

3R - 142

REPORTS

DATE:

1997

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

LD102

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

groundwater analytical
soil-gas analytical

☐
☐

If item boxes are not checked they are not applicable



Environmental Services Group
Southern Region

**2C-22 #1 Line Drip
Identification Code LD102**

Pit was excavated to 12 feet beneath ground surface. The headspace soil reading from the excavation bottom was 188 parts per million. Soil analytical were as follows; benzene - 1.2 mg/kg, total BTEX - 140 mg/kg, TPH - 27,100 mg/kg.

One soil boring was completed and a monitoring well was installed. A soil sample was collected from 25-27 feet beneath ground surface. Soil analytical results were as follows: benzene - <0.5 mg/kg, total BTEX - 67.6 mg/kg, TPH - 3,770 mg/kg. The groundwater monitoring well was sampled for 5 quarters. Four consecutive quarters were below standards. Groundwater analytical results were as follows:

Initial: benzene - 36.6 ppb, toluene - 164 ppb, ethyl benzene - 19.3 ppb, total xylenes - 241 ppb.

Quarter 1: benzene-11.3 ppb, toluene-3.15 ppb, ethyl benzene-9.53 ppb, total xylenes-31.3 ppb.

Quarter 2: benzene-2.4 ppb, toluene-1.44 ppb, ethyl benzene-5.99 ppb, total xylenes-11.3 ppb.

Quarter 3: benzene-4.07 ppb, toluene-<1 ppb, ethyl benzene-7.81 ppb, total xylenes-12.7 ppb.

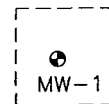
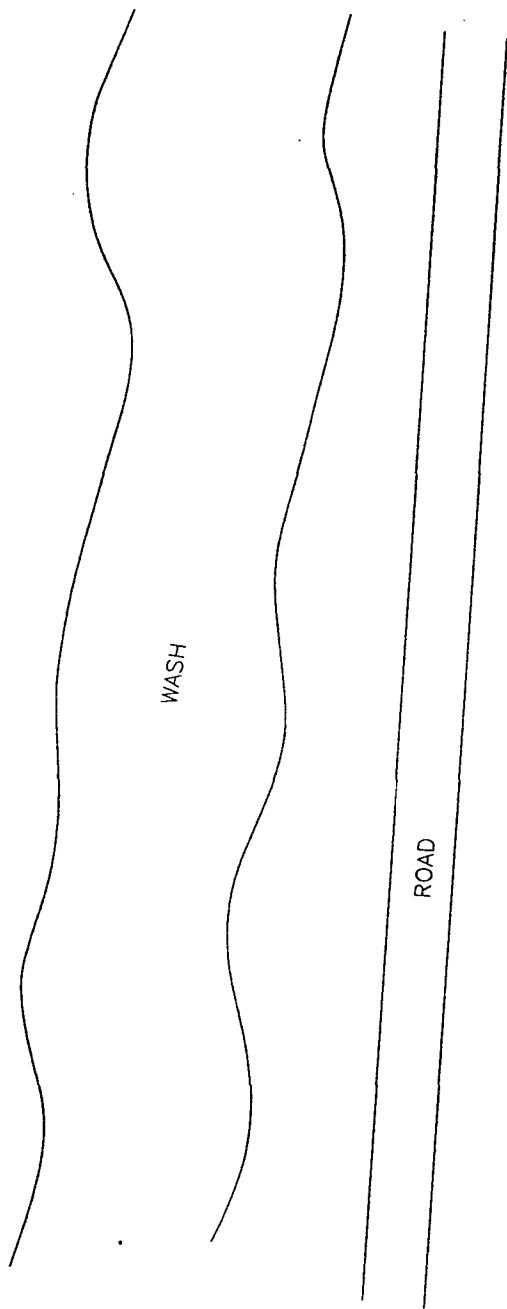
Quarter 4: benzene-4.92 ppb, toluene-<1 ppb, ethyl benzene-8.54 ppb, total xylenes-11.6 ppb.

Quarter 5: benzene-3.62 ppb, toluene-<1 ppb, ethyl benzene-7.67 ppb, total xylenes-16 ppb.

This site is ready for closure based on the following:

- Groundwater samples from MW-1 were below standards for four consecutive quarters.





FORMER PIT

LEGEND


MW-1 APPROXIMATE WELL LOCATION AND NUMBER

NOT TO SCALE



COL. 17520F-001



TITLE:
 2C-22 #1 LINE DRIP
 N-S35-T24-R6

DWN:	DES.:
TMM	CC
CHKD:	APPD:
CC	
DATE:	REV.:
7/11/97	0

PROJECT NO.: 17520
 EPFS GW PITS

FIGURE 1

FIELD PIT SITE ASSESSMENT FORM

GENERAL

Meter: N/A ^{N352406} Location: ZC-ZZ #1 Line Drip
 Operator #: N/A Operator Name: EPNG P/L District: Ballard
 Coordinates: Letter: N Section 35 Township: 24 Range: 6
 Or Latitude _____ Longitude _____
 Pit Type: Dehydrator _____ Location Drip: _____ Line Drip: X Other: _____
 Site Assessment Date: 8/1/94 Area: 07 Run: 06-14 FI

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 Escrito Canyon
 (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: 40 POINTS

REMARKS

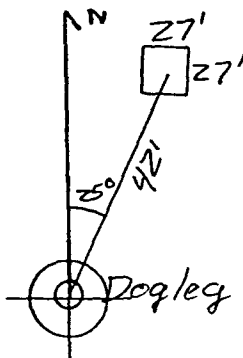
Remarks : Redline Book - Inside Vulnerable Zone - Inside
One pit, pit has liquid in it, will close one pit.

DIET & HAIL

ORIGINAL PIT LOCATION

ORIGINAL PIT LOCATION

Original Pit : a) Degrees from North 25° Footage from Wellhead 42'
b) Length : 27' Width : 27' Depth : 4'



REMARKS

Remarks :

Pictures @ 1243 (9-12, Roll 12)

Dump Truck

Measurement taken from the 2C-22/CL-263 dogleg.
(and bearing)

Completed By:

Sarah Kelly

Signature

8/1/94

Date

Phase I Excavation

FIELD PIT REMEDIATION/CLOSURE FORM

GENERAL

Meter: NA Location: 2C-22⁴ / LINE DRIP

Coordinates: Letter: N Section 35 Township: 24 Range: 6

Or Latitude _____ Longitude _____

Date Started : 9-1-94 Run: 07 06-18 F1

FIELD OBSERVATIONS

Sample Number(s): KP 216

Sample Depth: 12' Feet

Final PID Reading 188 PID Reading Depth 12' Feet

Yes No

Groundwater Encountered ☐ ☒ Approximate Depth _____ Feet

CLOSURE

Remediation Method :

Excavation ☒ Approx. Cubic Yards 120

Onsite Bioremediation ☐

Backfill Pit Without Excavation ☐

Soil Disposition:

Envirotech ☒ ☐ Tierra

Other Facility ☐ Name: _____

Pit Closure Date: _____ Pit Closed By: B.E.I.

REMARKS

Remarks : Some Line markers. Pit had some oil & water. Had to have pump truck suck it out. At 12' soil still light gray with a smell. Pid 188 closed pit.

Signature of Specialist: Kelly Padilla

**FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT****SAMPLE IDENTIFICATION**

	Field ID	Lab ID
SAMPLE NUMBER:	KP216	946046
MTR CODE SITE NAME:	LD102	2C-22 #1 Line Drip
SAMPLE DATE TIME (Hrs):	9/1/94	1230
PROJECT:	Phase I - Drilling <i>EXCAVATION</i>	
DATE OF TPH EXT. ANAL.:	9/6/94	9/6/94
DATE OF BTEX EXT. ANAL.:	9/11/94	9/11/94
TYPE DESCRIPTION:	VC	Brown sand & clay

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q	M(g)	V(ml)
BENZENE	1.20	MG/KG	20	D		
TOLUENE	27.0	MG/KG	20	D		
ETHYL BENZENE	12.0	MG/KG	20	D		
TOTAL XYLENES	100	MG/KG	20	D		
TOTAL BTEX	140	MG/KG				
TPH (418.1)	27,100	MG/KG			0.36	28
HEADSPACE PID	188	PPM				
PERCENT SOLIDS	86.6	%				

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

The Surrogate Recovery was at 76.0 for this sample All QA/QC was acceptable.
The "D" qualifier indicates the result for this analyte is calculated based on a secondary dilution factor.

Sample analyzed by ATI.

DF = Dilution Factor Used

Approved By: _____

INGVZPIT.XLS

Date: _____

9/30/94



Page _____ of _____

White • Testing Laboratory Canally • EFG Lab Fluk • Field Sampler

Phase II Soil Boring

07-51 Ballard

RECORD OF SUBSURFACE EXPLORATION

PHILIP ENVIRONMENTAL

100 Monroe Road

Farmington, New Mexico 87401

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

Borehole # BH-1

Well #

Page 1 of 1

Project Name

EPNG PITS

Project Number

14509

Phase

6000 77

Project Location

2C-22#1 Line Drip

Well Logged By

CM Chance

Personnel On-Site

K Padilla, F. Rivera, D. Charlie

Contractors On-Site

Client Personnel On-Site

Elevation

Borehole Location QN-S35-T24-R6

GWL Depth

Logged By CM CHANCE

Drilled By K Padilla

Date/Time Started 8/16/95 - 0900

Date/Time Completed 8/16/95 - 1130

Drilling Method

4 1/4" ID HSA / 8 1/4" I.D. 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	HS	
0				Backfill to 12'						
5										
10										
15	1	15-17	5"	Br silty SAND, vf sand, loose, sl moist, odor			0	120	1013 1220	-0911 m
20	2	20-22	20"	Br silty SAND, vf-F sand, loose, sl moist, sl odor			1	49	972 786	-0918
25	3	25-27	12"	Br SAND, mod silty, vf-F sand, loose, sl moist, sl odor			5	96	672 685	-0926
30	4	30-32	12'	lt br SAND, vf-F sand, tr med sand, loose, saturated			0	80	NA	-0935 -GW @ 28.8' -Product Film on water in split spoon -GW @ 29' after setting 15 min. -Cuttings dark grey & saturated
35										
40				TOB 40'						

Comments:

Groundwater @ 29' after setting 15 min. Will reach hole w/ 8 1/4" I.D. augers
 CM (75 (25-27) sent to lab (BTEX, TPH). Will set well @ 39'.

Geologist Signature

Cory Chance

**FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT**

SAMPLE IDENTIFICATION

SAMPLE NUMBER:	Field ID CMC75	Lab ID 947249
MTR CODE SITE NAME:	LD102	2C-22 #1 Line Drip
SAMPLE DATE TIME (Hrs):	8/16/95	926
PROJECT:	Phase II Drilling	
DATE OF TPH EXT. ANAL.:	8/17/95	8/17/95
DATE OF BTEX EXT. ANAL.:	8/18/95	8/19/95
TYPE DESCRIPTION:	VG	Light gray sand & clay

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q	M(g)	V(ml)
BENZENE	<0.5	MG/KG		F		
TOLUENE	3.30	MG/KG				
ETHYL BENZENE	6.50	MG/KG				
TOTAL XYLENES	57.8	MG/KG				
TOTAL BTEX	67.6	MG/KG				
TPH (418.1)	3,770	MG/KG			2.01	28
HEADSPACE PID	685	PPM				
PERCENT SOLIDS	89.5	%				

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

The Surrogate Recovery was at 115 for this sample All QA/QC was acceptable.

Benzene taken from FID

DF = Dilution Factor Used

Approved By: John L. Linder

INGVZPIT.XLS

Date: 8/24/95

PROJECT NUMBER # 24324		PROJECT NAME Pit Closure Project		CONTRACT LABORATORY P. O. NUMBER	
SAMPLERS: (Signature) <i>Cory Chase</i>		DATE: 8/16/95		REMARKS <i>Bagged & Iced 25-27' 2C-22#1 Line Drift</i>	
LAB ID	DATE	TIME	MATRIX	FIELD ID	SEQUENCE #
947249	8/16/95	0926	SOIL	CMC75	71
TOTAL NUMBER OF CONTAINERS		SAMPLE TYPE		REQUESTED ANALYSIS	
1		V6		EPA 418.1 ☒ TPH EPA 8020 ☒ BTEX LAB PID PPA HS PPM	
<i>Smx 8/16/95</i>					
RELINQUISHED BY: (Signature) <i>Cory Chase</i>		DATE/TIME 8/16/95 1700		RECEIVED BY: (Signature) <i>Kelly Saville</i>	
RELINQUISHED BY: (Signature)		DATE/TIME		RECEIVED BY: (Signature)	
REQUESTED TURNAROUND TIME: ☐ ROUTINE ☐ RUSH		CARRIER CO.		RESULTS & INVOICES TO:	
BILL NO.:		CHANGE CODE		FIELD SERVICES LABORATORY EL PASO NATURAL GAS COMPANY P.O. BOX 4990 FARMINGTON, NEW MEXICO 87499 FAX: 505-599-2261	

MONITORING WELL INSTALLATION RECORD

Philip Environmental Services Corp.

4000 Monroe Road

Farmington, New Mexico 87401

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

Borehole # BH-1

Well # MW-1

Page 1 of 1

Project Name EPNG Pits

Project Number 14509 Phase 6001.77

Project Location 2C-22#1 Line Drip

On-Site Geologist CM Chance

Personnel On-Site E. Rivera, D. Charlie

Contractors On-Site

Client Personnel On-Site

Elevation

Well Location DN-S35-T24-R6

GWL Depth 29'

Installed By K. Padilla

Date/Time Started 8/16/95 - 1130

Date/Time Completed 8/16/95 - 1400

Depths in Reference to Ground Surface				
Item	Material	Depth		
Top of Protective Casing		NA	Top of Protective Casing	<u>NA</u>
Bottom of Protective Casing		NA	Top of Riser	<u>+3'</u>
Top of Permanent Borehole Casing		NA	Ground Surface	<u>0'</u>
Bottom of Permanent Borehole Casing		NA		
Top of Concrete		NA		
Bottom of Concrete		NA		
Top of Grout	7-44# bags Type I-II cement	0'		
Bottom of Grout	-25-50# bags powder bentonite	19'		
Top of Well Riser	27' Sch 40 PVC	+3'		
Bottom of Well Riser	4" Flush thread	14'		
Top of Well Screen	15' Sch 40 PVC	14'		
Bottom of Well Screen	4" Flush thread	39'	Top of Seal	<u>19'</u>
Top of Peltonite Seal	0.01 slot	39'		
Bottom of Peltonite Seal	2-50' bags	19'		
Top of Gravel Pack	Enviroplug	21'	Top of Gravel Pack	<u>21'</u>
Bottom of Gravel Pack	Bentonite chips	21'	Top of Screen	<u>24'</u>
Top of Natural Cave-In	18-50' bags	21'		
Bottom of Natural Cave-In	10-20 silica sand	39'		
Top of Groundwater		29'		
Total Depth of Borehole		40'	Bottom of Screen	<u>39'</u>
			Bottom of Borehole	<u>40'</u>

Comments: Add 15 gal potable water on slough. Bentonite hydrated w/ 10 gal potable water.

Geologist Signature

CM Chance



Well Development and Purging Data

☐ Development
☐ Purging

Well Number MW-1

Page of

Serial No. WDPD-

Project Name EPNS PITS

Project Manager CORY CHANCE

Project No. 14509

Client Company EPNS

Phase/Task No. 6003-77

Site Name 20-22 #1 LINE DRIP

Site Address

Development Criteria

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

Methods of Development

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

Water Volume Calculation

Initial Depth of Well (feet) 42.21
Initial Depth to Water (feet) 31.52
Height of Water Column in Well (feet) 10.69
Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing		<u>674.7</u>	<u>785</u>
Gravel Pack			
Drilling Fluids		<u>10</u>	<u>10</u>
Total			<u>45</u>

Instruments Serial No. (If applicable) HYDAC

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

Water Disposal

Drummed + Tied to Separator
at KUTB - steamfield

Water Removal Data

Date	Time	Development Method		Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons)		Product Volume Removed (gallons)		Temperature of	pH	Conductivity (umhos/cm) x 1000	Dissolved Oxygen (mg/L)	Comments
		Pump	Bailer				Increment	Cumulative	Increment	Cumulative					
08-24-95	1050		X				5	5			66.7	7.35	2.54		6784m SURF
	1100						5	10			59.9	7.29	2.58		
	1110						5	15			54.5	7.33	2.76		
	1120						5	20			59.4	7.35	2.88		
	1130						5	25			59.1	7.34	3.00		
	1140						5	30			60.5	7.26	3.14		
	1155						5	35			60.4	7.29	3.17		6784m SURF
	1210						5	40			61.8	7.29	3.24		CLOUDY
08-24-95	1220		X				5	45			60.3	7.29	3.28		6784m CLOUDY

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

Comments

Developer's Signature(s) James A. Fox Date 08-24-95 Reviewer Date



Water Sampling Data

Location No. MW-1Serial No. WSD-

Group List Number _____

Sample Type: ☒ Groundwater ☐ Surface Water ☐ Other _____ Date 02-24-95Project Name EPN9 PITS Project No. 14509Project Manager Cory Chance Phase Task No. 6003-77Site Name 20-22 #1 Line DNP

Sampling Specifications

Requested Sampling
Depth Interval (feet) Top 3'
Requested Wait Following
Development/Purging (hours) —

Initial Measurements

Time Elapsed From Final Development/Purging (hours) 20
Initial Water Depth (feet) 31.52
Nonaqueous Liquids Present (Describe) NA

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	
See	well	Development	AND Purging				DATA SHEET				

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		S: 1240
TDS	1	P	250		X	NA	X		T: 1240

Filter Type _____ Chain-of-Custody Form Number _____

Comments _____

Signature James S. Lay Date 02-24-95 Reviewer _____ Date _____



EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY ANALYTICAL REPORT PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

SAMPLE NUMBER:	Field ID JAL12	Lab ID 947322
MTR CODE SITE NAME:	LD102	2C-22 #1 Line Drip
SAMPLE DATE TIME (Hrs):	8/24/95	N/A
PROJECT:	Phase II Drilling - Initial	
DATE OF BTEX EXT. ANAL.:	9/1/95	9/1/95
TYPE DESCRIPTION:	Monitor Well	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	36.6	PPB				
TOLUENE	164	PPB				
ETHYL BENZENE	19.3	PPB				
TOTAL XYLENES	241	PPB				
TOTAL BTEX	461	PPB				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 102 for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative: _____

Approved By: John F. [Signature]

Date: 9-7-97

947322,6/27/97



Phase II

CHAIN OF CUSTODY RECORD

Page _____ of _____

[illegible]

Timeline Information:

EL PASO NATURAL GAS - FIELD SERVICES LAB

QUALITY CONTROL REPORT

EPA METHOD 8020 - BTEX

Samples: 947321 to 947323, 947333 to 947335, and 947371

QA/QC for 9/1/95 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	54.4	108.8	75 - 125 %	X
Toluene	Standard	50.0	52.3	104.6	75 - 125 %	X
Ethyl benzene	Standard	50.0	51.2	102.4	75 - 125 %	X
m & p - Xylene	Standard	100	106	106.3	75 - 125 %	X
o - Xylene	Standard	50.0	50.2	100.4	75 - 125 %	X
LCS LA-45476 25 PPB					RANGE	
Benzene	Standard	25.0	23.3	93.2	- 150	X
Toluene	Standard	25.0	24.5	98.0	46 - 148	X
Ethyl benzene	Standard	25.0	23.7	94.8	32 - 160	X
m & p - Xylene	Standard	50	49	98.0	Not Given	X
o - Xylene	Standard	25.0	23.5	94.0	Not Given	X
CCV LA-45473 50 PPB					RANGE	
Benzene	Standard	50.0	50.6	101.2	75 - 125 %	X
Toluene	Standard	50.0	55.4	110.8	75 - 125 %	X
Ethyl benzene	Standard	50.0	49.7	99.4	75 - 125 %	X
m & p - Xylene	Standard	100	108	108.3	75 - 125 %	X
o - Xylene	Standard	50.0	49.6	99.2	75 - 125 %	X

Narrative: Acceptable.

LABORATORY DUPLICATES:

SAMPLE NUMBER	TYPE (Analysis, Portion, or Sample)	SAMPLE RESULT PPB	DUPLICATE RESULT PPB	RPD	ACCEPTABLE	
					YES	NO
947334					RANGE	
Benzene	2nd Analysis	<2.5	<2.5	0	+/- 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.

EL PASO NATURAL GAS - FIELD SERVICES LAB

QUALITY CONTROL REPORT

EPA METHOD 8020 - BTEX

Samples: 947321 to 947323, 947333 to 947335, and 947371

LABORATORY SPIKES:

SAMPLE NUMBER	SPIKE ADDED PPB	SAMPLE RESULT PPB	SPIKE SAMPLE RESULT PPB	%R	RANGE	ACCEPTABLE YES NO
2nd Analysis 947334						
Benzene	50.0	<2.5	47.2	94	75 - 125 %	X
Toluene	50.0	<2.5	47.0	94	75 - 125 %	X
Ethyl benzene	50.0	<2.5	45.3	91	75 - 125 %	X
m & p - Xylene	100.0	<5.0	97.3	97	75 - 125 %	X
o - Xylene	50.0	<2.5	5.0	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	PPB	STATUS
Benzene	Boiled Water	<2.5	NA
Toluene	Boiled Water	<2.5	NA
Ethyl benzene	Boiled Water	<2.5	NA
Total Xylenes	Boiled Water	<7.5	NA

Narrative: Acceptable.

SAMPLE ID METHANOL CHECK	SOURCE Lot H18318	PPB	STATUS
Benzene	MeOH/Boiled Water	<2.5	NA
Toluene	MeOH/Boiled Water	<2.5	NA
Ethyl benzene	MeOH/Boiled Water	<2.5	NA
Total Xylenes	MeOH/Boiled Water	<7.5	NA

Narrative: Acceptable.

Approved By:

John Paulsen

Date: 5-Sep-95



FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	960376
MTR CODE SITE NAME:	LD102	2C-22 #1 Line Drip
SAMPLE DATE TIME (Hrs):	4/19/96	1413
PROJECT:	Sample 4 - 1st Quarter	
DATE OF BTEX EXT. ANAL.:	4/22/96	4/22/96
TYPE DESCRIPTION:	Monitor Well	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	11.3	PPB				
TOLUENE	3.15	PPB				
ETHYL BENZENE	9.53	PPB				
TOTAL XYLENES	31.3	PPB				
TOTAL BTEX	55.3	PPB				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 95.7 for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative: _____

Approved By: _____

Date: 4/30/96

EPFS

EL PASO FIELD SERVICES

QUALITY CONTROL REPORT EPA METHOD 8020 - BTEX

Samples: 960375 through 960378 and 960380

Pit Project Monitor Well
QA/QC for 04/22/96 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	47.1	94.2	75 - 125 %	X
Toluene	Standard	50.0	47.2	94.4	75 - 125 %	X
Ethylbenzene	Standard	50.0	47.5	95.0	75 - 125 %	X
m & p - Xylene	Standard	100	95.6	95.6	75 - 125 %	X
o - Xylene	Standard	50.0	47.6	95.2	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	23.3	93.2	39 - 150	X
Toluene	Standard	25.0	22.9	91.6	46 - 148	X
Ethylbenzene	Standard	25.0	22.9	91.6	32 - 160	X
m & p - Xylene	Standard	50	46.1	92.2	Not Given	X
o - Xylene	Standard	25.0	23.1	92.4	Not Given	X
SAMPLE NUMBER	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE	
CCV LA-52589 50 PPB					YES	NO
					RANGE	
Benzene	Standard	50.0	46.4	92.8	75 - 125 %	X
Toluene	Standard	50.0	46.5	93.0	75 - 125 %	X
Ethylbenzene	Standard	50.0	46.9	93.8	75 - 125 %	X
m & p - Xylene	Standard	100	93.8	93.8	75 - 125 %	X
o - Xylene	Standard	50.0	47.0	94.0	75 - 125 %	X
SAMPLE NUMBER	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE	
CCV LA-52589 50 PPB					YES	NO
					RANGE	
Benzene	Standard	50.0	46.3	92.6	75 - 125 %	X
Toluene	Standard	50.0	46.4	92.8	75 - 125 %	X
Ethylbenzene	Standard	50.0	46.6	93.2	75 - 125 %	X
m & p - Xylene	Standard	100	92.9	92.9	75 - 125 %	X
o - Xylene	Standard	50.0	46.8	93.6	75 - 125 %	X

Narrative: Acceptable.

EL PASO FIELD SERVICES LAB
QUALITY CONTROL REPORT
EPA METHOD 8020 - BTEX
Samples: 960375 through 960378 and 960380

LABORATORY DUPLICATES:

SAMPLE ID	TYPE	SAMPLE RESULT PPB	DUPLICATE RESULT PPB	RPD	ACCEPTABLE	
					YES	NO
960377					RANGE	
Benzene	Matrix Duplicate	5.82	5.71	2	+/- 20 %	X
Toluene	Matrix Duplicate	31.2	30.9	1	+/- 20 %	X
Ethylbenzene	Matrix Duplicate	5.35	5.10	5	+/- 20 %	X
m & p - Xylene	Matrix Duplicate	28.1	27.7	1	+/- 20 %	X
o - Xylene	Matrix Duplicate	8.20	8.07	2	+/- 20 %	X

Narrative: Acceptable. Sample diluted X2.

LABORATORY SPIKES:

SAMPLE ID	SPIKE ADDED PPB	SAMPLE RESULT PPB	SPIKE SAMPLE RESULT PPB	%R	ACCEPTABLE	
					YES	NO
2nd Analysis 960377					RANGE	
Benzene	100	5.82	102	96.2	75 - 125 %	X
Toluene	100	31.2	127	95.8	75 - 125 %	X
Ethylbenzene	100	5.35	98.6	93.3	75 - 125 %	X
m & p - Xylene	200	28.1	216	94.0	75 - 125 %	X
o - Xylene	100	8.20	102	93.8	75 - 125 %	X

Narrative: Spike recoveries based on recovery in diluted sample (X2).

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 (One 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:

Approved By: John Sanchez

Date: 23-Apr-96



CHAIN OF CUSTODY RECORD

Project No.	Project Name	Requested Analysis		Contract Laboratory								
	HIVERLAND PIPELINE	8 RCB MEMBERS	EL PASO FIELD SERVICE CO.									
	Penwin Blvd	GENERAL CHEMISTRY	722 WEST ARLINGTO									
		See Attached	FARMINGTON N.M. 87901									
Lab ID	Date	Time	Matrix	Sample Number	Intact?	Chain of Custody Seals	Total No. of Containers	Composite or Grab	STYR	GENERAL CHEMISTRY	8 RCB MEMBERS	Remarks
4796	11/53	1413	WATER	960575			4	(C)	X	X	X	GRAHAM #53 NW 1/4 C 75212
4796	1413	1413	WATER	960576			4	(C)	X	X	X	20-22 #1 LINE DRIP NW 1/4 C 40102
[Large diagonal line across the table]												
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)
Penwin Blvd	11/53	1413	1413	1413	1413	1413	1413	1413	1413	1413	1413	1413
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)
Results & Invoices to:	Date Results Reported / by: (Signature)											



EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY ANALYTICAL REPORT PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	960647
MTR CODE SITE NAME:	LD102	2C-22 #1 Line Drip
SAMPLE DATE TIME (Hrs):	7/24/96	1152
PROJECT:	Sample 4 - 2nd Quarter	
DATE OF BTEX EXT. ANAL.:	7/31/96	7/31/96
TYPE DESCRIPTION:	Monitor Well	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	2.40	PPB				
TOLUENE	1.44	PPB				
ETHYL BENZENE	5.99	PPB				
TOTAL XYLENES	11.3	PPB				
TOTAL BTEX	21.1	PPB				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 97.5 for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative: _____

Approved By: _____

Date: 8/14/96

960647,6/27/97

CHAIN OF CUSTODY RECORD

[illegible]

EPFS

EL PASO FIELD SERVICES

QUALITY CONTROL REPORT EPA METHOD 8020 - BTEX

Samples: 960647 and 960660 thru 960664

QA/QC for 07/31/96 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	50.1	100	75 - 125 %	X
Toluene	Standard	50.0	50.3	101	75 - 125 %	X
Ethylbenzene	Standard	50.0	50.2	100	75 - 125 %	X
m & p - Xylene	Standard	100	100.2	100	75 - 125 %	X
o - Xylene	Standard	50.0	50.5	101	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	24.4	97.6	39 - 150	X
Toluene	Standard	25.0	24.9	99.6	46 - 148	X
Ethylbenzene	Standard	25.0	25.2	100.8	32 - 160	X
m & p - Xylene	Standard	50.0	50.8	101.6	Not Given	X
o - Xylene	Standard	25.0	25.4	101.6	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	50.5	101.0	75 - 125 %	X
Toluene	Standard	50.0	50.6	101.2	75 - 125 %	X
Ethylbenzene	Standard	50.0	50.5	101.0	75 - 125 %	X
m & p - Xylene	Standard	100	100.4	100.4	75 - 125 %	X
o - Xylene	Standard	50.0	50.8	101.6	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	50.0	100.0	75 - 125 %	X
Toluene	Standard	50.0	49.9	99.8	75 - 125 %	X
Ethylbenzene	Standard	50.0	49.7	99.4	75 - 125 %	X
m & p - Xylene	Standard	100	98.3	98.3	75 - 125 %	X
o - Xylene	Standard	50.0	49.9	99.8	75 - 125 %	X

Narrative: Acceptable.

EL PASO FIELD SERVICES LAB

QUALITY CONTROL REPORT

EPA METHOD 8020 - BTEX

Samples: 960647 and 960660 thru 960664

LABORATORY DUPLICATES:

SAMPLE ID	TYPE	SAMPLE RESULT PPB	DUPLICATE RESULT PPB	RPD	ACCEPTABLE	
					YES	NO
960661					RANGE	
Benzene	Matrix Duplicate	<5.0	<5.0	0.00	+/- 20 %	X
Toluene	Matrix Duplicate	<5.0	<5.0	0.00	+/- 20 %	X
Ethylbenzene	Matrix Duplicate	<5.0	<5.0	0.00	+/- 20 %	X
m & p - Xylene	Matrix Duplicate	<10.0	<10.0	0.00	+/- 20 %	X
o - Xylene	Matrix Duplicate	<5.0	<5.0	0.00	+/- 20 %	X

Narrative: Acceptable.

LABORATORY SPIKES:

SAMPLE ID	SPIKE ADDED PPB	SAMPLE RESULT PPB	SPIKE SAMPLE RESULT PPB	%R	ACCEPTABLE	
					YES	NO
2nd Analysis 960661					RANGE	
Benzene	250	<5.0	251	100.4	75 - 125 %	X
Toluene	250	<5.0	253	101.2	75 - 125 %	X
Ethylbenzene	250	<5.0	250	100.0	75 - 125 %	X
m & p - Xylene	500	<10.0	499	99.8	75 - 125 %	X
o - Xylene	250	<5.0	250	100.0	75 - 125 %	X

Narrative: Spike recovery is based on recovery in the diluted sample (x5).

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 MB1461	PPB (Analyzed with this set)	STATUS
Benzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Toluene	Vial + Boiled Water	<1.0	ACCEPTABLE
Ethylbenzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Total Xylenes	Vial + Boiled Water	<3.0	ACCEPTABLE

Narrative: Acceptable.

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

Narrative: Acceptable.

Reported By: mhApproved By: John SaderDate: 7/31/96



EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY

ANALYTICAL REPORT PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

SAMPLE NUMBER:	Field ID N/A	Lab ID 960881
MTR CODE SITE NAME:	LD102	2C-22 #1 Line Drip MW-1
SAMPLE DATE TIME (Hrs):	10/22/96	1330
PROJECT:	Sample 4 - 3rd Quarter	
DATE OF BTEX EXT. ANAL.:	10/23/96	10/23/96
TYPE DESCRIPTION:	<i>Monitor Grab Well</i>	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	4.07	PPB				
TOLUENE	< 1	PPB				
ETHYL BENZENE	7.81	PPB				
TOTAL XYLENES	12.7	PPB				
TOTAL BTEX	24.6	PPB				

—BTEX is by EPA Method 8020 —

The Surrogate Recovery was at
DF = Dilution Factor Used

111

% for this sample All QA/QC was acceptable.

Narrative: _____

Approved By: _____

John Lavelle

Date: _____

10/29/96



Natural's Company

CHAIN OF CUSTODY RECORD

A 2298

[illegible]

EPFS

EL PASO FIELD SERVICES

QUALITY CONTROL REPORT EPA METHOD 8020 - BTEX

Samples: 947943 - 947948 and 960880 & 960881

QA/QC for 10/23/96 Sample Set

LABORATORY CALIBRATION CHECKS / LABORATORY CONTROL SAMPLES:

SAMPLE NUMBER	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE	
					YES	NO
					RANGE	
ICV LA-52589 50 PPB						
Benzene	Standard	50.0	55.9	112	75 - 125 %	X
Toluene	Standard	50.0	55.3	111	75 - 125 %	X
Ethylbenzene	Standard	50.0	55.0	110	75 - 125 %	X
m & p - Xylene	Standard	100	109	109	75 - 125 %	X
o - Xylene	Standard	50.0	54.2	108	75 - 125 %	X
LCS LA-45476 25 PPB						
Benzene	Standard	25.0	26.7	107	39 - 150	X
Toluene	Standard	25.0	26.8	107	46 - 148	X
Ethylbenzene	Standard	25.0	27.2	109	32 - 160	X
m & p - Xylene	Standard	50.0	54.6	109	Not Given	X
o - Xylene	Standard	25.0	27.2	109	Not Given	X
CCV LA-52589 50 PPB						
Benzene	Standard	50.0	52.7	105	75 - 125 %	X
Toluene	Standard	50.0	52.2	104	75 - 125 %	X
Ethylbenzene	Standard	50.0	52.1	104	75 - 125 %	X
m & p - Xylene	Standard	100	104	104	75 - 125 %	X
o - Xylene	Standard	50.0	52.0	104	75 - 125 %	X
CCV LA-52589 50 PPB						
Benzene	Standard	50.0	52.0	104	75 - 125 %	X
Toluene	Standard	50.0	51.2	102	75 - 125 %	X
Ethylbenzene	Standard	50.0	50.9	102	75 - 125 %	X
m & p - Xylene	Standard	100	101	101	75 - 125 %	X
o - Xylene	Standard	50.0	50.6	101	75 - 125 %	X

narrative: Acceptable.

EL PASO FIELD SERVICES LAB

QUALITY CONTROL REPORT

EPA METHOD 8020 - BTEX

Samples: 947943 - 947948 and 960880 & 960881

LABORATORY DUPLICATES:

SAMPLE ID	TYPE	SAMPLE RESULT PPB	DUPLICATE RESULT PPB	RPD	ACCEPTABLE	
					YES	NO
947935					RANGE	
Benzene	Matrix Duplicate	4.07	3.99	1.99	+/- 20 %	X
Toluene	Matrix Duplicate	<1	<1	0.00	+/- 20 %	X
Ethylbenzene	Matrix Duplicate	7.81	7.63	2.33	+/- 20 %	X
m & p - Xylene	Matrix Duplicate	12.7	11.3	11.7	+/- 20 %	X
o - Xylene	Matrix Duplicate	<1	<1	0.00	+/- 20 %	X

arrative: Acceptable.

LABORATORY SPIKES:

SAMPLE ID	SPIKE ADDED PPB	SAMPLE RESULT PPB	SPIKE SAMPLE RESULT PPB	%R	ACCEPTABLE	
					YES	NO
2nd Analysis 947935					RANGE	
Benzene	50	4.07	57.2	106	75 - 125 %	X
Toluene	50	<1	53.6	107	75 - 125 %	X
Ethylbenzene	50	7.81	60.7	106	75 - 125 %	X
m & p - Xylene	100	12.7	118	105	75 - 125 %	X
o - Xylene	50	<1	53.1	106	75 - 125 %	X

arrative: Acceptable

DDITIONAL 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

arrative: Acceptable.

SOIL VIAL BLANK	SOURCE Lot MB1461	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

arrative: Acceptable.

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

arrative: Acceptable.

Reported By:

mda

Approved By:

John L. Lutz

Date:

10/29/94



EL PASO FIELD SERVICES



FIELD SERVICES LABORATORY

ANALYTICAL REPORT

PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

Field ID

Lab ID

SAMPLE NUMBER:

N/A

970027

MTR CODE | SITE NAME:

LD102

2C-22 #1 Line Drip MW-1

SAMPLE DATE | TIME (Hrs):

1/28/97

1030

PROJECT:

Sample 4 - 4th Quarter

DATE OF BTEX EXT. | ANAL.:

2/3/97

2/3/97

TYPE | DESCRIPTION:

Monitor Well

Water

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	4.92	PPB				
TOLUENE	< 1	PPB				
ETHYL BENZENE	3.54	PPB				
TOTAL XYLENES	11.6	PPB				
TOTAL BTEX	25.1	PPB				

-BTEX is by EPA Method 8020 -

The Surrogate Recovery was at
DF = Dilution Factor Used

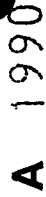
94.4

% for this sample All QA/QC was acceptable.

Narrative:

Approved By:

Date: 2-3-97

[illegible]

EPFS

EL PASO FIELD SERVICES

QUALITY CONTROL REPORT EPA METHOD 8020 - BTEX

Samples: 970027, 970029 - 970036, 970038 - 970040

QA/QC for 02/03/97 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	49.0	98.0	75 - 125 %	X
Toluene	Standard	50.0	48.4	96.8	75 - 125 %	X
Ethylbenzene	Standard	50.0	48.3	96.6	75 - 125 %	X
m & p - Xylene	Standard	100	95.9	95.9	75 - 125 %	X
o - Xylene	Standard	50.0	48.4	96.8	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	24.8	99.2	39 - 150	X
Toluene	Standard	25.0	24.4	97.6	46 - 148	X
Ethylbenzene	Standard	25.0	24.3	97.2	32 - 160	X
m & p - Xylene	Standard	50.0	48.8	97.6	Not Given	X
o - Xylene	Standard	25.0	24.6	98.4	Not Given	X
SAMPLE NUMBER	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE	
CCV LA-52589 50 PPB					YES	NO
					RANGE	
Benzene	Standard	50.0	48.0	96.0	75 - 125 %	X
Toluene	Standard	50.0	47.6	95.2	75 - 125 %	X
Ethylbenzene	Standard	50.0	47.4	94.8	75 - 125 %	X
m & p - Xylene	Standard	100	94.3	94.3	75 - 125 %	X
o - Xylene	Standard	50.0	47.5	95.0	75 - 125 %	X
SAMPLE NUMBER	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE	
CCV LA-52589 50 PPB					YES	NO
					RANGE	
Benzene	Standard	50.0	47.4	94.8	75 - 125 %	X
Toluene	Standard	50.0	46.9	93.8	75 - 125 %	X
Ethylbenzene	Standard	50.0	46.5	93.0	75 - 125 %	X
m & p - Xylene	Standard	100	92.3	92.3	75 - 125 %	X
o - Xylene	Standard	50.0	46.6	93.2	75 - 125 %	X

Narrative: Acceptable.

EL PASO FIELD SERVICES LAB

QUALITY CONTROL REPORT

EPA METHOD 8020 - BTEX

Samples: 970027, 970029 - 970036, 970038 - 970040

LABORATORY DUPLICATES:

SAMPLE ID	TYPE	SAMPLE RESULT PPB	DUPLICATE RESULT PPB	RPD	ACCEPTABLE	
					YES	NO
970040					RANGE	
Benzene	Matrix Duplicate	2.15	2.11	1.88	+/- 20 %	X
Toluene	Matrix Duplicate	11.6	11.4	1.74	+/- 20 %	X
Ethylbenzene	Matrix Duplicate	3.71	3.72	0.27	+/- 20 %	X
m & p - Xylene	Matrix Duplicate	34.3	34.4	0.29	+/- 20 %	X
o - Xylene	Matrix Duplicate	11.3	11.3	0.00	+/- 20 %	X

Narrative: Acceptable.

LABORATORY SPIKES:

SAMPLE ID	SPIKE ADDED PPB	SAMPLE RESULT PPB	SPIKE SAMPLE RESULT PPB	%R	ACCEPTABLE	
					YES	NO
2nd Analysis 970040					RANGE	
Benzene	50	2.15	50.5	96.7	75 - 125 %	X
Toluene	50	11.6	58.8	94.4	75 - 125 %	X
Ethylbenzene	50	3.71	51.6	95.8	75 - 125 %	X
m & p - Xylene	100	34.3	128	93.7	75 - 125 %	X
o - Xylene	50	11.3	58.8	95.0	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 MB1461	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 (Two analyzed with this set)	STATUS
Benzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Toluene	Vial + Boiled Water	<1.0	ACCEPTABLE
Ethylbenzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Total Xylenes	Vial + Boiled Water	<3.0	ACCEPTABLE

Narrative: Acceptable.

Reported By: IndaApproved By: John LardDate: 2-4-97



5-9-97

FIELD SERVICES LABORATORY
ANALYTICAL REPORT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	970354
MTR CODE SITE NAME:	LD102	2C-22 #1 Line Drip MW-1
SAMPLE DATE TIME (Hrs):	4/29/97	1140
PROJECT:	Sample 4	5th Quarter
DATE OF BTEX EXT. ANAL.:	4/30/97	4/30/97
TYPE DESCRIPTION:	Monitor Well	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	3.62	PPB				
TOLUENE	<1.0	PPB				
ETHYL BENZENE	7.67	PPB				
TOTAL XYLENES	16.0	PPB				
TOTAL BTEX	27.3	PPB				

The Surrogate Recovery was at 87.9 % for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative: _____

Approved By: _____

Date: 5/6/97



A 1934

Project No.	Project Name		Date		Sample Number		Type and No. of Sample Containers	Preservation Technique		Requested Analysis		Remarks
Samplers: (Signature)	Date	Time	Comp.	GRAB								
<i>Dennis Bird</i>												
<i>Dennis Bird</i>	4-28-97	1140		X	970354	R2	4°C	X	X	X	20-22" LINE DRIP MW-1 MC L0102	
<i>Dennis Bird</i>	4-28-97	1140		X	970355 (Field duplicate)	R2	4°C	X	X	X	20-22" LINE DRIP MW-1 MC L0102	
<i>Dennis Bird</i>	4-28-97			X		G-1	4°C	X			TRIP BUANK	
Relinquished by: (Signature) <i>Dennis Bird</i> Date/Time 4-28-97 1300 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 Relinquished by: (Signature) Date/Time 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:

Carrier Phone No.

Date Results Reported / by: (Signature)

Carrier Co:

• • • • •



QUALITY CONTROL REPORT
EPA METHOD 8020 - BTEX

Samples: 970349 thru 970356

QA/QC for 04/30/97 Sample S

LABORATORY CALIBRATION CHECKS / LABORATORY CONTROL SAMPLES:

SAMPLE NUMBER ICV LA-57725 50 PPB	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE	
					YES	NO
					RANGE	
Benzene	Standard	50.0	47.0	94.0	75 - 125 %	X
Toluene	Standard	50.0	46.4	92.8	75 - 125 %	X
Ethylbenzene	Standard	50.0	47.2	94.4	75 - 125 %	X
m & p - Xylene	Standard	100	94.6	94.6	75 - 125 %	X
o - Xylene	Standard	50.0	47.8	95.6	75 - 125 %	X
SAMPLE NUMBER LCS LA-47496 25 PPB	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE	
					YES	NO
					RANGE	
Benzene	Standard	25.0	24.4	97.6	39 - 150	X
Toluene	Standard	25.0	23.4	93.6	46 - 148	X
Ethylbenzene	Standard	25.0	23.6	94.4	32 - 160	X
m & p - Xylene	Standard	50.0	47.2	94.4	Not Given	X
o - Xylene	Standard	25.0	23.7	94.8	Not Given	X
SAMPLE NUMBER ICV LA-57725 50 PPB	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE	
					YES	NO
					RANGE	
Benzene	Standard	50.0	44.7	89.4	75 - 125 %	X
Toluene	Standard	50.0	44.0	88.0	75 - 125 %	X
Ethylbenzene	Standard	50.0	43.4	86.8	75 - 125 %	X
m & p - Xylene	Standard	100	86.9	86.9	75 - 125 %	X
o - Xylene	Standard	50.0	43.9	87.8	75 - 125 %	X
SAMPLE NUMBER ICV LA-57725 50 PPB	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE	
					YES	NO
					RANGE	
Benzene	Standard	50.0	41.8	83.6	75 - 125 %	X
Toluene	Standard	50.0	40.8	81.6	75 - 125 %	X
Ethylbenzene	Standard	50.0	40.3	80.6	75 - 125 %	X
m & p - Xylene	Standard	100	80.6	80.6	75 - 125 %	X
o - Xylene	Standard	50.0	40.6	81.2	75 - 125 %	X

Narrative: Acceptable.

EL PASO FIELD SERVICES LAB
QUALITY CONTROL REPORT
EPA METHOD 8020 - BTEX
Samples: 970349 thru 970356

LABORATORY DUPLICATES:

SAMPLE ID	TYPE	SAMPLE RESULT PPB	DUPLICATE RESULT PPB	RPD	ACCEPTABLE	
					YES	NO
970350					RANGE	
Benzene	Matrix Duplicate	<1.0	<1.0	0.00	+/- 20 %	X
Toluene	Matrix Duplicate	<1.0	<1.0	0.00	+/- 20 %	X
Ethylbenzene	Matrix Duplicate	<1.0	<1.0	0.00	+/- 20 %	X
m & p - Xylene	Matrix Duplicate	<2.0	<2.0	0.00	+/- 20 %	X
o - Xylene	Matrix Duplicate	<1.0	<1.0	0.00	+/- 20 %	X

Narrative: Acceptable.

LABORATORY SPIKES:

SAMPLE ID	SPIKE ADDED PPB	SAMPLE RESULT PPB	SPIKE SAMPLE RESULT PPB	%R	ACCEPTABLE	
					YES	NO
2nd Analysis 970350					RANGE	
Benzene	50	<1.0	45.8	91.6	75 - 125 %	X
Toluene	50	<1.0	45.4	90.8	75 - 125 %	X
Ethylbenzene	50	<1.0	44.3	88.6	75 - 125 %	X
m & p - Xylene	100	<2.0	87.4	87.4	75 - 125 %	X
o - Xylene	50	<1.0	43.2	86.4	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	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: Acceptable.

Reported By: mh

Approved By: John Ford

Date: 5/5/97