3R - 145

REPORTS

DATE:
1999

SAN JUAN BASIN PIT CLOSURES
San Juan Basin, New Mexico

El Paso Field Services Pit Project Groundwater Report
Annual Report

RECEIVED
MAR 2 9 2000
ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

March 2000

Prepared For

El Paso Field Services
Farmington, New Mexico

Project 62800158

PHILIP SERVICES CORP.

EPFS GROUNDWATER PITS
1999 ANNUAL GROUNDWATER REPORT

ANDERSON GC A #1 CH
Meter/Line ID - 95210

SITE DETAILS

Legals - Twn: 29N **Rng:** 10W **Sec:** 28 **Unit:** C
NMOCD Hazard Ranking: 40 **Land Type:** FEE
Operator: AMOCO PRODUCTION COMPANY

PREVIOUS ACTIVITIES

Site Assessment: Apr-94 **Excavation:** Apr-94 (25 CY) **Geoprobe:** Oct-96
Re-Excavation: Oct-96 (192 CY) **Soil Boring:** Feb-97 **Monitor Well:** Feb-97
Additional Monitor Well: Nov-99

1999 ACTIVITIES

Additional Monitor Well Installation – Two additional monitor wells were requested by the OCD correspondence dated July 28, 1999. One monitor well, MW-2, was installed in November 1999.

The OCD required EPFS to install additional monitoring wells to monitor groundwater conditions downgradient of the site. These well installations may require off-site work and a right-of-way may be needed from the private landowner.

Quarterly Groundwater Monitoring – Groundwater analytical data has been below standards for four consecutive quarters and was not sampled in 1999 due to request for closure.

SUMMARY TABLES

Previous analytical data are presented in Table 1.

SITE MAP

A site map showing the groundwater gradient is presented as Figure 1.

GEOLOGIC LOGS AND WELL COMPLETION DIAGRAMS

The November 18, 1999, geologic log and well completion diagram are included as Attachment 1.

DISPOSITION OF GENERATED WASTES

There were no wastes generated at this site in 1999.

CONCLUSIONS

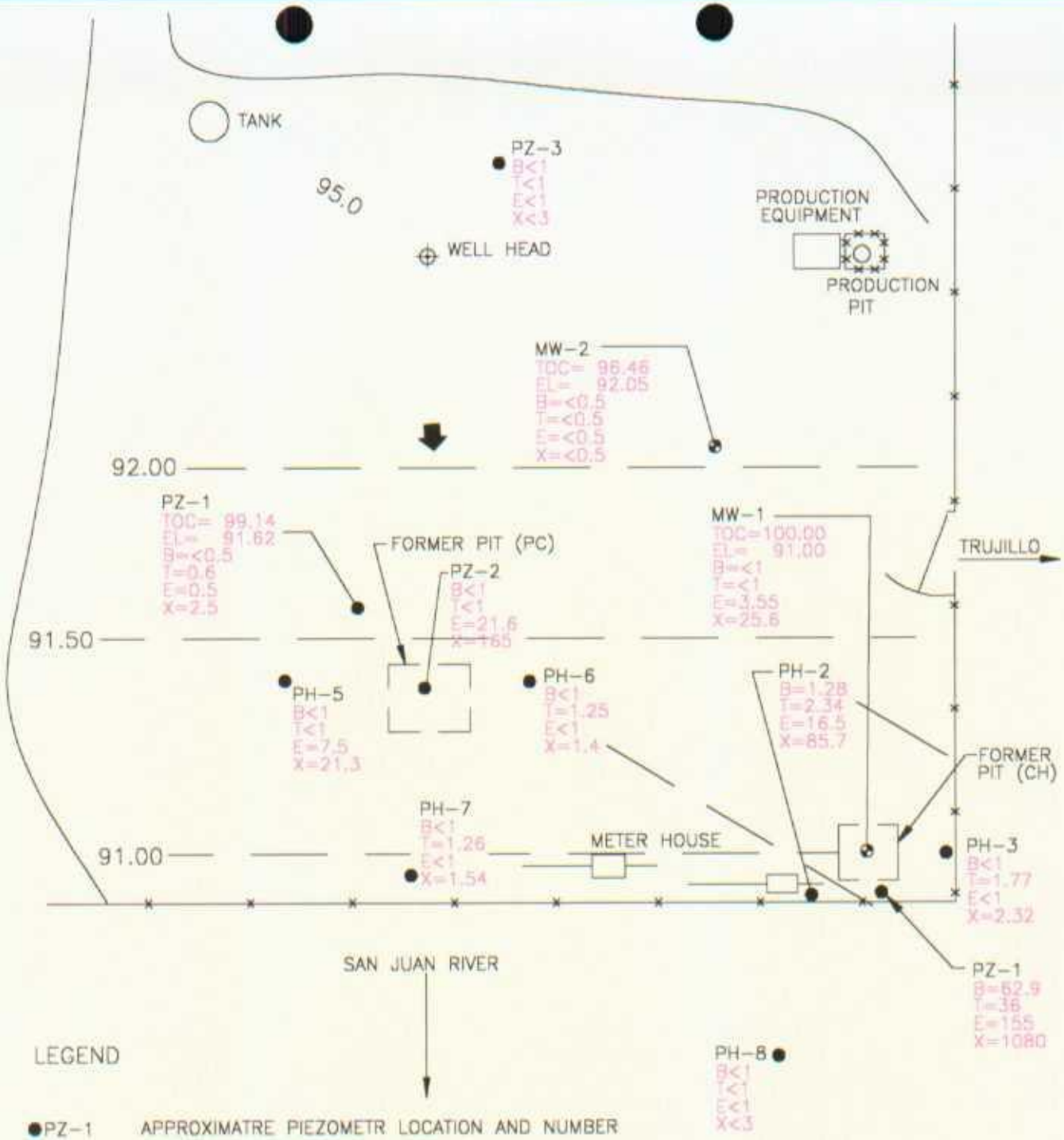
Based on groundwater levels collected from Geoprobe and monitoring well data, the groundwater flow trends to the south on this site, as presented in Figure 1. One downgradient groundwater sample collected from PH-8 was below standards for BTEX. A groundwater sample collected from PZ-1, which is immediately downgradient of MW-1 but upgradient of PH-8 was in excess of standards for benzene and xylene. Groundwater samples collected from crossgradient and upgradient probeholes, piezometers, and MW-2 were below regulatory standards for BTEX.

The OCD requested two additional downgradient monitoring wells which may require off-site work and possible right-of-way from the private landowner. Trees and a 20-30 foot levee for the river begins at the fence on the south side next to the former pit making downgradient access difficult. PH-8 is located on the south side of the levee. EPFS is currently working on the right-of-way access.

Groundwater analytical data has been below standards since quarterly sampling was initiated at MW-1. Minimal impact to groundwater has occurred at this site.

RECOMMENDATIONS

- One additional monitor well will be installed downgradient from MW-1.
- Sample all monitoring wells after the installation of the downgradient monitoring well.
- Following OCD approval for closure, MW-1 will be abandoned following OCD approved abandonment procedures.



TITLE: ANDERSON GC A#1 CH METER 95210 MARCH 1, 2000	DWN: CJG	DES.: CC	PROJECT NO.: 17520 EPFS GW PITS
	CHKD: CC	APPD:	
	DATE: 03/20/00	REV.: 0	FIGURE 1

175205-004
CDL

TABLE 1
Anderson GC A #1 CH

Sample #	Meter/ Line#	Site Name	Sample Date	Project	S1	Benzene (PPB)	S2	Toluene (PPB)	S3	Ehtyl Benzene (PPB)	S4	Total Xulenes (PPB)	S7	Total BTEX PPB
970206*	95210	Anderson GC A #1 CH	03/11/1997	Phase II Drilling - Initial	<	1	<	1	=	3.55	=	25.6	=	31
970805*	95210	Anderson GC A #1 CH	08/04/1997	Sample 4 - 1st Qtr	<	1.21	<	1	<	1	<	3	<	6
980144	95210	Anderson GC A #1 CH	02/05/1998	Sample 4 - 2nd Qtr	<	1	<	1	<	1	<	3	<	6
980347	95210	Anderson GC A #1 CH	05/05/1998	Sample 4 - 3 rd Qtr	<	1	<	1	<	1	<	3	<	6
AND-0003-MW-2	95210	Anderson GC A #1 CH	03/01/2000	Sample - MW - 2	<	0.5	<	0.5	<	0.5	<	0.5	<	2
AND-0003-PZ1A	95210	Anderson GC A #1 CH	03/01/2000	Sample 4 - PZ1A	<	0.5	=	0.6	=	0.5	=	2.5	=	4.1

*Analytical reports provided to NMOCD in prior annual report.

1999
Geologic Logs And Well Completion Diagrams

RECORD OF SUBSURFACE EXPLORATION

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

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

Project Number _____ Phase _____
Project Name ANDERSON GC A #1
Project Location T29N, R10W, S28, UNIT C

Elevation _____
Borehole Location _____
GWL Depth _____
Drilled By K. PADILLA
Well Logged By C. IRBY
Date Started 11/18/99 1030
Date Completed 11/18/99 1145

Drilling Method 4 1/4 ID HSA
Air Monitoring Method 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: PPM BZ	BH	S	Drilling Conditions & Blow Counts
0				0-5' Light brown fine to medium SAND with cobbles. Little clay. Moist at 4 feet.						Difficult drilling due to cobbles
▽ 5		1 (PID)		5' WATER encountered. 5'-10' Dark brown fine to medium SAND with cobbles. Little clay.						WATER at 5'. PID ~~0~~
10		2 (PID)		10'-15.5' SAME. Dark brown fine to medium SAND. Cobbles. Increasing clay.						PID ~~0~~
15	15.5' TD					TD 15.5'				
20										
25										
30										
35										
40										

Comments: Samples 1+2 field screened using PID. Hydrocarbons Not detected. Reproduced by SS on 3/8 from field Notes.

Geologist Signature _____

MONITOR WELL INSTALLATION FORM

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

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

Project Name ANDERSON GC A#1
Project Number _____ Phase _____
Site Location T29N, R10W, S 28

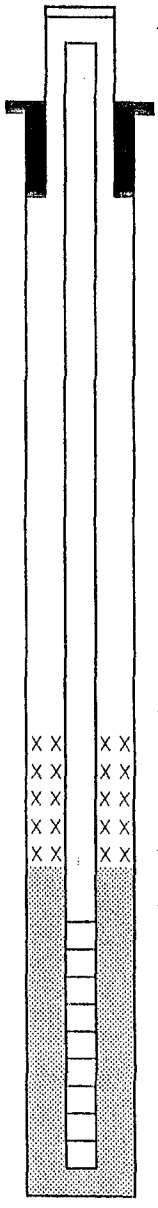
Elevation _____
Well Location _____
GWL Depth -5 ft.
Installed By K PADILLA

On-Site Geologist C. IRBY
Personnel On-Site K. PADILLA
Contractors On-Site NONE
Client Personnel On-Site NONE

Date/Time Started 11/18/99 1030
Date/Time Complete 11/18/99 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	PVC 40	3'
Bottom of Well Riser	PVC 40	-3'
Top of Well Screen	.010 Slot	-3'
Bottom of Well Screen	.010 Slot	-15'
Top of Peltonite Seal	enviroplug	
Bottom of Peltonite Seal		
Top of Gravel Pack	10-20 SAND	-2'
Bottom of Gravel Pack	10-20 SAND	15'
Top of Natural Cave-In		-15'
Bottom of Natural Cave-In		-15.5'
Top of Groundwater		-5'
Total Depth of Borehole		-15.5'



Top of Protective Casing
Top of Riser (survey elev.) 3'
Ground Surface 0

Top of Seal -0.5'
Top of Gravel Pack -2.5'
Top of Screen -3'
Bottom of Screen -15'
Bottom of Borehole -15.5'

Comment _____

Geologist Signature _____

3R - 145

REPORTS

DATE:
1998

SAN JUAN BASIN PIT CLOSURES
San Juan Basin, New Mexico

El Paso Field Services
Final Closure Report For Groundwater Sites With Four Consecutive Quarters Below Standards

RECEIVED
APR 05 1999
ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

December 1998

Prepared For

El Paso Field Services
Farmington, New Mexico

Project 17520
Book 1

PHILIP SERVICES CORP.

EPFS GROUNDWATER PITS
1998 CLOSURE REPORT

ANDERSON GC A #1 CH
Meter/Line ID - 95210

RECEIVED
APR 0 5 1999
ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

SITE DETAILS

Legals - Twn: 29N **Rng:** 10W **Sec:** 28 **Unit:** C
NMOCD Hazard Ranking: 40 **Land Type:** FEE
Operator: AMOCO PRODUCTION COMPANY

PREVIOUS ACTIVITIES

Site Assessment: Apr-94 **Excavation:** Apr-94 (25 cy) **Geoprobe:** Oct-96
Re-Excavation: Oct-96 (192 CY) **Soil Boring:** Feb-97 **Monitor Well:** Feb-97

The pit was excavated to 6 feet beneath ground surface (bgs) where groundwater was encountered. A composite soil sample was collected from the excavation bottom and four walls. Approximately 25 cubic yards were removed during excavation. The headspace soil reading from the excavation bottom was 428 ppm. Soil analytical was as follows; benzene - <0.5, total BTEX – 26.9, and TPH (418.1) 2,220 mg/kg.

The pit was re-excavated to 11 feet bgs and an additional 192 cubic yards of contaminated soil were removed. Groundwater was encountered at 6 feet bgs. Excavation to the south was limited by trees and large berm used for flood control of the San Juan River. The headspace soil reading from the excavation bottom was 126 ppm. Soil analytical was as follows; benzene – non- detect, total BTEX – non- detect, and TPH – 25.0 mg/kg. One half gallon of 30% hydrogen peroxide was added to the excavation to aid in the natural degradation of residual hydrocarbons.

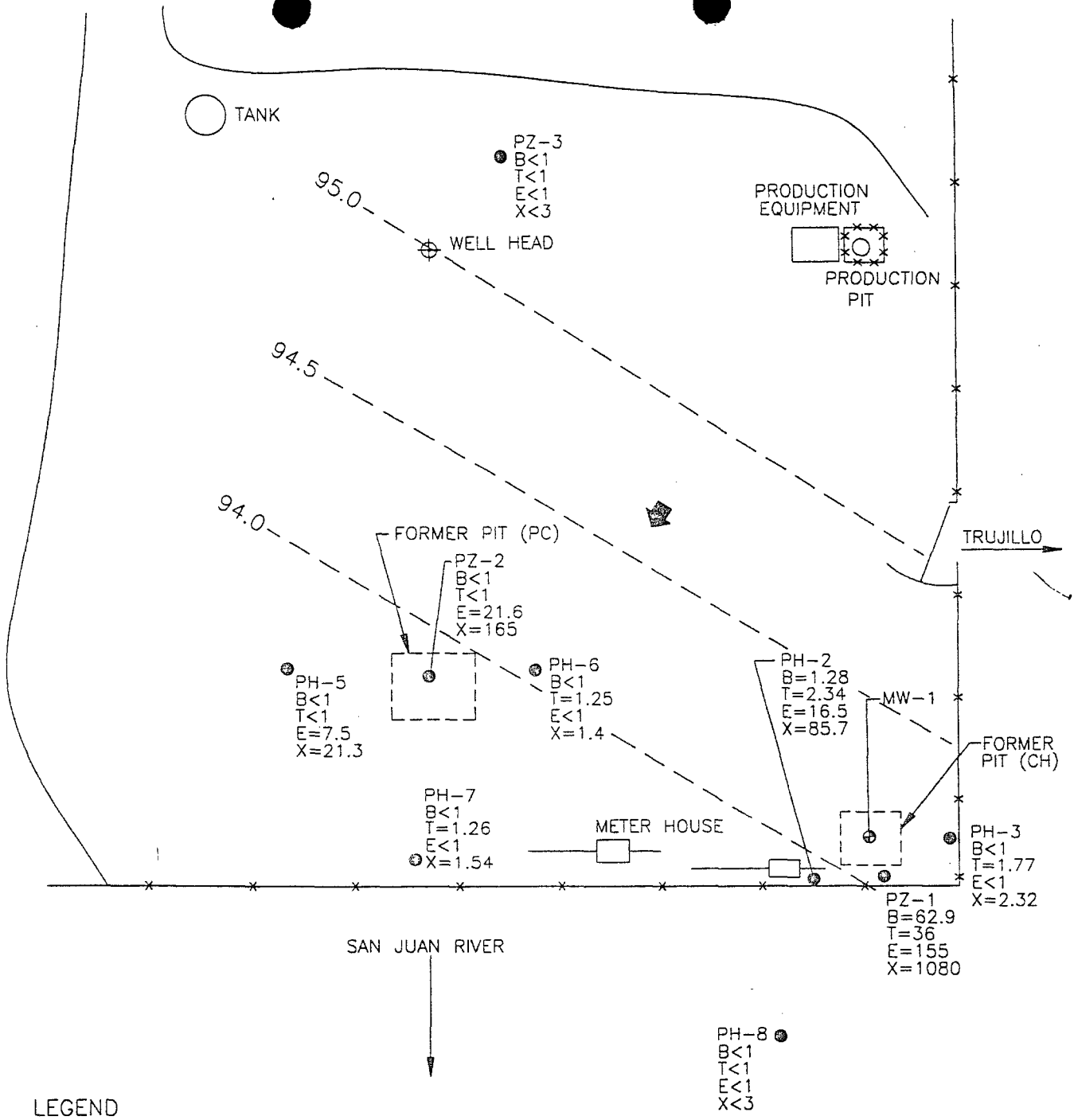
One soil boring was drilled in the center of the former pit. Groundwater was encountered at 6 feet bgs and a monitoring well was installed. No soil samples were collected. Quarterly groundwater monitoring was initiated on 3/11/97 and continued through 5/5/98. Groundwater analytical data are presented in Table 1. Groundwater analytical data prior to 1998 has been previously submitted in the 1997 Annual Report, along with boring logs and monitoring well installation diagrams.

CONCLUSIONS

Groundwater analytical data has been below standards for 4 consecutive quarters since quarterly sampling was initiated, indicating minimal impact to groundwater at this site. Additional geoprobe groundwater sampling has also shown minimal impact to groundwater at the site.

RECOMMENDATIONS

- EPFS request closure at this site.
- Following OCD approval for closure, MW-1 will be abandoned following OCD approved abandonment procedures.



LEGEND

B	BENZENE (ug/L)
T	TOLUENE (ug/L)
E	ETHYL BENZENE (ug/L)
X	XYLENE (ug/L)
ug/L	MICROGRAMS PER LITER
●PH-4	APPROXIMATE PROBEHOLE LOCATION AND NUMBER
94.0	GROUNDWATER POTENTIOMETRIC SURFACE
	APPROXIMATE GROUNDWATER GRADIENT

NOT TO SCALE

N

PHILIP SERVICES CORP

TITLE:

ANDERSON GC A#1 CH
95210

DWN:	DES.:	PROJECT NO.: 17520
TMM	CC	EPFS GW PITS
CHKD:	APPD:	
CC		
DATE:	REV.:	FIGURE 1
1/21/98	0	

COL. 17520S-002

FIELD PIT SITE ASSESSMENT FORM

GENERAL

Meter: 95210 Location: ANDERSON GAS COM A #1 CH

Operator #: 0203 Operator Name: AMOCO P/L District: BLOOMFIELD

Coordinates: Letter: C Section 28 Township: 29 Range: 10

Or Latitude _____ Longitude _____

Pit Type: Dehydrator ___ Location Drip: X Line Drip: ___ Other: _____

Site Visit Date: 4.12.94 Run: 10 42

SITE ASSESSMENT

NMOCD Zone: (From NMOCD Maps)
- Inside Vulnerable Zone ☒
- Outside ☐

Land Type:
- BLM ☐
- State ☐
- Fee ☒
- Indian _____

Depth to Groundwater
- Less Than 50 Feet (20 points) ☒
- 50 Ft to 99 Ft (10 points) ☐
- Greater Than 100 Ft (0 points) ☐

Wellhead Protection Area :
Is it less than 1000 ft from wells, springs, or other sources of fresh water extraction? , or ; Is it less than 200 ft from a private domestic water source? ☐ YES (20 points) ☒ NO (0 points)

Horizontal Distance to Surface Water Body
- Less Than 200 Ft (20 points) ☒
- 200 Ft to 1000 Ft (10 points) ☐
- Greater Than 1000 Ft (0 points) ☐

Name of Surface Water Body SAN JUAN RIVER

(Surface Water Body : Perennial Rivers,Major Wash,Streams,Creeks, Irrigation Canals,Ditches,Lakes,Ponds)

TOTAL HAZARD RANKING SCORE: 40 **POINTS**

REMARKS

Remarks : THREE PITS ON LOCATION. WILL CLOSE TWO OF THEM. PITS ARE DRY. LOCATION HAS A CH AND PC SIDE. IT IS LOCATED NEXT TO THE SAN JUAN RIVER.

PHASE I EXCAVATION

FIELD REMEDIATION/CLOSURE FORM

GENERAL

Meter: 95210 Location: ANDERSON GAS COM A #1 CH

Coordinates: Letter: C Section 28 Township: 29 Range: 10

Or Latitude _____ Longitude _____

Date Started : 4-29-94 Area: 10 Run: 42

FIELD OBSERVATIONS

Sample Number(s): 940349 KP #9 _____ _____ _____

Sample Depth: 6' Feet

Final PID Reading 428 PID Reading Depth 6' Feet

	Yes	No	
Groundwater Encountered	☒ (1)	☐ (2)	Approximate Depth 6' Feet

CLOSURE

Remediation Method :

Excavation	☒ (1)	Approx. Cubic Yards 25
Onsite Bioremediation	☐ (2)	
Backfill Pit Without Excavation	☐ (3)	

Soil Disposition:

Envirotech	☐ (1)	☒ (3)	Tierra
Other Facility	☐ (2)	Name:	_____

Pit Closure Date: 4/29/94 Pit Closed By: B.E.I

REMARKS

Remarks : Some Line markers dug down 6' Hit groud water wait for Alton James to call OCD For we could close Pit. OCD Bill olson OKayed to close up Pit.

Signature of Specialist: Kelly Padilla

(SP3191) 04/07/94

El Paso Natural Gas Company

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT - Soil

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	KP9	945049
MTR CODE | SITE NAME:	95210	N/A
SAMPLE DATE | TIME (Hrs):	4/29/94	1320
SAMPLED BY:	N/A	
DATE OF TPH EXT. | ANAL.:	5-2-94	5-2-94
DATE OF BTEX EXT. | ANAL.:	5/5/94	5/9/94
TYPE | DESCRIPTION:	VC	Brown Sand/Clay

REMARKS: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q	M(g)	V(ml)
BENZENE	<0.50	MG/KG				
TOLUENE	<0.50	MG/KG				
ETHYL BENZENE 2.9	~~<0.50~~	MG/KG				
TOTAL XYLENES 23	~~2.9~~	MG/KG				
TOTAL BTEX	26.9	MG/KG				
TPH (418.1) 2220	~~2245~~	MG/KG			2.27	28
HEADSPACE PID	428	PPM				
PERCENT SOLIDS	83.9	%				

JW 5/19/94

JW 5/14/94

– TPH is by EPA Method 418.1 and BTEX is by EPA Method 8020 –

The Surrogate Recovery was at 42 % for this sample All QA/QC was acceptable.

Narrative:

ATI Results attached. Surrogate recovery was outside ATI QC limit. Due to matrix interference.

DF = Dilution Factor Used

Approved By: John Sandi Date: 5/21/94

El Paso Natural Gas Company

CHAIN OF CUSTODY RECORD

Page 1 of 1

PROJECT NUMBER	PROJECT NAME	SAMPLERS: (Signature)	DATE:
	Pit Closure Project # 24324	Kelly Padilla	4/29/94

LAB ID	DATE	TIME	MATRIX	SAMPLE NUMBER	TOTAL NUMBER OF CONTAINERS	SAMPLE TYPE	TPH EPA 418.1	BTEX EPA 8020				SEQ #	REMARKS
	4/29/94	1015	soil	KP #7	1	VG	X	X				5	GW at 8'
	4/29/94	1300	soil	KP #8	1	VG	X	X				6	GW at 8'
	4/29/94	1326	soil	KP #9	1	VG	X	X				7	GW at 6'
	4/29/94	1445	soil	KP #10	1	VG	X	X				8	

CONTRACT LABORATORY P. O. NUMBER

REQUESTED ANALYSIS

REMARKS

RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)
Kelly Padilla	4/29/94 1610	Lisa T. Pyne 30°F	Lisa T. Pyne	5/2/94 1005 30°F	
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED OF LABORATORY BY: (Signature)

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*

Analytical Technologies, Inc.

95210

GAS CHROMATOGRAPHY RESULTS

TEST : BTEX (EPA 8020)

CLIENT : EL PASO NATURAL GAS CO. ATI I.D.: 405331

PROJECT # : 24324

PROJECT NAME : PIT PROJECT

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
04	945054	AQUEOUS	04/29/94	NA	05/12/94	50
05	945055	AQUEOUS	04/29/94	NA	05/11/94	250
06	945067	AQUEOUS	05/03/94	NA	05/11/94	250

PARAMETER	UNITS	04	05	06
BENZENE	UG/L	130	3200	1000
TOLUENE	UG/L	900	2500	1700
ETHYLBENZENE	UG/L	320	2500	900
TOTAL XYLENES	UG/L	4000	28000	8300
SURROGATE:				
BROMOFLUOROBENZENE (%)		95	81	90

PHASE III RE-EXCAVATION

FIELD PIT REMEDIATION/CLOSURE FORM/PHASE II

GENERAL

Meter: 95210 Location: Anderson Gas Com A #1 CH

Coordinates: Letter: C Section 28 Township: 29 Range: 10

Or Latitude _____ Longitude _____

Date Started : 10-23-96 Area: 10 Run: 42

FIELD OBSERVATIONS

Sample Number(s): MK543 _____ _____ _____

Sample Depth: 11' Feet

Final PID Reading 126 PPm PID Reading Depth 11' Feet

Yes No

Groundwater Encountered ☒ (1) ☐ (2) Approximate Depth 6' Feet

Final Dimensions: Length 22 Width 27 Depth 11

CLOSURE

Remediation Method :

Excavation ☒ (1) Approx. Cubic Yards 192

Onsite Bioremediation ☐ (2)

Backfill Pit Without Excavation ☐ (3)

Overburden Cubic Yards 40

Soil Disposition:

Envirotech ☒ (1) ☐ (3) Tierra

Other Facility ☐ (2) Name: _____

Pit Closure Date: 10-24-96 Pit Closed By: philip

REMARKS

Phase III

Remarks : Excavated 1st 3' was over Burden soil turned Black hit water at 6' N-wall 45 PPm soil Gray Clay East-wall Gray Clay W-wall Black sand 12 PPm S-wall 162 PPm Black Sand Sout wall where most of wate Flowing From Used 1/2 gallon of Hydrogen Peroxide 30%

Signature of Specialist: Morgan Killion

El Paso Natural Gas Company

CHAIN OF CUSTODY RECORD

Page ____ of ____

PROJECT NUMBER	PROJECT NAME
# 24324	Pit Closure Project

SAMPLERS: (*Signature*) Morgan Killion

DATE: 10-22-96

LAB ID	DATE	TIME	MATRIX	FIELD ID	TOTAL NUMBER OF CONTAINERS	SAMPLE TYPE	TPH EPA 418.1	BTEX EPA 8020	LAB PID			SEQUENCE #	REMARKS
947949	10-22-96	0940	Soil	MK543	1	VC	X	X				34	Anderson Gas Com A #1 CA 95210

REQUESTED ANALYSIS

CONTRACT LABORATORY P. O. NUMBER

RELINQUISHED BY: (*Signature*)	DATE/TIME	RECEIVED BY: (*Signature*)	RELINQUISHED BY: (*Signature*)	DATE/TIME	RECEIVED BY: (*Signature*)
Morgan Killion 10-23-96	340 1150	Kelly Sorrell	Kelly Sorrell	10-25-96 390 11:15	
RELINQUISHED BY: (*Signature*)	DATE/TIME	RECEIVED BY: (*Signature*)	RELINQUISHED BY: (*Signature*)	DATE/TIME	RECEIVED OF LABORATORY BY: (*Signature*)
				10-25-96 1115	Maria Armenta

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)

EPFS

EL PASO FIELD SERVICES
FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SJ 2-5-97 ✓

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	MK543	947949
MTR CODE | SITE NAME:	95210	Anderson Gas Com A #1 CH
SAMPLE DATE | TIME (Hrs):	10/23/96	940
PROJECT:	~~PHASE III~~ - Excavation	PHASE IV Excavation JL 11/3/96
DATE OF TPH EXT. | ANAL.:	10/28/96	10/28/96
DATE OF BTEX EXT. | ANAL.:	10/28/96	10/28/96
TYPE | DESCRIPTION:	VC	Dark gray sand & clay

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q	M(g)	V(ml)
BENZENE	<0.5	MG/KG				
TOLUENE	<0.5	MG/KG				
ETHYL BENZENE	<0.5	MG/KG				
TOTAL XYLENES	<1.5	MG/KG				
TOTAL BTEX	~~1.04~~ <3.0 JV 10/30/96	MG/KG				
TPH (418.1)	25	MG/KG				
HEADSPACE PID	126	PPM				
PERCENT SOLIDS	82.8	%				

– TPH is by EPA Method 418.1 and BTEX is by EPA Method 8020 –

e Surrogate Recovery was at 113 % for this sample All QA/QC was acceptable.
rative:

= Dilution Factor Used

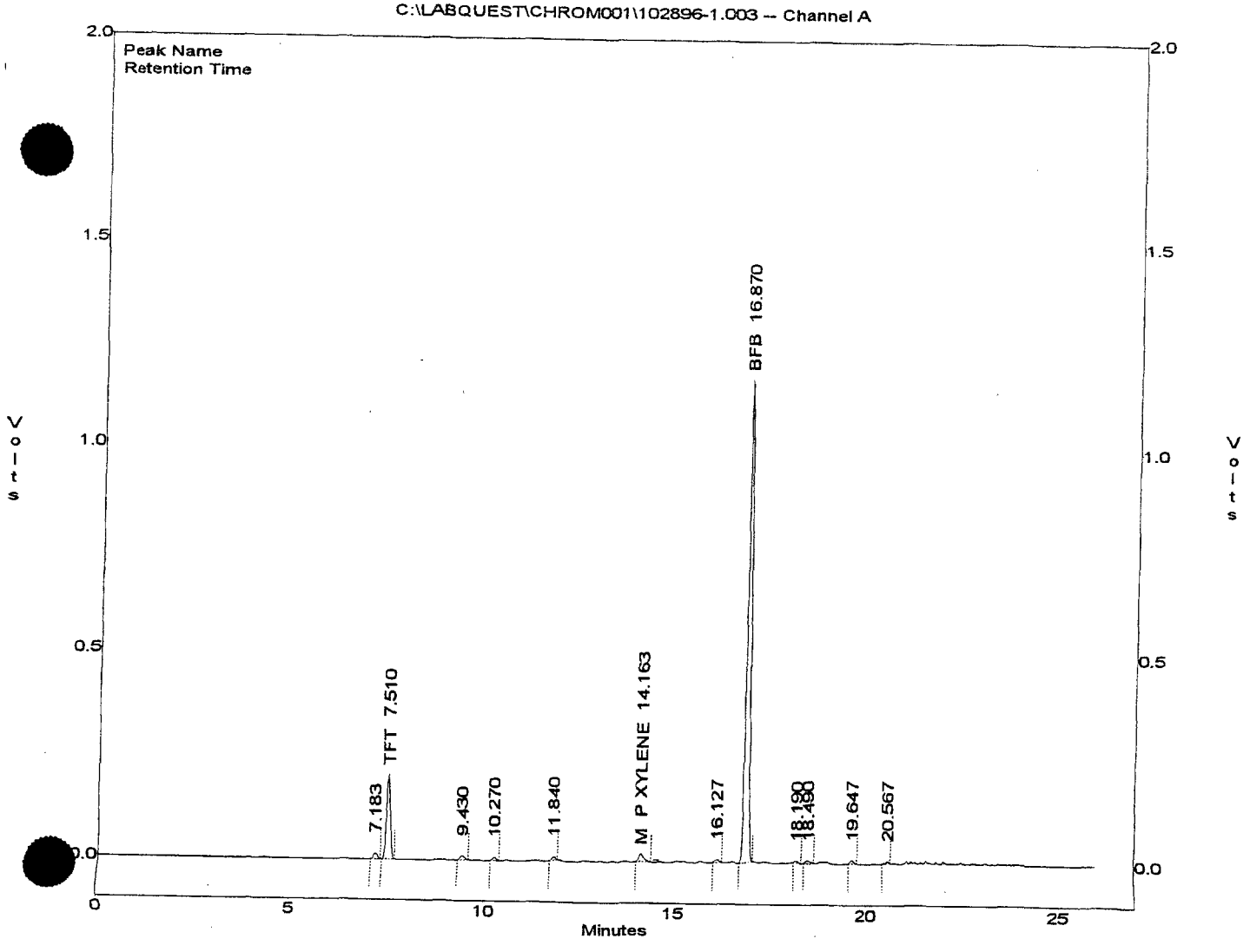
proved By: John Labrie INGVZPIT.XLS Date: 10/30/96

EL PASO NATURAL GAS
EPA METHOD 8020 - BTEX SOILS

File : C:\LABQUEST\CHROM001\102896-1.003
Method : C:\LABQUEST\METHODS\1-100896.MET
Sample ID : 947949,4.96G,50U
Acquired : Oct 28, 1996 16:34:07
Printed : Oct 28, 1996 17:00:32
User : MARLON

Channel A Results

COMPONENT	RET TIME	AREA	CONC (ug/L)
BENZENE	5.567	0	0.0000
TFT	7.510	1390547	114.4427
TOLUENE	9.677	0	0.0000
ETHYLBENZENE	13.740	0	0.0000
M & P XYLENE	14.163	181787	5.1750
O XYLENE	15.250	0	0.0000
BFB	16.870	7765927	113.0305



BTEX SOIL SAMPLE WORKSHEET

File	: 947949	Date Printed	: 10/29/96		
Soil Mass (g)	: 4.96	Multiplier (L/g)	: 0.00101		
Extraction vol. (mL)	: 10	CAL FACTOR (Analytical):	200		
Shot Volume (uL)	: 50	CAL FACTOR (Report):	0.20161		
		DILUTION FACTOR:	1	Det. Limit	
Benzene (ug/L)	: 0.00	Benzene (mg/Kg):	**0.000**	0.504	
Toluene (ug/L)	: 0.00	Toluene (mg/Kg):	**0.000**	0.504	
Ethylbenzene (ug/L)	: 0.00	Ethylbenzene (mg/Kg):	**0.000**	0.504	
p & m-xylene (ug/L)	: 5.18	p & m-xylene (mg/Kg):	1.044	1.008	
o-xylene (ug/L)	: 0.00	o-xylene (mg/Kg):	0.000	0.504	
		Total xylenes (mg/Kg):	**1.044**	1.512	
		Total BTEX (mg/Kg):	**1.044**		

****
Test Method for
Oil and Grease and Petroleum Hydrocarbons
in Water and Soil

Perkin-Elmer Model 1600 FT-IR
Analysis Report
****

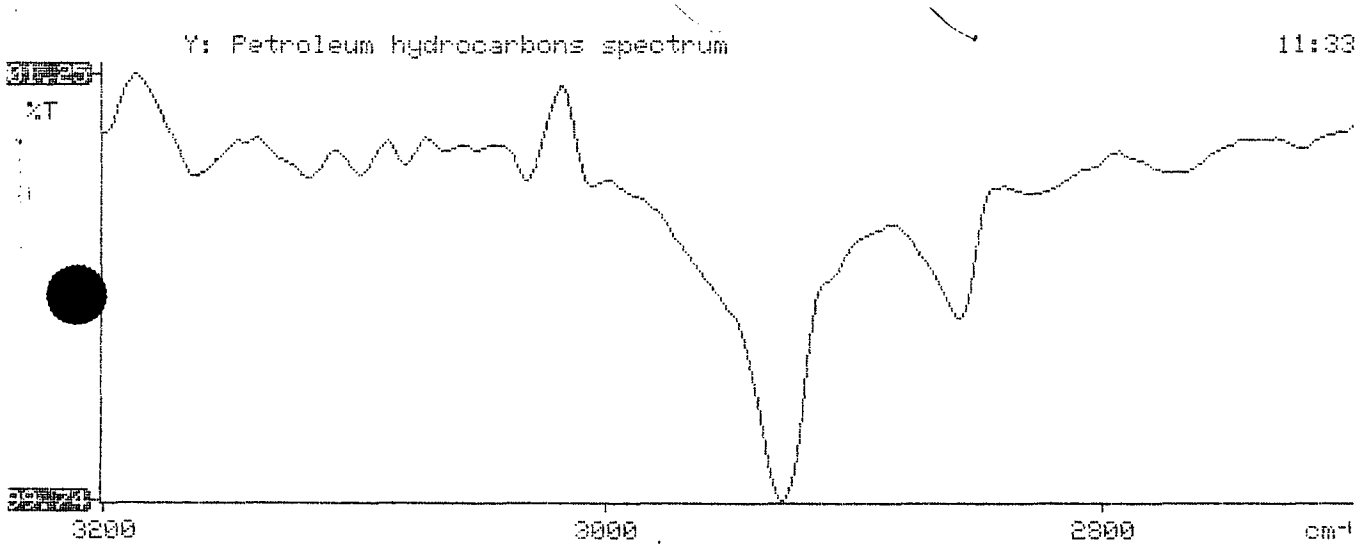
96/10/28 11:33

Sample identification
947949

Initial mass of sample, g
2.710

Volume of sample after extraction, ml
28.000

Petroleum hydrocarbons, ppm
25.454
Net absorbance of hydrocarbons (2930 cm-1)
0.006



GEOPROBE

PIEZOMETER INSTALLATION RECORD

Borehole # PZ - 1
Well #
Page 1 of 1

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

Project Name EPFS PITS
Project Number 16297 Phase 6004
Site Location Anderson GC 1 95210/94984

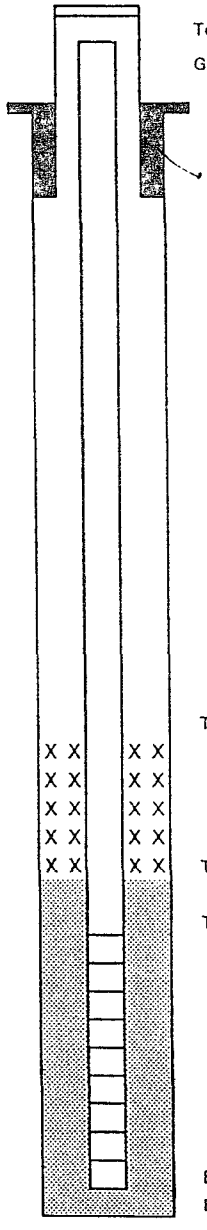
Elevation
Well Location S of PIT
GWL Depth 6.0' BGS 8.25TOR
Installed By K PADILLA

Date/Time Started 10/21/96
Date/Time Completed 10/21/96

On-Site Geologist CM CHANCE
Personnel On-Site D CHARLEY
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		N/A
Bottom of Permanent Borehole Casing		N/A
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
Ground Surface
Top of Seal
Top of Gravel Pack
Top of Screen 2.5'
Bottom of Screen 7.5'
Bottom of Borehole

Comments:

Geologist Signature

PIEZOMETER INSTALLATION RECORD

Borehole # PZ - 2
Well #
Page 1 of 1

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

Project Name EPFS PITS
Project Number 16297 Phase 6004
Site Location Anderson GC 1 9.5210/94984

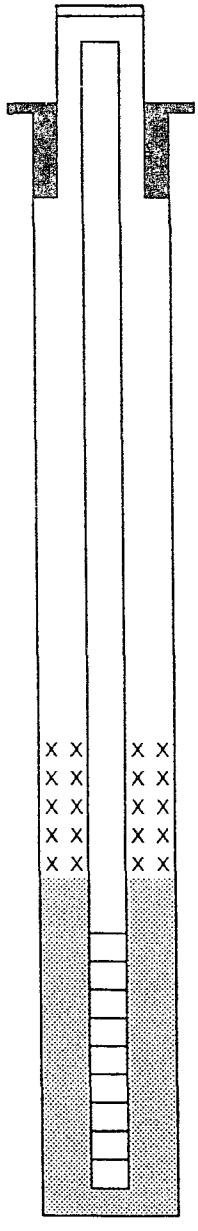
Elevation
Well Location Center of PC Pit
GWL Depth 8.55 TOR
Installed By K PADILLA

Date/Time Started 10/22/96
Date/Time Completed 10/22/96

On-Site Geologist CM CHANCE
Personnel On-Site D CHARLEY
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		N/A
Bottom of Permanent Borehole Casing		N/A
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
Ground Surface
Top of Seal
Top of Gravel Pack
Top of Screen 2-5
Bottom of Screen 7.5
Bottom of Borehole

Comments:

Geologist Signature

MWINSTAL.wk1

PIEZOMETER INSTALLATION RECORD

Borehole # PZ-3
Well #
Page 1 of 1

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

Project Name EPFS PITS
Project Number 16297 Phase 6004
Site Location Anderson GC 1A 95210/94484

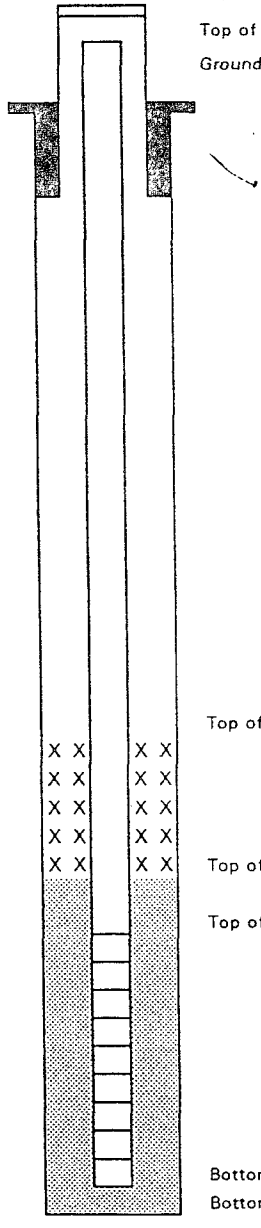
Elevation
Well Location N of Wellhead
GWL Depth 4.59 TOR
Installed By K PADILLA

Date/Time Started 10/22/96
Date/Time Completed 10/22/96

On-Site Geologist CM CHANCE
Personnel On-Site D CHARLEY
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		N/A
Bottom of Permanent Borehole Casing		N/A
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
Ground Surface
Top of Seal
Top of Gravel Pack
Top of Screen 3.5
Bottom of Screen 6.0
Bottom of Borehole

Comments:

Geologist Signature

MWINSTAL.wk1

✓

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	CMC212	947934
MTR CODE | SITE NAME:	95210/94984	Anderson GC #1
SAMPLE DATE | TIME (Hrs):	10/21/96	1045
PROJECT:	Geoprobe	
DATE OF BTEX EXT. | ANAL.:	10/23/96	10/23/96
TYPE | DESCRIPTION:	PH1 ~~Grab~~	~~PH1~~ Water

Field Remarks: ______

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	62.9	PPB	2	D		
TOLUENE	36.0	PPB	2	D		
ETHYL BENZENE	155	PPB	2	D		
TOTAL XYLENES	1080	PPB	2	D,D1		
TOTAL BTEX	1334	PPB				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 96.0 % 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 indicates that the analyte calculated is based on a secondary dilution factor.
Narrative:

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

947948.XLS,10/25/96

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	CMC213	947935
MTR CODE | SITE NAME:	95210/94984	Anderson GC #1
SAMPLE DATE | TIME (Hrs):	10/21/96	1205
PROJECT:	Geoprobe	
DATE OF BTEX EXT. | ANAL.:	10/23/96	10/23/96
TYPE | DESCRIPTION:	PH2 ~~Grab~~	~~PH2~~ water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	1.28	PPB				
TOLUENE	2.34	PPB				
ETHYL BENZENE	16.5	PPB				
TOTAL XYLENES	85.7	PPB				
TOTAL BTEX	106	PPB				

–BTEX is by EPA Method 8020 –

The Surrogate Recovery was at 96.4 % for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative:

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

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	CMC214	947936
MTR CODE | SITE NAME:	95210/94984	Anderson GC #1
SAMPLE DATE | TIME (Hrs):	10/21/96	1335
PROJECT:	Geoprobe	
DATE OF BTEX EXT. | ANAL.:	10/23/96	10/23/96
TYPE | DESCRIPTION:	PH3 ~~Grab~~	~~PHS~~ water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS DF	Q		
BENZENE	<1	PPB				
TOLUENE	1.77	PPB				
ETHYL BENZENE	<1	PPB				
TOTAL XYLENES	2.32	PPB				
TOTAL BTEX	4.09	PPB				

–BTEX is by EPA Method 8020 –

The Surrogate Recovery was at 93.4 % for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative:

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

947936.XLS,10/25/96

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	CMC215	947937
MTR CODE | SITE NAME:	95210/94984	Anderson GC #1
SAMPLE DATE | TIME (Hrs):	10/21/96	1350
PROJECT:	Geoprobe	
DATE OF BTEX EXT. | ANAL.:	10/23/96	10/23/96
TYPE | DESCRIPTION:	PH4 ~~Grab~~	~~PH4~~ Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	<1	PPB				
TOLUENE	<1	PPB				
ETHYL BENZENE	21.6	PPB				
TOTAL XYLENES	165	PPB				
TOTAL BTEX	187	PPB				

–BTEX is by EPA Method 8020 –

The Surrogate Recovery was at 93.8 % for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative:

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

947934.XLS,10/25/96

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	CMC216	947938
MTR CODE | SITE NAME:	95210/94984	Anderson GC #1
SAMPLE DATE | TIME (Hrs):	10/21/96	1415
PROJECT:	Geoprobe	
DATE OF BTEX EXT. | ANAL.:	10/23/96	10/23/96
TYPE | DESCRIPTION:	DHS ~~Grab~~	~~PHE~~ Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	<1	PPB				
TOLUENE	<1	PPB				
ETHYL BENZENE	7.50	PPB				
TOTAL XYLENES	21.3	PPB				
TOTAL BTEX	28.8	PPB				

–BTEX is by EPA Method 8020 –

The Surrogate Recovery was at 89.2 % for this sample All QA/QC was acceptable.

DF = Dilution Factor Used

Narrative:

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

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	CMC217	947939
MTR CODE | SITE NAME:	95210/94984	Anderson GC #1
SAMPLE DATE | TIME (Hrs):	10/21/96	1435
PROJECT:	Geoprobe	
DATE OF BTEX EXT. | ANAL.:	10/23/96	10/23/96
TYPE | DESCRIPTION:	PHC ~~Grab~~	~~PHC~~ water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	<1	PPB				
TOLUENE	1.25	PPB				
ETHYL BENZENE	<1	PPB				
TOTAL XYLENES	1.40	PPB				
TOTAL BTEX	2.65	PPB				

–BTEX is by EPA Method 8020 –

The Surrogate Recovery was at 93.1 % for this sample All QA/QC was acceptable.

DF = Dilution Factor Used

Narrative:

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

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	CMC218	947940
MTR CODE | SITE NAME:	95210/94984	Anderson GC #1
SAMPLE DATE | TIME (Hrs):	10/21/96	1550
PROJECT:	Geoprobe	
DATE OF BTEX EXT. | ANAL.:	10/23/96	10/23/96
TYPE | DESCRIPTION:	PW ~~Grab~~	~~PW~~ water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	<1	PPB				
TOLUENE	1.26	PPB				
ETHYL BENZENE	<1	PPB				
TOTAL XYLENES	1.54	PPB				
TOTAL BTEX	2.80	PPB				

–BTEX is by EPA Method 8020 –

The Surrogate Recovery was at 92.3 % for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative:

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

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	CMC219	947941
MTR CODE | SITE NAME:	95210/94984	Anderson GC #1
SAMPLE DATE | TIME (Hrs):	10/21/96	1620
PROJECT:	Geoprobe	
DATE OF BTEX EXT. | ANAL.:	10/23/96	10/23/96
TYPE | DESCRIPTION:	PH8 ~~Grab~~	~~PH8~~ 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 92.3 % for this sample All QA/QC was acceptable.

DF = Dilution Factor Used

Narrative:

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

947939.XLS,10/25/96

EPFS
EL PASO FIELD SERVICES

QUALITY CONTROL REPORT
EPA METHOD 8020 - BTEX

Samples: 947934 - 947941 and 960875 - 960879

QA/QC for 10/23/96 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	54.8	110	75 - 125 %	X	
Toluene	Standard	50.0	53.3	107	75 - 125 %	X	
Ethylbenzene	Standard	50.0	53.1	106	75 - 125 %	X	
m & p - Xylene	Standard	100	101	101	75 - 125 %	X	
o - Xylene	Standard	50.0	53.6	107	75 - 125 %	X	

SAMPLE NUMBER LCS LA-45478 25 PPB	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE RANGE	YES	NO
Benzene	Standard	25.0	28.3	113	39 - 150	X	
Toluene	Standard	25.0	27.5	110	46 - 148	X	
Ethylbenzene	Standard	25.0	27.6	110	32 - 160	X	
m & p - Xylene	Standard	50.0	51.3	103	Not Given	X	
o - Xylene	Standard	25.0	27.9	112	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	51.6	103	75 - 125 %	X	
Toluene	Standard	50.0	50.8	102	75 - 125 %	X	
Ethylenzene	Standard	50.0	50.8	102	75 - 125 %	X	
m & p - Xylene	Standard	100	97.2	97.2	75 - 125 %	X	
o - Xylene	Standard	50.0	51.2	102	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	42.1	84.2	75 - 125 %	X	
Toluene	Standard	50.0	41.0	82.0	75 - 125 %	X	
Ethylbenzene	Standard	50.0	40.9	81.8	75 - 125 %	X	
m & p - Xylene	Standard	100	77.4	77.4	75 - 125 %	X	
o - Xylene	Standard	50.0	41.2	82.4	75 - 125 %	X	

Narrative: Acceptable.

EL PASO FIELD SERVICES LAB
QUALITY CONTROL REPORT
EPA METHOD 8020 - BTEX
Samples: 947934 - 947941 and 960875 - 960879

ORATORY DUPLICATES:

SAMPLE ID 947935	TYPE	SAMPLE RESULT PPB	DUPLICATE RESULT PPB	RPD	ACCEPTABLE RANGE	YES	NO
Benzene	Matrix Duplicate	1.28	1.08	16.9	+/- 20 %	X	
Toluene	Matrix Duplicate	2.34	2.37	1.27	+/- 20 %	X	
Ethylbenzene	Matrix Duplicate	16.5	15.9	3.70	+/- 20 %	X	
m & p - Xylene	Matrix Duplicate	82.6	80.1	3.07	+/- 20 %	X	
o - Xylene	Matrix Duplicate	3.04	2.95	3.01	+/- 20 %	X	

Narrative: Acceptable.

LABORATORY SPIKES:

SAMPLE ID 2nd Analysis 947935	SPIKE ADDED PPB	SAMPLE RESULT PPB	SPIKE SAMPLE RESULT PPB	%R	ACCEPTABLE RANGE	YES	NO
Benzene	50	1.28	53.8	105	75 - 125 %	X	
Toluene	50	2.34	55.9	107	75 - 125 %	X	
Ethylbenzene	50	16.5	65.8	98.6	75 - 125 %	X	
m & p - Xylene	100	82.6	175	92.4	75 - 125 %	X	
o - Xylene	50	3.04	52.4	98.7	75 - 125 %	X	

ative: Acceptable

DITIONAL ANALYTICAL BLANKS:

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

Narrative: Acceptable.

SOIL VIAL BLANK	SOURCE Lot MB1451	PPB (Analyzed with this set)	STATUS
Benzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Toluene	Vial + Boiled Water	<1.0	ACCEPTABLE
Ethylbenzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Total Xylenes	Vial + Boiled Water	<3.0	ACCEPTABLE

Narrative: Acceptable.

CONTAMINATION CARRYOVER CHECK	SOURCE	PPB (Three analyzed with this set)	STATUS
Benzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Toluene	Vial + Boiled Water	<1.0	ACCEPTABLE
Ethylbenzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Total Xylenes	Vial + Boiled Water	<3.0	ACCEPTABLE

ative: Acceptable.

Reported By: Onda Approved By: John Jacobs Date: 10/29/96

Geoprobe

El Paso Natural Gas Company

A 2343

CHAIN OF CUSTODY RECORD

Project No.	Project Name
16297	EPPS PITS

Samplers: (Signature) Cory Chavez

Date: 10/21/96

	Date	Time	Comp.	GRAB	Sample Number	Type and No. of Sample Containers	Preservation Technique	Requested Analysis: BTEX				Remarks
47934	10/21/96	1045		✓	CMC 212	2	HCl/4°C	✓				Anderson GC# 95210 94984 PH1 (6-9' cmc 10/22/96 PZ1
47935		1205		✓	CMC 213	2		✓				PH2 94984
47936		1335		✓	CMC 214	2		✓				PH3
47937		1350		✓	CMC 215	2		✓				PH4 (PZ2
47938		1415		✓	CMC 216	2		✓				PH5
47939		1435		✓	CMC 217	2		✓				PH6
47940		1550		✓	CMC 218	2		✓				PH7
47941		1620		✓	CMC 219	2		✓				PH8 (PZ3
		—			TRIP BLANK	1		✓				

RUSH TURNAROUND

Cmc 10/21/96

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Cory Chavez	10/21/96 1700	Cory Chavez	Cory Chavez	10/22/96 0757	
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
		Cory Chavez		10/22/96 0757	Marla Armenta
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks:	

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

Air Bill No.:

Form 71-55 A

RECORD OF SUBSURFACE EXPLORATION

Borehole # BH-7
Well # 1
Page 1 of 1

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

Project Name EPFS GW PITS
Project Number 17520 Phase 6001.77
Project Location ANDERSON GC A#1 - 95210

Elevation
Borehole Location T27-R10-S28-Ltr C
GWL Depth 9'
Logged By D CESARK
Drilled By M DONOHUE
Date/Time Started 2/27/97 - 1000
Date/Time Completed 2/27/97 - 1045

Well Logged By D CESARK
Personnel On-Site D CHARLEY
Contractors On-Site
Client Personnel On-Site

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

Depth (Feet)	Sample Number	Sample Interval	Sample Type & Recovery (inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: PPM BZ	BH	S	Drilling Conditions & Blow Counts
0				BACKFILL TO 6'					0/HS	
5	1	6'-8'	12"	(BACKFILL)					1/-	
10				9' BGS - COBBLES						
				TD = 13'						
15										
20										
25										
30										
35										
40										

Comments: GW ENCOUNTERED @ 9' BGS. TD = 13' BGS @ AUGER REFUSAL IN COBBLES. LAST RETRIEVABLE SAMPLE ABOVE GW WAS IN FILL MATERIAL SO NO SAMPLES SUBMITTED TO LAB. SET WELL - PLEASE REFER TO WELL COMP. DIAGRAM.

Geologist Signature

MONITORING WELL INSTALLATION RECORD

Borehole # 2
Well # 1
Page 1 of 1

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

Project Name EPFS GW PITS
Project Number 17520 Phase 6002.77
Site Location ANDERSEN GC A#1 — 95210

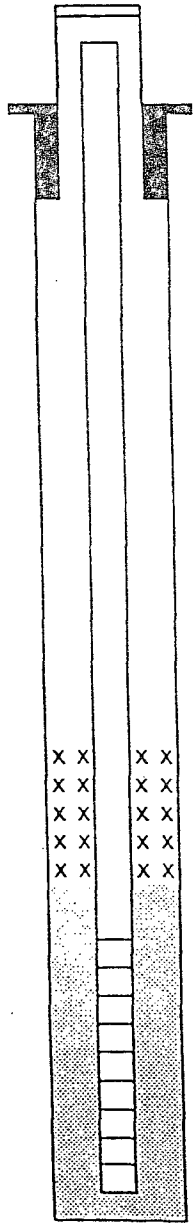
Elevation
Well Location T29N-R10W-S28-L'C'
GWL Depth 9' BGS
Installed By M DONOHUE

On-Site Geologist D CESARK
Personnel On-Site D CHARLEY
Contractors On-Site
Client Personnel On-Site

Date/Time Started 2/27/97 — 1045
Date/Time Completed " — 1280

Depths in Reference to Ground Surface

Item	Material	Depth (feet)
Top of Protective Casing		
Bottom of Protective Casing		
Top of Permanent Borehole Casing		N/A
Bottom of Permanent Borehole Casing		N/A
Top of Concrete		
Bottom of Concrete		
Top of Grout		
Bottom of Grout		
Top of Well Riser	SCH 40 PVC	+3'
Bottom of Well Riser	"	-2.5'
Top of Well Screen	.010 SLOT	-2.5'
Bottom of Well Screen	"	-12.5'
Top of Peltonite Seal	ENVIROPLUG	-.5'
Bottom of Peltonite Seal	"	-2'
Top of Gravel Pack	10-20 SAND	-2'
Bottom of Gravel Pack	"	-12.5'
Top of Natural Cave-In		-12.5'
Bottom of Natural Cave-In		-13'
Top of Groundwater		-9'
Total Depth of Borehole		-13'



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

Top of Seal -.5'
Top of Gravel Pack -2'
Top of Screen -2.5'
Bottom of Screen -12.5'
Bottom of Borehole -13'

Comments:

Geologist Signature

QUARTERLY MONITORING RESULTS

Sample #	Meter/ Line #	Site Name	Sample Date	Project	S1	Benzene (PPB)	S2	Toluene (PPB)	S3	Ethyl Benzene (PPB)	S4	Total Xylenes (PPB)	S7	Total BTEX PPB
970206 *	95210	Anderson GC A #1 CH	3/11/97	Phase II Drilling - Initial	<	1	<	1	=	3.55	=	25.6	=	31
970805 *	95210	Anderson GC A #1 CH	8/4/97	Sample 4 - 1st Qtr	<	1.21	<	1	<	1	<	3	<	6
980144	95210	Anderson GC A #1 CH	2/5/98	Sample 4 - 2nd Qtr	<	1	<	1	<	1	<	3	<	6
980347	95210	Anderson GC A #1 CH	5/5/98	Sample 4 - 3rd Qtr	<	1	<	1	<	1	<	3	<	6

* Analytical reports provided to NMOCD in prior annual report.

EL F O
FIE SERVICES

Well Development and Purging Data

☐ Development
☒ Purging

Well Number MW-1

Site Name ANDERSON GC A#1

Meter Code 95210

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) 15.40
Initial Depth to Water (feet) 7.85
Height of Water Column in Well (feet) 7.55
Diameter (inches): Well 4 Gravel Pack_____

Item	Water Volume in Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing		5.0	15.0
Gravel Pack			
Drilling Fluids			
Total			

Instruments

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

Water Disposal

KOTZ 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	Cumulative	Increment	Cumulative					
2-5-98	1343										10.8	7.21	1131		
2-5-98	1348						5.0	5.0			10.6	7.24	1130		
2-5-98	1353						5.0	10.0			10.7	7.11	1124		
2-5-98	1400						5.0	15.0			10.7	7.32	1127		
2-5-98	1405						5.0	20.0			10.9	7.36	1122	1.0	

Comments_____

Developer's Signature Dennis Bird Date 2-5-98 Reviewer John Forbi Date 4/7/98

EL PASO FIELD SERVICES

Well Development and Purging Data

☐ Development
☒ Purging

Well Number MW-1

Site Name ANDERSON GC A#1

Meter Code 95210

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) 15.40
Initial Depth to Water (feet) 7.44
Height of Water Column in Well (feet) 7.96
Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing		5.3	15.8
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		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	Cumulative	Increment	Cumulative					
5-5-98	1325										16.7	7.16	969		
5-5-98	1331						5.0	5.0			15.1	7.38	990		
5-5-98	1337						5.0	10.0			14.2	7.44	1095		
5-5-98	1345						5.0	15.0			14.5	7.42	1128		
5-5-98	1351						5.0	20.0			14.7	7.46	1137	1.0	

Comments

Developer's Signature Dennis Bird Date 5-5-98 Reviewer John Stanko Date 5/11/98

EL PASO FIELD SERVICES

QUALITY CONTROL REPORT
EPA METHOD 8020 - BTEX

Samples: 980345 to 980348, 980350 to 980352

QA/QC for 5/7/98 Sample Set

ABORATORY 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	49.7	99.4	75 - 125 %	X	
Toluene	Standard	50.0	50.9	102	75 - 125 %	X	
Ethylbenzene	Standard	50.0	51.7	103	75 - 125 %	X	
m & p - Xylene	Standard	100	104.0	104.0	75 - 125 %	X	
o - Xylene	Standard	50.0	50.8	102	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	100.5	39 - 150	X	
Toluene	Standard	25.0	25.6	102	46 - 148	X	
Ethylbenzene	Standard	25.0	26.0	104	32 - 160	X	
m & p - Xylene	Standard	50.0	52.7	105	Not Given	X	
o - Xylene	Standard	25.0	25.7	103	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	48.8	97.5	75 - 125 %	X	
Toluene	Standard	50.0	50.0	100.0	75 - 125 %	X	
Ethylenzene	Standard	50.0	51.2	102.3	75 - 125 %	X	
m & p - Xylene	Standard	100	103.0	103.0	75 - 125 %	X	
o - Xylene	Standard	50.0	49.9	100	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	48.1	96.2	75 - 125 %	X	
Toluene	Standard	50.0	49.0	98.1	75 - 125 %	X	
Ethylbenzene	Standard	50.0	50.2	100.3	75 - 125 %	X	
m & p - Xylene	Standard	100	100.7	100.7	75 - 125 %	X	
o - Xylene	Standard	50.0	49.1	98.1	75 - 125 %	X	

Narrative: Acceptable.

SAMPLE 4 2ND QTR

El Paso Natural Gas Company

A 2196 CKD: 2-18-98

CHAIN OF CUSTODY RECORD

Project No.	Project Name	Type and No. of Sample Containers	Preservation Technique	Requested Analysis			Remarks
	MC # 95210			BTXE			
Samplers: (Signature) Dennis Bird	Date: 2-5-98						

MATRIX	Date	Time	Comp.	GRAB	Sample Number							
WATER	2-5-98	1418		X	980144 ✓	G-1	4°C	X				ANDERSON GC A #1 MW-1

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Dennis Bird	2-5-98 1716				
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks:	
		Marlon Hopper	2/6/98 1145		

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

san juan repro Form 71-55 A

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	980144
MTR CODE | SITE NAME:	95210	Anderson GC A #1
SAMPLE DATE | TIME (Hrs):	2/5/98	1418
PROJECT:	Sample 4 2nd Quarter	
DATE OF BTEX EXT. | ANAL.:	2/6/98	2/6/98
TYPE | DESCRIPTION:	MW-1	Water

Field Remarks: Surrogate recovery is low due to malfunction of surrogate injection syringe.

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 45.8 % for this sample All QA/QC was acceptable.

DF = Dilution Factor Used

Narrative:

Approved By: John Fortner Date: 2/17/98

SAMPLE 4 3RD QTR

El Paso Natural Gas Company

5-18-98 Hist.
5-18-98 Anal.
5-18-98 Chem.

A 2658

CHAIN OF CUSTODY RECORD

Project No.	Project Name	Type and No. of Sample Containers	Preservation Technique	Requested Analysis				Remarks
	MC# 95210			BTXE				
Samplers: (Signature) Dennis Bird	Date: 5-5-98							

MATRIX	Date	Time	Comp.	GRAB	Sample Number							
WATER	5-5-98	1401		X	980347	G-1	4°C	X				ANDERSON GC A #1 MW-1

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Dennis Bird	5-5-98 1718				
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks:	
		Marlon Hopper	5/7/98 0900		

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

san juan repro Form 71-55 A

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	980347
MTR CODE | SITE NAME:	95210	Anderson GC A #1
SAMPLE DATE | TIME (Hrs):	5/5/98	1401
PROJECT:	Sample 4 3rd Quarter	
DATE OF BTEX EXT. | ANAL.:	5/7/98	5/7/98
TYPE | DESCRIPTION:	MW-1	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 93.5 % for this sample All QA/QC was acceptable.

DF = Dilution Factor Used

Narrative:

Approved By: John Fowler Date: 5/11/98

980347BTEXMW,5/8/98

LABORATORY DUPLICATES:

SAMPLE ID 980345	TYPE	SAMPLE RESULT PPB	DUPLICATE RESULT PPB	RPD	ACCEPTABLE RANGE	YES	NO
Benzene	Matrix Duplicate	<1	<1	0.00	+/- 20 %	X	
Toluene	Matrix Duplicate	1.8	1.8	0.31	+/- 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 980345	SPIKE ADDED PPB	SAMPLE RESULT PPB	SPIKE SAMPLE RESULT PPB	%R	ACCEPTABLE RANGE	YES	NO
Benzene	50	<1	49.2	98.4	75 - 125 %	X	
Toluene	50	1.8	51.8	100	75 - 125 %	X	
Ethylbenzene	50	<1	50.2	100	75 - 125 %	X	
m & p - Xylene	100	<2	101.3	101.3	75 - 125 %	X	
o - Xylene	50	<1	50.2	100	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 (2 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 Lawler Date: 5/1/98

EL PASO FIELD SERVICES

QUALITY CONTROL REPORT
EPA METHOD 8020 - BTEX

Samples: 980132 to 980135, 980142 to 980145

QA/QC for 2/6/98 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	47.5	95.0	75 - 125 %	X	
Toluene	Standard	50.0	47.8	96	75 - 125 %	X	
Ethylbenzene	Standard	50.0	48.3	97	75 - 125 %	X	
m & p - Xylene	Standard	100	96.4	96.4	75 - 125 %	X	
o - Xylene	Standard	50.0	48.4	97	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	24.7	98.7	39 - 150	X	
Toluene	Standard	25.0	24.5	98	46 - 148	X	
Ethylbenzene	Standard	25.0	24.5	98	32 - 160	X	
m & p - Xylene	Standard	50.0	48.8	98	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	49.2	98.4	75 - 125 %	X	
Toluene	Standard	50.0	49.4	98.7	75 - 125 %	X	
Ethylenzene	Standard	50.0	49.6	99.2	75 - 125 %	X	
m & p - Xylene	Standard	100	98.9	98.9	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	49.3	98.5	75 - 125 %	X	
Toluene	Standard	50.0	50.4	100.8	75 - 125 %	X	
Ethylbenzene	Standard	50.0	49.9	99.7	75 - 125 %	X	
m & p - Xylene	Standard	100	99.3	99.3	75 - 125 %	X	
o - Xylene	Standard	50.0	50.0	100.0	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	47.6	95.2	75 - 125 %	X	
Toluene	Standard	50.0	47.0	94.0	75 - 125 %	X	
Ethylbenzene	Standard	50.0	47.9	95.7	75 - 125 %	X	
m & p - Xylene	Standard	100	95.0	95.0	75 - 125 %	X	
o - Xylene	Standard	50.0	48.5	97.0	75 - 125 %	X	

Narrative: Acceptable.

LABORATORY DUPLICATES:

SAMPLE ID 980143	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 980143	SPIKE ADDED PPB	SAMPLE RESULT PPB	SPIKE SAMPLE RESULT PPB	%R	ACCEPTABLE RANGE	YES	NO
Benzene	50	<1	48.7	97.3	75 - 125 %	X	
Toluene	50	<1	48.4	97	75 - 125 %	X	
Ethylbenzene	50	<1	48.6	97	75 - 125 %	X	
m & p - Xylene	100	<2	96.7	96.7	75 - 125 %	X	
o - Xylene	50	<1	48.6	97	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 (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

larrative: Acceptable.

eported By: CW Approved By: John Fardi Date: 2/17/98