

3R - 166

REPORTS

DATE:

1997



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

February 27, 1998

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

RECEIVED

MAR 02 1998

Environmental Bureau
Oil Conservation Division

Re: 1997 Groundwater Annual Report

Dear Mr. Olson:

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

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

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

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

Sincerely,

A handwritten signature in cursive script that reads 'Sandra D. Miller'.

Sandra D. Miller
Environmental Manager

xc: Mr. Bill Liese, BLM w/o enclosures

Mr. Denny Foust, NMOCD - Aztec w/enclosures; **Certified Mail #Z 295 387 298; #Z 295 387 299**

Ms. Charmaine Tso, Navajo EPA w/enclosures; **Certified Mail #Z 295 387 292**

SAN JUAN BASIN PIT CLOSURES
San Juan Basin, New Mexico

El Paso Field Services Pit Project
Pit Closure Report

March 1998

Prepared For

El Paso Field Services
Farmington, New Mexico

Project 17520

PHILIP
ENVIRONMENTAL

EPFS GROUNDWATER PITS

1997 ANNUAL GROUNDWATER REPORT

TRUNK D LINE DRIP

Meter/Line ID - LD015

SITE DETAILS

Legals - Twn: 28N Rng: 8W Sec: 20 Unit: F
NMOCD Hazard Ranking: 30 Land Type: FEDERAL
Operator: EL PASO FIELD SERVICES

PREVIOUS ACTIVITIES

Site Assessment: May-94 Excavation: May-94 (50 cy) Re-Excavation: Nov-95 (1,514 cy)
Soil Boring: Sep-95 Monitor Well: Mar-97

The pit was excavated to the practical extent of the trackhoe 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 312 ppm. The soil analytical were as follows; benzene - 0.13 mg/kg, total BTEX - 14 mg/kg, TPH - 172 mg/kg.

One soil boring was drilled in the center of the former pit and shallow groundwater was encountered at approximately 10.8 feet bgs. Due to encountering shallow groundwater, the pit would be re-excavated and no monitoring well was installed during this phase. One soil sample was collected from 15- 16.5 feet bgs. Soil analytical were as follows; benzene - <0.5 mg/kg, total BTEX - <3 mg/kg, TPH - <10 mg/kg.

The pit was re-excavated to 19 feet bgs, where groundwater was encountered. A soil sample was collected from the pit bottom with a soil headspace reading of 3 ppm. The soil analytical were as follows; benzene - <0.5 mg/kg, total BTEX - <3 mg/kg, TPH - <10 mg/kg.

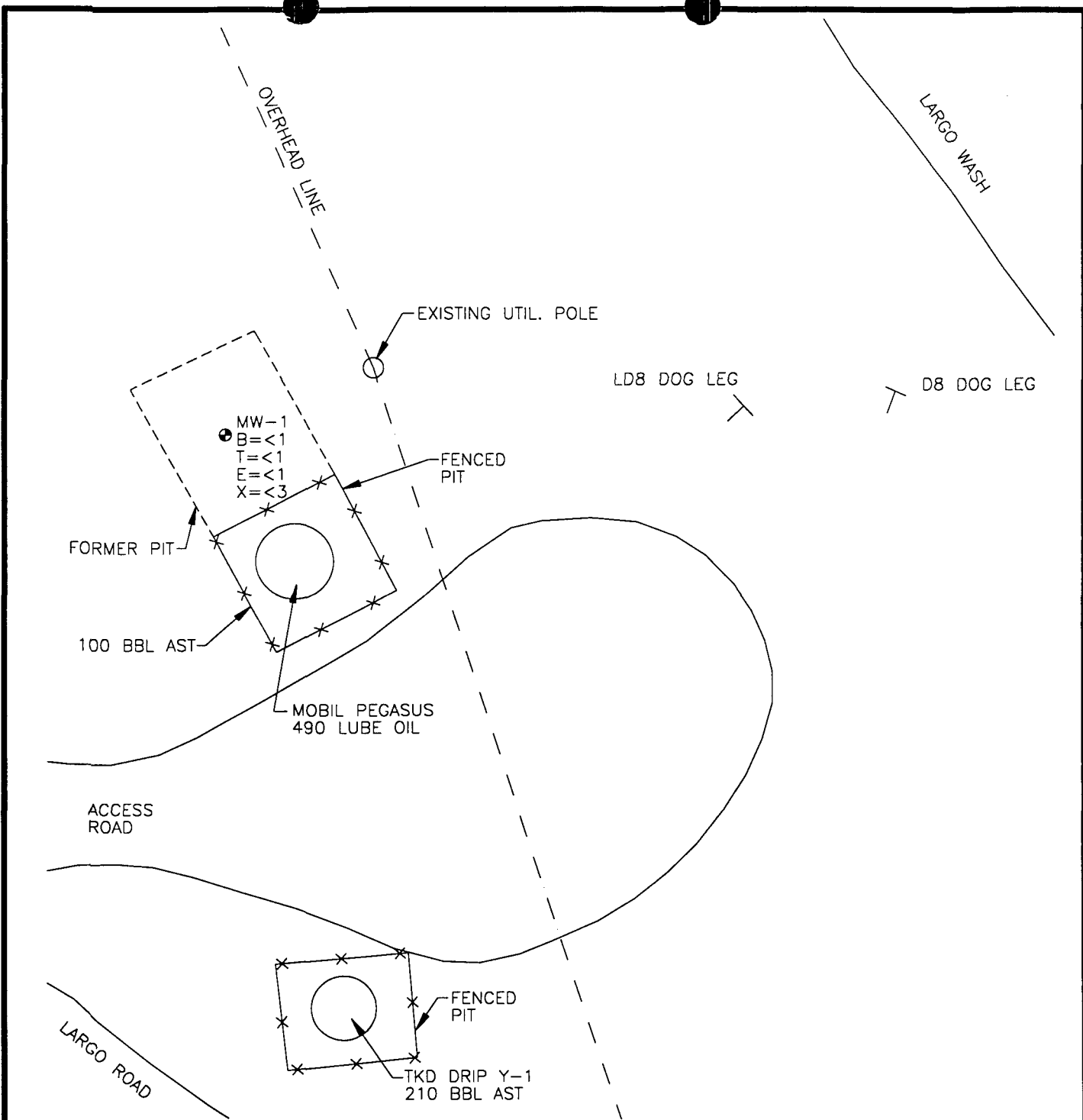
Following re-excavation of the pit, a groundwater monitoring well was installed, and groundwater samples were collected on a quarterly basis. Groundwater analytical data are presented in Table 1, and a site map is presented in Figure 1.

CONCLUSIONS

Groundwater analytical data has been below standards for four 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

NOT TO SCALE



COL. 175200-001



TITLE:

TRUNK D LINE DRIP
LD015

OWN:

TMM

DES.:

CC

PROJECT NO.:

17520

CHKD:

CC

APPD:

DATE:

12/8/97

REV.:

0

EPFS GW PITS

FIGURE 1

FIELD PIT SITE ASSESSMENT FORM

GENERAL

Meter: LD015 Location: TRUNK D LINE DRIP (Loop D-8)
 Operator #: _____ Operator Name: EPNG P/L District: BLANCO
 Coordinates: Letter: F Section 20 Township: 28 Range: 8
 Or Latitude _____ Longitude _____
 Pit Type: Dehydrator _____ Location Drip: _____ Line Drip: X Other: _____
 Site Assessment Date: 5-15-94 Area: 03 Run: 82-14P
31

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 CAÑON LARGO
 (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: 30 POINTS

REMARKS

Remarks : ONLY PIT ON LOCATION. PIT IS DRY. LOCATION IS JUST WEST OF LARGO WASH. REDLINE AND TOPO CONFIRMED LOCATION IS INSIDE U.Z.

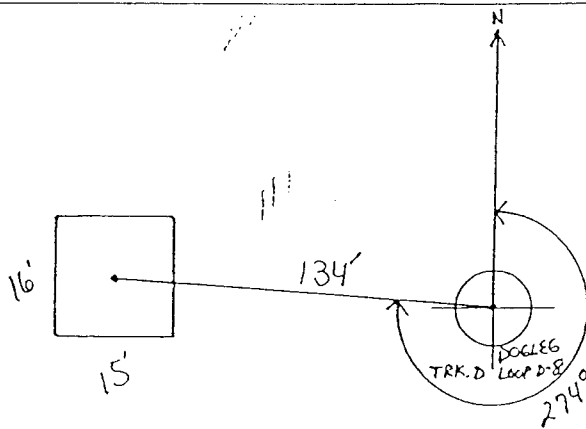
LD015

ORIGINAL PIT LOCATION

TRK.D LOOP D-8

DOGLEG

Original Pit : a) Degrees from North 274° Footage from Wellhead 134'
b) Length : 16' Width : 15' Depth : 1'



Remarks :

TOOK PICTURES AT 3:24 P.M.

END DUMP

MEASURED DISTANCE FROM PIT TO THE TRK.D LOOP D-8 DOGLEG

Completed By:

Robert Thompson

5.15.94

TABLE 1

Sample #	Meter/ Line #	Site Name	Sample Date	MV #	Project	Benzene (PPB)	Toluene (PPB)	Ethyl Benzene (PPB)	Total Xylenes (PPB)	Total BTEX
970226	LD015	Trunk D Line Drip	3/31/97	1	Phase II Drilling - Initial	< 1	< 1	< 1	< 3	< 6
970547	LD015	Trunk D Line Drip	6/10/97	1	Sample 4 - 1st Qtr	< 1	< 1	< 1	< 3	< 6
971053	LD015	Trunk D Line Drip	9/25/97	1	Sample 4 - 2nd Qtr	< 1	< 1	< 1	< 3	< 6
971297	LD015	Trunk D Line Drip	12/12/97	1	Sample 4 - 3rd Qtr	< 1	< 1	< 1	< 3	< 6

PHASE I EXCAVATION

FIELD PIT REMEDIATION/CLOSURE FORM

GENERAL

Meter: _____ Location: TRUNK D LINE Drip (Loop D-8)

Coordinates: Letter: F Section 20 Township: 28 Range: 8

Or Latitude _____ Longitude _____

Date Started : 5-23-94 Area: 03 Run: 82

FIELD OBSERVATIONS

Sample Number(s): KP# 65 KP# 66 KP# 67

Sample Depth: 12' Feet

Final PID Reading 312 PID Reading Depth 12' Feet

Yes No

Groundwater Encountered ☐ (1) ☒ (2) Approximate Depth _____ Feet

CLOSURE

Remediation Method :

Excavation ☒ (1) Approx. Cubic Yards 50

Onsite Bioremediation ☐ (2)

Backfill Pit Without Excavation ☐ (3)

Soil Disposition:

Envirotech ☐ (1) ☒ (3) Tierra

Other Facility ☐ (2) Name: _____

Pit Closure Date: 5-23-94 Pit Closed By: B.E.I

REMARKS

Remarks : Some Line marked Pit looks Dry Started
Remediating to 12', Soil Turned Black, KP 5-23-94
Soil Real Black At 12' Still digging And

Signature of Specialist: Kelly Padilla



30

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT - Soil

SAMPLE IDENTIFICATION

LD 015

Field ID

Lab ID

SAMPLE NUMBER:

KP 65

945269

MTR CODE | SITE NAME:

Trunk D Line Drip (loop D8)

N/A

SAMPLE DATE | TIME (Hrs):

5-23-94

1215

SAMPLED BY:

N/A

DATE OF TPH EXT. | ANAL.:

5-24-94

5/24/94

DATE OF BTEX EXT. | ANAL.:

5/27/94

6/1/94

TYPE | DESCRIPTION:

vL

grey fine sand

REMARKS:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q	M(g)	V(ml)
BENZENE	0.13	MG/KG	S			
TOLUENE	2.4	MG/KG	S			
ETHYL BENZENE	0.92	MG/KG	S			
TOTAL XYLENES	11	MG/KG	S			
TOTAL BTEX	14	MG/KG				
TPH (418.1)	170 172	MG/KG			2.02	28
HEADSPACE PID	312	PPM				
PERCENT SOLIDS	77.8	%				

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

Surrogate Recovery was at 150 % for this sample All QA/QC was acceptable.
Irritative:

ATI results attached. Surrogate recovery was outside ATI
QC limits due to matrix interference.

= Dilution Factor Used

revised By:

Date:

7/14/94

GAS CHROMATOGRAPHY RESULTS

TEST : BTEX (EPA 8020)
CLIENT : EL PASO NATURAL GAS CO. ATI I.D.: 405406
PROJECT # : 24324
PROJECT NAME : PIT CLOSURE

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
16	945268	NON-AQ	05/23/94	05/27/94	06/01/94	1
17	945269	NON-AQ	05/23/94	05/27/94	06/01/94	5
18	945270	NON-AQ	05/23/94	05/27/94	06/01/94	10

PARAMETER	UNITS	16	17	18
BENZENE	MG/KG	<0.025	0.13	0.20
LUENE	MG/KG	0.058	2.4	2.1
ETHYLBENZENE	MG/KG	<0.025	0.92	0.60
TOTAL XYLENES	MG/KG	0.072	11	5.0

SURROGATE:

BROMOFLUOROBENZENE (%) 95 150* 139*

*OUTSIDE ATI QUALITY CONTROL LIMITS DUE TO MATRIX INTERFERENCE



Analytical **Technologies**, Inc.

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

ATI I.D. 405406

June 8, 1994

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

Project Name/Number: PIT CLOSURE 24324

Attention: John Lambdin

On 05/25/94, 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.

Letitia Krakowski, Ph.D.
Project Manager

H. Mitchell Rubenstein, Ph.D.
Laboratory Manager

MR:jd

Enclosure



Analytical Technologies, Inc.

CLIENT : EL PASO NATURAL GAS CO. DATE RECEIVED : 05/25/94
PROJECT # : 24324
PROJECT NAME : PIT CLOSURE REPORT DATE : 06/08/94

ATI ID: 405406

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	945232	NON-AQ	05/19/94
02	945233	NON-AQ	05/19/94
03	945234	NON-AQ	05/19/94
04	945235	NON-AQ	05/19/94
05	945236	NON-AQ	05/19/94
06	945250	NON-AQ	05/20/94
07	945251	NON-AQ	05/20/94
08	945252	NON-AQ	05/20/94
09	945253	NON-AQ	05/20/94
10	945254	NON-AQ	05/20/94
11	945255	NON-AQ	05/20/94
12	945256	NON-AQ	05/20/94
13	945265	NON-AQ	05/23/94
14	945266	NON-AQ	05/23/94
15	945267	NON-AQ	05/23/94
16	945268	NON-AQ	05/23/94
17	945269	NON-AQ	05/23/94
18	945270	NON-AQ	05/23/94
19	945271	NON-AQ	05/23/94

---TOTALS---

<u>MATRIX</u>	<u>#SAMPLES</u>
NON-AQ	19

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.

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

ATI I.D. 405406

June 8, 1994

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Letitia Krakowski, Ph.D.
Project Manager

H. Mitchell Rubenstein, Ph.D.
Laboratory Manager

MR:jd

Enclosure



Analytical Technologies, Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

CLIENT : EL PASO NATURAL GAS CO. ATI I.D. : 405406
PROJECT # : 24324 SAMPLE MATRIX : NON-AQ
PROJECT NAME : PIT CLOSURE UNITS : MG/KG

PARAMETER	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC.	% REC
PETROLEUM HYDROCARBONS	40540804	47	54	14	200	150	102

Accepted
S
6/15/04

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

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

GAS CHROMATOGRAPHY RESULTS

REAGENT BLANK

TEST	: BTEX (EPA 8020)	ATI I.D.	: 405406
BLANK I.D.	: 052794	MATRIX	: NON-AQ
CLIENT	: EL PASO NATURAL GAS CO.	DATE EXTRACTED	: 05/27/94
PROJECT #	: 24324	DATE ANALYZED	: 05/31/94
PROJECT NAME	: PIT CLOSURE	DILUTION FACTOR	: 1

PARAMETER	UNITS	
BENZENE	MG/KG	<0.025
TOLUENE	MG/KG	<0.025
ETHYLBENZENE	MG/KG	<0.025
TOTAL XYLENES	MG/KG	<0.025

INROGATE:

BROMOFLUOROBENZENE (%)

102

Acceptable.
J8
6/15/94

GAS CHROMATOGRAPHY RESULTS

REAGENT BLANK - EXTERNAL STANDARD

TEST	: BTEX (EPA 8020)	ATI I.D.	: 405406
BLANK I.D.	: 052794	MATRIX	: NON-AQ
CLIENT	: EL PASO NATURAL GAS CO.	DATE EXTRACTED	: 05/27/94
PROJECT #	: 24324	DATE ANALYZED	: 05/31/94
PROJECT NAME	: PIT CLOSURE	DILUTION FACTOR	: 1

PARAMETER	UNITS	
BENZENE	MG/KG	<0.025
TOLUENE	MG/KG	<0.025
ETHYLBENZENE	MG/KG	<0.025
TOTAL XYLENES	MG/KG	<0.025

SURROGATE:

BROMOFLUOROBENZENE (%)

102

Acceptable
for
6/15/94

GAS CHROMATOGRAPHY - QUALITY CONTROL

MSMSD

TEST	: BTEX (EPA 8020)		
MSMSD #	: 40540601	ATI I.D.	: 405406
CLIENT	: EL PASO NATURAL GAS CO.	DATE EXTRACTED	: 05/27/94
PROJECT #	: 24324	DATE ANALYZED	: 05/31/94
PROJECT NAME	: PIT CLOSURE	SAMPLE MATRIX	: NON-AQ
REF. I.D.	: 40540601	UNITS	: MG/KG

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD
BENZENE	<0.025	1.0	0.83	83	0.90	90	8
TOLUENE	<0.025	1.0	0.81	81	0.86	86	6
ETHYLBENZENE	<0.025	1.0	0.86	86	0.93	93	8
TOTAL XYLENES	0.032	3.0	2.5	83	2.7	90	8

Acceptable.
JS
4/15/94

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

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

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: BRAND IS HUSCO

ADDRESS: _____

SAMPLE ID	DATE	TIME	MATRIX	LAB ID
945232	5/19/94	0920	Soil	01
945233	5/19/94	1515	Soil	02
945234	5/19/94	1030	Soil	03
945235	5/19/94	1300	Soil	04
945236	5/19/94	1540	Soil	05
945250	5/20/94	0851	Soil	06
945251	5/20/94	1100	Soil	07
945252	5/20/94	1310	Soil	08
945253	5/20/94	0940	Soil	09

PROJECT INFORMATION		SAMPLE RECEIPT	
PROJ. NO.:	24324	NO. CONTAINERS	9
PROJ. NAME:	Pit Closure	CUSTODY SEALS	Y/N (NA)
P.O. NO.:	38822	RECEIVED INTACT	Y
SHIPPED VIA:	Federal Express	RECEIVED COLD	Y

PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS

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

Comments: Charge Code ;

50%. 108-51570-24 - 6001-0012-31-2010

50% 108-52A52-24-0001-0012-31-2010 samples-400

QA/QC on project samples blank - 20C samples

ATI Labs: San Diego (619) 458-9141 • Phoenix (602) 496-4400 • Seattle (206) 228-8335 • Pensacola (904) 487-2222

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

ANALYSIS REQUEST

[illegible]

SAMPLED & RELINQUISHED BY: 1.		RELINQUISHED BY: 2.	
Signature:	Time:	Signature:	Time:
Printed Name:	Date:	Printed Name:	Date:
Company:	Phone:	Company:	

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

DISTRIBUTION: White, Canary - AT1 • Pink - ORIGINATOR

PROJECT MANAGER:

COMPANY:

ADDRESS:

PHONE:

FAX:

BILL TO:

COMPANY:

ADDRESS:

SAMPLE ID	DATE	TIME	MATRIX	LAB ID
945232	5/19/94	0920	soil	01
945233	5/19/94	1515	soil	02
945234	5/19/94	1030	soil	03
945235	5/19/94	1300	soil	04
945236	5/19/94	1540	soil	05
945250	5/20/94	0851	soil	06
945251	5/20/94	1100	soil	07
945252	5/20/94	1310	soil	08
945253	5/20/94	0940	soil	09

PROJECT INFORMATION

PROJ. NO.:	24324	NO. CONTAINERS	2
PROJ. NAME:	Pit closure	CUSTODY SEALS	Y/N (NA)
P.O. NO.:	38822	RECEIVED INTACT	Y
SHIPPED VIA:	Federal Express	RECEIVED COLD	Y

PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS

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

Comments: Change Code :

50% 108 - 51570.24 - 6001 - 0012 - 31 - 1010

20% 108-52452-24-0001-0012-31-2010

samples. 400

ANALYSIS REQUEST

[illegible]

SAMPLED & RELINQUISHED BY: 1. RELINQUISHED BY: 2.

Signature:	Time:	Signature:	Time:
Kim Kirby		Kim Kirby	1545
Printed Name:	Date:	Printed Name:	Date:
Kim Kirby		Kim Kirby	5-24-94
Company:	Phone:	Company:	

RECEIVED BY:

Signature:	Time:	Signature:	Time:
			
Printed Name:	Date:	Printed Name:	Date:
John D. Davis	12/30	John D. Davis	12/30
Company:		Company:	
		Analytical Technologies, Inc.	

ATI Labs: San Diego (619) 458-9141 • Phoenix (602) 498-4400 • Seattle (206) 228-8335 • Pensacola (904) 474-1001 • Portland (503) 684-0447 • Albuquerque (505) 344-3777
DISTRIBUTION: White, Canary • ATI • Pink • ORIGINATOR

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



PROJECT MANAGER: John Lambada

COMPANY: El Paso Natural Gas

ADDRESS: P.O. Box 4990
Farmington, NM 87499
(505) 599-2141
(505) 599-2261

PHONE:

FAX:

BILL TO: Same as above

COMPANY:

ADDRESS:

SAMPLE ID	DATE	TIME	MATRIX	LAB ID
945254	5/20/94	1100	Soil	10
945255	5/20/94	1245	Soil	11
945256	5/20/94	1600	Soil	12
945265	5/23/94	0930	Soil	13
945266	5/23/94	1030	Soil	14
945267	5/23/94	1630	Soil	15
945268	5/23/94	1045	Soil	16
945269	5/23/94	1215	Soil	17
945270	5/23/94	1215	Soil	18

PROJECT INFORMATION

PROJ. NO.: 24324

PROJ. NAME: PIT CLOSURE

P.O. NO.: 38822

SHIPPED VIA: Federal Express

NO. CONTAINERS: 9

CUSTODY SEALS: Y/N/NA

RECEIVED INTACT: Y

RECEIVED COLD: Y

PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS

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

Comments: Change code:
50% 108-51570-24-0001-0012-31-2010
50% 108-52452-24-0001-0012-31-2010
QA/QC ON PROJECT SAMPLES blank-20

ANALYSIS REQUEST	NUMBER OF CONTAINERS
Petroleum Hydrocarbons (418.1)	
Diesel/Gasoline/BTEX/MTBE (MOD 8015/8020)	
BTEX/MTBE (8020)	
Chlorinated Hydrocarbons (601/8010)	
Aromatic Hydrocarbons (602/8020)	
SDWA Volatiles (502.1/503.1, 502.2 Reg. & Unreg.)	
Pesticides/PCB (608/8080)	
Herbicides (615/8150)	
Base/Neutral/Acid Compounds GC/MS (625/8270)	
Volatile Organics GC/MS (624/8240)	
Polynuclear Aromatics (610/8310)	
SDWA Primary Standards - Arizona	
SDWA Secondary Standards - Arizona	
SDWA Primary Standards - Federal	
SDWA Secondary Standards - Federal	
The 13 Priority Pollutant Metals	
RCRA Metals by Total Digestion	
RCRA Metals by TCLP (1311)	

SAMPLED & RELINQUISHED BY: 1. RELINQUISHED BY: 2. RELINQUISHED BY: 3.

Signature: Kim V. Kim Time: 1545 Signature: _____ Time: _____

Printed Name: Kim V. Kim Date: 5-24-94 Printed Name: _____ Date: _____

Company: El Paso Natural Gas Company: _____

RECEIVED BY: 1. RECEIVED BY: 2. RECEIVED BY: 3.

Signature: _____ Time: _____ Signature: John Lambada Time: 1330

Printed Name: _____ Date: _____ Printed Name: John Lambada Date: 5-25-94

Company: _____ Company: Analytical Technologies, Inc.

PROJECT MANAGER: JOHN LAMB DIN

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:

SAMPLE ID DATE TIME MATRIX LAB ID

945271 5/23/94 1230 Soil 19

ANALYSIS REQUEST

Petroleum Hydrocarbons (418.1)	
(MOD 8015) Gas/Diesel	
Diesel/Gasoline/BTXE/MTBE (MOD 8015/8020)	
BTXE/MTBE (8020)	
BTX (8020)	X
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

PROJECT INFORMATION

PROJ. NO.: 24324	NO. CONTAINERS	1
PROJ. NAME: PIT CLOSURE	CUSTODY SEALS	Y/N (NA)
P.O. NO.: 38822	RECEIVED INTACT	Y
SHIPPED VIA: FEDERAL EXPRESS	RECEIVED COLD	Y

PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS

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

Comments: CHARGE CODE: 50% 108-51570-24-0001-0012-31-2010
50% 108-52452-24-0001-0012-31-2010

QA/QC ON PROJECT SAMPLES Samples - 4°C
blank - 2°C

SAMPLED & RELINQUISHED BY: 1. RELINQUISHED BY: 2. RELINQUISHED BY: 3.

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

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

Date of Analysis: May 24, 1994

LABORATORY CONTROL SAMPLES: CALIBRATION CHECKS

SAMPLE ID	SOURCE	TRUE VALUE (PPM)	FOUND (MG/KG)	%R	ACCEPTABLE RANGE 75-125 %R	
					YES	NO
INITIAL CALIBRATION VERIF. "B" Heavy Oil (Lot MOR9480)	HORIBA	200	195	98	X	

Narrative: Acceptable.

LABORATORY DUPLICATES:

SAMPLE NUMBER	TYPE	SAMPLE RESULT (S)MG/KG	DUPLICATE RESULT (D)MG/KG	RPD	ACCEPTABLE RANGE + / - 35%	
					YES	NO
945252	2nd Extract	752	566	28.2	X	
945253	2nd Extract	508	480	5.7	X	
945260	2nd Extract	700	572	20.1	X	

Narrative: Acceptable.

LABORATORY SPIKES:

SAMPLE NUMBER	SPIKE ADDED (SA)MG/KG	SAMPLE RESULT (S)MG/KG	SPIKE SAMPLE RESULT (SR)MG/KG	%R	ACCEPTABLE RANGE 75-125 %R	
					YES	NO
945252	3010	752	3420	89	X	
945253	2610	508	3760	125	X	
945260	2010	700	3020	115	X	

Narrative: Acceptable.

REFERENCE SOIL (Laboratory Control Sample):

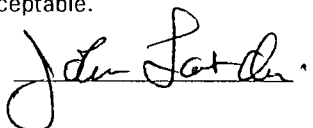
SAMPLE ID	SOURCE	KNOWN VALUE (MG/KG)	SAMPLE RESULT FOUND (MG/KG)	MFG SPECIFIED RANGE	ACCEPTABLE	
					YES	NO
ERA TPH STANDARD #1 LOT # 91026	ENVIRONMENTAL RESOURCE ASS.	1340	1320	804 - 1680	X	
ERA TPH STANDARD #2 w/int LOT # 91026	ENVIRONMENTAL RESOURCE ASS.	2590	3110	1550 - 3240	X	

Narrative: Acceptable.

LABORATORY REAGENT BLANK:

SAMPLE ID	SOURCE	TPH LEVEL (MG/KG)	STATUS
Freon Solvent	Mallinkroft	< 10.0	ACCEPTABLE
Reagent Blank	EPNG Lab	< 10.0	ACCEPTABLE

Narrative: Acceptable.

Approved By: 

Date: 9-Jun-94

Extracted: 5/24/94

PHASE II SOIL BORING

RECORD OF SUBSURFACE EXPLORATION

PHILIP ENVIRONMENTAL

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

Borehole # BH-1
Well # N/A
Page 1 of 1

Project Name EPNG PITS
Project Number 14509 Phase 6000 77
Project Location TRUNK D LINE DRIP

Elevation _____
Borehole Location T28, RB, S20, F
GWL Depth 10.8
Logged By S. POPE
Drilled By M. DONOHUE K. Padilla
Date/Time Started 9/26/95 1130
Date/Time Completed 9/26/95 1230

Well Logged By ST Pope
Personnel On-Site C. Mart, D. Charlie
Contractors On-Site N/A
Client Personnel On-Site N/A

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 HS			Drilling Conditions & Blow Counts
0										
5				Brown Sand, F.I.I			0	0		
10										water @ 10.8'
12.0				Bottom of Pit						
15	1	15 16.5		Brown Sand, Medium-Coarse Grained trace Silt, Loose, Saturated	SP		0	0	0	Head Space = 0
20				TOB - 16.5						
25										
30										
35										
40										

Comments:

15-16.5' Sample Collected for STP-8 BTEX & TPH. No well Installed.

Geologist Signature

Steve T. Pope

CHAIN OF CUSTODY RECORD

[illegible]



El Paso

Natural Gas Company

FIELD SERVICES LABORATORY

ANALYTICAL REPORT

PIT CLOSURE PROJECT - Soil Samples Inside the GWV Zone

SAMPLE IDENTIFICATION

SAMPLE NUMBER:	Field ID ^{25 correct of 7/24/95} STP 8-20 8	Lab ID 947 540
MTR CODE SITE NAME:	L0015	Trunk D Line Drip Pit
SAMPLE DATE TIME (Hrs):	09-26-95	1200
PROJECT:	Phase II Drilling	
DATE OF TPH EXT. ANAL.:	9-27-95	9/27/95 on da 7-18-96
DATE OF BTEX EXT. ANAL.:	9/27/95	9/27/95
TYPE DESCRIPTION:	VG	Lght brown 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	< 3	MG/KG				
TPH (418.1)	< 10	MG/KG			2.06	28
HEADSPACE PID	0	PPM				
PERCENT SOLIDS	83	%				

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

The Surrogate Recovery was at
Narrative:

98%

for this sample All QA/QC was acceptable.

DF = Dilution Factor Used

Approved By:

JP

Date:

9-29-95

EL PASO NATURAL GAS - FIELD SERVICES LAB

QUALITY CONTROL REPORT

EPA METHOD 8020 - BTEX

Samples: 947532, 947533, 947536 thru 947541, 947543 and 947544

QA/QC for 9/27/95 Sample Set

LABORATORY CALIBRATION CHECKS, LABORATORY CONTROL SAMPLES:

SAMPLE NUMBER ICV LA-45473 50 PPB	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE	
					YES	NO
					RANGE	
Benzene	Standard	50.0	52.2	104.4	75 - 125 %	X
Toluene	Standard	50.0	52.7	105.4	75 - 125 %	X
Ethyl benzene	Standard	50.0	53.2	106.4	75 - 125 %	X
m & p - Xylene	Standard	100	106	105.8	75 - 125 %	X
o - Xylene	Standard	50.0	53.3	106.6	75 - 125 %	X
SAMPLE NUMBER LCS LA-45476 25 PPB	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE	
					YES	NO
					RANGE	
Benzene	Standard	25.0	30.6	122.4	39 - 150	X
Toluene	Standard	25.0	31.1	124.4	46 - 148	X
Ethyl benzene	Standard	25.0	29.3	117.2	32 - 160	X
m & p - Xylene	Standard	50.0	59.7	119.4	Not Given	X
o - Xylene	Standard	25.0	29.9	119.6	Not Given	X
SAMPLE NUMBER CCV1 LA-45473 50 PPB	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE	
					YES	NO
					RANGE	
Benzene	Standard	50.0	45.2	90.4	75 - 125 %	X
Toluene	Standard	50.0	46.5	93.0	75 - 125 %	X
Ethyl benzene	Standard	50.0	47.3	94.6	75 - 125 %	X
m & p - Xylene	Standard	100	93	93.4	75 - 125 %	X
o - Xylene	Standard	50.0	47.5	95.0	75 - 125 %	X
SAMPLE NUMBER CCV2 LA-45473 50 PPB	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE	
					YES	NO
					RANGE	
Benzene	Standard	50.0	44.8	89.6	75 - 125 %	X
Toluene	Standard	50.0	46.3	92.6	75 - 125 %	X
Ethyl benzene	Standard	50.0	47.2	94.4	75 - 125 %	X
m & p - Xylene	Standard	100	93	92.9	75 - 125 %	X
o - Xylene	Standard	50.0	47.2	94.4	75 - 125 %	X
SAMPLE NUMBER CCV3 LA-45473 50 PPB	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE	
					YES	NO
					RANGE	
Benzene	Standard	50.0	44.5	89.0	75 - 125 %	X
Toluene	Standard	50.0	46.6	93.2	75 - 125 %	X
Ethyl benzene	Standard	50.0	47.1	94.2	75 - 125 %	X
m & p - Xylene	Standard	100	93	92.6	75 - 125 %	X
o - Xylene	Standard	50.0	47.0	94.0	75 - 125 %	X

Narrative: Acceptable.

LABORATORY DUPLICATES:

SAMPLE NUMBER	TYPE (Analysis, Portion, or Sample)	SAMPLE RESULT PPM ug/L	DUPLICATE RESULT PPM ug/L	RPD	ACCEPTABLE	
					YES	NO
947532					RANGE	
Benzene	Extraction Dup	<2.5	<2.5	0	+/- 35 %	X
Toluene	Extraction Dup	<2.5	<2.5	0	+/- 35 %	X
Ethyl benzene	Extraction Dup	<2.5	<2.5	0	+/- 35 %	X
m & p - Xylene	Extraction Dup	<5.0	<5.0	0	+/- 35 %	X
o - Xylene	Extraction Dup	<2.5	<2.5	0	+/- 35 %	X

Narrative: Acceptable.

LABORATORY DUPLICATES:

SAMPLE NUMBER	TYPE (Analysis, Portion, or Sample)	SAMPLE RESULT PPM ug/L	DUPLICATE RESULT PPM ug/L	RPD	ACCEPTABLE	
					YES	NO
NA					RANGE	
Benzene	Extraction Dup			0	+/- 35 %	NA
Toluene	Extraction Dup			0	+/- 35 %	NA
Ethyl benzene	Extraction Dup			0	+/- 35 %	NA
m & p - Xylene	Extraction Dup			0	+/- 35 %	NA
o - Xylene	Extraction Dup			0	+/- 35 %	NA

Narrative:

LABORATORY DUPLICATES:

SAMPLE NUMBER	TYPE (Analysis, Portion, or Sample)	SAMPLE RESULT PPM ug/L	DUPLICATE RESULT PPM ug/L	RPD	ACCEPTABLE	
					YES	NO
947532					RANGE	
Benzene	Matrix Duplicate	<2.5	<2.5	0	+/- 35 %	X
Toluene	Matrix Duplicate	<2.5	<2.5	0	+/- 35 %	X
Ethyl benzene	Matrix Duplicate	<2.5	<2.5	0	+/- 35 %	X
m & p - Xylene	Matrix Duplicate	<5.0	<5.0	0	+/- 35 %	X
o - Xylene	Matrix Duplicate	<2.5	<2.5	0	+/- 35 %	X

Narrative: Acceptable.

LABORATORY DUPLICATES:

SAMPLE NUMBER	TYPE (Analysis, Portion, or Sample)	SAMPLE RESULT PPM ug/L	DUPLICATE RESULT PPM ug/L	RPD	ACCEPTABLE	
					YES	NO
NA					RANGE	
Benzene	Matrix Duplicate			0	+/- 35 %	NA
Toluene	Matrix Duplicate			0	+/- 35 %	NA
Ethyl benzene	Matrix Duplicate			0	+/- 35 %	NA
m & p - Xylene	Matrix Duplicate			0	+/- 35 %	NA
o - Xylene	Matrix Duplicate			0	+/- 35 %	NA

Narrative:

LABORATORY SPIKES:

SAMPLE NUMBER	SPIKE ADDED PPB	SAMPLE RESULT PPB	SPIKE SAMPLE RESULT PPB	%R	ACCEPTABLE	
					YES	NO
947532	50.00				RANGE	
Benzene	50.0	<2.5	45.2	90.4	75 - 125 %	X
Toluene	50.0	<2.5	46.3	92.6	75 - 125 %	X
Ethyl benzene	50.0	<2.5	46.9	93.8	75 - 125 %	X
m & p - Xylene	100.0	<5.0	92.7	92.7	75 - 125 %	X
o - Xylene	50.0	<2.5	46.7	93.4	75 - 125 %	X

Narrative: Acceptable.

LABORATORY SPIKES:

SAMPLE NUMBER	SPIKE ADDED PPB	SAMPLE RESULT PPB	SPIKE SAMPLE RESULT PPB	%R	ACCEPTABLE	
					YES	NO
NA	50.00				RANGE	
Benzene	50.0			0	75 - 125 %	NA
Toluene	50.0			0	75 - 125 %	NA
Ethyl benzene	50.0			0	75 - 125 %	NA
m & p - Xylene	100.0			0	75 - 125 %	NA
o - Xylene	50.0			0	75 - 125 %	NA

Narrative:

ADDITIONAL ANALYTICAL BLANKS:

SAMPLE ID AUTO BLANK/BOILED WATER	SOURCE	PPB	STATUS
Benzene	Boiled Water	<2.5	ACCEPTABLE
Toluene	Boiled Water	<2.5	ACCEPTABLE
Ethyl benzene	Boiled Water	<2.5	ACCEPTABLE
Total Xylenes	Boiled Water	<7.5	ACCEPTABLE

Narrative: Acceptable

SAMPLE ID SOIL VIAL BLANK	SOURCE	PPB	STATUS
Benzene	Vial + Boiled Water	<2.5	ACCEPTABLE
Toluene	Vial + Boiled Water	<2.5	ACCEPTABLE
Ethyl benzene	Vial + Boiled Water	<2.5	ACCEPTABLE
Total Xylenes	Vial + Boiled Water	<7.5	ACCEPTABLE

Narrative: Acceptable.

SAMPLE ID EXTRACTION BLANK	SOURCE Lot # H18318	PPB	STATUS
Benzene	Methanol	<2.5	ACCEPTABLE
Toluene	Methanol	<2.5	ACCEPTABLE
Ethyl benzene	Methanol	<2.5	ACCEPTABLE
Total Xylenes	Methanol	<7.5	ACCEPTABLE

Narrative: Acceptable.

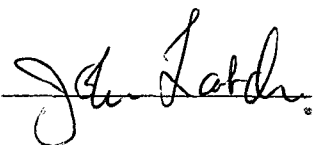
SAMPLE ID Carryover contamination checks	SOURCE	NARRATIVE (Not performed with this set)	STATUS
Benzene	Vial + Boiled Water	<2.5	NA
Toluene	Vial + Boiled Water	<2.5	NA
Ethyl benzene	Vial + Boiled Water	<2.5	NA
Total Xylenes	Vial + Boiled Water	<7.5	NA

Narrative: Acceptable.

SAMPLE ID METHANOL CHECK	SOURCE Lot # H18318	PPB (Not performed with this set)	STATUS
Benzene	MeOH/Boiled Water	<2.5	Acceptable
Toluene	MeOH/Boiled Water	<2.5	Acceptable
Ethyl benzene	MeOH/Boiled Water	<2.5	Acceptable
Total Xylenes	MeOH/Boiled Water	<7.5	Acceptable

Narrative: Acceptable

Approved By:



Date: 28-Sep-95

QUALITY CONTROL REPORT

TPH by Modified 418.1 by Infrared

Date of Analysis: September 27, 1995

27 Samples

LABORATORY CONTROL SAMPLES: CALIBRATION CHECKS

SAMPLE ID	SOURCE	TRUE VALUE (PPM)	FOUND (MG/KG)	%R	ACCEPTABLE RANGE 75-125 %R YES NO
INITIAL CALIBRATION VERIF. "B" Heavy Oil (Lot M3G9616)	HORIBA	300	not run	0	

Narrative: Not run.

LABORATORY DUPLICATES:

SAMPLE NUMBER	TYPE	SAMPLE RESULT (S)MG/KG	DUPLICATE RESULT (D)MG/KG	RPD	ACCEPTABLE RANGE + / - 35% YES NO
947516	2nd Extract	107	107	0.00	X
947534	2nd Extract	483	505	4.45	X
947423	2nd Extract	626	541	14.57	X

Narrative : Acceptable.

LABORATORY SPIKES:

SAMPLE NUMBER	SPIKE ADDED (SA)MG/KG	SAMPLE RESULT (S)MG/KG	SPIKE SAMPLE RESULT (SR)MG/KG	%R	ACCEPTABLE RANGE 75-125 %R YES NO
947516	2130	107	2490	112	X
947534	2210	483	2690	100	X
947423	2050	626	2770	105	X

Narrative: Acceptable.

REFERENCE SOIL (Laboratory Control Sample):

SAMPLE ID	SOURCE	KNOWN VALUE (MG/KG)	SAMPLE RESULT FOUND (MG/KG)	MFG SPECIFIED RANGE	ACCEPTABLE YES NO
ERA TPH STANDARD #1 LOT # 91030	ENVIRONMENTA RESOURCE ASS.	2920	3340	1900 - 3360	X
ERA TPH STANDARD #2 w/int LOT # 91030	ENVIRONMENTA RESOURCE ASS.	1150	1230	750 - 1320	X

Narrative: Acceptable.

LABORATORY REAGENT BLANK:

SAMPLE ID	SOURCE	TPH LEVEL (MG/KG)	STATUS
Freon Solvent	EPNG Lab	< 10.0	ACCEPTABLE
Reagent Blank	EPNG Lab	< 10.0	ACCEPTABLE

Narrative: Acceptable.

Approved By:

John T. Jorden

Date: 2-Oct-95

Extracted: 09/27/95

PHASE III EXCAVATION

FIELD PIT REMEDIATION/CLOSURE FORM/PHASE II

GENERAL

Meter: N/A Location: Trunk D Line Drip (Loop D-8)

Coordinates: Letter: E Section 20 Township: 28 Range: 08

Or Latitude _____ Longitude _____

Date Started : 11-9-95 Area: 03 Run: 31

FIELD OBSERVATIONS

Sample Number(s): 4P85 4P86 _____

Sample Depth: 19' Feet

Final PID Reading 3 ppm PID Reading Depth _____ Feet
Yes No

Groundwater Encountered ☒ (1) ☐ (2) Approximate Depth 17 1/2 Feet

Final Dimensions: Length 55 Width 54 Depth 19

CLOSURE

Remediation Method :

1514 LT 11/16/95

Excavation ☒ (1) Approx. Cubic Yards 2090 ~~411~~

Onsite Bioremediation ☐ (2)

Backfill Pit Without Excavation ☐ (3)

Overburden Cubic Yards 200 ~~411~~

Soil Disposition:

Envirotech ☒ (1) ☐ (3) Tierra

Other Facility ☐ (2) Name: _____

Pit Closure Date: 11-13-95

Pit Closed By: Philip Env.

Phase III

REMARKS

Remarks : Dug to 19' & encountered groundwater at 17 1/2 ft
Took P&A N wall 2 ppm S wall 4 ppm E wall 5 ppm W wall 2 ppm
Bot 3 ppm Comp sample 3 ppm. Used 50 lbs Fertilizer.

Signature of Specialist: James F. [Signature]



Natural Gas Company

CHAIN OF CUSTODY RECORD

Phase II

Page _____ of _____

[illegible]

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

FM-08-0565A (Rev. 03-94)



FIELD SERVICES LABORATORY
ANALYTICAL REPORT

PIT CLOSURE PROJECT - Soil Samples Inside the GWV Zone

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	JP85	947770
MTR CODE SITE NAME:	LD015	Trunk D Line Drip (Loop D-8)
SAMPLE DATE TIME (Hrs):	11-09-95	1630
PROJECT:	Phase III Excavation	
DATE OF TPH EXT. ANAL:	11/10/95	11/11/95 mde 7-18-96
DATE OF BTEX EXT. ANAL:	11/10/95	11/10/95
TYPE DESCRIPTION:	VC ^{RLB 11-10-95} VC	BROWN 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	< 3	MG/KG				
TPH (418.1)	< 10	MG/KG			2.06	28
HEADSPACE PID	3 mde	7-18-96 PPM				
PERCENT SOLIDS	100.1	%				

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

The Surrogate Recovery was at
Narrative:

98%

for this sample All QA/QC was acceptable.

DF = Dilution Factor Used

Approved By:

Date:

11-15-95

EL PASO NATURAL GAS - FIELD SERVICES LAB

QUALITY CONTROL REPORT

EPA METHOD 8020 - BTEX

Samples: 947766 thru 947770

QA/QC for 11/10/95 Sample Set

LABORATORY CALIBRATION CHECKS, LABORATORY CONTROL SAMPLES:

SAMPLE NUMBER	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE	
ICV LA-52589 50 PPB					YES	NO
RANGE						
Benzene	Standard	50.0	45.8	91.6	75 - 125 %	X
Toluene	Standard	50.0	43.0	86.0	75 - 125 %	X
Ethyl benzene	Standard	50.0	43.3	86.6	75 - 125 %	X
m & p - Xylene	Standard	100	82.3	82.3	75 - 125 %	X
o - Xylene	Standard	50.0	41.3	82.6	75 - 125 %	X
SAMPLE NUMBER	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE	
LCS LA-45476 25 PPB					YES	NO
RANGE						
Benzene	Standard	25.0	26.4	105.6	39 - 150	X
Toluene	Standard	25.0	24.5	98.0	46 - 148	X
Ethyl benzene	Standard	25.0	23.3	93.2	32 - 160	X
m & p - Xylene	Standard	50.0	45.3	90.6	Not Given	X
o - Xylene	Standard	25.0	22.5	90.0	Not Given	X
SAMPLE NUMBER	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE	
CCV1 LA-52589 50 PPB					YES	NO
RANGE						
Benzene	Standard	50.0	52.5	105.0	75 - 125 %	X
Toluene	Standard	50.0	47.9	95.8	75 - 125 %	X
Ethyl benzene	Standard	50.0	47.0	94.0	75 - 125 %	X
m & p - Xylene	Standard	100	89.6	89.6	75 - 125 %	X
o - Xylene	Standard	50.0	45.4	90.8	75 - 125 %	X
SAMPLE NUMBER	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE	
CCV2 LA-52589 50 PPB					YES	NO
RANGE						
Benzene	Standard	50.0	52.0	104.0	75 - 125 %	X
Toluene	Standard	50.0	47.8	95.6	75 - 125 %	X
Ethyl benzene	Standard	50.0	46.6	93.2	75 - 125 %	X
m & p - Xylene	Standard	100	88.6	88.6	75 - 125 %	X
o - Xylene	Standard	50.0	44.6	89.2	75 - 125 %	X
SAMPLE NUMBER	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE	
CCV3 LA-52589 50 PPB					YES	NO
RANGE						
Benzene	Standard	50.0	52.2	104.4	75 - 125 %	X
Toluene	Standard	50.0	47.6	95.2	75 - 125 %	X
Ethyl benzene	Standard	50.0	46.4	92.8	75 - 125 %	X
m & p - Xylene	Standard	100	88.0	88.0	75 - 125 %	X
o - Xylene	Standard	50.0	44.7	89.4	75 - 125 %	X

Narrative: Acceptable.

LABORATORY DUPLICATES:

SAMPLE NUMBER	TYPE	SAMPLE RESULT PPM ug/L	DUPLICATE RESULT PPM ug/L	RPD	ACCEPTABLE	
					YES	NO
947766					RANGE	
Benzene	Extraction Dup	<2.5	<2.5	0	+/- 35 %	X
Toluene	Extraction Dup	<2.5	<2.5	0	+/- 35 %	X
Ethyl benzene	Extraction Dup	<2.5	<2.5	0	+/- 35 %	X
m & p - Xylene	Extraction Dup	<5.0	<5.0	0	+/- 35 %	X
o - Xylene	Extraction Dup	<2.5	<2.5	0	+/- 35 %	X

Narrative: Acceptable.

LABORATORY DUPLICATES:

SAMPLE NUMBER	TYPE	SAMPLE RESULT PPM ug/L	DUPLICATE RESULT PPM ug/L	RPD	ACCEPTABLE	
					YES	NO
NA					RANGE	
Benzene	Extraction Dup			0	+/- 35 %	NA
Toluene	Extraction Dup			0	+/- 35 %	NA
Ethyl benzene	Extraction Dup			0	+/- 35 %	NA
m & p - Xylene	Extraction Dup			0	+/- 35 %	NA
o - Xylene	Extraction Dup			0	+/- 35 %	NA

Narrative:

LABORATORY DUPLICATES:

SAMPLE NUMBER	TYPE	SAMPLE RESULT PPM ug/L	DUPLICATE RESULT PPM ug/L	RPD	ACCEPTABLE	
					YES	NO
947766					RANGE	
Benzene	Matrix Duplicate	<2.5	<2.5	0	+/- 35 %	X
Toluene	Matrix Duplicate	<2.5	<2.5	0	+/- 35 %	X
Ethyl benzene	Matrix Duplicate	<2.5	<2.5	0	+/- 35 %	X
m & p - Xylene	Matrix Duplicate	<5.0	<5.0	0	+/- 35 %	X
o - Xylene	Matrix Duplicate	<2.5	<2.5	0	+/- 35 %	X

Narrative: Acceptable.

LABORATORY DUPLICATES:

SAMPLE NUMBER	TYPE	SAMPLE RESULT PPM ug/L	DUPLICATE RESULT PPM ug/L	RPD	ACCEPTABLE	
					YES	NO
NA					RANGE	
Benzene	Matrix Duplicate			0	+/- 35 %	NA
Toluene	Matrix Duplicate			0	+/- 35 %	NA
Ethyl benzene	Matrix Duplicate			0	+/- 35 %	NA
m & p - Xylene	Matrix Duplicate			0	+/- 35 %	NA
o - Xylene	Matrix Duplicate			0	+/- 35 %	NA

Narrative:

LABORATORY SPIKES:

SAMPLE NUMBER	SPIKE ADDED PPB	SAMPLE RESULT PPB	SPIKE SAMPLE RESULT PPB	%R	ACCEPTABLE	
					YES	NO
947766	50.00				RANGE	
Benzene	50.0	<2.5	51.4	102.8	75 - 125 %	X
Toluene	50.0	<2.5	47.5	95.0	75 - 125 %	X
Ethyl benzene	50.0	<2.5	45.9	91.8	75 - 125 %	X
m & p - Xylene	100.0	<5.0	86.6	86.6	75 - 125 %	X
o - Xylene	50.0	<2.5	44.2	88.4	75 - 125 %	X

Narrative: Acceptable.

LABORATORY SPIKES:

SAMPLE NUMBER	SPIKE ADDED PPB	SAMPLE RESULT PPB	SPIKE SAMPLE RESULT PPB	%R	ACCEPTABLE	
					YES	NO
NA	50.00				RANGE	
Benzene	50.0			0.0	75 - 125 %	NA
Toluene	50.0			0.0	75 - 125 %	NA
Ethyl benzene	50.0			0.0	75 - 125 %	NA
m & p - Xylene	100.0			0.0	75 - 125 %	NA
o - Xylene	50.0			0.0	75 - 125 %	NA

Narrative:

ADDITIONAL ANALYTICAL BLANKS:

SAMPLE ID	SOURCE	PPB	STATUS
AUTO BLANK/BOILED WATER			
Benzene	Boiled Water	<2.5	ACCEPTABLE
Toluene	Boiled Water	<2.5	ACCEPTABLE
Ethyl benzene	Boiled Water	<2.5	ACCEPTABLE
Total Xylenes	Boiled Water	<7.5	ACCEPTABLE

Narrative: Acceptable.

SAMPLE ID	SOURCE	PPB	STATUS
SOIL VIAL BLANK	Lot M12151, A2	(Analyzed with this batch)	
Benzene	Vial + Boiled Water	<2.5	ACCEPTABLE
Toluene	Vial + Boiled Water	<2.5	ACCEPTABLE
Ethyl benzene	Vial + Boiled Water	<2.5	ACCEPTABLE
Total Xylenes	Vial + Boiled Water	<7.5	ACCEPTABLE

Narrative: Acceptable.

SAMPLE ID	SOURCE	PPB	STATUS
EXTRACTION BLANK	1110 Ext. Blk		
Benzene	Methanol	<2.5	ACCEPTABLE
Toluene	Methanol	<2.5	ACCEPTABLE
Ethyl benzene	Methanol	<2.5	ACCEPTABLE
Total Xylenes	Methanol	<7.5	ACCEPTABLE

Narrative: Acceptable.

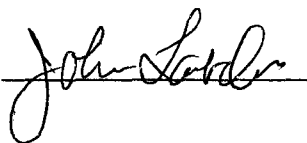
SAMPLE ID	SOURCE	NARRATIVE	STATUS
Carryover contamination checks		(One analyzed with this batch)	
Benzene	Vial + Boiled Water	<2.5	ACCEPTABLE
Toluene	Vial + Boiled Water	<2.5	ACCEPTABLE
Ethyl benzene	Vial + Boiled Water	<2.5	ACCEPTABLE
Total Xylenes	Vial + Boiled Water	<7.5	ACCEPTABLE

Narrative: Acceptable.

SAMPLE ID	SOURCE	PPB	STATUS
METHANOL CHECK	Lot # H18318	(Not performed with this set)	
Benzene	MeOH/Boiled Water	<2.5	ACCEPTABLE
Toluene	MeOH/Boiled Water	<2.5	ACCEPTABLE
Ethyl benzene	MeOH/Boiled Water	<2.5	ACCEPTABLE
Total Xylenes	MeOH/Boiled Water	<7.5	ACCEPTABLE

Narrative: Acceptable.

Approved By:



Date: 13-Nov-95

QUALITY CONTROL REPORT

TPH by Modified 418.1 by Infrared

Date of Analysis: November 10, 1995

5 Pit Samples

LABORATORY CONTROL SAMPLES: CALIBRATION CHECKS

SAMPLE ID	SOURCE	TRUE VALUE (PPM)	FOUND (MG/KG)	%R	ACCEPTABLE RANGE 75-125 %R YES NO
INITIAL CALIBRATION VERIF. "B" Heavy Oil (Lot M3G9616)	HORIBA	300	344	115	X

Narrative: Acceptable.

LABORATORY DUPLICATES:

SAMPLE NUMBER	TYPE	SAMPLE RESULT (S)MG/KG	DUPLICATE RESULT (D)MG/KG	RPD	ACCEPTABLE RANGE + / - 35% YES NO
947769	2nd Extract	24	18	28.03	X

Narrative : Acceptable.

LABORATORY SPIKES:

SAMPLE NUMBER	SPIKE ADDED (SA)MG/KG	SAMPLE RESULT (S)MG/KG	SPIKE SAMPLE RESULT (SR)MG/KG	%R	ACCEPTABLE RANGE 75-125 %R YES NO
947769	2010	24	2220	109	X

Narrative: Acceptable.

REFERENCE SOIL (Laboratory Control Sample):

SAMPLE ID	SOURCE	KNOWN VALUE (MG/KG)	SAMPLE RESULT FOUND (MG/KG)	MFG SPECIFIED RANGE	ACCEPTABLE YES NO
ERA TPH STANDARD #1 LOT # 91030	ENVIRONMENTA RESOURCE ASS.	2920	3190	1900 - 3360	X
ERA TPH STANDARD #2 w/int LOT # 91030	ENVIRONMENTA RESOURCE ASS.	1150	1270	750 - 1320	X

Narrative: Acceptable.

LABORATORY REAGENT BLANK:

SAMPLE ID	SOURCE	TPH LEVEL (MG/KG)	STATUS
Freon Solvent Reagent Blank	EPNG Lab EPNG Lab	<10.0 <10.0	ACCEPTABLE ACCEPTABLE

Narrative: Acceptable.

Approved By:

John F. Laber

Date: 14-Nov-95

Extracted: 11/10/95

**1997 GROUNDWATER
ANALYTICAL**

RECORD OF SUBSURFACE EXPLORATION

PHILIP ENVIRONMENTAL SERVICES INC.

4000 Monroe Road

Farmington, New Mexico 87401

(505) 326-2262 FAX (505) 326-2388

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

Project Name EPFS GW PITS
Project Number 17520 Phase 600277
Project Location TRUNK D LINE DRIP - LDOIS

Elevation _____
Borehole Location T28R 8 - S20 Ltr F
GWL Depth 20' BGS
Logged By D CESARK
Drilled By K PADILLA
Date/Time Started 3/14/97 - 1230
Date/Time Completed " - 1300

Well Logged By D CESARK
Personnel On-Site ~~D. CESARK~~, C MAIZ
Contractors On-Site S ARCHULETA
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			Drilling Conditions & Blow Counts
							BZ	BH	S	
0				BACK FILL TO 19'						
5										
10										
15										
20				GWL 20' BGS (HIGHLY CONTAM. SOIL) TD=30'						
25										
30										
35										
40										

Comments: ENCOUNTERED GW @ 20' BGS, OVER-DRILLED TO 30' BGS, SET MW-1.
NO SAMPLES COLLECTED. PLEASE REFER TO MW INSTALLATION RECORD.

Geologist Signature

[Handwritten Signature]

Comments: CASING WAS ACCIDENTLY PULLED-UP 4' WHEN PULLING FINAL 5' FLIGHT OF AUGER.
GW LEVEL ROSE FROM 20' + BGS TO 9' BGS. SCREEN IS POSSIBLY SMEARED.
POSSIBLE MULT. ZONES (PERCITED)

Chain of Custody Record — Nonchemical Samples

210 West Sand Bank Road
P.O. Box 230
Columbia, IL 62236-0230

(618) 281-7173 Phone
(618) 281-5120 FAX

COC Serial No. **G** 3467

[illegible]

Relinquished by:

Received By:

32°

Signature	Date	Time	Signature	Date	Time
<i>[Signature]</i>	3/31/97	1645	<i>Charles G. Monte</i>	4-1-97	1155

Carrier:

Airbill No.

Shipping and Lab Notes:



5-22-97

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

SAMPLE NUMBER:	Field ID DRC22	Lab ID 970226
MTR CODE SITE NAME:	LD015	Trunk D Line Drip
SAMPLE DATE TIME (Hrs):	3/31/97	1205
PROJECT:	Phase II Drilling - Initial	
DATE OF BTEX EXT. ANAL.:	4/3/97	4/3/97
TYPE DESCRIPTION:	Monitor Well	Water

Field Remarks: _____

RESULTS

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

The Surrogate Recovery was at 106 for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative: _____

Approved By: John Latta

Date: 4/8/97

970226,4/8/97



Water Sampling Data

Location No. MW-1Serial No. WSD-Group List Number Sample Type: ☒ Groundwater ☐ Surface Water ☐ Other Date 3/31/97Project Name EPFS GW PITS Project No. 17520Project Manager C. CHANCE Phase/Task No. 6003.77Site Name TRUNK D LINE DRIP - LDOIS

Sampling Specifications

Requested Sampling
Depth Interval (feet)
Requested Wait Following
Development/Purging (hours)

Initial Measurements

Time Elapsed From Final Development/Purging (hours)
Initial Water Depth (feet)
Nonaqueous Liquids Present (Describe)

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)	

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	DRC 22	VV	40		✓	Y	✓		
	DR								

Filter Type Chain-of-Custody Form Number Comments * PLEASE SEE WELL DEVELOPMENT & PURGING DATA FORM.Signature [Signature] Date 3/31/97 Reviewer Date

Well Development and Purging Data

Well Number MW-1

☒ Development
☒ Purging

Serial No. WDPD.

Project Name

EW FITS

Project Manager

C CHANCE

Project No.

Client Company

595

Site Name TRUNK & LINE DEP -- LDOALS

Site Address

Site Address _____

Development Criteria

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

Methods of Development

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

Water Volume Calculation

Initial Depth of Well (feet) 26' ~~28~~ 66.5

Initial Depth to Water (feet) 9' 66.5

Height of Water Column in Well (feet) 17'

Diameter (inches): Well 4 Gravel Pack

Instruments

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

Water Disposal

Water Removal Data

[illegible]

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

Comments Baled water was muddy except for first 2-3 bales

Developer's Signature(s)

Date 3/31/97

Reviewer _____ Date _____



CHAIN OF CUSTODY RECORD

[illegible]



6-23-97

FIELD SERVICES LABORATORY

ANALYTICAL REPORT

PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	970547
MTR CODE SITE NAME:	LD015	Trunk D Line Drip MW-1
SAMPLE DATE TIME (Hrs):	6/10/97	1339
PROJECT:	Sample 4 - 1st Quarter	
DATE OF BTEX EXT. ANAL.:	6/12/97	6/12/97
TYPE DESCRIPTION:	Monitor Well	Water

Field Remarks: _____

RESULTS

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

The Surrogate Recovery was at 94.7 for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative: _____

Approved By: _____

Date: 6/17/97

970547,6/16/97



6-23-97

Field Services Laboratory
Analytical Report

SAMPLE IDENTIFICATION

EPFS LAB ID:	970547
DATE SAMPLED:	06/10/97
TIME SAMPLED (Hrs):	1339
SAMPLED BY:	N/A
MATRIX:	Water
METER CODE:	LD015
SAMPLE SITE NAME:	Trunk D Line Drip
SAMPLE POINT:	MW-1

FIELD REMARKS:

GENERAL CHEMISTRY WATER ANALYSIS RESULTS

PARAMETER	RESULT	UNITS	DATE ANALYZED
Laboratory pH	7.9	Units	06/11/97
Alkalinity as CO ₃	0.0	PPM	06/11/97
Alkalinity as HCO ₃	490	PPM	06/11/97
Calcium as Ca	368	PPM	06/11/97
Magnesium as Mg	100	PPM	06/11/97
Total Hardness as CaCO ₃	1,331	PPM	06/11/97
Chloride as Cl	34	PPM	06/11/97
Sulfate as SO ₄	5,620	PPM	06/11/97
Fluoride as F	4.8	PPM	06/11/97
Nitrate as NO ₃ -N	< 1.1	PPM	06/11/97
Nitrite as NO ₂ -N	< 1.1	PPM	06/11/97
Ammonium as NH ₄ ⁺	< 0.6	PPM	06/11/97
Phosphate as PO ₄	< 1.1	PPM	06/11/97
Potassium as K	10	PPM	06/11/97
Sodium as Na	2340	PPM	06/11/97
Total Dissolved Solids	8,590	PPM	06/11/97
Conductivity	9,010	umhos/cm	06/11/97
Anion/Cation %	0.9%	%, < 5.0 Accepted	06/16/97

Lab Remarks:

Reported By: mdaApproved By: Jan FaldutDate: 6/17/97



7-21-97

**FIELD SERVICES LABORATORY
ANALYTICAL REPORT****SAMPLE IDENTIFICATION**

SAMPLE NUMBER:	970547
SAMPLE DATE:	06/10/97
SAMPLE TIME (Hrs):	1339
SAMPLED BY:	N/A
MATRIX:	Water
METER CODE:	LD015
SAMPLE SITE NAME:	Trunk D Line Drip
SAMPLE POINT:	MW-1

REMARKS: _____

RESULTS

PARAMETER	TOTAL RESULT (mg/L)	N. M. WQCC LIMIT (mg/L)
ARSENIC	<.029	0.100
BARIUM	0.09	1.00
CADMIUM	<.0002	0.010
CHROMIUM	0.010	0.050
LEAD	<.002	0.050
MERCURY	<0.0002	0.002
SELENIUM	<0.005	0.050
SILVER	0.0020	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, USEPA, June, 1991.
Method 7741A, Selenium (Atomic Absorption, Gaseous Hydride), Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept., 1994.
Method 7761, Silver (Atomic Absorption, Furnace Technique), Test Methods for Evaluating Solid Waste, SW-846, USEPA, July, 1992.

Reported By: ondaApproved By: John L. LinderDate: 7/17/97



QUALITY CONTROL REPORT

Sample ID: 970547
Date Reported: 07/16/97

LABORATORY CONTROL SAMPLE

Analyte	Found Result (mg/L)	Known Value (mg/L)	% Recovery
Arsenic	0.031	0.032	96.6%
Barium	0.062	0.065	95.7%
Cadmium	0.0025	0.0024	104%
Chromium	0.0049	0.0048	103%
Lead	0.033	0.030	111%
Mercury	0.0043	0.0046	93.2%
Selenium	0.038	0.041	94.3%
Silver	0.0051	0.0043	118%

DUPLICATE ANALYSIS (mg/L)

Analyte	Original Sample Result	Duplicate Sample Result	% RPD
Arsenic	ND	ND	NA
Barium	0.181	0.183	1.1%
Cadmium	ND	ND	NA
Chromium	0.0166	0.0153	8.2%
Lead	0.0065	0.0069	6.2%
Mercury	ND	ND	NA
Selenium	ND	ND	NA
Silver	0.0003	0.0004	8.7%

SPIKE ANALYSIS (mg/L)

Analyte	Original Sample Result	Spike Sample Result	Spike Added	Recovery Percent
Arsenic	0.001	0.126	0.100	118%
Barium	0.183	1.253	1.00	107%
Cadmium	ND	0.0103	0.010	103%
Chromium	0.017	0.065	0.050	97.0%
Lead	0.007	0.054	0.050	94.4%
Mercury	ND	0.0018	0.0020	90.0%
Selenium	ND	0.053	0.050	101%
Silver	0.0003	0.0539	0.050	107%

METHOD BLANK

Analyte	Found Result (mg/L)	Detection Level (mg/L)
Arsenic	ND	0.027
Barium	ND	0.019
Cadmium	ND	0.0002
Chromium	ND	0.004
Lead	ND	0.002
Mercury	ND	0.0002
Selenium	ND	0.011
Silver	ND	0.0005

ND: Not Detected at stated detection level.

NA: Not Applicable.

Reported By: mhApproved By: John L. LinderDate: 7/17/97



Well Development and Purging Data

Well Number NW-1
Meter Code L0015

☐ Development
☒ Purging

Site Name TRUNK O LINE DRIP

Development Criteria

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

Methods of Development

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

Water Volume Calculation

Initial Depth of Well (feet) 28.95
Initial Depth to Water (feet) 13.18
Height of Water Column in Well (feet) 16.77
Diameter (inches): Well 4 Gravel Pack _____

Item	Water Volume in Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing		<u>11.1</u>	<u>33.3</u>
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 (gal/min)	Intake Depth (feet)	Ending Depth (feet)	Water Volume		Product Volume		pH	Temperature °C	Conductivity µmho/cm	Dissolved Oxygen mg/L	Comments
						Removed (gal)	Increment	Removed (gallons)	Increment					
6-10-97	1235													
6-10-97	1241					5.0	5.0			6.87	18.0	9300		
6-10-97	1247					5.0	5.0			7.17	17.0	9230		
6-10-97	1255					5.0	5.0			7.18	17.0	9390		
6-10-97	1301					5.0	5.0			7.19	17.3	9470		
6-10-97	1309					5.0	5.0			7.20	17.5	9490		
6-10-97	1315					5.0	5.0			7.23	17.1	9270		
6-10-97	1322					5.0	5.0			7.19	16.5	9310		
						5.0	5.0			7.21	17.5	9230	1.0	

Comments _____

Developer's Signature Dennis Bied

Date 6-10-97 Reviewer _____

Date 6/17/97



Natural Gas Company

CHAIN OF CUSTODY RECORD

A 2097

[illegible]



EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY ANALYTICAL REPORT PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	971053
MTR CODE SITE NAME:	LD015	Trunk D Line Drip
SAMPLE DATE TIME (Hrs):	9/25/97	1218
PROJECT:	Sample 4 2nd Quarter	
DATE OF BTEX EXT. ANAL.:	9/30/97	9/30/97
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 95.4 % for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative: _____

Approved By: John Larcher

Date: 10-6-97

971053BTEXMW,10/3/97



Well Number AW-1
Meter Code LD015

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

☐ Other

Initial Depth of Well (feet) 28.95
Initial Depth to Water (feet) 12.32
Height of Water Column in Well (feet) 16.63

Diameter (Inches)	Well	Gravel Pack		Gallons to be Removed
		Water Volume in Well	Gallons	
		Cubic Feet		
	Well Casing		11.0	33.0
	Gravel Pack			
	Drilling Fluids			
	Total			

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

KVT2 SEPARATOR

Date	Time	Development Method		Removal Rate (gall/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gal)		Product Volume Removed (gallons)		Temperature °C	pH	Conductivity µmho/cm	Dissolved Oxygen mg/L	Comments
		Pump	Bailer				Increment	Cumulative	Increment	Cumulative					
9-25-97	1114										20.1	6.93	7320		
9-25-97	1121						5.0	5.0			18.2	7.19	7340		
9-25-97	1127						5.0	10.0			17.4	7.22	7480		
9-25-97	1135						5.0	15.0			17.5	7.23	7490		
9-25-97	1143						5.0	20.0			17.7	7.20	7640		
9-25-97	1155						5.0	25.0			17.3	7.34	7505		
9-25-97	1200						5.0	30.0			17.4	7.22	7590		
9-25-97	1208						5.0	35.0			17.4	7.21	7530	1.0	

Developer's Signature Dennis Bird

Date 9-3-97 Reviewer John Fortin Date 10-6-97



SAMPLE 43 RD QTR

A 2167

CHAIN OF CUSTODY RECORD

Project No.		Project Name		Requested Analysis		Remarks	
Samplers: (Signature) <i>Dennis Bird</i>		MC# LD015		Date: 12-12-97			
Date	Time	Comp.	GRAB	Sample Number	Type and No. of Sample Containers	Preservation Technique	Requested Analysis
12-12-97	1306	X		971297	G-1 400	X	TRUNK DUNE DRIP MW-1
12-12-97		X			G-1 400	X	TRIP BLANK
[The following rows are crossed out with a diagonal line]							
Relinquished by: (Signature) <i>Dennis Bird</i> Date/Time 12-12-97 1613 Received by: (Signature) Date/Time							
Relinquished by: (Signature) Date/Time Received by: (Signature) Date/Time							
Relinquished by: (Signature) Date/Time Received by: (Signature) Date/Time							
Carrier Co: <i>Morgan Hopper</i> Date Results Reported / by: (Signature) 12/13/97 0730							
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	971297
MTR CODE SITE NAME:	LD105	Trunk D Line Drip
SAMPLE DATE TIME (Hrs):	12/12/97	1306
PROJECT:	Sample 4 3rd Quarter	
DATE OF BTEX EXT. ANAL.:	12/16/97	12/16/97
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 105.4 % for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative: _____

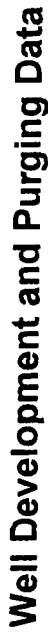
Approved By: _____

John Lander

Date: _____

1/2/98

971297BTEXMW,12/16/97



☐	Development
☒	Purging

Well Number MW-1
Meter Code LD015

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

Water Volume Calculation

Initial Depth of Well (feet) 28.95

Initial Depth to Water (feet) 12.13

Height of Water Column in Well (feet) 16.82

Diameter (Inches): Well 4 Gravel Pack

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

Initial Depth of Well (feet) 28.95
Initial Depth to Water (feet) 12.13
Height of Water Column in Well (feet) 16.82
Diameter (Inches): Well 4 Gravel Pack

Item	Water Volume in Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing		11.1	33.4
Gravel Pack			
Drilling Fluids			
Total			

☒	pH Meter
☐	DO Monitor
☒	Conductivity Meter
☒	Temperature Meter
☒	Other <u>DO, C</u>

Water Disposal

02606035 210X

[illegible]

Developer's Signature Dennis Bird

Date 12-12-97 Reviewer

John Fowler

Date 1/2/98