

3R - 232

REPORTS

DATE:

July, 1997



November 5, 1997

Certified Mail

**Return Receipt Nos. P 532 649 088
P 532 649 089**

RECEIVED

NOV 11 1997

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

Environmental Bureau
Oil Conservation Division

Re: Request for Closure of Eleven Groundwater Locations

Dear Mr. Olson:

I have enclosed closure packages for eleven groundwater locations that were identified during our pit closure project. El Paso Field Services (EPFS) hereby requests your review and approval for closure of these sites.

I have included a summary listing of the eleven locations. If you have any questions regarding this information, please call me at 505/599-2141.

Sincerely,

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

Sandra D. Miller
Environmental Manager

xc: Mr. Bill Liesse, BLM w/o enclosures
Mr. Denny Foust, NMOCD - Aztec w/enclosures

Groundwater Locations
Request for Closure, 11/97

Meter/Line #	Location/Line Name	LTR	Sec	TN	RG	Land Type
74943	NM COM G1	P	36	30	10	1 - State
LD102	2C-22 #1 LINE DRIP	N	35	24	06	2 - Federal
94180	SALAZAR G 34-1	K	34	25	06	2 - Federal
89230	JOHNSTON FEDERAL #3A	I	12	30	09	2 - Federal
73079	Mae Gail Com #1	E	24	29	11	4 - Fee
70862	MCGRATH #1	F	07	30	11	4 - Fee
93156	MARY ACKROYD #1	J	18	30	11	4 - Fee
93828	JACQUEZ #3	E	25	30	09	4 - Fee
94984	ANDERSON GAS COM A#1 PC	C	28	29	10	4 - Fee
93296	GALLEGOS CANYON UNIT 188E	B	30	29	12	4 - Fee
93462	GALLEGOS CANYON UT 145 E	D	26	29	12	4 - Fee

} Filed
individually
in
case files

SAN JUAN BASIN PIT CLOSURES
San Juan Basin, New Mexico

Pit Closure Report

July 1997

RECEIVED

NOV 11 1997

Environmental Bureau
Oil Conservation Division

Prepared For

El Paso Field Services
Farmington, New Mexico

Project 17520

PHILIP
ENVIRONMENTAL

Closure Checklist

Meter Code

94180

Summary
Site Map
Site Assessment Sheet

☒
☐
☒

Phase I Excavation

Y

closure form
soil analytical results
soil chain-of-custody
groundwater analytical results
groundwater chain-of-custody

☒
☒
☒
☐
☐

Phase II Soil Boring

Y

boring log
soil analytical results
soil chain-of-custody
well installation form
development form
groundwater analytical
groundwater chain-of-custody

☒
☒
☒
☒
☒
☒
☒

Phase III Excavation

closure form
soil analytical results
soil chain-of-custody
groundwater analytical
groundwater chain of-custody

☐
☐
☐
☐
☐

Recon/Geoprobe performed

groundwater analytical
soil-gas analytical

☐
☐

If item boxes are not checked they are not applicable

PHILIP

ENVIRONMENTAL

Environmental Services Group
Southern Region

Salazar G 34-1
Meter Code 94180

Pit was excavated to 12 feet beneath ground surface. The headspace soil reading from excavation bottom was 170 parts per million. Soil analytical were as follows; benzene - <0.25 mg/kg, total BTEX - 16.5 mg/kg, TPH - 11,100 mg/kg.

One soil boring was completed and a monitoring well installed and a soil sample collected at 30 - 31 feet. Soil boring analytical results were as follows: benzene - <0.03 mg/kg, total BTEX - <10 mg/kg, TPH - 81.8 mg/kg. Groundwater was encountered at 34 feet and a monitoring well installed. Initial groundwater analytical were as follows; benzene - 2.5 ug/L, toluene - 2.5 ug/L, ethylbenzene - 2.5 ug/L, xylenes - 7.5 ug/L. Second groundwater analytical were as follows; benzene - <1.0 ug/L, toluene - <1.0 ug/L, ethylbenzene - <1.0 ug/L, xylenes - <3.0 ug/L.

This site is ready for closure based on the following:

- Soil boring analytical results are below standards.
- Groundwater analytical results are below standards.



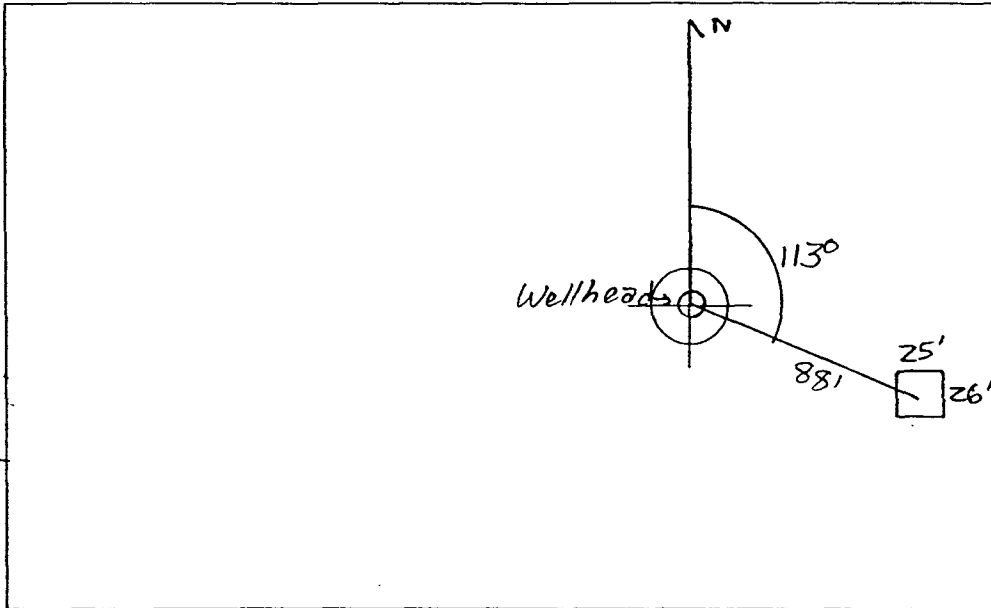
FIELD PIT SITE ASSESSMENT FORM

GENERAL	Meter: <u>94-180</u> Location: <u>Salazar "G" 34-1</u> Operator #: <u>5997</u> Operator Name: <u>^{MERRION} Oile Gas</u> P/L District: <u>Ballard</u> Coordinates: Letter: <u>K</u> Section <u>34</u> Township: <u>25</u> Range: <u>6</u> Or Latitude _____ Longitude _____ Pit Type: Dehydrator _____ Location Drip: <u>X</u> Line Drip: _____ Other: _____ Site Assessment Date: <u>7/12/94</u> Area: <u>07</u> Run: <u>42</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>Largo Wash</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 Book - Inside</u> <u>Vulnerable Zone Type - Inside</u> <u>Three pits on site, location drip pit has liquid in it.</u> <u>Will close one pit.</u> <u>NTK n 4/11/11</u>

ORIGINAL PIT LOCATION

Original Pit : a) Degrees from North 113° Footage from Wellhead 88'
b) Length : 25' Width : 26' Depth : 4'

ORIGINAL PIT LOCATION



REMARKS :

Pictures @ 14:37 (19-22, Roll 2)
Dump Truck

REMARKS

Completed By:

Sarah Kelley
Signature

7/12/94
Date

Phase I Excavation

FIELD PIT REMEDIATION/CLOSURE FORM

GENERAL

Meter: 94180 Location: SALAZAR G 34-1

Coordinates: Letter: K Section 34 Township: 25 Range: 6

Or Latitude _____ Longitude _____

Date Started : ¹⁸⁻⁸⁻²⁵⁻⁹⁴ ~~8-26-94~~ 8-29-94 Run: 07 42

FIELD OBSERVATIONS

Sample Number(s): KP 211

Sample Depth: 12' Feet

Final PID Reading 170 PID Reading Depth 12' Feet

Yes No

Groundwater Encountered ☐ ☒ Approximate Depth _____ Feet

CLOSURE

Remediation Method :

Excavation ☒ Approx. Cubic Yards 210

Onsite Bioremediation ☐

Backfill Pit Without Excavation ☐

Soil Disposition:

Envirotech ☒ Tierra ☐

Other Facility ☐ Name: _____

Pit Closure Date: ¹⁸⁻⁸⁻²⁹⁻⁹⁴ ~~8-26-94~~ 8-29-94 Pit Closed By: B.EI

REMARKS

Remarks : Some LINE markers Pit has a lot of water
& oil in it dumped 2 loads to Soilbury Pit. At 12' soil started
Looking clean pid 170 closed pit.

Signature of Specialist: Kelly Padilla

FIELD SERVICES LABORATORY ANALYTICAL REPORT PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	KP211	946025
MTR CODE SITE NAME:	94180	Salazar "G" 34-1
SAMPLE DATE TIME (Hrs):	8/29/94	1000
PROJECT:	Phase I	
DATE OF TPH EXT. ANAL.:	9/1/94	9/1/94
DATE OF BTEX EXT. ANAL.:	8/31/94	9/1/94
TYPE DESCRIPTION:	VC	Brown sand

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q	M(g)	V(ml)
BENZENE	<0.25	MG/KG				
TOLUENE	<0.08	MG/KG				
ETHYL BENZENE	1.93	MG/KG				
TOTAL XYLENES	14.2	MG/KG				
TOTAL BTEX	16.5	MG/KG				
TPH (418.1)	11,100	MG/KG			0.57	28
HEADSPACE PID	170	PPM				
PERCENT SOLIDS	91.2	%				

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

The Surrogate Recovery was at 105 for this sample All QA/QC was acceptable.

Narrative:

ATI results attached. Surrogate recoveries were outside ATI QC limits due to matrix interference.

DF = Dilution Factor Used

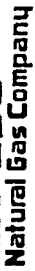
Approved By:

John Lutch

INGVZPIT.XLS

Date:

9/30/97



Page _____ of _____

Date of Analysis: September 1, 1994

14 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 MOR9480)	HORIBA	100	112	112	X

Narrative: Acceptable.

LABORATORY DUPLICATES:

SAMPLE NUMBER	TYPE	SAMPLE RESULT (S)MG/KG	DUPLICATE RESULT (D)MG/KG	RPD	ACCEPTABLE RANGE + / - 35% YES NO
946036	2nd Extract	632	512	21.0	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
946036	2890	632	3850	111	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	1600	804 - 1680	X
ERA TPH STANDARD #2 w/int LOT # 91026	ENVIRONMENTAL RESOURCE ASS.	2590	3180	1550 - 3240	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 Saurbren

Date: 15-Sep-94

Extracted: 9/1/94



GAS CHROMATOGRAPHY RESULTS

TEST : BTEX (EPA 8020)
CLIENT : EL PASO NATURAL GAS CO. ATI I.D.: 408425
PROJECT # : 24324
PROJECT NAME : PIT CLOSURE

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
07	946018	NON-AQ	03/26/94	08/31/94	09/07/94	20
08	946025	NON-AQ	03/29/94	08/31/94	09/07/94	10
09	946026	NON-AQ	03/29/94	08/31/94	09/06/94	-
PARAMETER			UNITS	07	08	09
BENZENE			MG/KG	8.1	<0.25	<0.025
TOLUENE			MG/KG	36	3.3	0.038
ETHYLBENZENE			MG/KG	22	3.5	0.096
TOTAL XYLENES			MG/KG	240	16	0.025

SURROGATE:

BROMOFLUOROBENZENE (%) 209* 127* 93

*OUTSIDE ATI QUALITY CONTROL LIMITS DUE TO MATRIX INTERFERENCE



Analytical Technologies, Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

CLIENT : EL PASO NATURAL GAS CO. ATI I.D. : 408425
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	40931304	<20	<20	NA	200	150	133

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

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



GAS CHROMATOGRAPHY RESULTS

REAGENT BLANK

TEST	: BTEX (EPA 8020)	ATI I.D.	: 408425
BLANK I.D.	: 083194B	MATRIX	: NON-AQ
CLIENT	: EL PASO NATURAL GAS CO.	DATE EXTRACTED	: 08/31/94
PROJECT #	: 24324	DATE ANALYZED	: 09/03/94
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 (%)

88

Acceptable

X

9/14/94



GAS CHROMATOGRAPHY RESULTS

REAGENT BLANK

TEST	: BTEX (EPA 3020)	ATI I.D.	: 408425
BLANK I.D.	: 033194	MATRIX	: NON-AQ
CLIENT	: EL PASO NATURAL GAS CO.	DATE EXTRACTED	: 08/31/94
PROJECT #	: 24324	DATE ANALYZED	: 09/03/94
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 (%)	86
------------------------	----

Accepted -
CDX
9/14/94



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - QUALITY CONTROL

MSMSD

TEST : BTEX (EPA 8020)
MSMSD # : 40841710 ATI I.D. : 408425
CLIENT : EL PASO NATURAL GAS CO. DATE EXTRACTED : 08/31/94
PROJECT # : 24324 DATE ANALYZED : 09/03/94
PROJECT NAME : PIT CLOSURE SAMPLE MATRIX : NON-AQ
REF. I.D. : 40841710 UNITS : MG/KG

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD
BENZENE	<0.025	1.0	0.84	84	0.86	88	5
TOLUENE	<0.025	1.0	0.84	84	0.90	90	7
ETHYLBENZENE	<0.025	1.0	0.84	84	0.89	89	6
TOTAL XYLENES	<0.025	3.0	2.6	87	2.6	93	7

Accepted
X
analy

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

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



GAS CHROMATOGRAPHY - QUALITY CONTROL

MSMSD

TEST : BTEX (EPA 8020)
MSMSD # : 40842511 ATI I.D. : 408425
CLIENT : EL PASO NATURAL GAS CO. DATE EXTRACTED : 08/31/94
PROJECT # : 24324 DATE ANALYZED : 09/07/94
PROJECT NAME : PIT CLOSURE SAMPLE MATRIX : NON-AQ
REF. I.D. : 40842511 UNITS : MG/KG

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD
BENZENE	<0.02	1.0	0.88	88	0.97	92	4
TOLUENE	<0.025	1.0	0.91	91	0.96	96	5
ETHYLBENZENE	<0.025	1.0	0.89	89	0.92	92	3
TOTAL XYLENES	<0.025	3.0	2.8	93	2.9	97	4

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

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

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

PROJECT MANAGER: JOHN LAMBIDIN

COMPANY: EL PASO NATURAL GAS

ADDRESS: P.O. BOX 4990

FARMINGTON, NM 87409

PHONE: (505) 599-2141

FAX: (505) 599-2261

BILL TO: SAME AS ABOVE

COMPANY:

ADDRESS:

SAMPLE ID DATE TIME MATRIX LAB ID

944007	8/26/94	1145	soil	01
944008	8/26/94	1545	soil	02
944009	8/26/94	1570	soil	03
944010	8/26/94	1530	soil	04
944011	8/26/94	1500	soil	05
944018	8/26/94	1415	soil	06
944025	8/26/94	1000	soil	07
944036	8/26/94	1120	soil	08

PROJECT INFORMATION SAMPLE RECEIPT

PROJ. NO.: 24324 NO. CONTAINERS: 9

PROJ. NAME: PIT CLOSURE CUSTODY SEALS: (V) 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 (XX) 1 0012 31 2440

50% 108-52452-24 (XX) 1 (00) 12 31 2440

ON PROJECT SAMPLES

CHAIN OF CUSTODY

DATE: 8/30/94 PAGE 1 OF 2

AT LAB ID

108445

ANALYSIS REQUEST

Petroleum Hydrocarbons (418.1)	
(MOD 8015) Gas/Diesel	
Diesel/Gasoline/BTXE/MTBE (MOD 8015 8020)	
BTXE/MTBE (8020)	
BETX (8020)	X
Chlorinated Hydrocarbons (601/3010)	X
Aromatic Hydrocarbons (602/3020)	X
SDWA Volatiles (502.1/503.1), 502.2 Reg. & Unreg.	X
Pesticides/PCB (608/8080)	X
Herbicides (615/8150)	X
Base/Neutral/Acid Compounds GC/MS (825/8270)	X
Volatile Organics GC/MS (824/8240)	X
Polynuclear Aromatics (810/8310)	X
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

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

RECEIVED BY: 1 RECEIVED BY: 2

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

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

CHAIN OF CUSTODY
DATE 8/30/94 PAGE 2 OF 2

ATI LAB I.D. 108425

PROJECT MANAGER: JOHNN LAMBRIDIN

COMPANY: EL PASO NATURAL GAS

ADDRESS: P.O. BOX 4090
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

946027	8/29/94	1150	Soil	10
946028	8/29/94	1155	Soil	11
946029	8/29/94	1640	Soil	12

PROJECT INFORMATION SAMPLE RECEIPT

PROJ. NO.: 24324 NO. CONTAINERS: 3
PROJ. NAME: PIT CLOSURE CUSTODY SEALS: (V) N / NA
P.O. NO.: 3KR22 RECEIVED INTACT: V
SHIPPED VIA: FEDERAL EXPRESS RECEIVED COLD: V 200

PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS

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

Comments:

CHARGE CODE: 50% 108-51570-24 (KMI-K) 12-31-2010
50% 108-52452-24 (KMI-K) 12-31-2010

WORK ON PROJECT SAMPLES

ANALYSIS REQUEST

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

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:	

RECEIVED BY: 1. RECEIVED BY: 2. RECEIVED BY: (LAB) 3.

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

Analytical Technologies, Inc.

Phase II Soil Boring

RECORD OF SUBSURFACE EXPLORATION

Burlington Environmental Inc.
4000 Monroe Road
Farmington, New Mexico 87401
(505) 326-2282 FAX (505) 326-2388

Borehole # BH-1
Well #
Page 1 of 1

Project Name EPNG PITS
Project Number 14509 Phase 6000.77
Project Location Salazar "G" 34-1 94/180

Elevation
Borehole Location LaBar K-S34-T25-R6
GWL Depth
Logged By J.F. LaBarbera
Drilled By K. Padilla
Date/Time Started 8/5/95-1250
Date/Time Completed -1410

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 <u>165</u> BZ BH S			Drilling Conditions & Blow Counts
0										
5				Fill						
10										
15	1	15-14.5	18	Brown, loose, v fine to med, SAND, some silt, dry damp no odor noted. JFB	SW		0	0	1005 0.2	1306
20	2	20-21	13	RA			0	0.3	1069 0	1318
25	3	25-24	13	RA - fine	SP		0	0.3	1033 0	1324
30	4	30-31	13	RA - fine to coarse	SW		0	0.5	112 0	1335
35	5	35-34.5	18	RA - fine, saturated	SP		0	0	1 2	1335
40				TOB @ 44'						

Comments: Sample JFL 50 from 30-31' sent to lab for BTEX/TPH analysis. Set 4" monitoring well at 48' by 8 feet of core, etc.

Geologist Signature

J.F. LaBarbera

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY ANALYTICAL REPORT PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

SAMPLE NUMBER:	Field ID JFL50	Lab ID 947181
MTR CODE SITE NAME:	94180	Salazar "G" 34-1
SAMPLE DATE TIME (Hrs):	8/8/95	1324
PROJECT:	Phase II Drilling	
DATE OF TPH EXT. ANAL.:	8/9/95	8/9/95
DATE OF BTEX EXT. ANAL.:	8/12/95	8/14/95
TYPE DESCRIPTION:	VG	Brown sand & clay

Field Remarks: (30-31')

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q	M(g)	V(ml)
BENZENE	<0.03	MG/KG				
TOLUENE	<0.03	MG/KG				
ETHYL BENZENE	<0.03	MG/KG				
TOTAL XYLENES	<0.03	MG/KG				
TOTAL BTEX	<10	MG/KG				
TPH (418.1)	81.8	MG/KG			2.04	28
HEADSPACE PID	972	PPM				
PERCENT SOLIDS	95.6	%				

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

The Surrogate Recovery was at 102.0 for this sample All QA/QC was acceptable.

Narrative:

~~ALL Results Attached~~ JF. 4/22/97

DF = Dilution Factor Used

Approved By:

John Zahedi

INGVZPIT.XLS

Date:

8/28/95



El Paso
Natural Gas Company

Phase 4: Dials

CHAIN OF CUSTODY RECORD

Page:

22 of 22

Date of Analysis: August 9, 1995

9 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	200	200	100	X

Narrative: Acceptable.

LABORATORY DUPLICATES:

SAMPLE NUMBER	TYPE	SAMPLE RESULT (S)MG/KG	DUPLICATE RESULT (D)MG/KG	RPD	ACCEPTABLE RANGE + / - 35% YES NO
947176	2nd Extract	221	202	8.98	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
947176	3070	221	3510	107	X

Narrative: Acceptable.

REFERENCE SOIL (Laboratory Control Sample):

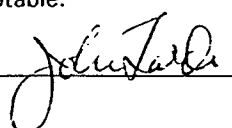
SAMPLE ID	SOURCE	KNOWN VALUE (MG/KG)	SAMPLE RESULT FOUND (MG/KG)	MFG SPECIFIED RANGE	ACCEPTABLE YES NO
ERA TPH STANDARD #1 LOT # 91026	ENVIRONMENTAL RESOURCE ASS.	1340	1450	804 - 1680	X
ERA TPH STANDARD #2 w/int LOT # 91026	ENVIRONMENTAL RESOURCE ASS.	2590	2920	1550 - 3240	X

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: 

Date: 10-Aug-95

Extracted: 08/09/95

QUALITY CONTROL REPORT
EPA METHOD 8020 - BTEX
Samples: 947187 to 947189

QA/QC for 8/14/95 Sample Set

LABORATORY CALIBRATION CHECKS, LABORATORY CONTROL SAMPLES:

SAMPLE NUMBER	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE YES NO	
ICV LA-45473 50 PPB					RANGE	
Benzene	Standard	50.0	40.3	80.6	75 - 125 %	X
Toluene	Standard	50.0	44.0	88.0	75 - 125 %	X
Ethyl benzene	Standard	50.0	43.8	87.6	75 - 125 %	X
m & p - Xylene	Standard	100	92	91.8	75 - 125 %	X
o - Xylene	Standard	50.0	43.9	87.8	75 - 125 %	X
SAMPLE NUMBER	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE YES NO	
LCS LA-45476 50 PPB					RANGE	
Benzene	Standard	50.0	50.8	101.6	39 - 150	X
Toluene	Standard	50.0	52.6	105.2	46 - 148	X
Ethyl benzene	Standard	50.0	49.7	99.4	32 - 160	X
m & p - Xylene	Standard	100	105	105.3	Not Given	X
o - Xylene	Standard	50.0	49.6	99.2	Not Given	X
SAMPLE NUMBER	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE YES NO	
CCV LA-45473 50 PPB					RANGE	
Benzene	Standard	50.0	48.3	96.6	75 - 125 %	X
Toluene	Standard	50.0	48.8	97.6	75 - 125 %	X
Ethyl benzene	Standard	50.0	47.6	95.2	75 - 125 %	X
m & p - Xylene	Standard	100	100	100.3	75 - 125 %	X
o - Xylene	Standard	50.0	47.9	95.8	75 - 125 %	X

Narrative: Acceptable.

LABORATORY DUPLICATES:

SAMPLE NUMBER	TYPE (Analysis, Portion, or Sample)	SAMPLE RESULT PPB	DUPLICATE RESULT PPB	RPD	ACCEPTABLE YES NO	
947187					RANGE	
Benzene	2nd Analysis	4.59	4.45	3	+/- 35 %	X
Toluene	2nd Analysis	<2.5	<2.5	0	+/- 35 %	X
Ethyl benzene	2nd Analysis	<2.5	<2.5	0	+/- 35 %	X
m & p - Xylene	2nd Analysis	<5.0	<5.0	0	+/- 35 %	X
o - Xylene	2nd Analysis	<2.5	<2.5	0	+/- 35 %	X

Narrative: Acceptable.

QUALITY CONTROL REPORT
EPA METHOD 8020 - BTEX
Samples: 947187 to 947189

LABORATORY SPIKES:

SAMPLE NUMBER	SPIKE ADDED PPB	SAMPLE RESULT PPB	SPIKE SAMPLE RESULT PPB	%R	RANGE	ACCEPTABLE YES NO
2nd Analysis 947187 @ 50 PPB						
Benzene	50.0	4.6	45.9	83	75 - 125 %	X
Toluene	50.0	<2.5	47.6	95	75 - 125 %	X
Ethyl benzene	50.0	<2.5	44.9	90	75 - 125 %	X
m & p - Xylene	100.0	<5.0	93.7	94	75 - 125 %	X
o - Xylene	50.0	<2.5	44.8	90	75 - 125 %	X

Narrative: Acceptable.

ADDITIONAL ANALYTICAL BLANKS:

SAMPLE ID AUTO BLANK	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.

REAGENT BLANKS:

SAMPLE ID BOILED WATER	SOURCE 12/13/94	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 METHANOL CHECK	SOURCE 12/28/94	PPB	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: John Zander

Date: 15-Aug-95

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

Project Name EP21G-P145
14509 8705
Project Number 14509 Phase 6000.77
Project Location Salazar "G" 34-1 9450

On-Site Geologist J. LaBarbera
 Personnel On-Site K. Padilla, F. Rivera, D. Charles
 Contractors On-Site _____
 Client Personnel On-Site _____

Elevation _____
Well Location Letter K-S34-T25-R6
GWL Depth 34.10' bgs
Installed By T La Barbera, K Padilla

Date/Time Started 8/8/95 - 1410
Date/Time Completed - 1740

Depths in Reference to Ground Surface		
Item	Material	Depth
Top of Protective Casing	n/A	
Bottom of Protective Casing	}	
Top of Permanent Borehole Casing		
Bottom of Permanent Borehole Casing		
Top of Concrete		
Bottom of Concrete		
Top of Grout	9 x 9x# Portland 15 x 9x# Best.	0
Bottom of Grout	"	
Top of Well Riser	JTB 25' x 7" PVC 30'	+3
Bottom of Well Riser	"	-37 JTB
Top of Well Screen	15' x 7" PVC 0.518" slot	-37 JTB
Bottom of Well Screen	"	-42 JTB
Top of Peltonite Seal	1 x 50# Hekt Plug	-19
Bottom of Peltonite Seal	"	-21
Top of Gravel Pack	22 x 50# 10-20 silica	-21
Bottom of Gravel Pack	"	-42
Top of Natural Cave-In		-42
Bottom of Natural Cave-In		-44
Top of Groundwater		-34
Total Depth of Borehole		-44

Top of Protective Casing n/A

Top of Riser +3

Ground Surface 0

Top of Seal

Top of Gravel Pack

Top of Screen

Bottom of Screen

Bottom of Borehole

-47 JTB

-44

Comments: 1.527 Jaffa 1' into cart-in while placing gravel pack.
Depth to water after installation = 33.12' bgs.

Geologist Signature



Well Development and Purging Data

☒ Development
☐ Purging

Well Number WW-1

Serial No. WDPD-

Page 1 of 1

Project Name ERMS PITS

Project Manager Cory Chaback

Project No. 14509

Client Company ERMS

Phase/Task No. 6003

Project No. 14509

Site Name 524322- Y 34-1 94180

Site Address

Development Criteria

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

Methods of Development

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

Water Volume Calculation

Initial Depth of Well (feet) 46.24
Initial Depth to Water (feet) 35.45
Height of Water Column in Well (feet) 10.79
Diameter (Inches): Well 4 Gravel Pack

Item	Water Volume In Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing		<u>7</u>	<u>7 x 5</u>
Gravel Pack			
Drilling Fluids			
Total			<u>35</u>

Instruments

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

Water Disposal

Decontaminated and transferred to KUTZ
Spreader in Blawiefield

Water Removal Data 5/1/95

Date	Time	Development Method	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons)		Temperature (°F)	pH	Conductivity (umhos/cm)	Dissolved Oxygen (mg/L)	Comments
						Increment	Cumulative					
08-25-95	0730	X				10	10	61.3	7.22	4,220		LT BRN SILTY
	0955					10	20	62.5	7.27	5.01		
	1010					5	25	61.5	7.26	5.31		
	1020					5	30	61.3	7.33	5.45		OT BRN SILTY
08-25-95	1040	X				5	35	60.0	7.28	5.45		

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

Comments

Developer's Signature(s) [Signature]

Date 08-25-95

Reviewer

Date



Water Sampling Data

Location No. MW-1Serial No. WSD-Group List Number Sample Type: ☒ Groundwater ☐ Surface Water ☐ Other Date 08-25-95Project Name ENV PITSProject No. 14509Project Manager Corey ChancePhase/Task No. 6003.77Site Name SALAZAR "G" 34-1 94180

Sampling Specifications

Requested Sampling

Depth Interval (feet) TOP 3'

Requested Wait Following

Development/Purging (hours)

Initial Measurements

Time Elapsed From Final Development/Purging ^{min} (hours) 20Initial Water Depth (feet) 35.45Nonaqueous 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)	
See	well	Development	2nd	Purging	DATA	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	A	40		X	H	X		T 1100
TDS	1	P	250		X	HA	X		T 1100

Filter Type Chain-of-Custody Form Number Comments Signature James [Signature]Date 08-25-95Reviewer Date



Page _____ of _____

FAX: 505-599-2261

FM-08-0565 A (Rev. 05-94)

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY ANALYTICAL REPORT PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	JAL14	947334
MTR CODE SITE NAME:	94180	Salazar "G" 34-1
SAMPLE DATE TIME (Hrs):	8/25/95	N/A
PROJECT:	Phase II Drilling	
DATE OF BTEX EXT. ANAL.:	9/1/95	9/1/95
TYPE DESCRIPTION:	Monitor Well	Water

Field Remarks: TDS - Total Dissolved Solids (PPM) 3764

RESULTS

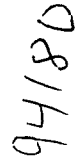
PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	<2.5	PPM				
TOLUENE	<2.5	PPM				
ETHYL BENZENE	<2.5	PPM				
TOTAL XYLENES	<7.5	PPM				
TOTAL BTEX	<15	PPM				

The Surrogate Recovery was at 86.0 for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative:

Approved By: John Savich

Date: 9-7-95



CHAIN OF CUSTODY RECORD

CHAIN OF CUSTODY RECORD

WHITE-Testing Laboratory
YELLOW-EPN(G Lab
PINK-Field Sampling
San Juan repro Form 7)

3/14/96

To: John Lambdin

Date: March 4, 1996

From: Dennis Bird

Place: Laboratory Services

Subject: Ballard Pipeline Pit Monitor Wells

On Tuesday, February 20, 1996, Richard Benson and myself went to Ballard Pipeline and started sampling the pit monitor wells. The following analytical parameters are to be performed on these groundwater samples: BTXE, General Chemistry, Nitrate as NO₃-N, Metals As, Ba, Cd, Cr, Hg, Se, Ag, Pb, and Dissolved Oxygen. The samples were assigned the laboratory numbers 960170, 960171, 960184, 960192, 960193. The samples for metals were filtered with a 0.45 micron filter in the field at the time of sampling. The dissolved oxygen results were taken at the time of sampling with a ChemMets Kit. The Field Service Laboratory will be performing all of the analysis.

The following information was collected on each well.

Monitor Well=	Pipe ID	Static Level	Total Depth	Gallons Bailed	Dissolved Oxygen	
Hammond Fed. #1	4"	25.77'	33.00'	15.5	1.5 ppm	
Lat. 2C-55 Line Drip	4"	23.47'	35.40'	25.0	1.5 ppm	
Cleveland #6	4"	66.65'	82.62'	32.0	3.5 ppm	
960192 Salazar "G" 34-1	4"	35.83'	46.25'	21.0	1.0 ppm	94180

All bailing and sampling was done with disposable, one time use equipment and bottles. All samples were preserved on ice immediately after collection. The static level and total depth was measured from the top of the pipe.

Should you have any question or comments, please let me know.

DB
Dennis P. Bird
Chief Technician

cc: Nancy Prince
Ann Allen
Sandra Miller

EPFS

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY ANALYTICAL REPORT

SAMPLE IDENTIFICATION

SAMPLE NUMBER: 960192
SITE NAME: Ballard Pipeline
SAMPLE SITE: Salazar "G" 34-1
SAMPLE DATE: 02/22/96
SAMPLE TIME (Hrs): 1547
SAMPLED BY: D. Bird
DATE OF BTEX ANALYSIS: 02/23/96
SAMPLE TYPE: Water

REMARKS:

EPA Method 8020 (BTEX) RESULTS

PARAMETER	RESULT PPB	QUALIFIER	WQCC LIMIT PPB
BENZENE	< 1.0		10
TOLUENE	< 1.0		740
ETHYL BENZENE	< 1.0		750
TOTAL XYLENES	< 3.0		620
SURROGATE % RECOVERY	96.3	Allowed Range 80 to 120 %	

NOTES:

Vol. Linda

Date: 2-26-96

EL PASO FIELD SERVICES

Field Services Laboratory Water Analysis Report

LOCATION: Ballard Pipeline PROJECT: M.W.
DATE OF REPORT: 2/28/96 SAVE FILE: 960192
SAMPLED BY: Dennis Bird & Richard Benson

****All Results By Standard Methods (AWWA) Or EPA Method 300****

[illegible]

****All Results Expressed as ppm or umhos****

REMARKS:

Fluoride results were with the HACH DR/2000 using the spadns fluoride reagents.

* It is not unusual for shallow groundwater in New Mexico to naturally exceed these limits.

Approvals:

Lab Super.: John Labini Date: 3/14/96

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

SAMPLE NUMBER:	960192
LOCATION:	Ballard Pipeline
SAMPLE DATE:	02/22/96
SAMPLE TIME (Hrs):	1547
SAMPLED BY:	D. Bird
SAMPLE POINT:	Salazar "G" 34-1

REMARKS: _____

RESULTS

PARAMETER	DISSOLVED RESULT (mg/L)	TOTAL RESULT (mg/L)	N. M. WQCC LIMIT (mg/L)
ARSENIC	0.001	0.008	0.10
BARIUM	0.02	0.32	1.00
CADMIUM	<0.0005	<0.0005	0.01
CHROMIUM	0.006	0.018	0.05
LEAD	0.013	0.052	0.05
MERCURY	0.0003	<0.0001	0.002
SELENIUM	0.041	0.052	0.05
SILVER	0.0009	0.0013	0.05

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, EPA600/4-91/010, 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: *m/h*Approved By: *Volan Jordan 3/19/96*

EPTS EL PASO FIELD SERVICES

QUALITY CONTROL REPORT EPA METHOD 8020 - BTEX

Samples: 960170, 960171, 960184 and 960190 through 960193

QA/QC for 02/23/96 Sample Set

LABORATORY CALIBRATION CHECKS / LABORATORY CONTROL SAMPLES:

SAMPLE NUMBER ICV LA-52589 50 PPB	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE	
					YES	NO
					RANGE	
Benzene	Standard	50.0	51.4	102.8	75 - 125 %	X
Toluene	Standard	50.0	51.3	103.6	75 - 125 %	X
Ethylbenzene	Standard	50.0	51.3	103.6	75 - 125 %	X
m & p - Xylene	Standard	100	103.4	103.4	75 - 125 %	X
o - Xylene	Standard	50.0	51.9	103.8	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	25.3	103.2	39 - 150	X
Toluene	Standard	25.0	25.6	102.4	46 - 148	X
Ethylbenzene	Standard	25.0	25.7	102.8	32 - 160	X
m & p - Xylene	Standard	50	51.6	103.2	Not Given	X
o - Xylene	Standard	25.0	25.7	102.8	Not Given	X
SAMPLE NUMBER CCV LA-52589 50 PPB	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE	
					YES	NO
					RANGE	
Benzene	Standard	50.0	51.1	102.2	75 - 125 %	X
Toluene	Standard	50.0	51.1	102.2	75 - 125 %	X
Ethylbenzene	Standard	50.0	50.8	101.6	75 - 125 %	X
m & p - Xylene	Standard	100	100.8	100.8	75 - 125 %	X
o - Xylene	Standard	50.0	51.1	102.2	75 - 125 %	X
SAMPLE NUMBER CCV LA-52589 50 PPB	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE	
					YES	NO
					RANGE	
Benzene	Standard	50.0	51.3	102.6	75 - 125 %	X
Toluene	Standard	50.0	51.2	102.4	75 - 125 %	X
Ethylbenzene	Standard	50.0	51.0	102.0	75 - 125 %	X
m & p - Xylene	Standard	100	100.9	100.9	75 - 125 %	X
o - Xylene	Standard	50.0	51.3	102.6	75 - 125 %	X

arrative: Acceptable.

EPA METHOD 8020 - BTEX

Samples: 960170, 960171, 960184 and 960190 through 960193

LABORATORY DUPLICATES:

SAMPLE ID	TYPE	SAMPLE RESULT PPB	DUPLICATE RESULT PPB	RPD	ACCEPTABLE	
					YES	NO
960190					RANGE	
Benzene	Matrix Duplicate	2.04	1.77	14	+/- 20 %	X
Toluene	Matrix Duplicate	<1.0	<1.0	0	+/- 20 %	X
Ethylbenzene	Matrix Duplicate	46.6	47.6	2	+/- 20 %	X
m & p - Xylene	Matrix Duplicate	77.7	78.1	1	+/- 20 %	X
o - Xylene	Matrix Duplicate	2.66	2.51	6	+/- 20 %	X

Narrative: Acceptable.

LABORATORY SPIKES:

SAMPLE ID	SPIKE ADDED PPB	SAMPLE RESULT PPB	SPIKE SAMPLE RESULT PPB	%R	ACCEPTABLE	
					YES	NO
2nd Analysis 960190					RANGE	
Benzene	50	2.04	55.9	107.7	75 - 125 %	X
Toluene	50	<1.0	55.2	110.4	75 - 125 %	X
Ethylbenzene	50	46.6	94.6	96.0	75 - 125 %	X
m & p - Xylene	100	77.7	188	110.3	75 - 125 %	X
o - Xylene	50	2.66	59.2	113.1	75 - 125 %	X

Narrative: Acceptable.

ADDITIONAL ANALYTICAL BLANKS:

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

Narrative: Acceptable.

SOIL VIAL BLANK	SOURCE Lot M12151	PPB (Analyzed with this set)	STATUS
Benzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Toluene	Vial + Boiled Water	<1.0	ACCEPTABLE
Ethylbenzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Total Xylenes	Vial + Boiled Water	<3.0	ACCEPTABLE

Narrative: Acceptable.

CONTAMINATION CARRYOVER CHECK	SOURCE	PPB (None analyzed with this set)	STATUS
Benzene	Vial + Boiled Water	<1.0	NA
Toluene	Vial + Boiled Water	<1.0	NA
Ethylbenzene	Vial + Boiled Water	<1.0	NA
Total Xylenes	Vial + Boiled Water	<3.0	NA

Narrative:

Approved By:

John L. Liden

Date: 26-Feb-96

EPFS

EL PASO FIELD SERVICES

QUALITY CONTROL REPORT

Sample ID: 960170, 960171, 960184 & 960190 thru 9
 Date Sampled: 02/20 - 02/22/96
 Location: Blanco & Ballard Pipelines

Date Reported: 03/11/96
 Date Analyzed: 2/26/96 - 03/08/96

TOTAL METALS

LABORATORY CONTROL SAMPLE (µg/L)

Analyte	Found Value (µg/L)	Known Result (µg/L)	% Recovery
Arsenic	13.3	13.5	98.5%
Barium	28.0	31.5	88.9%
Cadmium	2.95	2.90	101.7%
Chromium	7.03	6.56	107.2%
Lead	39.8	39.5	100.7%
Mercury	1.77	1.75	101.1%
Selenium	30.4	31.0	98.1%
Silver	3.49	3.06	114.1%

DUPLICATE ANALYSIS (µg/L)

Analyte	Original Sample Result	Duplicate Sample Result	% RPD
Arsenic	1.37	1.37	2.0%
Barium	139	130	37.0%
Cadmium	ND	ND	NA
Chromium	10.0	9.640	3.7%
Lead	3.59	9.26	7.5%
Mercury	ND	ND	NA
Selenium	5.29	5.36	1.0%
Silver	0.36	0.45	22.2%

SPIKE ANALYSIS (mg/L)

Analyte	Original Sample Result	Spike Sample Result	Spike Added	Recovery Percent
Arsenic	4.41	47.3	45.45	95%
Barium	479	5510	4545	112%
Cadmium	<0.5	10.00	9.09	109%
Chromium	15.5	55.5	45.45	91%
Lead	3.99	44.5	45.45	90%
Mercury	<0.1	2.05	2.00	103%
Selenium	<5	9.9	9.09	108%
Silver	0.57	28.0	45.45	90%

METHOD BLANK

Analyte	Found Result (µg/L)	Detection Level (µg/L)
Arsenic	ND	1
Barium	ND	20
Cadmium	ND	0.5
Chromium	ND	1
Lead	ND	4
Mercury	ND	0.1
Selenium	ND	5
Silver	ND	0.4

ND: Not Detected at stated detection level.

NA: Not Applicable.

Approved By: *[Signature]* 3/13/96

EPFS

EL PASO FIELD SERVICES

QUALITY CONTROL REPORT

Sample ID: 960170, 960171, 960184 & 960190 thru 960193

Date Sampled: 02/20 - 02/22/96

Location: Blanco & Ballard Pipelines

Date Reported: 03/11/96

Date Analyzed: 2/26/96 - 03/08/96

DISSOLVED METALS

LABORATORY CONTROL SAMPLE

Analyte	Found Value (µg/L)	Known Result (µg/L)	% Recovery
Arsenic	13.3	13.5	98.5%
Barium	28.0	31.5	88.9%
Cadmium	2.95	2.90	101.7%
Chromium	7.03	6.56	107.2%
Lead	39.8	39.5	100.7%
Mercury	1.77	1.75	101.1%
Selenium	30.4	31.0	98.1%
Silver	3.49	3.06	114.1%

DUPLICATE ANALYSIS

Analyte	Original Sample Result	Duplicate Sample Result	% RPD
Arsenic	ND	ND	NA
Barium	0.031	0.021	10.8%
Cadmium	ND	ND	NA
Chromium	0.005	0.005	11.8%
Lead	0.004	0.004	4.8%
Mercury	ND	ND	NA
Selenium	0.003	0.003	3.8%
Silver	0.0002	0.0002	2.4%

SPIKE ANALYSIS

Analyte	Original Sample Result	Spike Sample Result	Spike Added	Recovery Percent
Arsenic	1.29	46.0	45.45	99%
Barium	16.5	4978	4545	109%
Cadmium	<0.5	9.17	9.09	101%
Chromium	5.39	43.9	45.45	36%
Lead	1.35	38.0	45.45	31%
Mercury	<0.1	2.03	2.00	102%
Selenium	<5	11.4	9.09	126%
Silver	0.39	7.0	45.45	14%

ND: Not Detected at stated detection level.

NA: Not Applicable.

Reported By: mh

Approved By: J. L. Taylor 3/13/96