

**EPFS GROUNDWATER PITS
1997 ANNUAL GROUNDWATER REPORT**

Denny E. Faust
DEPUTY OIL & GAS INSPECTOR

JUL 22 1998

**FLORANCE C LS #7
Meter/Line ID - 74997**

SITE DETAILS

Legals - Twn: 28N Rng: 8W

Sec: 30

Unit: F

NMOCD Hazard Ranking: 40

Land Type: FEDERAL

Operator: AMOCO PRODUCTION COMPANY

Approved

SITE ACTIVITIES

Site Assessment: May-94

Excavation: May-94 (80 cy)

Soil Boring: Sep-95

Monitor Well: Sep-95

The pit was excavated to 12 feet beneath ground surface (bgs), and one soil sample was collected. The headspace soil reading from the excavation bottom was 219 parts per million. Soil analytical were as follows; benzene - <0.62 mg/kg, total BTEX - 6.4 mg/kg, TPH - 2,110 mg/kg.

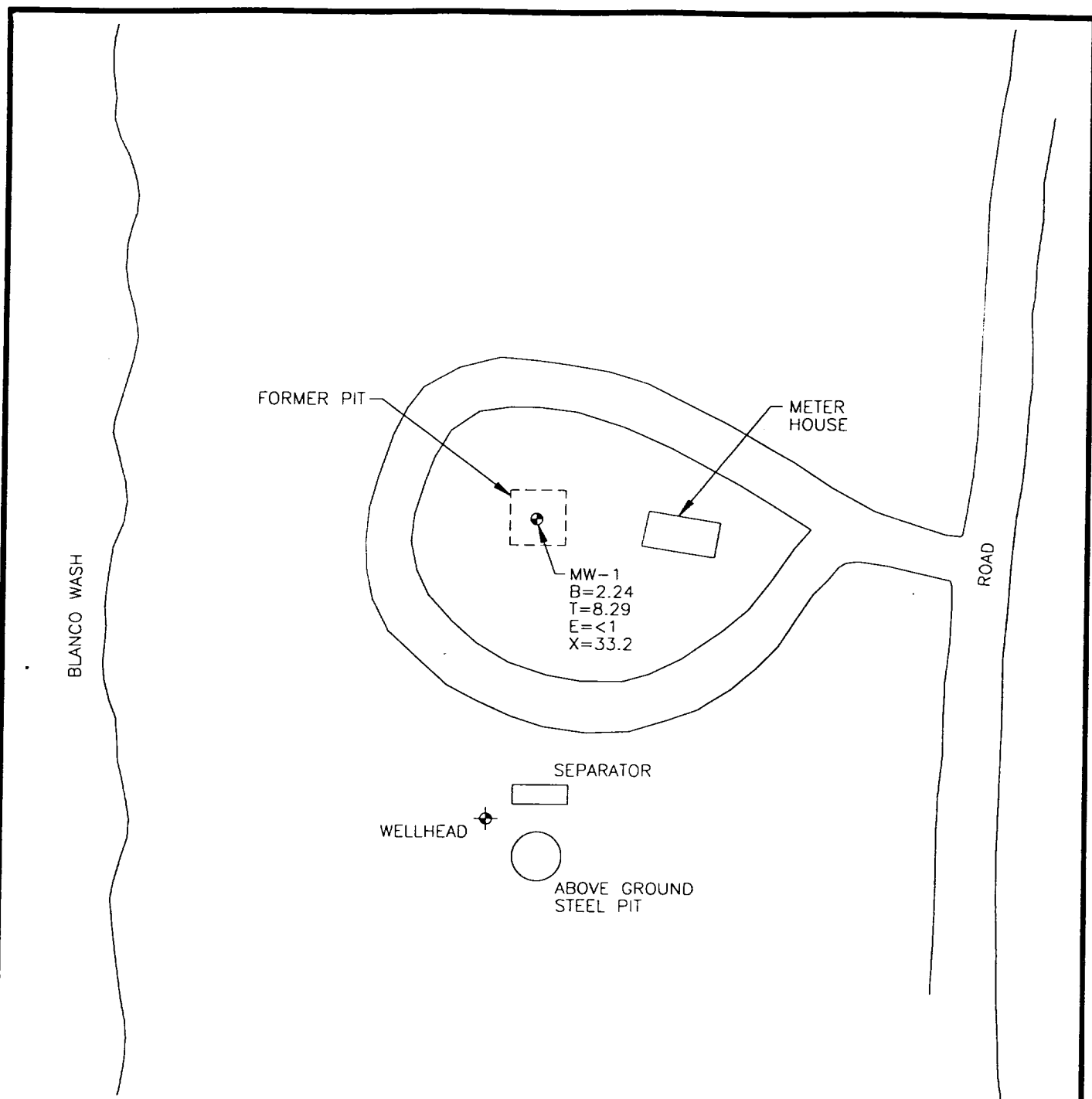
One soil boring was drilled in the center of the former pit and a monitoring well was installed. One soil sample was collected from 35-36.5 bgs. Soil analytical were as follows; benzene - 1.4 mg/kg, total BTEX - 293 mg/kg, TPH - 3,750 mg/kg. Initial groundwater analytical were as follows; benzene - 71.8 ppb, toluene - 1,360 ppb, ethyl benzene - 275 ppb, total xylenes - 3,780 ppb. Groundwater samples have been collected for four consecutive quarters and have been below standards since quarterly sampling was initiated on 11/7/96, as presented in Table 1. A site map is presented in Figure 1.

CONCLUSIONS

Groundwater analytical data has been below standards since quarterly sampling was initiated for 4 consecutive quarters at MW-1. Minimal impact to groundwater has occurred at this site.

RECOMMENDATIONS

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



LEGEND

● MW-1 APPROXIMATE MONITORING WELL LOCATION AND NUMBER

B BENZENE (ug\L)
T TOLUENE (ug\L)
E ETHYL BENZENE (ug\L)
X XYLENE (ug\L)

ug\L MICROGRAMS PER LITER

0 50
FEET



COL. 17520AR-001



TITLE:

FLORANCE CLS#7
74997

DWN:

TMM

DES.:

CC

PROJECT NO.:

17520

CHKD:

CC

APPD:

EPFS GW PITS

DATE:

1/14/98

REV.:

0

FIGURE 1

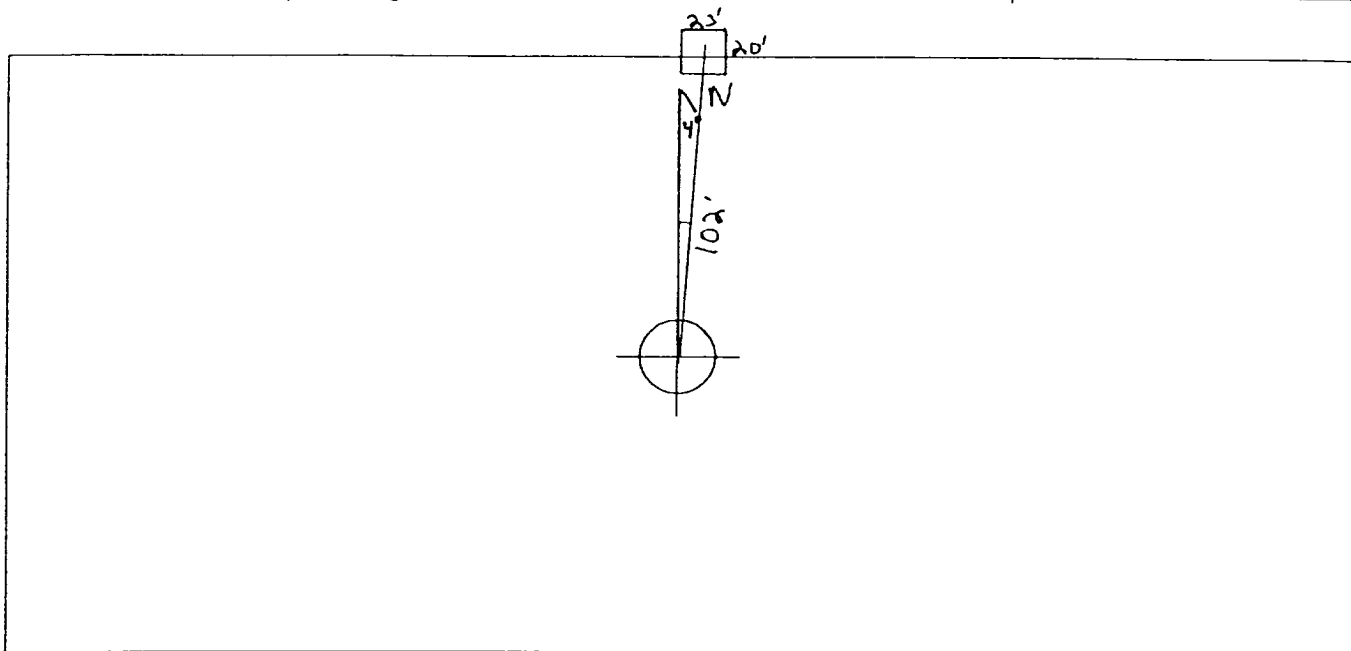
FIELD PIT SITE ASSESSMENT FORM

GENERAL	Meter: <u>74997</u> Location: <u>Florance CLS7</u> Operator #: <u>0203</u> Operator Name: <u>Amoco</u> P/L District: <u>Blanco</u> Coordinates: Letter: <u>F</u> Section <u>30</u> Township: <u>28</u> Range: <u>8</u> Or Latitude _____ Longitude _____ Pit Type: Dehydrator _____ Location Drip: ☒ Line Drip: _____ Other: _____ Site Assessment Date: <u>5/16/94</u> Area: <u>03</u> Run: <u>82</u>
SITE ASSESSMENT	NMOCD Zone: (From NMOCD Maps) Inside ☒ (1) Outside ☐ (2) Land Type: BLM ☒ (1) State ☐ (2) Fee ☐ (3) Indian _____ Depth to Groundwater Less Than 50 Feet (20 points) ☒ (1) 50 Ft to 99 Ft (10 points) ☐ (2) Greater Than 100 Ft (0 points) ☐ (3) 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? ☐ (1) YES (20 points) ☒ (2) NO (0 points) Horizontal Distance to Surface Water Body Less Than 200 Ft (20 points) ☒ (1) 200 Ft to 1000 Ft (10 points) ☐ (2) Greater Than 1000 Ft (0 points) ☐ (3) Name of Surface Water Body <u>Blanco Canyon</u> (Surface Water Body : Perennial Rivers, Major Wash, Streams, Creeks, Irrigation Canals, Ditches, Lakes, Ponds) Distance to Nearest Ephemeral Stream ☐ (1) < 100' (Navajo Pits Only) ☐ (2) > 100' TOTAL HAZARD RANKING SCORE: <u>40</u> POINTS
REMARKS	Remarks : <u>Redline 1/4 Sec - Inside</u> <u>1 Pit Will close</u>

ORIGINAL PIT LOCATION

ORIGINAL PIT LOCATION

Original Pit : a) Degrees from North 4° Footage from Wellhead 102'
b) Length : 23' Width : 20' Depth : 5'



REMARKS

Remarks :

Pictures @ 1303(11-15)

Dump Truck

Completed By:

Cory Chase
Signature

5/12/94
Date

TABLE 1

Sample #	Meter/ Line #	Site Name	Sample Date	MW #	Project	Benzene (PPB)	Toluene (PPB)	Ethyl Benzene (PPB)	Total Nylenes (PPB)	Total RIEX
960927	74997	Florance CLS-7	11/07/96	1	Sample 4 - 1st Quarter	= 2.74	< 1	= 10.8	= 51.8	= 66
970077	74997	Florance CLS-7	2/10/97	1	Sample 4 - 2nd Qtr	= 2.98	= 2.85	= 5.64	= 21.6	= 33
970415	74997	Florance CLS-7	5/14/97	1	Sample 4 - 3rd Qtr	= 1.49	= 6.09	= 4.28	= 23	= 35
970811	74997	Florance CLS-7	8/5/97	1	Sample 4 - 4th Qtr	= 2.24	= 8.29	= 1	= 33.2	= 44

FIELD PIT REMEDIATION/CLOSURE FORM

GENERAL

Meter: 74997 Location: Florance CLS 7
 Coordinates: Letter: F Section 30 Township: 28 Range: 8
 Or Latitude _____ Longitude _____
 Date Started : 5-31-94 Area: 03 Run: 82

ELD OBSERVATIONS

Sample Number(s): KP*72
 Sample Depth: 12' Feet
 Final PID Reading 219 PID Reading Depth 12' Feet
 Yes No
 Groundwater Encountered ☐ (1) ☒ (2) Approximate Depth _____ Feet

CLOSURE

Remediation Method :
 Excavation ☒ (1) Approx. Cubic Yards 80
 Onsite Bioremediation ☐ (2)
 Backfill Pit Without Excavation ☐ (3)
 Soil Disposition:
 Envirotech ☐ (1) ☒ (3) Tierra
 Other Facility ☐ (2) Name: _____
 Pit Closure Date: 5-31-94 Pit Closed By: B.E.I

REMARKS

Remarks : No line markers gone down 3' soil BLACK
Smell BAD. At 12' soil still BLACK.

Signature of Specialist: Kelly Rediff



CHAIN OF CUSTODY RECORD

[illegible]



70

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT - Soil

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	KP72	945304
MTR CODE SITE NAME:	74997	NIA FLORINCE C LS #7
SAMPLE DATE TIME (Hrs):	5-31-94	1520
SAMPLED BY:	N/A Phase I	
DATE OF TPH EXT. ANAL.:	6-2-94	6/2/94
DATE OF BTEX EXT. ANAL.:	6/6/94	6/6/94
TYPE DESCRIPTION:	VC	BLACK COARSE SAND & CLAY

REMARKS:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q	M(g)	V(ml)
BENZENE	20.62	MG/KG	25			
TOLUENE	0.84	MG/KG	25			
ETHYL BENZENE	0.30	MG/KG	25			
TOTAL XYLENES	4.6	MG/KG	25			
TOTAL BTEX	6.4	MG/KG				
TPH (418.1)	2110	MG/KG			1.98	28
HEADSPACE PID	219	PPM				
PERCENT SOLIDS	90.7	%				

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

Surrogate Recovery was at 80 % for this sample All QA/QC was acceptable.

ATTN: ATI results attached.

= Dilution Factor Used

Approved By:

John Foubert

Date:

7/14/94



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY RESULTS

TEST : BTEX (EPA 8020)
CLIENT : EL PASO NATURAL GAS
PROJECT # : 24324
PROJECT NAME : PIT CLOSURE
ATI I.D.: 406313

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
07	945303	NON-AQ	05/31/94	06/06/94	06/06/94	1
08	945304	NON-AQ	05/31/94	06/06/94	06/06/94	25
09	945325	NON-AQ	06/01/94	06/06/94	06/06/94	1

PARAMETER	UNITS	07	08	09
BENZENE	MG/KG	<0.025	<0.62	<0.025
TOLUENE	MG/KG	0.18	0.84	<0.025
ETHYLBENZENE	MG/KG	0.029	0.30	<0.025
TOTAL XYLENES	MG/KG	0.12	4.6	0.027

SURROGATE:

BROMOFLUOROBENZENE (%)

95 80 99



Analytical **Technologies**, Inc.

2709-D Pan American Freeway, NE Albuquerque, NM 87107
Phone (505) 344-3777 FAX (505) 344-4413

ATI I.D. 406313



June 10, 1994

El Paso Natural Gas
P.O. Box 4990
Farmington, NM 87499

Project Name/Number: PIT CLOSURE 24324

Attention: John Lambdin

On 06/03/94, Analytical Technologies, Inc., (ADHS License No. AZ0015), received a request to analyze **non-aqueous** samples. The samples 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.

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

H. Mitchell Rubenstein, Ph.D.
Laboratory Manager

MR:jd

Enclosure

03-82 Blau

RECORD OF SUBSURFACE EXPLORATION

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

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

Project Name EPNG Pits
Project Number 14509 Phase 60+6000
Project Location Elorence CLS 7, 74997

Elevation _____
Borehole Location T28, R8, S. 30, F
GWL Depth _____
Logged By S. Kelly
Drilled By R. Padilla
Date/Time Started 9/22/95, 0815
Date/Time Completed 9/22/95, 0920 0930 AK 9/22/95

Well Logged By S. Kelly
Personnel On-Site K. Padilla, F. Rivera, D. Charley
Contractors On-Site _____
Client Personnel On-Site _____
Drilling Method 4 1/2" ID HSA
Air Monitoring Method CGI, PID

Depth (Feet)	Sample Number	Sample Interval	Sample Type & Recovery (inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: NDU BZ BH <u>5445</u>			Drilling Conditions & Blow Counts
0				Backfill						
5				to 12'						
15	1	15-17	7' / 2.0'	sandy SILT, black, 5-20% fine sand, loose, dry				175 / 428	0843	
20	2	20-21.5	1.5' / 2.0'	silty SAND, grey, 10-30% silt, fine to med. sand, loose, dry		21		128 / 314	0850	
25	3	25-27	2' / 2.0'	silty SAND, grey with black mottling, 10-30% silt, fine to med. sand, loose, damp		22		302 / 1122	0906	has intervals of silt and clayey silt approx. 2" all thick.
30	4	30-31.5	1.5' / 1.5'	SAND, brown, fine to med sand, loose, damp		33		159 / 677	0915	
35	5	35-37	2' / 1.5'	silty SAND, trace clay, olive brown, 10-25% silt, fine to med. sand, loose, damp		35		228 / 887	0924	
40										

Comments:

35'-36.5' sample (SEK 90) sent to lab. (BTEX & TPH) water level at 36.5'. Installed well.

RECORD OF SUBSURFACE EXPLORATION

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

Borehole # _____
Well # _____
Page 2 of 2

Project Name EPNG Pits
Project Number 14509 Phase 601
Project Location Florange C 45 T, 74997

Elevation _____
Borehole Location _____
GWL Depth _____
Logged By S.Kelly
Drilled By _____
Date/Time Started _____
Date/Time Completed _____

Well Logged By S.Kelly
Personnel On-Site _____
Contractors On-Site _____
Client Personnel On-Site _____
Drilling Method _____
Air Monitoring Method CGI, PID

Depth (Feet)	Sample Number	Sample Interval	Sample Type & Recovery (inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: NDU BZ BH S/H/S			Drilling Conditions & Blow Counts
40	6	40-42		No split spoon taken - water table.						Hit water at approx. 40'. Water level rises to 38.5' after 10 min.
45										
50										
55										
60										
65										
70										
75										
80										
85										
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360										
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370										
375										
380										
385										
390										
395										
400										

Comments:

MONITORING WELL INSTALLATION RECORD

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

Borehole # BH-1
Well #
Page 1 of 1

Project Name EPUG Pit Drilling
Project Number 14509 Phase 6001.77
Project Location Florance CLS7, 74997
On-Site Geologist S. Kelly
Personnel On-Site K. Padilla, E. Rivera, D. Charkey
Contractors On-Site
Client Personnel On-Site

Elevation
Well Location +28.88, S.30, F
GWL Depth
Installed By K. Padilla

Date/Time Started 9/22/95, 0930 0930 2K 9/22/95
Date/Time Completed 9/22/95, 1515

Depths in Reference to Ground Surface				
Item	Material	Depth Feet		
Top of Protective Casing			Top of Protective Casing <u>N/A</u>	
Bottom of Protective Casing			Top of Riser <u>+2.5</u>	
Top of Permanent Borehole Casing			Ground Surface <u>0.0</u>	
Bottom of Permanent Borehole Casing				
Top of Concrete				
Bottom of Concrete				
Top of Grout	Type I-II cement with 5% bentonite	0.0		
Bottom of Grout	13-94# bags	-28.0'		
Top of Well Riser	4" sch 40, PVC	+2.5		
Bottom of Well Riser	" "	-32.3'		
Top of Well Screen	4" sch 40, .010 slot, PVC	-32.3'		
Bottom of Well Screen	" "	-47.3'		
Top of <u>bentonite</u> <u>Seal</u>	Enviro Plug-Med 82-50# bags	-28.0'	Top of Seal <u>-28.0'</u>	
Bottom of <u>bentonite</u> <u>Seal</u>	" "	-30.0'		
Top of Gravel Pack	10-20 CSSI sand 22-50# bags	-30.0'	Top of Gravel Pack <u>-30.0'</u>	
Bottom of Gravel Pack	" "	-47.3'	Top of Screen <u>-32.3'</u>	
Top of Natural Cave-In		-47.3'		
Bottom of Natural Cave-In		-48.0'		
Top of Groundwater				
Total Depth of Borehole		-48.0'	Bottom of Screen <u>-47.3'</u> Bottom of Borehole <u>-47.3'</u>	

Comments: Water level at 38.5', 10 minutes after it was first encountered

Geologist Signature

Mark Kelly



Phase II

CHAIN OF CUSTODY RECORD

[illegible]



FIELD SERVICES LABORATORY
ANALYTICAL REPORT

PIT CLOSURE PROJECT - Soil Samples Inside the GWV Zone

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	SEK90	947524
MTR CODE SITE NAME:	74997	Fluence CL57
SAMPLE DATE TIME (Hrs):	09/22/95	0924
PROJECT:	Phase II Drilling	
DATE OF TPH EXT. ANAL.:	9-27-95	9/27/95 mdu 9/20/96
DATE OF BTEX EXT. ANAL.:	9/25/95	9/26/95
TYPE DESCRIPTION:	V6	Brown Sand & Clay

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q	M(g)	V(ml)
BENZENE	1.4	MG/KG	2	D		
TOLUENE	50.7	MG/KG	2	D		
ETHYL BENZENE	12.7	MG/KG	2	D		
TOTAL XYLENES	228	MG/KG	2	D		
TOTAL BTEX	293	MG/KG	2	D		
TPH (418.1)	3750	MG/KG			2.03	28
HEADSPACE PID	887	PPM				
PERCENT SOLIDS	89.2	%				

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

The Surrogate Recovery was at 102% for this sample All QA/QC was acceptable.

Narrative:

~~ATI~~ ATI Results for mod 8015 attached (2250).

DF = Dilution Factor Used



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8015 MODIFIED
CLIENT : EL PASO NATURAL GAS ATI I.D.: 510301
PROJECT # : 24324
PROJECT NAME : PIT CLOSURE/PHASE II

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
01	947512	NON-AQ	09/20/95	10/03/95	10/04/95	10
02	947516	NON-AQ	09/21/95	10/03/95	10/04/95	1
03	947524	NON-AQ	09/22/95	10/03/95	10/04/95	10
PARAMETER			UNITS	01	02	03
FUEL HYDROCARBONS			MG/KG	3100	57	2000
HYDROCARBON RANGE				C6-C14	C6-C14	C6-C14
HYDROCARBONS QUANTITATED USING				GASOLINE	GASOLINE	GASOLINE
FUEL HYDROCARBONS			MG/KG	1100	120	250
HYDROCARBON RANGE				C14-C36	C14-C36	C16-C32
HYDROCARBONS QUANTITATED USING				DIESEL	DIESEL	DIESEL
SURROGATE:						
O-TERPHENYL (%)				120	101	110



Analytical**Technologies**, Inc.

2709-D Pan American Freeway, NE Albuquerque, NM 87107
Phone (505) 344-3777 FAX (505) 344-4413

ATI I.D. 510301

October 9, 1995

El Paso Natural Gas
P.O. Box 4990
Farmington, NM 87499

Project Name/Number: PIT CLOSURE/PHASE II 24324

Attention: John Lambdin

On 10/03/95, Analytical Technologies, Inc., (ADHS License No. AZ0015), received a request to analyze **non-aqueous** samples. The samples 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.

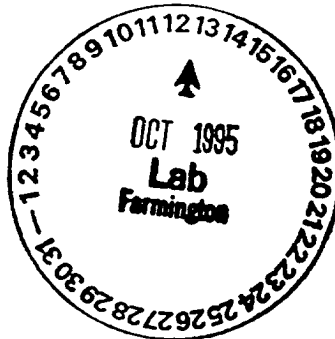
If you have any questions or comments, please do not hesitate to contact us at (505) 344-3777.

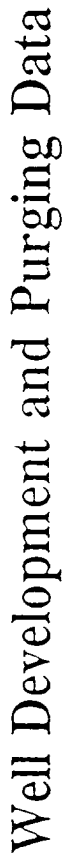
Kimberly D. McNeill
Project Manager

H. Mitchell Rubenstein, Ph.D.
Laboratory Manager

MR:jt

Enclosure





☒ Development
☐ Purging

Well Number MW-1

Page 1 of 1

Project No. 14509

Project Manager CM Chance

Phase.Task No. 6002.77

Site Address QF-530-T28-B8

Water Volume Calculation

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

Initial Depth of Well (feet) 50.47' TDR

Initial Depth to Water (feet) 40.25'

Height of Water Column in Well (feet)	10.22
10.22	10.22

Diameter (inches): Well 4" Gravel Pack

Pump
Bailer

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

Instruments

☒ pH Meter

☐ DO Monitor☒ Conductivity Meter 9206

☒ Temperature Meter

☐ Other

Water Disposal
Kutz

Water Removal Data

Date	Time	Development Method		Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons)		Product Volume Removed (gallons)		Temperature (°F)	pH	Conductivity (umhos/cm) X1000	Dissolved Oxygen (mg/L)	Comments
		Pump	Sailer				Increment	Cumulative	Increment	Cumulative					
9/24/95	0731						5	5			66.2	6.20	6.78		Br, silty, odor
	0742						5	10			59.7	6.98	7.58		AA
	0754						5	15			59.4	7.26	7.98		AA
	0804						5	20			59.4	7.33	8.28		1+br, silty
	0813						5	25			59.0	7.26	8.22		AA
	0825						5	30			58.7	7.37	8.25		1+br, silty
9/29/95	0834					40.93	5	35			58.3	7.43	8.30		AA

Circle the date and time that the development criteria are met.

Comments Initial bail had slight product odor. Ending water depth taken after sampling.

Developer's Signature(s) Cory Chant

Date 9/29/95

Reviewer _____ Date _____

Date _____



Water Sampling Data

Location No. _____

Serial No. WSD- _____

Group List Number _____

Sample Type: ☒ Groundwater ☐ Surface Water ☐ Other _____ Date 9/29/95Project Name EPNG Plants Project No. 14509Project Manager _____ Phase/Task No. 6003 . 77Site Name Florence CLS-7 74997

Sampling Specifications

Requested Sampling
Depth Interval (feet) Upper 3'
Requested Wait Following
Development/Purging (hours) NA

Initial Measurements

Time Elapsed From Final Development/Purging (hours) .5 hr
Initial Water Depth (feet) 40.25
Nonaqueous Liquids Present (Describe) None

Water Quality/Water Collection

DO = Dissolved Oxygen; Cond. = Conductivity

Date	Time	Sampler Initials	Water Quality Readings				Water Collection Data					Notes (Explain in Comments Below)	
			Temp. (°C)	pH	DO (mg/L)	Cond. (µmhos/ cm)	Volume Removed (gallons)	Removal Rate (gal/min)	Pump Intake Depth (feet)	Bail	Final Water Depth (feet)		
			SEE Development Form										

Sample Containers

Container Type: G = Clear Glass; A = Amber Glass; P = Plastic; V = VOA Vial (Glass); O = Other (Specify)

Preservatives: H = HCl; N = HNO₃; S = H₂SO₄; A = NaOH; O = Other (Specify); - = None

Analytical Parameter List	Container			Field Filtered		Preserved	Cooled During Collection		Comments
	Number	Type	Volume (mL)	Yes	No		Yes	No	
BTEX	2	✓	40		✓	HCl, 4°C	✓		CMC123 0.250 hr
TDS	1	P	250		✓	4°C	✓		11

Filter Type _____ Chain-of-Custody Form Number EPNG CDCComments Slight drizzle during sample collection. Samples sent to EPNG Lab for analysisSignature Cory Chesser Date 9/29/95 Reviewer _____ Date _____



Page II M10

Page 1 of 1

PROJECT NUMBER # 24324		PROJECT NAME Pit Closure Project					
SAMPLES: (Signature)		DATE: 9/29/95					
LAB ID	DATE	TIME	MATRIX	FIELD ID			
947565	9/29/95	0850	Water	CMC123	TOTAL NUMBERS OF CONTAINERS	SAMPLE TYPE	
947566	↓	NA	↑	CMC124			
947567	9/29/95	1305	Water	CMC125			
<i>Cmc 9/29/95</i>							

REQUESTED ANALYSIS				SEQUENCE #		REMARKS	
TPH EPA 418.1	BTEX EPA 8020	LAB PID	TDS				
✓	✓		✓	4	Florence CLS-7	74997	
✓	✓			4	Trip Blank		
✓	✓		✓	5	Lay H-37 Drip Y-3	QF-SI-TJ1-RD LDOOR	
<i>Cmc 9/29/95</i>							

RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)
<i>Cory Chase</i>	9/29/95 1600	<i>Julie & Dianna</i>	9/29/95 1600	
RELINQUISHED BY: (Signature)	DATE/TIME	RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED OF LABORATORY BY: (Signature)
				<i>[Signature]</i>

REQUESTED TURNAROUND TIME: ☐ ROUTINE ☐ RUSH		SAMPLE RECEIPT REMARKS		RESULTS & INVOICES TO:	
CARRIER CO.				FIELD SERVICES LABORATORY EL PASO NATURAL GAS COMPANY P.O. BOX 4990 FARMINGTON, NEW MEXICO 87499	
BILL NO.:				505-599-2144 FAX: 505-500-2261	



FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT - Water

SAMPLE IDENTIFICATION

SAMPLE NUMBER:	947565
FIELD ID:	CMC123
MTR CODE:	74997
SAMPLE DATE:	09-29-95
SAMPLE TYPE:	W [mw]
SITE NAME:	Florange CLS-7
PROJECT:	Phase II MW
DATE OF BTEX ANALYSIS:	10/2/95

FIELD COMMENTS:

EPA Method 8020 (BTEX) RESULTS

PARAMETER	RESULT	QUALIFIER	WQCC LIMIT PPB
TDS - TOTAL DISSOLVED SOLIDS (PPM)	4620		None
BENZENE (PPB)	71.8	D (x20)	10
TOLUENE (PPB)	1360	D (x20)	740
ETHYL BENZENE (PPB)	275	D (x20)	750
TOTAL XYLENES (PPB)	3780	D (x20)	620
SURROGATE % RECOVERY	96%	Allowed Range 80 to 120 %	

NOTES:

Approved By:

10-10-95



A 2674

[illegible]



FIELD SERVICES LABORATORY

ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	960927
MTR CODE SITE NAME:	74997	Fl. orange CLS-7
SAMPLE DATE TIME (Hrs):	11/7/96	1358
PROJECT:	Sample 4 - 1st Quarter	
DATE OF BTEX EXT. ANAL.:	11/11/96	11/11/96
TYPE DESCRIPTION:	Monitor Well	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	2.74	PPB				
TOLUENE	< 1	PPB				
ETHYL BENZENE	10.8	PPB				
TOTAL XYLENES	51.8	PPB				
TOTAL BTEX	65.3	PPB				

—BTEX is by EPA Method 8020 —

The Surrogate Recovery was at 101 % for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative:

Approved By: John Zander

Date: 11/14/96



Field Services Laboratory

Analytical Report

SAMPLE IDENTIFICATION

EPFS LAB ID:	960927
DATE SAMPLED:	11/07/96
TIME SAMPLED (Hrs):	1358
SAMPLED BY:	D. Bird
MATRIX:	Water
METER CODE:	74997
SAMPLE SITE NAME:	Huerfano Pipeline
SAMPLE POINT:	Florance CLS-7 MW-1

FIELD REMARKS: _____

GENERAL CHEMISTRY WATER ANALYSIS RESULTS

PARAMETER	RESULT	UNITS	DATE ANALYZED
Laboratory pH	8.1	Units	11/06/96
Alkalinity as CO ₃	0.0	PPM	11/06/96
Alkalinity as HCO ₃	369	PPM	11/06/96
Calcium as Ca	215	PPM	11/07/96
Magnesium as Mg	39	PPM	11/07/96
Total Hardness as CaCO ₃	696	PPM	11/07/96
Chloride as Cl	27	PPM	11/06/96
Sulfate as SO ₄	3,180	PPM	11/06/96
Fluoride as F	1.6	PPM	11/07/96
Nitrate as NO ₃ -N*	< 0.6	PPM	11/06/96
Nitrite as NO ₂ -N	< 0.6	PPM	11/06/96
Ammonium as NH ₄ ⁺	< 0.6	PPM	11/07/96
Phosphate as PO ₄	< 0.6	PPM	11/06/96
Potassium as K	4.9	PPM	11/07/96
Sodium as Na	1320	PPM	11/07/96
Total Dissolved Solids	4,850	PPM	11/06/96
Conductivity	5,440	umhos/cm	11/06/96
Anion/Cation %	1.2%	%, < 5.0 Accepted	11/20/96

Remarks:

Nitrate was analyzed outside of holding limits.

Reported By:

gnd

Approved By:

V. L. L. L.

Date: 11/20/96



FIELD SERVICES LABORATORY
ANALYTICAL REPORT

SAMPLE IDENTIFICATION

SAMPLE NUMBER:	960927
SAMPLE DATE:	11/07/96
SAMPLE TIME (Hrs):	1358
SAMPLED BY:	D. Bird
MATRIX:	Water
METER CODE:	74997
SAMPLE SITE NAME:	Huerfano Pipeline
SAMPLE POINT:	Florance CLS-7 MW-1

REMARKS:

RESULTS

PARAMETER	TOTAL RESULT (mg/L)	N. M. WQCC LIMIT (mg/L)
ARSENIC	<.010	0.100
BARIUM	0.05	1.00
CADMIUM	<.0002	0.010
CHROMIUM	0.002	0.050
LEAD	<.004	0.050
MERCURY	<.00024	0.002
SELENIUM	<.003	0.050
SILVER	0.0005	0.050

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

References:

- Method 3015, Microwave Assisted Acid Digestion of Aqueous Samples and Extracts, Test Methods for Evaluating Solid Waste, SW-846, Sept., 1994.
- Method 7061A, Arsenic (Atomic Absorption, Gaseous Hydride), Test Methods for Evaluating Solid Waste, SW-846, USEPA, July, 1992.
- Method 7081, Barium (Atomic Absorption, Furnace Technique), Test Methods for Evaluating Solid Waste, SW-846, USEPA, July, 1992.
- Method 7131, Cadmium (Atomic Absorption, Furnace Technique), Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept., 1986.
- Method 7191, Chromium (Atomic Absorption, Furnace Technique), Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept., 1986.
- Method 7421, Lead (Atomic Absorption, Furnace Technique), Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept., 1986.
- Method 245.5, Mercury (Automated Cold Vapor Technique), Methods for the Determination of Metals in Environmental Samples, EPA 600/4-91/010, JSF, 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.



Well Number MW-1
Meter Code 74997

Site Name FLOPPANCE CLS-7

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) 50.47
Initial Depth to Water (feet) 40.25
Height of Water Column In Well (feet) 10.19
Diameter (Inches): Well 4 Gravel Pack

Item	Water Volume In Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing		6.7	292
Gravel Pack			
Drilling Fluids			
Total			

Instruments

- ☒ pH Meter
☐ DO Monitor
☒ Conductivity Meter
☒ Temperature Meter
☒ Other D.O.C

Water Disposal

KUTZ SEP 1971

Water Removal Data

[illegible]

Comments

Developer's Signature *Demio Bira* Reviewer *John Faldin* Date 11-7-96 Date 11/14/96



A 2221

CHAIN OF CUSTODY RECORD

Project No.	Project Name			
HUENFAN PIPELINE Date: 3-10-97	Dennis Bishop			
Samplers: (Signature) Dennis Bishop	Date: 3-10-97			
Type and No. of Sample Containers	Preservation Technique	Requested Analysis	Remarks	
G-3 4°C X	BTKP		FERRANCE CLS-T NW-1 MC 74997	
G-1 4°C X			TRIP BLANK	
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time	Received by: (Signature)
(Signature)	3-10-97 1625			
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks:
		Marden Cooper	2 / 11/97 1515	
Carrier Co:	Carrier Pkg's 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	970077
MTR CODE SITE NAME:	74997	Florance CLS-7 MW-1
SAMPLE DATE TIME (Hrs):	2/10/97	1426
PROJECT:	Sample 4 - 2nd Quarter	
DATE OF BTEX EXT. ANAL.:	2/13/97	2/13/97
TYPE DESCRIPTION:	Monitor Well	Water

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	2.98	PPB				
TOLUENE	2.85	PPB				
ETHYL BENZENE	5.64	PPB				
TOTAL XYLENES	21.6	PPB				
TOTAL BTEX	33.1	PPB				

—BTEX is by EPA Method 8020 —

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

Narrative:

Approved By:

John F. Smith

Date: 2-19-97



Well Development and Purging Data

Well Number mw-1
Meter Code 74997

Site Name FLOPPANCE CLS-7

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) 50.47
Initial Depth to Water (feet) 40.15
Height of Water Column in Well (feet) 10.32

Diameter (inches): Well

Item	Water Volume in Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing		6.8	22.5
Gravel Pack			
Drilling Fluids			
Total			

Instruments

- ☒ pH Meter
☐ DO Monitor
☒ Conductivity Meter
☒ Temperature Meter
☒ Other D.O.C.

Water Disposal

KUTZ 5509RAZOP

Water Removal Data

[illegible]

Comments

Developer's Signature: Lennis Bird

Date 2-10-97 Reviewer _____

Reviewer

Date 7-19-97



A 1950

CHAIN OF CUSTODY RECORD

Project No.		Project Name		Requested Analysis		Remarks	
Samplers: (Signature)		Date: 5-8-97		Type and No. of Sample Containers		Preservation Technique	
Date	Time	Comp.	GRAB	Sample Number			
5-8-97	1540		X	970415	52	4PC	X
HOBBSFAND PIPELINE							
Dennis Bird							
FLOPPANCE CDS-77 MW-1 MC 74997							
Relinquished by: (Signature) <i>Dennis Bird</i> Date/Time 5-8-97 1721 Received by: (Signature) _____ Date/Time _____ Relinquished by: (Signature) _____ Date/Time _____ Received by: (Signature) _____ Date/Time _____ Relinquished by: (Signature) _____ Date/Time _____ Received for Laboratory by: (Signature) <i>Marlon Hopper</i> Date/Time 5/9/97 0710 Remarks: _____							
Carrier Co:				Date Results Reported / by: (Signature)			
Air Bill No:							



6-11-97

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	970415
MTR CODE SITE NAME:	74997	Florance CLS-7 MW-1
SAMPLE DATE TIME (Hrs):	5/8/97	1540
PROJECT:	Sample 4 - 3rd Quarter	
DATE OF BTEX EXT. ANAL.:	5/14/97	5/14/97
TYPE DESCRIPTION:	Monitor Well	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	1.49	PPB				
TOLUENE	6.09	PPB				
ETHYL BENZENE	4.28	PPB				
TOTAL XYLENES	23.0	PPB				
TOTAL BTEX	34.9	PPB				

The Surrogate Recovery was at 98.4 for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative:

Approved By: John L. Latta

Date: 6/3/97



Developer's Signature James Bird Date 5-8-97 Reviewer Jim Bird Date 5-7-97

Sample 4-4th QUARTER



Natural Gas Company

A 2043

CHAIN OF CUSTODY RECORD

Project No.	Project Name	Type and No. of Sample Containers			Preservation Technique	Requested Analysis	Remarks								
Huerfano Pipeline		Date: 8-5-97													
Dennis Bird															
Date	Time	Comp.	GRAB	Sample Number											
WATER 8:57 PM	1:54		X	970811	G-1 4PC X	CLS-7 MW-1	FEEDANCE 8:57 MW-1 MC 74997								
Relinquished by: (Signature)		Date/Time	Received by: (Signature)		Relinquished by: (Signature)	Date/Time	Received by: (Signature)								
Dennis Bird		8-5-97 1745													
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)		Relinquished by: (Signature)	Date/Time	Remarks:								
			Marla Rapp		B/ 4/97 0730										
Carrier Co:		Carrier Phone No.		Date Results Reported / by: (Signature)											
		1													
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	970811
MTR CODE SITE NAME:	74997	Florance CLS-7 MW-1
SAMPLE DATE TIME (Hrs):	8/5/97	1604
PROJECT:	Sample 4 - 4th Quarter	
DATE OF BTEX EXT. ANAL.:	8/6/97	8/6/97
TYPE DESCRIPTION:	Monitor Well	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	2.24	PPB				
TOLUENE	8.29	PPB				
ETHYL BENZENE	<1	PPB				
TOTAL XYLENES	33.2	PPB				
TOTAL BTEX	44	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: _____

Date: _____

8/25/97

970811BTEX, 8/22/97



27

Well Number 2745-1
Meter Code 74997

☐	Development
☒	Purging

Water Volume Calculation
 Initial Depth of Well (feet) 5347
 Initial Depth to Water (feet) 4430
 Height of Water Column in Well (feet) 917

Diameter (Inches): Well 4 Gravel Pack

Item	Water Volume in Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing		6.7	202
Gravel Pack			
Drilling Fluids			
Total			

Initial Depth of Well (feet) 5047
Initial Depth to Water (feet) 4430
Height of Water Column In Well (feet) 1217
Diameter (inches): Well 4 Gravel Pack

Water Disposal
KVTZ SEPARATOR

[illegible]

Developer's Signature Kenneth Biss Date 8-5-97 Reviewer John Farkle Date 8/22/97