT

SAMPLE IDENTIFICATION

SAMPLE NUMBER:	960653
SITE NAME:	Aztec Pipeline
SAMPLE SITE:	Coldiron A #1 MW-1
METER CODE:	73551
SAMPLE DATE:	07/25/96
SAMPLE TIME (Hrs):	1523
SAMPLED BY:	D. Bird
DATE OF BTEX ANALYSIS:	07/30/96
SAMPLE TYPE:	Water

REMARKS: _____

EPA Method 8020 (BTEX) RESULTS

PARAMETER	RESULT PPB	QUALIFIER	WQCC LIMIT PPB
BENZENE	14.6		10
TOLUENE	139		740
ETHYL BENZENE	54.1		750
TOTAL XYLENES	581	D (x2)	620
SURROGATE % RECOVERY	99.7	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: mda Approved By: John Zaida Date: 8/14/96

EPFS
EL PASO FIELD SERVICES

Well Development and Purging Data

☐ Development
☒ Purging

Well Number MW-1

Site Name COLOIRON A #1

Meter Code 73551

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) 45.24
Initial Depth to Water (feet) 38.13
Height of Water Column in Well (feet) 7.11
Diameter (inches): Well 4 Gravel Pack_____

Item	Water Volume in Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing			14.2
Gravel Pack			
Drilling Fluids			
Total			

Instruments

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

Water Disposal

KUTZ SEPARATOR

Water Removal Data

Date	Time	Development Method		Removal Rate	Intake Depth	Ending Water Depth	Water Volume Removed (gal)		Product Volume Removed (gallons)		Temperature °C	pH	Conductivity µmho/cm	Dissolved Oxygen mg/L	Comments
		Pump	Bailer	(gal/min)	(feet)	(feet)	Increment	Cumulativ	Increment	Cumulative					
7-25-96	1431										21.5	6.80	3660		
7-25-96	1438						5.0	5.0			20.6	7.00	3860		
7-25-96	1447						5.0	10.0			20.1	7.05	3940		
7-25-96	1457						5.0	15.0			19.7	7.08	3960		
7-25-96	1507						5.0	20.0			21.4	7.15	4170	1.5	

Comments 0.13' OF HYDROCARBON SHEEN. STRONG HYDROCARBON SMELL.

Developer's Signature Dennis Bird Date 7-25-96 Reviewer JF Date 8/14/96

American Environmental Network, Inc.

AEN I.D. 607361

August 6, 1996

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

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

Attention: John Lambdin

On **07/26/96**, 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	: 07/26/96
PROJECT #	**: (NONE)**		
PROJECT NAME	**: COLDIRON A#1 MW-1**	REPORT DATE	: 08/06/96

AEN ID: 607361

	AEN ID #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	607361-01	960653	AQUEOUS	07/25/96

~~Johnston Fed #6~~

Meter Code ~~#59232~~ 73551

COLDIRON A#1

MW-1

8/12/96

---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:	608016
Client:	AMERICAN ENVIRONMENTAL NETWORK OF NEW MEXICO
Project Number:	607361
Project Name:	N/S
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:	25-JUL-96 1523
Client Sample Id:	607361-01	Received Date:	27-JUL-96
Batch: PAW134		Extraction Date:	29-JUL-96
Blank: A	Dry Weight %: N/A	Analysis Date:	31-JUL-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	27	1	
PHENANTHRENE	UG/L	ND	1	
PYRENE	UG/L	ND	1	
1-METHYLNAPHTHALENE	UG/L	52	1	
2-METHYLNAPHTHALENE	UG/L	31	1	
5-CHLOROANTHRACENE	%REC/SURR	107	28-138	
ANALYST	INITIALS	BV		

Comments:

American Environmental Network, Inc.

"Method Report Summary"

Accession Number: 608016
Client: AMERICAN ENVIRONMENTAL NETWORK OF NEW MEXICO
Project Number: 607361
Project Name: N/S
Project Location: N/S
Test: POLYNUCLEAR AROMATICS BY 8310

Client Sample Id:	Parameter:	Unit:	Result:
607361-01	NAPHTHALENE	UG/L	27
	1-METHYLNAPHTHALENE	UG/L	52
	2-METHYLNAPHTHALENE	UG/L	31
	TOTAL	UG/L	110

"QC Report"

Title: Water Blank
Batch: PAW134
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: 30-JUL-96 Date Extracted: 29-JUL-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	[illegible]	28-138
ANALYST	INITIALS	[illegible]T	

Comments:

8/12/96

American Environmental Network, Inc.

"QC Report"

Title: Water Reagent
Batch: PAW134
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: 30-JUL-96
RSD Date Analyzed: 30-JUL-96
RS Date Extracted: 29-JUL-96
RSD Date Extracted: 29-JUL-96

Parameters:	Spike Added	Sample Conc	RS Conc	RS %Rec	RSD Conc	RSD %Rec	RPD	RPD Lmts	Rec Lmts
ACENAPHTHYLENE	10.0	<1	8.9	89	8.4	84	6	46	46-110
BENZO(k)FLUORANTHENE	10.0	<1	9.7	97	9.7	97	0	30	58-128
CHRYSENE	10.0	<1	9.7	97	9.6	96	1	29	62-129
PHENANTHRENE	10.0	<1	9.2	92	9.0	90	2	28	61-116
PYRENE	10.0	<1	8.8	88	8.7	87	1	26	62-120
Surrogates:									
2-CHLOROANTHRACENE				98		99			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.

American Environmental Network, Inc.

"QC Report"

Title: Water Matrix
Batch: PAW134
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.

Dry Weight %: N/A
Sample Spiked: 608008-5

MS Date Analyzed: 30-JUL-96
MSD Date Analyzed: 30-JUL-96

MS Date Extracted: 29-JUL-96
MSD Date Extracted: 29-JUL-96

Parameters:	Spike Added	Sample Conc	MS Conc	MS %Rec	MSD Conc	MSD %Rec	RPD	RPD Lmts	Rec Lmts
ACENAPHTHYLENE	10.0	9.7	30.9	212*	26.6	169*	23	42	14-135
BENZO(k)FLUORANTHENE	10.0	1.0	9.6	86	7.7	67	25	58	25-142
CHRYSENE	10.0	<1	7.8	78	6.3	63	21	51	3-176
PHENANTHRENE	10.0	6.8	15.2	84	10.5	[illegible]	78*	55	27-146
PYRENE	10.0	5.4	11.4	60	8.8	[illegible]	55*	47	15-157
Surrogates:									
2-CHLOROANTHRACENE				125		87			28-138

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

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.

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, Inc., Albuquerque, NM
San Diego • Phoenix • Seattle • Pensacola • Ft. Collins • Portland • Albuquerque

CHAIN OF CUSTODY

DATE: 7-25-96 PAGE 1 OF 1

ATI LAB I.D. 607361

PLEASE FILL THIS FORM IN COMPLETELY. SHADED AREAS ARE FOR LAB USE ONLY.

PROJECT MANAGER: JOHN LACOBOIN

COMPANY: EL PASO FIELD SERVICE 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 ID	Petroleum Hydrocarbons (418.1)	(MOD 8015) Gas/Diesel	Diesel/Gasoline/BTXE/MTBE (MOD 8015/8020)	BTXE/MTBE (8020)	Chlorinated Hydrocarbons (601/8010)	Aromatic Hydrocarbons (602/8020)	SDWA Volatiles (502.1/503.1), 502.2 Reg. & Unreg.	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)	SDWA Primary Standards - Arizona	SDWA Secondary Standards - Arizona	SDWA Primary Standards - Federal	SDWA Secondary Standards - Federal	The 13 Priority Pollutant Metals	RCRA Metals by Total Digestion	RCRA Metals by TCLP (1311)	NUMBER OF CONTAINERS
960653	7-25-96	1523	WATER	-01												X								2

PROJECT INFORMATION		SAMPLE RECEIPT	
PROJ. NO.:		NO. CONTAINERS	2
PROJ. NAME:	COLDIRON A #1 (NW)	CUSTODY SEALS	Y / N (NA)
P.O. NO.:		RECEIVED INTACT	X
SHIPPED VIA:	FED-EX	RECEIVED COLD	5°C

PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS

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

Comments: CHARGE #
6138-6113-6115-90002-515
LOW LEVEL BENZO(A) PAYRENE 0.1 ppb

SAMPLED & RELINQUISHED BY: 1.	RELINQUISHED BY: 2.	RELINQUISHED BY: 3.
Signature: Time: 1642	Signature: Time:	Signature: Time:
Printed Name: DENNIS BIRD Date: 7-25-96	Printed Name: Date:	Printed Name: Date:
Company: EL PASO FIELD SERVICE Phone: 599-2144	Company:	Company:

RECEIVED BY: 1.	RECEIVED BY: 2.	RECEIVED BY: (LAB) 3.
Signature: Time:	Signature: Time:	Signature: Time:
Printed Name: Date:	Printed Name: Date:	Printed Name: Date:
Company:	Company:	Analyst Comments:

ATI Labs: San Diego (619) 458-9141 • Phoenix (602) 438-4400 • Seattle (206) 228-8335 • Pensacola (904) 474-1001 • Portland (503) 684-0447 • Albuquerque (505) 344-3777

DISTRIBUTION: White, Canary - ATI • Pink - ORIGINATOR

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CHAIN OF CUSTODY

DATE: 7-25-96 PAGE 1 OF 1

ATI LAB ID: 607156

PLEASE FILL THIS FORM IN COMPLETELY. SHADED AREAS ARE FOR LAB USE ONLY.

PROJECT MANAGER: JOHN LACOBOIN

COMPANY: EL PASO FIELD SERVICE 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 ID	Petroleum Hydrocarbons (418.1)	(MOD 8015) Gas/Diesel	Diesel/Gasoline/BTXE/MTBE (MOD 8015/8020)	BTXE/MTBE (8020)			Chlorinated Hydrocarbons (601/8010)	Aromatic Hydrocarbons (602/8020)	SDWA Volatiles (502.1/503.1), 502.2 Reg. & Unreg.			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)			SDWA Primary Standards - Arizona	SDWA Secondary Standards - Arizona	SDWA Primary Standards - Federal	SDWA Secondary Standards - Federal			The 13 Priority Pollutant Metals	RCRA Metals by Total Digestion	RCRA Metals by TCLP (1311)		NUMBER OF CONTAINERS
960653	7-25-96	1523	WATER	-21																X													2

PROJECT INFORMATION		SAMPLE RECEIPT	
PROJ. NO.:		NO. CONTAINERS	2
PROJ. NAME: COLDIRON A#1 AMI		CUSTODY SEALS	Y / N (NA)
P.O. NO.:		RECEIVED INTACT	X
SHIPPED VIA: FED-EX		RECEIVED COLD	5°C

PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS

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

Comments: CHARGE #
6138-6113-6115-90002-515
LOW LEVEL BENZO(A) PAYRENE 0.7 ppb

SAMPLED & RELINQUISHED BY: 1.	RELINQUISHED BY: 2.	RELINQUISHED BY: 3.
Signature: Dennis Bird Time: 1617	Signature: Time:	Signature: Time:
Printed Name: DENNIS BIRD Date: 7-25-96	Printed Name: Date:	Printed Name: Date:
Company: EL PASO FIELD SERVICE Phone: 599-2144	Company:	Company:

RECEIVED BY: 1.	RECEIVED BY: 2.	RECEIVED BY: (LAB) 3.
Signature: Time:	Signature: Time:	Signature: [redacted]
Printed Name: Date:	Printed Name: Date:	[redacted]
Company:	Company:	[redacted]

DISTRIBUTION: White, Canary - ATI • Pink - ORIGINATOR

El Paso Natural Gas Company

A 2297

CHAIN OF CUSTODY RECORD

Project No.	Project Name	Type and No. of Sample Containers	Preservation Technique	Requested Analysis			Remarks
	ARTEC PIPELINE			BTXE			
Samplers: (Signature) Dennis Bird	Date: 10-22-96						

Date	Time	Comp.	GRAB	Sample Number							
10-22-96	1047		X	960880	G-2		X				COLOIRON A#1 / MW-1 / MC 7355 /
10-22-96	—		X	—	G-1		X				TRIP BLANK

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Dennis Bird	10-22-96 1743				
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	10/23/96 0805		

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

Bill No.:

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	960880
MTR CODE | SITE NAME:	73551	Coldiron A #1 MW-1
SAMPLE DATE | TIME (Hrs):	10/22/96	1047
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	22.6	PPB				
TOLUENE	34.8	PPB				
ETHYL BENZENE	75.7	PPB				
TOTAL XYLENES	608 ~~580~~ 10/29/96	PPB		D1		
TOTAL BTEX	713	PPB				

–BTEX is by EPA Method 8020 –

The Surrogate Recovery was at 109 % 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.

Narrative:

Approved By: John Leach Date: 10/29/96

960880.XLS,10/25/96

EPFS
EL PASO FIELD SERVICES

Well Development and Purging Data

☐ Development
☒ Purging

Well Number MW-1

Meter Code 73551

Site Name COLDIRON A #1

Development Criteria

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

Methods of Development

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

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 45.24
Initial Depth to Water (feet) 32.83
Height of Water Column in Well (feet) 7.41
Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing		49	14.7
Gravel Pack			
Drilling Fluids			
Total			

Instruments

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

Water Disposal

KUTZ SEPARATOR

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gal): Increment	Water Volume Removed (gal): Cumulativ	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature °C	pH	Conductivity µmho/cm	Dissolved Oxygen mg/L	Comments
10-22-96	1006										12.2	6.29	5730		
10-22-96	1013						5.0	5.0			13.1	6.30	6090		
10-22-96	1021						5.0	10.0			13.3	6.76	6440		
10-22-96	1030						5.0	15.0			13.5	6.90	6610		
10-22-96	1038						5.0	20.0			12.9	7.01	6650	1.0	

Comments 0.24' OF HYDROCARBON SHEEN. STRONG HYDROCARBON SMELL.

Developer's Signature Dennis Bird Date 10-22-96 Reviewer [signature] Date 10/29/96

El Paso Natural Gas Company

A 1987

CHAIN OF CUSTODY RECORD

Project No.	Project Name	Type and No. of Sample Containers	Preservation Technique	Requested Analysis			Remarks
	AZTEC PIPELINE						
Samplers: (Signature) Dennis Bird	Date: 1-21-97						

Matrix	Date	Time	Comp.	GRAB	Sample Number						
WATER	1-21-97	1054		X	970011	G-2	4°C	X				COLLIRONA #1 MW-1 AC 7355T
WATER	1-21-97	—		X	—	G-1	4°C	X				TRIP BLANK

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Dennis Bird	1-21-97 1512				
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 Hoppe	1/22/97 0738		
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	970011
MTR CODE | SITE NAME:	73551	Coldiron A #1 MW-1
SAMPLE DATE | TIME (Hrs):	01/21/97	1054
PROJECT:	Sample 4 - 4th Quarter	
DATE OF BTEX EXT. | ANAL.:	1/23/97	1/24/97
TYPE | DESCRIPTION:	Monitor Well	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	33.9	PPB	2	D		
TOLUENE	143	PPB	2	D		
ETHYL BENZENE	90.4	PPB	2	D		
TOTAL XYLENES	882	PPB	5	D		
TOTAL BTEX	1150	PPB				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 100 % 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 Labadie Date: 1-29-97

EPFS
EL PASO FIELD SERVICES

Well Development and Purging Data

☐ Development
☒ Purging

Well Number MW-1

Site Name COLDIRON A #1

Meter Code 73551

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) 45.24
Initial Depth to Water (feet) 37.71
Height of Water Column in Well (feet) 7.53
Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing		5.0	14.9
Gravel Pack			
Drilling Fluids			
Total			

Instruments

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

Water Disposal

KOT2 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
1-21-97	1011										13.7	6.32	4250		
1-21-97	1018						5.0	5.0			13.8	6.47	4190		
1-21-97	1026						5.0	10.0			14.1	6.74	4440		
1-21-97	1035						5.0	15.0			14.3	6.79	4400		
1-21-97	1044						5.0	20.0			14.3	6.98	4540	1.0	

Comments 0.09' OF FREE FLOATING HYDROCARBON.

Developer's Signature Dennis Bird Date 1-21-97 Reviewer John Stroh Date 1-29-97

El Paso Natural Gas Company

A 2211

CHAIN OF CUSTODY RECORD

Project No.	Project Name	Type and No. of Sample Containers	Preservation Technique	Requested Analysis				Remarks
	AZTEC PIPELINE			BTXE	CHLORIDES	NON-METALS		
Samplers: (Signature) Dennis Bird	Date: 4-17-97							
Matrix / Date / Time / Comp. / GRAB / Sample Number								
WATER 4-17-97 1112 X 970317		2	4°C	X	X	X		COLORADO #1 MW-1 MC 73551
WATER 4-17-97 — X —		1	4°C	X				TRIP BLANK

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Dennis Bird	4-17-97 1554				
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 Hoppe	4/21/97 0710		

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

Air Bill No.:

EL PASO FIELD SERVICES

5-6-97

FIELD SERVICES LABORATORY
ANALYTICAL REPORT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	970317
MTR CODE | SITE NAME:	73551	Coldiron A#1
SAMPLE DATE | TIME (Hrs):	4/17/97	5th 1112
PROJECT:	Sample 4 - ~~1st~~ Quarter	4/25/97
DATE OF BTEX EXT. | ANAL.:	4/18/97	4/18/97
TYPE | DESCRIPTION:	Monitor Well	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	18.7	PPB	5	D		
TOLUENE	48.4	PPB	5	D		
ETHYL BENZENE	43.0	PPB	5	D		
TOTAL XYLENES	659	PPB	5	D		
TOTAL BTEX	769	PPB				

The Surrogate Recovery was at 99.2 % for this sample All QA/QC was acceptable.
The "D" qualifier indiciates that the analyte calculated is based on a secondary dilution factor.

Narrative:

Approved By: John Laller Date: 4/24/97

970317.XLS,4/21/97

EL PASO FIELD SERVICES

5-6-97

Field Services Laboratory
Analytical Report

SAMPLE IDENTIFICATION

EPFS LAB ID:	970317
DATE SAMPLED:	04/17/97
TIME SAMPLED (Hrs):	1112
SAMPLED BY:	D. Bird
MATRIX:	Water
METER CODE:	73551
SAMPLE SITE NAME:	Aztec Pipeline
SAMPLE POINT:	Coldiron A#1

FIELD REMARKS:

GENERAL CHEMISTRY WATER ANALYSIS RESULTS

PARAMETER	RESULT	UNITS	DATE ANALYZED
Laboratory pH	8.1	Units	04/18/97
Alkalinity as $C0_3$	0	PPM	04/18/97
Alkalinity as $HC0_3$	362	PPM	04/18/97
Calcium as Ca	499	PPM	04/19/97
Magnesium as Mg	56	PPM	04/19/97
Total Hardness as $CaC0_3$	1,478	PPM	04/19/97
Chloride as Cl	63	PPM	04/18/97
Sulfate as $S0_4$	2,480	PPM	04/18/97
Fluoride as F	1.5	PPM	04/18/97
Nitrate as $N0_3$-N	<0.6	PPM	04/18/97
Nitrite as $N0_2$-N	<0.6	PPM	04/18/97
Ammonium as NH_4^+	<0.6	PPM	04/19/97
Phosphate as PO_4	<0.6	PPM	04/18/97
Potassium as K	<0.6	PPM	04/19/97
Sodium as Na	765	PPM	04/19/97
Total Dissolved Solids	4,180	PPM	04/19/97
Calculated TDS	4,043	PPM	04/19/97
Conductivity	4,870	umhos/cm	04/18/97
Anion/Cation %	2.7%	%, <5.0 Accepted	04/21/97

Remarks:

Reported By: mh

Approved By:

Date: 4/24/97

EPFS
EL PASO FIELD SERVICES

Well Development and Purging Data

☐ Development
☒ Purging

Well Number MW-1

Site Name COLDIRON A #1

Meter Code 73551

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) 45.24
Initial Depth to Water (feet) 38.28
Height of Water Column in Well (feet) 6.96
Diameter (Inches): Well 4 Gravel Pack

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing		4.6	13.8
Gravel Pack			
Drilling Fluids			
Total			

Instruments

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

Water Disposal

KUTZ SEPARATOR

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gal): Increment	Water Volume Removed (gal): Cumulativ	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature °C	pH	Conductivity µmho/cm	Dissolved Oxygen mg/L	Comments
4-17-97	1024										17.2	6.74	4490		
4-17-97	1033						5.0	5.0			17.0	7.12	4180		
4-17-97	1041						5.0	10.0			16.7	7.22	4470		
4-17-97	1050						5.0	15.0			16.8	7.24	4330		
4-17-97	1059						5.0	20.0			16.8	7.24	4330	0.5	

Comments 0.24' OF FREE FLOATING HYDROCARBON. LIGHT HYDROCARBON SHEEN

Developer's Signature Dennis Bird Date 4-17-97 Reviewer John Ludlam Date 4/24/97