

EPFS GROUNDWATER PITS 1997 ANNUAL GROUNDWATER REPORT

Dennis G. Frost
DEPUTY OIL & GAS INSPECTOR

GRAHAM #53
Meter/Line ID - 75212

JUL 22 1998

SITE DETAILS

Legals - Twn: 27N Rng: 8W
NMOCD Hazard Ranking: 30
Operator: R & G DRILLING COMPANY

Sec: 10

Unit: L

Land Type: FEDERAL

Approved

PREVIOUS ACTIVITIES

Site Assessment: Jan-95

Excavation: Feb-95 (160 cy)

Soil Boring: Jul-95

Monitor Well: Jul-95

The pit was excavated to 12 feet below ground surface (bgs) and a soil sample was collected from the bottom of the excavation. The soil headspace reading from the pit bottom was 173 ppm. Soil analytical were as follows; benzene – 7.38 mg/kg, total BTEX – 134 mg/kg, TPH – 1,560 mg/kg.

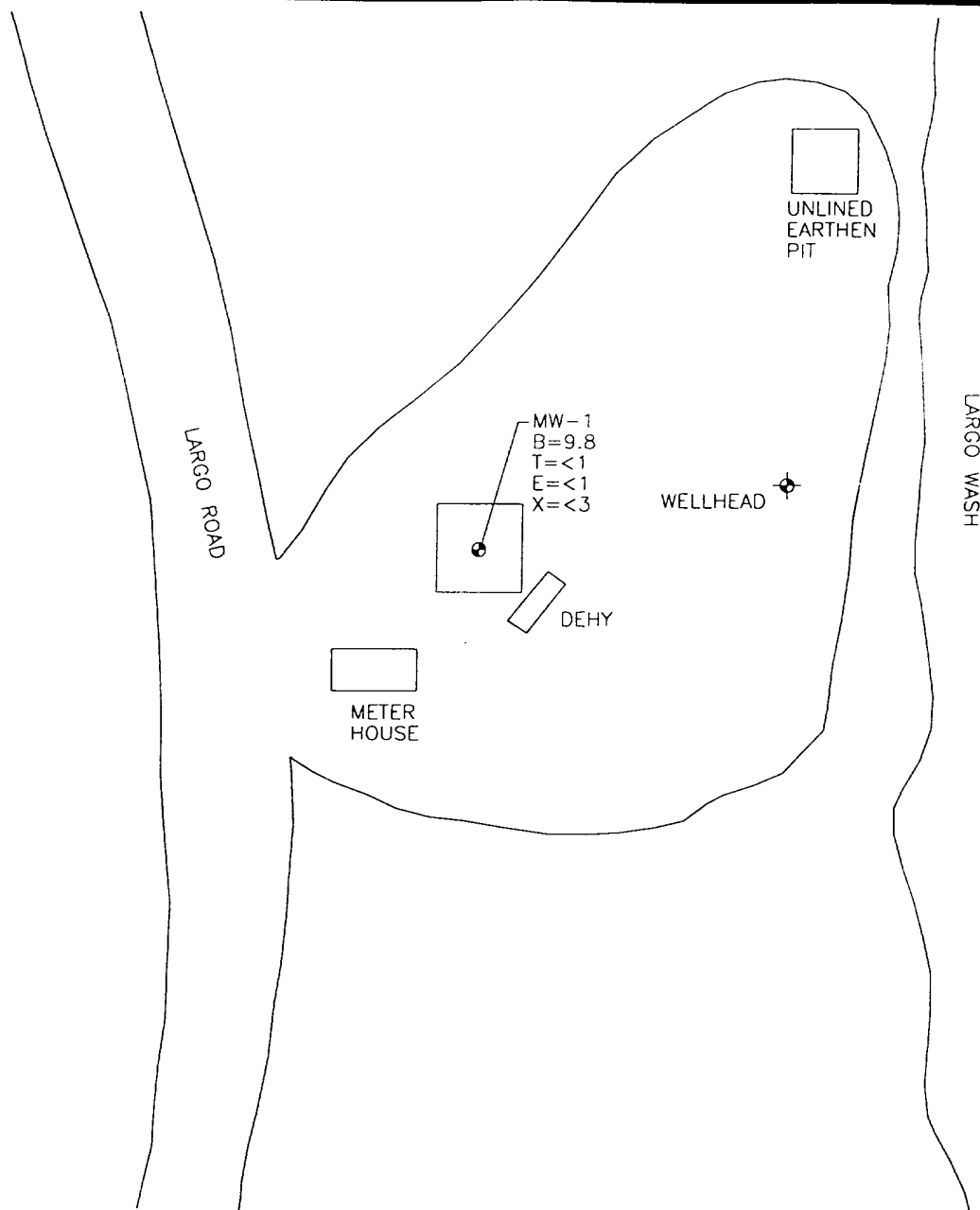
A soil boring was drilled in the center of the former pit and a groundwater monitoring well was installed. A soil sample was collected from 25-26 feet bgs. Soil analytical were as follows; benzene – ND, total BTEX – ND, TPH – 65.6 mg/kg. Quarterly groundwater monitoring was initiated on 4/17/97. Groundwater analytical data are summarized in Table 1, and a site map is presented in Figure 1.

CONCLUSIONS

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

- 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



TITLE:

GRAHAM #53
75212

DWN: TMM	DES.: CC	PROJECT NO.: 17520
CHKD: CC	APPD:	EPFS GW PITS
DATE: 1/18/98	REV.: 0	FIGURE 1



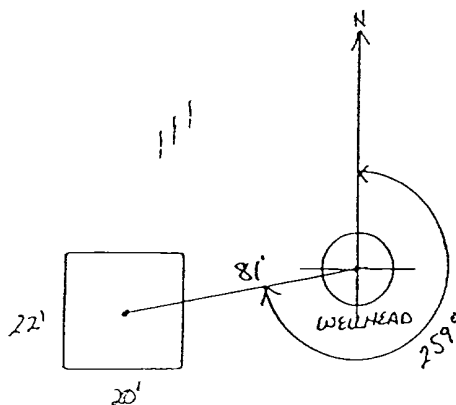
FIELD PIT SITE ASSESSMENT FORM

GENERAL	Meter: <u>75212</u> Location: <u>GRAHAM #S3</u> Operator #: _____ Operator Name: <u>RIG DRILLING</u> P/L District: <u>BALLAP</u> Coordinates: Letter: <u>L</u> Section <u>10</u> Township: <u>27</u> Range: <u>8</u> Or Latitude _____ Longitude _____ Pit Type: Dehydrator ☒ Location Drip: _____ Line Drip: _____ Other: _____ Site Assessment Date: <u>1-25-95</u> Area: <u>07</u> Run: <u>32</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>CAÑON LARGO</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>30</u> POINTS
ARK	Remarks : <u>REDLINE & TOPO SHOW LOCATION INSIDE V.Z. ONLY PIT ON LOCATION BELONGS TO EPNG. WILL CLOSE PIT.</u>

75212

ORIGINAL PIT LOCATION

Original Pit : a) Degrees from North 259° Footage from Wellhead 81'
b) Length : 22' Width : 20' Depth : 2'



Remarks :

PHOTOS- 1402

Completed By:

[Signature]

TABLE 1

Sample #	Meter Line #	Site Name	Sample Date	NW #	Project	Recess (PPB)	Taberns (PPB)	Etch Recess (PPB)	Total Xylene (PPB)	Total BTEX
1	1	1	4/17/97		Sample 4 - 1st Quarter	= 4.44	< 1	< 1	< 3	4
2	2	2	7/17/97		Sample 4 - 2nd Quarter	= 1.99	< 1	< 1	< 3	2
3	3	3	10/21/97		Sample 4 - 3rd Quarter	= 9.8	< 1	< 1	< 3	= 10
4	4	4	1/6/98	1	Sample 4 - 4th Quarter	= 7.87	< 1	< 1	< 3	= 8

FIELD PIT REMEDIATION/CLOSURE FORM

GENERAL	Meter: <u>75212</u> Location: <u>GRAHAM #53</u> Coordinates: Letter: <u>L</u> Section <u>10</u> Township: <u>27</u> Range: <u>8</u> Or Latitude _____ Longitude _____ Date Started : <u>2-7-95</u> Run: <u>07</u> <u>32</u>
FIELD OBSERVATIONS	Sample Number(s): <u>KP 414</u> Sample Depth: <u>12'</u> Feet Final PID Reading <u>173</u> PID Reading Depth <u>12'</u> Feet Yes No Groundwater Encountered ☐ ☐ Approximate Depth _____ Feet
CLOSURE	Remediation Method : Excavation Onsite Bioremediation Backfill Pit Without Excavation ☒ Approx. Cubic Yards <u>160 mt. 150 2-10-95</u> ☐ ☐ Soil Disposition: Envirotech ☒ Other Facility ☐ ☐ Tierra Name: _____ Pit Closure Date: <u>KP-2-8-95</u> <u>2-7-95</u> <u>2-8-95</u> Pit Closed By: <u>B.E.F.</u>
REMARKS	Remarks : <u>Some Line markers. started Remediating to 12'</u> <u>Soil At 12' is dark Black with A strange H.C odor.</u> <u>Closed Pit.</u>
	Signature of Specialist: <u>Kelly Padilla</u>



Page _____ of _____



FIELD SERVICES LABORATORY
ANALYTICAL REPORT

PIT CLOSURE PROJECT - Soil Samples Inside the GWV Zone

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	KP 414	946656
MTR CODE SITE NAME:	75212	N/A
SAMPLE DATE TIME (Hrs):	2-8-95	1250
SAMPLED BY:	Phase I	N/A
DATE OF TPH EXT. ANAL:	2-10-95	2-10-95
DATE OF BTEX EXT. ANAL:	2/9/95	2/17/95
TYPE DESCRIPTION:	VC	Black w/some Brown clay

REMARKS:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q	M(g)	V(ml)
BENZENE	7.38 ^{11 4/21/95} 6.94	MG/KG	0.47847		2.09	20
TOLUENE	24.3	MG/KG	I		I	I
ETHYL BENZENE	9.76	MG/KG	I		I	I
TOTAL XYLENES	92.1	MG/KG	I		I	I
TOTAL BTEX	134	MG/KG				
TPH (418.1)	1560	MG/KG			1.94	28
HEADSPACE PID	173	PPM				
PERCENT SOLIDS	77.3	%				

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

Recovery was at 86.5 % for this sample All QA/QC was acceptable.

ave:

Toluene was reported off a duplicate run due to unacceptable integration of toluene on this analysis.

F = Dilution Factor Used

Approved By:

[Signature]

Date:

4/27/95

MEMO

Date: April 21, 1995

To: John Lambdin

From: Tony Tristano *ATT*

Subject: Sample set consisting of sample numbers 946644E & 946656E

Two samples, 946644 and 946656 were sampled on February 7, 1995 and February 8, 1995 respectively and submitted for BTEX analysis by Method 8020.

Since we are using sample preparation and analysis methods found in the "Test Methods for Evaluating Solid Waste", SW-846 3rd. edition, USEPA, 1986 and its approved updates I felt it would be necessary to detail discrepancies between the methods and the quality control report.

First, the toluene recovery for the Laboratory Calibration Standard (LCS) was higher than expected due to the soil vial used for the analysis contained carryover contamination from the sample previously analyzed in the soil vial. The small peaks in the chromatogram which replaced the normally smooth baseline, demonstrated by both the auto blank analysis and the soil vial blank analysis, leads me to believe the contamination is present. I feel the contamination is a rare occurrence despite our rigorous cleaning of the soil vials following being used in an analysis.

Secondly, the lower than expected recoveries for the Continuing Calibration Verification (CCV) are due to an on going instrumental problem. The response from the Photo-Ionization Detector (PID) gradually decreases until the recoveries of the analytical surrogates, which are added to every sample, drop to unacceptable levels. The CCV was analyzed late in the batch as illustrated by the attached batch list which corresponded to a significant decrease in response and should therefore be disregarded.

Despite the problems discussed, I feel the results for these two samples are correct due to the fact that the samples were analyzed at the beginning of the batch and following the acceptable calibration verifications before the response decrease came into play. In addition the samples could not be re-analyzed before the holding time lapsed due to continued equipment problems.

*Reviewed &
Approved
4/27/95
JTD*

RECORD OF SUBSURFACE EXPLORATION

Burlington Environmental Inc.
4000 Monroe Road
Farmington, New Mexico 87401
(505) 326-2262 FAX (505) 326-2388

Borehole # BH-1
Well #
Page 1 of 1

Project Name EPNG PITS
Project Number 14509 Phase 6000.77
Project Location Graham #53 75012

Elevation
Borehole Location 2440 L-512-T27-RP
GWL Depth
Logged By J.F. LaBarbera
Drilled By K. Padilla
Date/Time Started 7/7/75 - 1240
Date/Time Completed - 1530

Well Logged By J.F. LaBarbera
Personnel On-Site K. Padilla, F. Rivera, 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			Drilling Conditions & Blow Counts
0										
5										
10										
15	1	15-16.5	17	Brn, soft, silty, lo. fine sand, dry, odor	ML		0	8	1778 576	6750
20	2	20-20.5	5	Brn, med. soft, clay, silty damp, odor, med. plastic	CL		0	143	1390 29	1300
25	3	25-26	12	Gray, loose, fine sand, to silty, odor, damp	SP		0	124	160 84	1311
30	4	30-31.25	15	Brn, soft, silty, fine sand, moist, silty odor			0	144	5714 2.5	1320
35										
40										

Comments:

(came up to)
water encountered at 25.33'. Sample bagged & used. Sample JFL is sent for BTEX/TPH analysis. 4" monitoring well set at 35 feet
40'

Geologist Signature

J.F. LaBarbera

MONITORING WELL INSTALLATION RECORD

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

Borehole # BH1
Well # MW1
Page 1 of 1

Project Name EPRI Pz Closure

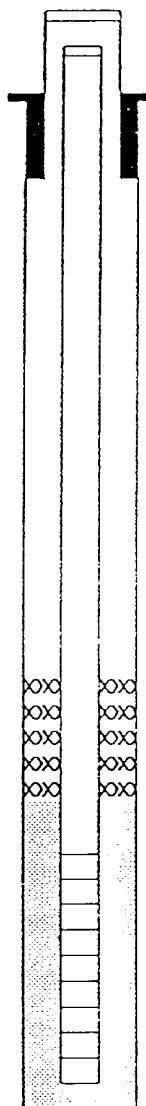
Project Number 17509 Phase Case 77
Project Location Graham #53 75212

Elevation _____
Well Location Interlock-Sia-T27-R8
GWL Depth 28.33'
Installed By K Padilla

On-Site Geologist John LaBarbera
Personnel On-Site K Padilla, E. Rivera, D. Charl
Contractors On-Site _____
Client Personnel On-Site _____

Date/Time Started 2/12/95 - 1345
Date/Time Completed - 1330

Depths in Reference to Ground Surface				
Item	Material	Depth		
Top of Protective Casing	-		Top of Protective Casing	<u>-</u>
Bottom of Protective Casing	-		Top of Riser	<u>+3</u>
Top of Permanent Borehole Casing	-		Ground Surface	<u>0</u>
Bottom of Permanent Borehole Casing	-			
Top of Concrete	-			
Bottom of Concrete	-			
Top of Grout	Portland	-5		
Bottom of Grout	10 x 94# Portland	-20		
Top of Well Riser	4" PVC	+3		
Bottom of Well Riser	4" PVC	-25		
Top of Well Screen	4" PVC 0.010"	-25		
Bottom of Well Screen	4" PVC 0.010"	-40		
Top of Peltonite Seal		-20	Top of Seal	<u>20</u>
Bottom of Peltonite Seal	2.5 x 50# H2a Plug	-22		
Top of Gravel Pack	10-20 silica	-22	Top of Gravel Pack	<u>22</u>
Bottom of Gravel Pack	50# x 20 50-20 Silica	-70	Top of Screen	<u>25</u>
Top of Natural Cave-In	-			
Bottom of Natural Cave-In	-			
Top of Groundwater	HL Data		Bottom of Screen	<u>70'</u>
Total Depth of Borehole		-70	Bottom of Borehole	<u>70'</u>



Comments: _____

Geologist Signature

John LaBarbera

[illegible]



FIELD SERVICES LABORATORY
ANALYTICAL REPORT

PIT CLOSURE PROJECT - Soil Samples Inside the GWV Zone

Phase II

~~Down A #1 M m.v. p.c~~
(321)

Graham #63 (30-31.25)

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	JFL10	947009
MTR CODE SITE NAME:	75212	N/A
SAMPLE DATE TIME (Hrs):	7/17/95	13:20
SAMPLED BY:	Phase II Drill	N/A
DATE OF TPH EXT. ANAL:	7-18-95	7-18-95
DATE OF BTEX EXT. ANAL:	7-19-95	7-20-95
TYPE DESCRIPTION:	1/6	Brown wet clay

REMARKS:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q	M(g)	V(ml)
BENZENE	<0.025	MG/KG	1			
TOLUENE	0.077	MG/KG	1			
ETHYL BENZENE	<0.025	MG/KG	1			
TOTAL XYLENES	0.076	MG/KG	1			
TOTAL BTEX	0.153	MG/KG				
TPH (418.1)	65.6	MG/KG			1.99	28
HEADSPACE PID	5714	PPM				
PERCENT SOLIDS	80.7	%				

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

The Surrogate Recovery was at 95 % for this sample All QA/QC was acceptable.

Narrative:

ATI Results attached.

DF = Dilution Factor Used

GAS CHROMATOGRAPHY RESULTS

TEST : BTEX (EPA 8020)
 CLIENT : EL PASO NATURAL GAS CO. ATI I.D.: 507358
 PROJECT # : 24324
 PROJECT NAME : PIT CLOSURE/PHASE II DRIL

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
14	947009	NON-AQ	07/17/95	07/19/95	07/20/95	1
PARAMETER			UNITS	14		
BENZENE			MG/KG	<0.025		
TOLUENE			MG/KG	0.077		
ETHYLBENZENE			MG/KG	<0.025		
METHYL XYLENES			MG/KG	0.076		

SURROGATE:

BROMOFLUOROBENZENE (%)

95



Analytical **Technologies, Inc.**

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

ATI I.D. 507358

July 25, 1995

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

Project Name/Number: PIT CLOSURE/PHASE II DRIL M/W 24324

Attention: John Lambdin

On 07/19/95, Analytical Technologies, Inc., (ADHS License No. AZ0015), received a request to analyze **aqueous and 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

MR:jt

Enclosure

H. Mitchell Rubenstein, Ph.D.
Laboratory Manager



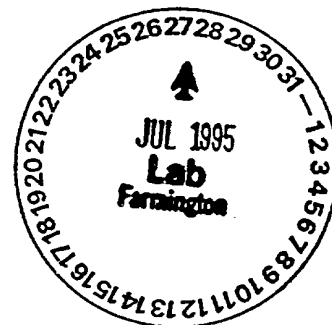


Analytical Technologies, Inc.

CLIENT : EL PASO NATURAL GAS CO. DATE RECEIVED : 07/19/95
PROJECT # : 24324
PROJECT NAME : PIT CLOSURE/PHASE II DRIL REPORT DATE : 07/25/95

ATI ID: 507358

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	946991	NON-AQ	07/13/95
02	946992	NON-AQ	07/13/95
03	946993	NON-AQ	07/13/95
04	946994	NON-AQ	07/13/95
05	946995	NON-AQ	07/13/95
06	946996	AQUEOUS	07/13/95
07	946997	AQUEOUS	07/13/95
08	946998	AQUEOUS	07/13/95
09	946999	AQUEOUS	07/13/95
10	947005	NON-AQ	07/14/95
11	947006	NON-AQ	07/14/95
12	947007	NON-AQ	07/17/95
1	947008	NON-AQ	07/17/95
	947009	NON-AQ	07/17/95
15	947019	AQUEOUS	07/17/95



---TOTALS---

<u>MATRIX</u>	<u>#SAMPLES</u>
AQUEOUS	5
NON-AQ	10

ATI 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.



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - QUALITY CONTROL

MSMSD

TEST : EPA 8015 MODIFIED
MSMSD # : 072095 ATI I.D. : 507358
CLIENT : EL PASO NATURAL GAS CO. DATE EXTRACTED : 07/20/95
PROJECT # : 24324 DATE ANALYZED : 07/22/95
PROJECT NAME : PIT CLOSURE/PHASE II DRIL SAMPLE MATRIX : NON-AQ
REF. I.D. : 072095 UNITS : MG/KG

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD
FUEL HYDROCARBONS	<5	100	120	120	110	110	9

JS 7/21/95

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - QUALITY CONTROL

MSMSD

TEST : BTEX (EPA 8020)
MSMSD # : 50735809 ATI I.D. : 507358
CLIENT : EL PASO NATURAL GAS CO. DATE EXTRACTED : NA
PROJECT # : 24324 DATE ANALYZED : 07/20/95
PROJECT NAME : PIT CLOSURE/PHASE II DRIL SAMPLE MATRIX : AQUEOUS
REF. I.D. : 50735809 UNITS : UG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD
BENZENE	2.0	10	12	100	12	100	0
TOLUENE	<0.5	10	10	100	10	100	0
ETHYLBENZENE	<0.5	10	11	110	11	110	0
TOTAL XYLENES	<0.5	30	32	107	32	107	0

JP
7/31/95

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\% \text{ (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

GAS CHROMATOGRAPHY - QUALITY CONTROL

MSMSD

TEST : BTEX (EPA 8020)
 MSMSD # : 50735703 ATI I.D. : 507358
 CLIENT : EL PASO NATURAL GAS CO. DATE EXTRACTED : 07/19/95
 PROJECT # : 24324 DATE ANALYZED : 07/19/95
 PROJECT NAME : PIT CLOSURE/PHASE II DRIL SAMPLE MATRIX : NON-AQ
 REF. I.D. : 50735703 UNITS : MG/KG

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD
BENZENE	<0.025	1.0	1.1	110	1.1	110	0
TOLUENE	<0.025	1.0	1.1	110	1.1	110	0
ETHYLBENZENE	<0.025	1.0	1.1	110	1.1	110	0
TOTAL XYLENES	<0.025	3.0	3.3	110	3.4	113	3

Handwritten signature and date 7/21/95

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\% \text{ (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

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

CHAIN OF CUSTODY

DATE: 7/18/95 PAGE 1 OF 2

ATLAB I.D.

507358

PROJECT MANAGER: JOHN LAMBDIN

COMPANY: EL PASO NATURAL GAS

ADDRESS: P.O. BOX 4990

FARMINGTON, NM 87499

PHONE: (505) 599-2144

FAX: (505) 599-2261

BILL TO: SAME AS ABOVE

COMPANY:

ADDRESS:

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	LAB ID	Petroleum Hydrocarbons (41.1)	(MOD 8015) Gas/Diesel	Diesel/Gasoline/BTXE/MTBE (MOD 8015/8020)	BTXE/MTBE (8020)	BTEX (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
946991	7/13/95	9:13	Soil	-01	X	X			X																1
946992	7/13/95	11:41	↑	-02	X	X			X																1
946993	7/13/95	16:18	↓	-03	X	X			X																1
946994	7/13/95	16:18	↓	-04	X	X			X																1
946995	7/13/95	16:30	Soil	-05					X																1
946996	7/13/95	13:45	Water	-06					X																2
946997	7/13/95	13:50	↑	-07					X																2
946998	7/13/95	14:05	↓	-08					X																1
946999	7/13/95	16:50	Water	-09					X																2

PROJECT INFORMATION

PROJ. NO.: 24324	NO. CONTAINERS	19
PROJ. NAME: PIT CLOSURE/Post Drill	CUSTODY SEALS	01 N / NA
P.O. NO.: 38822	RECEIVED INTACT	340 F
SHIPPED VIA: FEDERAL EXPRESS	RECEIVED COLD	340 F

PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS

(RUSH) ☐ 24hr ☐ 48hr ☐ 72hr ☒ 1 WEEK (NORMAL) ☐ 2 WEEK	CHARGE CODE: 50% 108-51570-24-(XX)1-(X)12-31-2010
Comments: 50% 108-52452-24-(XX)1-(X)12-31-2010	7210

Q/A/QC ON PROJECT SAMPLES

SAMPLED & RELINQUISHED BY: 1.

Signature:	Time:	Signature:	Time:
Printed Name:	Date:	Printed Name:	Date:
Company:	Phone:	Company:	Company:

RELINQUISHED BY: 2.

Signature:	Time:	Signature:	Time:
Printed Name:	Date:	Printed Name:	Date:
Company:	Company:	Company:	Company:

3.

Signature:	Time:	Signature:	Time:
Printed Name:	Date:	Printed Name:	Date:
Company:	Company:	Company:	Company:

RECEIVED BY: 1.

Signature:	Time:	Signature:	Time:
Printed Name:	Date:	Printed Name:	Date:
Company:	Company:	Company:	Company:

RECEIVED BY: 2.

Signature:	Time:	Signature:	Time:
Printed Name:	Date:	Printed Name:	Date:
Company:	Company:	Company:	Company:

3.

Signature:	Time:	Signature:	Time:
Printed Name:	Date:	Printed Name:	Date:
Company:	Company:	Company:	Company:

ADDRESS:

QA/QC ON PROJECT SAMPLES

Company:

Company. ,

Analytical Technologies, Inc.

Petroleum Hydrocarbons (418.1)
(MOD 8015) Gas/Diesel
Diesel/Gasoline/BTXE/MTBE (MOD 8015/8020)
BTEX/MTBE (8020)
BETX (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)

[illegible]



Natural Gas Company

A 2210

CHAIN OF CUSTODY RECORD

[illegible]



EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY ANALYTICAL REPORT



5-6-97

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	970318
MTR CODE SITE NAME:	75212	Graham #53 MW-1
SAMPLE DATE TIME (Hrs):	4/17/97	1440
PROJECT:	Sample 4 - 1st Quarter	
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	4.44	PPB				
TOLUENE	< 1	PPB				
ETHYL BENZENE	< 1	PPB				
TOTAL XYLENES	< 3	PPB				
TOTAL BTEX	4.44	PPB				

e Surrogate Recovery was at 99.6 % for this sample All QA/QC was acceptable.

rrative:

proved By:

John L. Loh

Date:

4/24/97



EL PASO FIELD SERVICES

Field Services Laboratory
Analytical Report



5-6-97

SAMPLE IDENTIFICATION

EPFS LAB ID:	970318
DATE SAMPLED:	04/17/97
TIME SAMPLED (Hrs):	1410
SAMPLED BY:	D. Bird
MATRIX:	Water
METER CODE:	75212
SAMPLE SITE NAME:	Huerfano Pipeline
SAMPLE POINT:	Graham #53 MW-1

FIELD REMARKS:

GENERAL CHEMISTRY WATER ANALYSIS RESULTS

PARAMETER	RESULT	UNITS	DATE ANALYZED
Laboratory pH	7.9	Units	04/18/97
Alkalinity as CO ₃	0	PPM	04/18/97
Alkalinity as HCO ₃	299	PPM	04/18/97
Calcium as Ca	503	PPM	04/19/97
Magnesium as Mg	34	PPM	04/19/97
Total Hardness as CaCO ₃	1,395	PPM	04/19/97
Chloride as Cl	12	PPM	04/18/97
Sulfate as SO ₄	1,800	PPM	04/18/97
Fluoride as F	1.5	PPM	04/18/97
Nitrate as NO ₃ -N	<0.6	PPM	04/18/97
Nitrite as NO 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	0.9	PPM	04/19/97
Sodium as Na	397	PPM	04/19/97
Total Dissolved Solids	3,000	PPM	04/19/97
Calculated TDS	2,895	PPM	04/19/97
Conductivity	3,530	umhos/cm	04/18/97
Anion/Cation %	2.7%	%, <5.0 Accepted	04/21/97

Remarks:

Printed By:

mb

Approved By:

[Signature]



Well Number 44W-1
Meter Code 75213

☐	Development
☒	Purging

Site Name GRAHAM #53

Development Criteria

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

Methods of Development

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

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 43.48
Initial Depth to Water (feet) 28.91
Height of Water Column In Well (feet) 14.57

Diameter (Inches): Well 4 Gravel Pack

Item	Water Volume in Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing		9.6	28.9
Gravel Pack			
Drilling Fluids			
Total			

Instruments

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

☒ Temperature Meter
☒ Other D.O. CHEMISTS KIT

Water Disposal

DELTA 5 SEPARATOR

Water Removal Data

[illegible]

Comments

Comments _____

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



A 2027

CHAIN OF CUSTODY RECORD

Project No.		Project Name		Requested Analysis		Remarks	
Samplers: (Signature)		Date: 7-15-97		Type and No. of Sample Containers		Preservation Technique	
Date	Time	Comp.	GRAB	Sample Number			
7-15-97	1226	X		970670	5-1 400 X	GRAHAM #53 ANAL MC 75212	
7-15-97		X			5-1 400 X	TRIP BLANK	
Relinquished by: (Signature)		Date/Time		Received by: (Signature)		Date/Time	
Dennis Bied		7-16-97 1615					
Relinquished by: (Signature)		Date/Time		Received by: (Signature)		Date/Time	
Relinquished by: (Signature)		Date/Time		Received for Laboratory by: (Signature)		Remarks:	
				Mando Heppner		7/17/97 1415	
Carrier Co:		Carrier Phone No.		Date Results Reported / by: (Signature)			
Air Bill No.:							



EL PASO FIELD SERVICES



8/8/97

FIELD SERVICES LABORATORY ANALYTICAL REPORT PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	970670
MTR CODE SITE NAME:	75212	Graham #53
SAMPLE DATE TIME (Hrs):	7/16/97	1226
PROJECT:	Sample 4 - 2nd Quarter	
DATE OF BTEX EXT. ANAL.:	7/17/97	7/17/97
TYPE DESCRIPTION:	Monitor Well	Water

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	1.99	PPB				
TOLUENE	< 1	PPB				
ETHYL BENZENE	< 1	PPB				
TOTAL XYLENES	< 3	PPB				
TOTAL BTEX	1.99	PPB				

--BTEX is by EPA Method 8020 --

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

Narrative:

Approved By:

John L. Linder

Date:

7/22/97



Well Number NY-1
Meter Code 75212

Development Criteria

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

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

Water Volume Calculation

Initial Depth of Well (feet) 43.48
Initial Depth to Water (feet) 22.68
Height of Water Column in Well (feet) 13.80

Diameter (Inches): Well

Item	Water Volume In Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing		9.1	27.4
Gravel Pack			
Drilling Fluids			
Total			

☒ pH Meter
☐ DO Monitor
☒ Conductivity Meter
☒ Temperature Meter
☒ Other 200

KUTZ SEPARATOR

[illegible]

Developer's Signature Terrence Bied

Date 4-18-97 Reviewer _____

John Lundberg Date 7/22/97



Natural Gas Company

A 2113

CHAIN OF CUSTODY RECORD

[illegible]



EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY

ANALYTICAL REPORT

PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	971123
MTR CODE SITE NAME:	75212	Graham #53
SAMPLE DATE TIME (Hrs):	10/21/97	1028
PROJECT:	Sample 4 3rd Quarter	
DATE OF BTEX EXT. ANAL.:	10/23/97	10/23/97
TYPE DESCRIPTION:	MW-1	Water

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	9.80	PPB				
TOLUENE	< 1	PPB				
ETHYL BENZENE	< 1	PPB				
TOTAL XYLENES	< 3	PPB				
TOTAL BTEX	10	PPB				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 91.5 % for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative:

Approved By:

Date:

10-27-97

971123BTEXMW, 10/24/97

Well Development and Purging Data

Site Name GRAHAM #53

☐	Development
☒	Purging

Well Number MW-1
Meter Code 75212

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) 43.48
Initial Depth to Water (feet) 29.19
Height of Water Column In Well (feet) 14.29

Diameter (inches): Well 4 Gravel Pack

Item	Water Volume In Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing		9.4	28.3
Gravel Pack			
Drilling Fluids			
Total			

Instruments

- ☒ pH Meter
☐ DO Monitor
☒ Conductivity Meter
☒ Temperature Meter
☒ Other DO Meter

Water Disposal

KUTZ SEPARATOR

Water Removal Data

[illegible]

Comments

Developer's Signature Dennis Bird

Date 10-21-97 Reviewer _____

John Lollar

Date 10-27-97



A 2176

SAMPLE 4 4TH QTR

CHAIN OF CUSTODY RECORD

Project No.		Project Name		MC # 75213		Date: 1-6-98			
Samplers: (Signature)		Dennis Bird							
Date	Time	Comp.	GRAB	Sample Number	Type and No. of Sample Containers	Preservation Technique	Requested Analysis	Remarks	
1-6-98	1457		X	980009	5-1	4°C X		GRAHAM #53 MW-1	
Relinquished by: (Signature)		Dennis Bird		1-6-98 1658		Received by: (Signature)		Date/Time	Received by: (Signature)
Relinquished by: (Signature)						Received by: (Signature)		Date/Time	Received by: (Signature)
Relinquished by: (Signature)						Received for Laboratory by: (Signature)		Date/Time	Remarks:
						Carrier		1/2/98 0745	
						Carrier phone No.			
						Date Results Reported / by: (Signature)			



EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY ANALYTICAL REPORT PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	980009
MTR CODE SITE NAME:	75212	Graham #53
SAMPLE DATE TIME (Hrs):	1/6/98	1457
PROJECT:	Sample 4 4th Quarter	
DATE OF BTEX EXT. ANAL.:	1/12/98	1/12/98
TYPE DESCRIPTION:	MW-1	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	7.87	PPB				
TOLUENE	< 1	PPB				
ETHYL BENZENE	< 1	PPB				
TOTAL XYLENES	< 3	PPB				
TOTAL BTEX	8	PPB				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 101.3 % for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative: _____

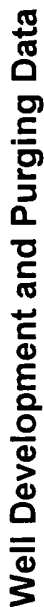
Approved By: _____

John L. Linder

Date: _____

1/21/98

980009BTEXMonitorWell, 1/16/98



☐	Development
☒	Purging

Well Number MW-1

Site Name GRAHAM #33

Meter Code 75217

Development Criteria

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

Water Volume Calculation

Initial Depth of Well (feet) 43.48
Initial Depth to Water (feet) 22.75
Height of Water Column in Well (feet) 14.73

Diameter (inches): Well _____ Gravel Pack _____

Methods of Development

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

Instruments

- | | |
|-------------------------------------|---------------------|
| ☒ | pH Meter |
| ☐ | DO Monitor |
| ☒ | Conductivity Meter |
| ☒ | Temperature Meter |
| ☒ | Other <u>D.O. C</u> |

Water Disposal

26072 SEP 25 1965

Water Removal Data

[illegible]

Comments

Developer's Signature _____

Date 1-6-98 Reviewer

Date 1/24/98