

3R - 222

REPORTS

DATE:

1998



Certified Mail: #Z 211 324 121

March 31, 1999

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

RECEIVED

APR 05 1999

ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

RE: 1998 Pit Project Annual Groundwater Report

Dear Mr. Olson:

In accordance with reporting requirements, El Paso Field Services (EPFS) has enclosed annual updates for the 49 remaining groundwater impacted locations that were identified during our pit closure project of 1994 / 1995.

Of the 49 reports, EPFS hereby requests closure of 18 of these locations. The 18 sites EPFS is requesting closure on are presented in 4 separate binders entitled "Final Closure Report for Groundwater Sites with Four Consecutive Quarters Below Standards".

The Jaquez Com. C #1 and Jaquez Com. E #1 site is included in a separate report which is entitled "Jaquez Com. C #1 and Jaquez Com. E #1 Annual Report for Soil and Groundwater Remediation".

If you have any questions concerning the enclosed reports or closure requests, please call me at (505) 599-2124.

Sincerely,

A handwritten signature in dark ink, appearing to read 'Scott T. Pope'.

Scott T. Pope P.G.
Senior Environmental Scientist

xc: Mr. Denny Foust, NMOCD, Aztec - w / enclosures; **Certified Mail # Z 211 324 122**
Mr. Bill Liesse, BLM - w / enclosures; **Certified Mail # Z 211 324 123**
Ms. Charmaine Tso, Navajo EPA - w / enclosures; **Certified Mail # Z 211 324 120**

SAN JUAN BASIN PIT CLOSURES
San Juan Basin, New Mexico

El Paso Field Services
Final Closure Report For Groundwater Sites With Four
Consecutive Quarters Below Standards

December 1998

RECEIVED

APR 05 1999

ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

Prepared For

El Paso Field Services
Farmington, New Mexico

Project 17520
Book 1



EPFS GROUNDWATER PITS 1998 CLOSURE REPORT

MESA CPD
Meter/Line ID - 02643

RECEIVED

APR 05 1999

SITE DETAILS

Legals - Twn: 29N Rng: 14W Sec: 4 Unit: E
NMOCD Hazard Ranking: 40 Land Type: FEE
Operator: DUGAN PRODUCTION CORP.

ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

PREVIOUS ACTIVITIES

Site Assessment: Nov-93 Excavation: Nov-93 (103 cy) Soil Boring: Mar-97
Monitor Well: Mar-97 Well Points: Oct-1997

The pit was excavated to 7 feet beneath ground surface (bgs) and approximately 103 cubic yards of impacted soil were removed. The headspace soil reading from the excavation bottom was 346.8 ppm. Soil analytical was as follows; benzene - <0.01 mg/kg, total BTEX - 0.10 mg/kg, TPH (418.1) - 26 mg/kg.

One soil boring was drilled in the center of the former pit. Groundwater was encountered at approximately 7 feet bgs and a monitoring well was installed. Quarterly groundwater monitoring was initiated on 4/11/97 and continued through 4/27/98. Groundwater analytical data are presented in Table 1. Groundwater analytical data prior to 1998 has been previously submitted in the 1997 Annual Report, along with drill logs and well installation diagrams.

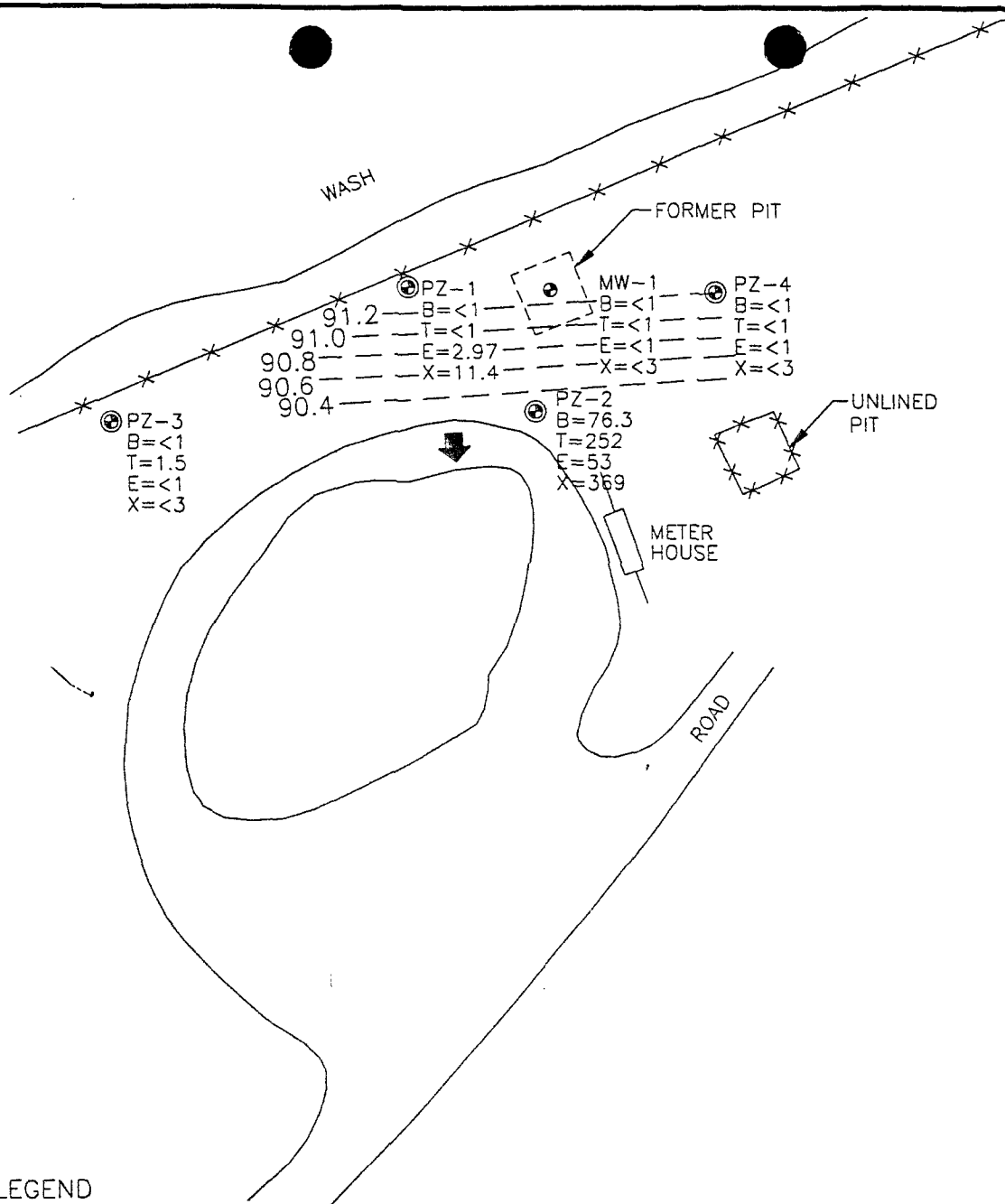
In October 1997 a well point investigation was performed to determine if downgradient migration of contamination had occurred. Four temporary well points were installed in the downgradient direction and samples collected. Well point installation diagrams and well point sample data can be found in the 1997 Annual Report.

CONCLUSION

Groundwater analytical data has been below standards for 4 consecutive quarters since quarterly sampling was initiated, indicating minimal impact to groundwater.

RECOMMENDATIONS

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



LEGEND

⊙ PZ-1 APPROXIMATE PIEZOMETER LOCATION AND NUMBER

⊗ 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

— 91.2 — GROUNDWATER POTENTIOMETRIC SURFACE

➔ APPROXIMATE GROUNDWATER GRADIENT

0 30
FEET



COL 1752040-001



TITLE:

MESA CPD
02643

DWN:
TMM

DES.:
CC

PROJECT NO.: 17520
EPFS GW PITS

CHKD:
CC

APPD:

DATE:
1/22/98

REV.:
0

FIGURE 1

LOCATION PIT CLOSURE FORM

GENERAL

Meter: 02643 Location: MESA CPD
 Operator #: 1862 Operator Name: DUGAN P/L District: KUTZ
 Coordinates: Letter: C Section 4 Township: 29 Range: 14
 Pit Type: Dehydrator _____ Location Drip: X Line Drip: _____ Other: _____
 Date Started: 11-09-93 Run: 02 23

SITE ASSESSMENT

NMOCD Zone: Original ☐
 (From NMOCD Expanded ☒
 Maps) Outside ☐

Land Type: BLM ☐
 State ☐
 Fee ☒
 Indian _____

Depth to Groundwater

Less Than 50 Ft (20 points) ☒
 50 Ft to 99 Ft (10 points) ☐
 Greater Than 100 Ft (0 points) ☐

Wellhead Protection Area:

Is it less than 1000 ft from wells, springs, or other sources of fresh fresh water extraction? , or ; Is it less than 200 ft from a private domestic water source? ☐ YES (20 points) ☒ NO (0 points)

Horizontal Distance to Surface Water Body

Less Than 200 Ft (20 points) ☒
 200 Ft to 1000 Ft (10 points) ☐
 Greater Than 1000 Ft (0 points) ☐

Name of Surface Water Body COOLIDGE

(Surface Water Body : Perennial Rivers, Major Wash, Streams, Creeks, Irrigation Canals, Ditches, Lakes, Ponds)

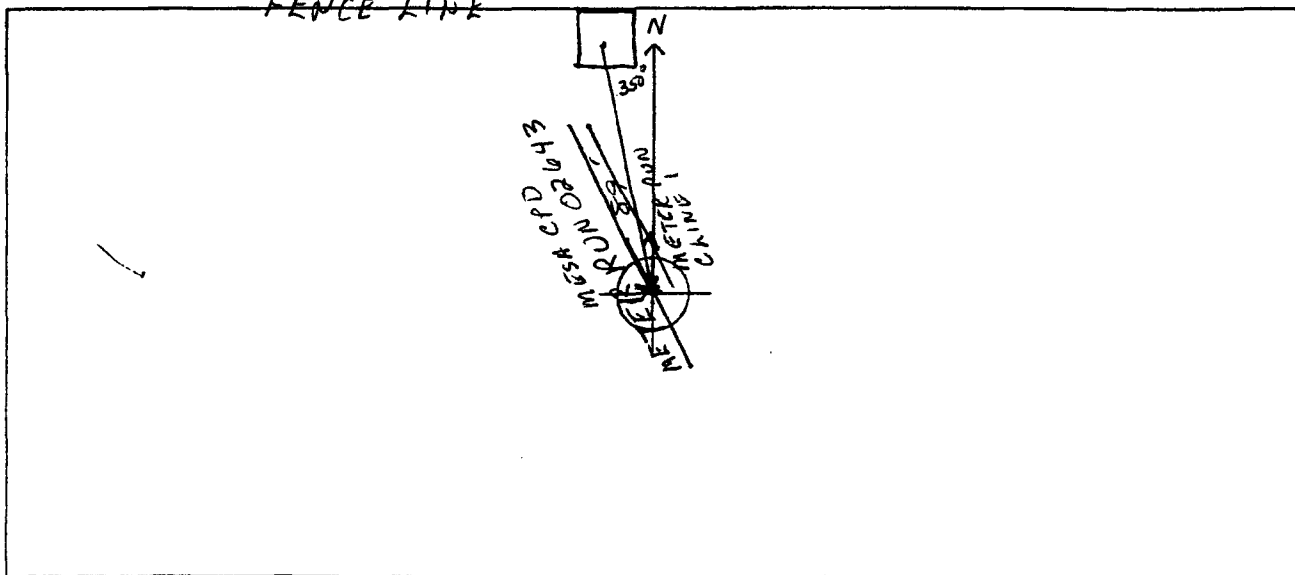
TOTAL HAZARD RANKING SCORE: 40 POINTS

REMARKS

Remarks : _____

ORIGINAL PIT LOCATION

DOWNSTREAM
END OF
METER RUN
Wellhead 89'



CLOSURE

TO BE DETERMINED

REMARKS

PHASE I EXCAVATION

SAMPLING INFORMATION

OUTSIDE ZONES	Pit Located Outside Both Water Vulnerable Zones Sample Number: _____ Date Taken: _____ Sampled By: _____ Time Sampled: _____ Sample Depth at Center of Pit: _____ Feet Verification ☐ Duplicate ☐ Blank ☐
INSIDE ZONES FIELD HEADSPACE BELOW 100ppm	Pit Located in Original Zone or Expanded Zone Sample Number: _____ Date Taken: _____ Sampled By: _____ Time Sampled: _____ Sample Depth at Center of Pit: _____ Feet Pit Bottom Field Headspace: _____ ppm Verification ☐ Duplicate ☐ Blank ☐
INSIDE ZONES FIELD HEADSPACE ABOVE 100ppm	Pit Located in Original Zone or Expanded Zone Sample Number: <u>3-02643-L-V-01</u> Date Taken: <u>11-09-93</u> Sampled By: <u>Ruby Cosby</u> Time Sampled: _____ Sample Depth at Center of Pit: <u>7'0</u> Feet Five Point Composite Headspace: <u>346.8</u> ppm Verification ☒ Duplicate ☐ Blank ☐ OTHERS ☒



FIELD SERVICES LABORATORY
ANALYTICAL REPORT

SAMPLE IDENTIFICATION

SAMPLE NUMBER: 3-02643-L-V-01, Mesa CPD

SAMPLE DATE: 9-Nov-93

SAMPLE TIME (Hrs.): 1540

SAMPLED BY: Ricky Cosby

DATE OF TPH EXT. & ANAL.: 15-Nov-93

DATE OF BTEX ANALYSIS: 16-Nov-93

DESCRIPTION: Light Brown Course Sand

REMARKS: MIDDLE BOTTOM

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIER
BENZENE	<0.01	MG/KG	None
TOLUENE	0.010	MG/KG	None
ETHYL BENZENE	0.014	MG/KG	None
TOTAL XYLENES	0.077	MG/KG	None
TOTAL BTEX	0.10	MG/KG	None
TPH (418.1)	26	MG/KG	None
HEADSPACE PID	347	PPM	None
PERCENT SOLIDS	80	%	None

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

Narrative:

Surrogate Recovery was at 92.7 % for this sample All QA/QC was acceptable.

Approved By: John L. Lachin

24-Nov-93



FIELD SERVICES LABORATORY
ANALYTICAL REPORT

SAMPLE IDENTIFICATION

SAMPLE NUMBER: 3-02643-L-V-02, Mesa CPD

SAMPLE DATE: 9-Nov-93

SAMPLE TIME (Hrs.): 1615

SAMPLED BY: Ricky Cosby

DATE OF TPH EXT. & ANAL.: 15-Nov-93

DATE OF BTEX ANALYSIS: 16-Nov-93

DESCRIPTION: Brown Clay with Large Clumps

REMARKS: SOUTH BOTTOM

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIER
BENZENE	<0.010	MG/KG	None
TOLUENE	<0.010	MG/KG	None
ETHYL BENZENE	<0.010	MG/KG	None
TOTAL XYLENES	<0.010	MG/KG	None
TOTAL BTEX	<0.040	MG/KG	None
TPH (418.1)	<10	MG/KG	None
HEADSPACE PID	17	PPM	None
PERCENT SOLIDS	82	%	None

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

Narrative:

Surrogate Recovery was at 87.1 % for this sample All QA/QC was acceptable.

Approved By: John L. L. L.

24-Nov-93



FIELD SERVICES LABORATORY
ANALYTICAL REPORT

SAMPLE IDENTIFICATION

SAMPLE NUMBER: 3-02643-L-V-03, Mesa CPD

SAMPLE DATE: 9-Nov-93

SAMPLE TIME (Hrs.): 1620

SAMPLED BY: Ricky Cosby

DATE OF TPH EXT. & ANAL.: 15-Nov-93

DATE OF BTEX ANALYSIS: 16-Nov-93

DESCRIPTION: Brown Sand and Clay

REMARKS: NORTH BOTTOM

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIER
BENZENE	<0.010	MG/KG	None
TOLUENE	0.49	MG/KG	None
ETHYL BENZENE	0.047	MG/KG	None
TOTAL XYLENES	0.39	MG/KG	None
TOTAL BTEX	0.93	MG/KG	None
TPH (418.1)	<10	MG/KG	None
HEADSPACE PID	540	PPM	None
PERCENT SOLIDS	80	%	None

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

Narrative:

Surrogate Recovery was at 93.1 % for this sample All QA/QC was acceptable.

Approved By:

John Ladden

24-Nov-93



FIELD SERVICES LABORATORY
ANALYTICAL REPORT

SAMPLE IDENTIFICATION

SAMPLE NUMBER: 3-02643-L-V-04, Mesa CPD

SAMPLE DATE: 9-Nov-93

SAMPLE TIME (Hrs.): 1630

SAMPLED BY: Ricky Cosby

DATE OF TPH EXT. & ANAL.: 15-Nov-93

DATE OF BTEX ANALYSIS: 17-Nov-93

DESCRIPTION: Grey Course Sand

REMARKS: COMPOSITE GREY

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIER
BENZENE	<0.13	MG/KG	None
TOLUENE	19	MG/KG	D1
ETHYL BENZENE	0.23	MG/KG	None
TOTAL XYLENES	12	MG/KG	None
TOTAL BTEX	31	MG/KG	None
TPH (418.1)	1,645	MG/KG	None
HEADSPACE PID	746	PPM	None
PERCENT SOLIDS	90	%	None

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

Narrative:

Surrogate Recovery was at 99.0 % for this sample All QA/QC was acceptable.
The "D1" qualifier indicates that the analyte concentration exceeded the calibration curve limit.

Approved By:

John L. Linder

24-Nov-93



FIELD SERVICES LABORATORY
ANALYTICAL REPORT

SAMPLE IDENTIFICATION

SAMPLE NUMBER: 3-02643-L-V-05, Mesa CPD

SAMPLE DATE: 9-Nov-93

SAMPLE TIME (Hrs.): 1635

SAMPLED BY: Ricky Cosby

DATE OF TPH EXT. & ANAL.: 15-Nov-93

DATE OF BTEX ANALYSIS: 17-Nov-93

DESCRIPTION: Brown Sand with Black Pebbles

REMARKS: COMPOSITE BLACK

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIER
BENZENE	<0.20	MG/KG	None
TOLUENE	12	MG/KG	D1
ETHYL BENZENE	0.93	MG/KG	None
TOTAL XYLENES	7.7	MG/KG	None
TOTAL BTEX	20	MG/KG	None
TPH (418.1)	2,019	MG/KG	None
HEADSPACE PID	684	PPM	None
PERCENT SOLIDS	86	%	None

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

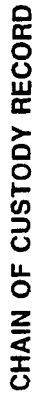
Narrative:

Surrogate Recovery was at 91.2 % for this sample All QA/QC was acceptable.
The "D1" qualifier indicates that the analyte concentration exceeded the calibration curve limit.

Approved By:

John L. Luchi

24-Nov-93



White-Testing Laboratory	Yellow-EPNG Lab	Pink-Field Sampler	FM-08-0565 (9-91)
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PHASE II SOIL BORING

RECORD OF SUBSURFACE EXPLORATION

PHILIP ENVIRONMENTAL SERVICES INC.

1000 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 6001.77
Project Location MESA CPD - 02643

Elevation _____
Borehole Location T29-R14-S4-Ltr C
GWL Depth 7' BGS
Logged By D CESARK
Drilled By M DONOHUE
Date/Time Started 3/4/97 - 1430
Date/Time Completed " - 1500

Well Logged By D CESARK
Personnel On-Site D CHARLEY, J LONG
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			Drilling Conditions & Blow Counts
							BZ	BH	S	
0				BACKFILL						
5				TO						
				7'						
				GW @ 7' BGS						
10				SILTSTONE @ 8'						
				TD = 13'						
15										
20										
25										
30										
35										
40										

Comments:

GW ENCOUNTERED @ 7' BGS, SILTSTONE BEDROCK @ 8', AUGER REFUSAL IN
BEDROCK @ 13' BGS, NO SAMPLE COLLECTED. SET GW MON. WELL IN CTR.
OF FORMER PIT. PLEASE REFER TO WELL COMP. DIAGRAM.

Geologist Signature

[Signature]

MONITORING WELL INSTALLATION RECORD

Philip Environmental Services, Inc.
4000 Monroe Rd.
Farmington, NM 87401
(505) 326-2262 FAX (505) 326-2388

Borehole # 2
Well # 1
Page 1 of 1

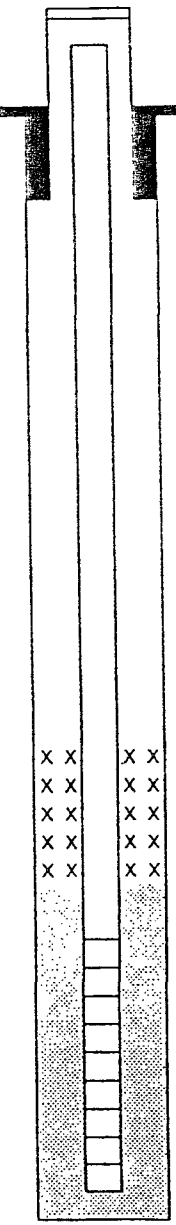
Project Name EPFS GW PITS
Project Number 17520 Phase 6002.77
Site Location MESA CPD - 02643

Elevation _____
Well Location T29N-R14W-S4-L'C'
GWL Depth 7' BGS
Installed By M DONOHUE

On-Site Geologist D CESARK
Personnel On-Site D CHARLEY, J LONG
Contractors On-Site _____
Client Personnel On-Site _____

Date/Time Started 3/4/97 - 1500
Date/Time Completed " - 1600

Depths in Reference to Ground Surface		
Item	Material	Depth (feet)
Top of Protective Casing		
Bottom of Protective Casing		
Top of Permanent Borehole Casing		N/A
Bottom of Permanent Borehole Casing		N/A
Top of Concrete		
Bottom of Concrete		
Top of Grout		
Bottom of Grout		
Top of Well Riser	SCH 40 PVC	+3'
Bottom of Well Riser	"	-3'
Top of Well Screen	1010 SLOT	-3'
Bottom of Well Screen	"	-13'
Top of Peltonite Seal	ENVIROPLUG	-1'
Bottom of Peltonite Seal	"	-2'
Top of Gravel Pack	10-20 SAND	-2'
Bottom of Gravel Pack	"	-13'
Top of Natural Cave-In		-13'
Bottom of Natural Cave-In		-13'
Top of Groundwater		-7'
Total Depth of Borehole		-13'



Top of Protective Casing +3'

Top of Riser +3'

Ground Surface 0'

Top of Seal -1'

Top of Gravel Pack -2'

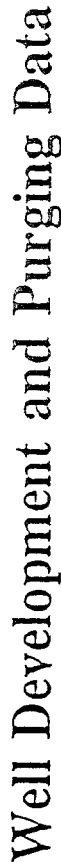
Top of Screen -3'

Bottom of Screen -13'

Bottom of Borehole -13'

Comments: _____

01/1



~~Development~~
~~Purging~~

Page 1 of 1

Development Criteria

Water Volume Calculation

Methods of Development

☐ Other☐ Other

Water Removal Data

[illegible]

Comments Bailed water relatively clear, transparent, little silt. Wall did not bail dry. Water had muddy odor, but no presence of HCN .

Developer's Signature(s) _____ Date 4/9/97 Reviewer _____ Date _____



Water Sampling Data

Location No. MW-1Serial No. WSD-Group List Number Sample Type: ☒ Groundwater ☐ Surface Water ☐ Other Date 4/9/97Project Name EPFS GW PITS Project No. 17520Project Manager C CHANCE Phase Task No. 6003.77Site Name MESA CPD-02643

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)	

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

Sample Containers

Analytical Parameter List	Container			Field Filtered		Preserved	Cooled During Collection		Comments
	Number	Type	Volume (mL)	Yes	No		Yes	No	
EPA 8020 BTEX	3	G/VV	40		X	Y	X		DRC 32 (MW-1)
"	1	"	"				X		TRIP BLANK - DRC 30

Filter Type Chain-of-Custody Form Number Comments * PLEASE REFER TO WELL DEVELOPMENT + PURGING DATA FORM.Signature [Signature] Date 4/9/97 Reviewer Date

EL PASO FIELD SERVICES



4-24-97

FIELD SERVICES LABORATORY ANALYTICAL REPORT PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	DRC32	970261
MTR CODE SITE NAME:	2643	Mesa CPD
SAMPLE DATE TIME (Hrs):	4/9/97	1418
PROJECT:	Phase II Drilling - Initial	
DATE OF BTEX EXT. ANAL.:	4/11/97	4/11/97
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 100 for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative:

Approved By: [Signature]

Date: 4/14/97

970261,4/16/97



CHAIN OF CUSTODY RECORD

Initial

Page

10.

[illegible]

**PHASE III TEMPORARY WELL
POINT DATA**

TEMPORARY PIEZOMETER INSTALLATION

Philip Services Corp.

4000 Monroe Rd.

Farmington, NM 87401

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

Borehole

Well # PZ-1

Page 1 of 1

Project Name EPFS GW PITS

Project Number 17520 Phase 6006

Site Location Mesa CPD D2642

Elevation

Well Location Ltr E -S4-T29-R14

GWL Depth 6.67 TDR

Installed By K. Padilla

On-Site Geologist C CHANCE

Personnel On-Site D Charley

Contractors On-Site

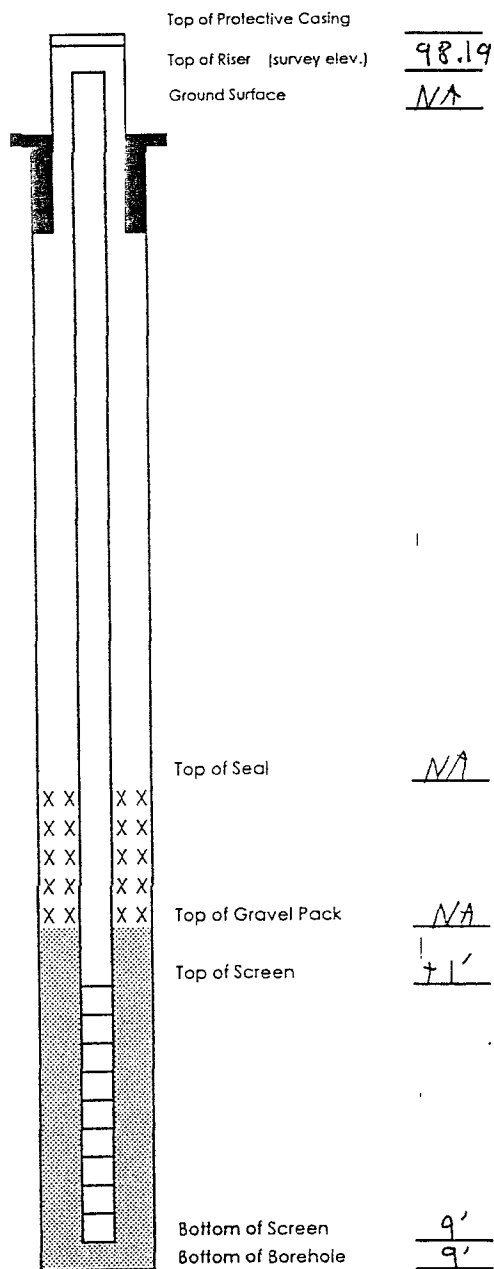
Client Personnel On-Site

Date/Time Started 10/22/97

Date/Time Complete 10/22/97

COMMENTS

- PZ1 is 275° + 26' from MW1
- Dark Black cuttings string ok @ ~5' BGS
- Install temp well & collect GW sample cmc 365
- Let well set overnight to get static water level



MW1 GW @ 8.45' TDR. Riser @ 99.76'

MWINSTAL.WK1

Geologist Signature

Cory Chance

TEMPORARY PIEZOMETER INSTALLATION

Philip Services Corp.

4000 Monroe Rd.

Farmington, NM 87401

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

Borehole

Well # PZ-2

Page 1 of 1

Project Name EPFS GW PITS

Project Number 17520

Phase 6006

Site Location Mesa CPD 02643

Elevation

Well Location Ltr E -S4-T29-R14

GWL Depth 7.54 TDR

Installed By K Padilla

On-Site Geologist

C CHANCE

Personnel On-Site

D Charley

Contractors On-Site

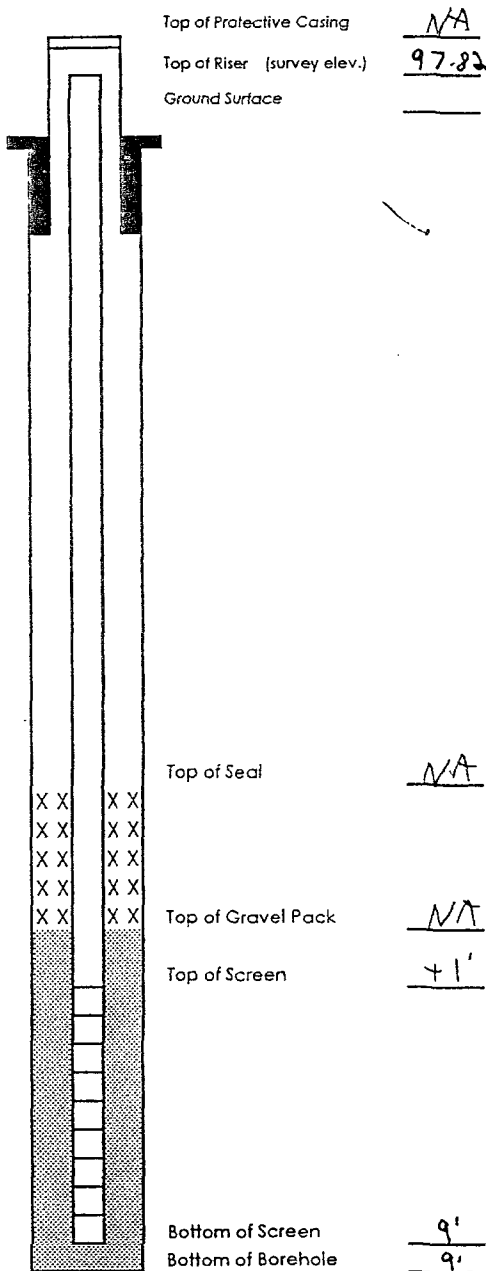
Client Personnel On-Site

Date/Time Started 10/22/97

Date/Time Complete 10/22/97

COMMENTS

- PZ2 is 195° & 52' from MW1
- Install temp. well & collect GW sample. CMC 366
- Let well set overnight to get static water level
- Dark Black sandy cuttings @ ~5-6'. May be drilling in an old pit.



(Note: Did not encounter GW @ 15'. Hole plugged to 10' & set well. May have drilled past GW @ 8'. Hole plugged to 9' & set piezo)

MWINSTAL.WKT

Geologist Signature

Cory Cherry

TEMPORARY PIEZOMETER INSTALLATION

Philip Services Corp.

4000 Monroe Rd.

Farmington, NM 87401

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

Borehole #

Well # PH-3

Page 1 of 1

Project Name EPFS GW PITS

Project Number 17520 Phase 6006

Site Location Mesa CPD 02642

Elevation

Well Location Ltr E-S4-T29-R14

GWL Depth ~3.5' BGS

Installed By K. Padilla

On-Site Geologist C CHANCE

Personnel On-Site D. Charley

Contractors On-Site

Client Personnel On-Site

Date/Time Started 10/22/97

Date/Time Complete 10/22/97

COMMENTS	Diagram	Labels	Values
- PH3 is 80' & 255° from MW1. - GW sample collected from open hole. CMC367 - BH hole plugged to surface.		Top of Protective Casing	<u>NA</u>
		Top of Riser (survey elev.)	<u>NA</u>
		Ground Surface	<u>NA</u>
		Top of Seal	<u>NA</u>
		Top of Gravel Pack	<u>NA</u>
		Top of Screen	<u>NA</u>
		Bottom of Screen	<u>NA</u>
		Bottom of Borehole	<u>5'</u>

TEMPORARY PIEZOMETER INSTALLATION

Philip Services Corp.

4000 Monroe Rd.

Farmington, NM 87401

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

Borehole #

Well # PZ P24

Page 1 of 1

Project Name EPFS GW PITS

Project Number 17520 Phase 6006

Site Location Mesa CPD 02642

Elevation

Well Location Ltr E -S4 -T2 9-R14

GWL Depth

Installed By R Padilla

On-Site Geologist C CHANCE

Personnel On-Site D Charley

Contractors On-Site

Client Personnel On-Site

Date/Time Started 10/22/97

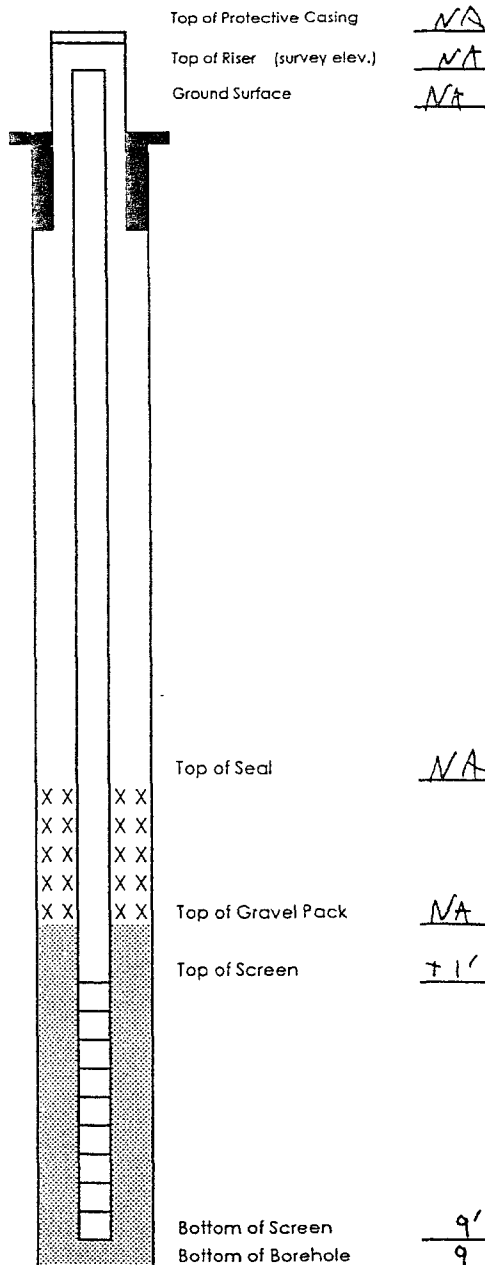
Date/Time Complete 10/22/97

COMMENTS

- P24 is 95° + 39' From MW1

- Install temp well & collect GW sample CMC 368

- BH hole plugged to surface





Well Boats

CHAIN OF CUSTODY RECORD

Page 1 of 1

PROJECT NAME		Pit Closure Project / Well Boats										
OBJECT NUMBER	DATE	LAB	TIME	MATRIX	FIELD ID	TOTAL NUMBER OF CONTAINERS	SAMPLE TYPE	REQUESTED ANALYSIS			SEQUENCE #	REMARKS
								TPH EPA 418.1	BTEX EPA 8020	LAB PID		
9711394	10/22/97		0905	Water	CMC364	2						CMC364 Mesa CD 02643 PZ1
9711401	10/22/97		-		Trip Blank	1						Trip Blank
9711414	10/22/97		1045		CMC365	2						Mesa CD 02643 PZ2
9711426	10/22/97		1050		CMC366	2						" BHI
9711438	10/22/97		1140		CMC367	2						" PZ3
9711440	10/22/97		1430		CMC368	2						" PZ4
9711442	10/22/97		1515		CMC369	2						Turner A1 71676 PZ1
9711445	10/22/97				CMC370*	2						" PZ2
Note: CMC366 (BHI) is a grab sample from the wash from 2.5' BGS												
RECEIVED BY: (Signature) _____ DATE/TIME _____ RECEIVED BY: (Signature) _____												
RELINQUISHED BY: (Signature) _____ DATE/TIME _____ RELINQUISHED BY: (Signature) _____												
FIELD RECEIPT REMARKS: In Tact Temp. 30°C												
CHARGE CODE _____												
RESULTS & INVOICES TO: FIELD SERVICES LABORATORY EL PASO NATURAL GAS COMPANY P. O. BOX 4990 FARMINGTON, NEW MEXICO 87499												



EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY ANALYTICAL REPORT PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	CMC364	971139
MTR CODE SITE NAME:	02643	Mesa CPD
SAMPLE DATE TIME (Hrs):	10/22/97	0905
PROJECT:	Well Points	
DATE OF BTEX EXT. ANAL.:	10/24/97	10/24/97
TYPE DESCRIPTION:	PZ-1	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	< 1	PPB				
TOLUENE	< 1	PPB				
ETHYL BENZENE	2.97	PPB				
TOTAL XYLENES	11.4	PPB				
TOTAL BTEX	14	PPB				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 101.1 % for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative:

Toluene was detected in the associated vial blank at a concentration of 1.6 ppb

Approved By: _____

Date: 10-28-97

971139BTEXWP, 10/28/97



FLPASO FIELD SERVICES

FIELD SERVICES LABORATORY ANALYTICAL REPORT PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	Trip Blank	971140
MTR CODE SITE NAME:	02643	Mesa CPD
SAMPLE DATE TIME (Hrs):	10/22/97	0905
PROJECT:	Well Points	
DATE OF BTEX EXT. ANAL.:	10/24/97	10/24/97
TYPE DESCRIPTION:	Trip Blank	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 108.2 % for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative:

Toluene was detected in the associated vial blank at a concentration of 1.6 ppb

Approved By: _____

Date: _____

10-28-97

971140BTEXWPTB,10/28/97



EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY

ANALYTICAL REPORT

PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	CMC366	971141
MTR CODE SITE NAME:	02643	Mesa CPD
SAMPLE DATE TIME (Hrs):	10/22/97	1045
PROJECT:	Well Points	
DATE OF BTEX EXT. ANAL.:	10/24/97	10/24/97
TYPE DESCRIPTION:	BH-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 98.1 % for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative:

luene was detected in the associated vial blank at a concentration of 1.6 ppb

Approved By: _____

Date: 10-28-97

971141BTEXWP,10/28/97



EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY ANALYTICAL REPORT PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	CMC367	971142
MTR CODE SITE NAME:	02643	Mesa CPD
SAMPLE DATE TIME (Hrs):	10/22/97	1050
PROJECT:	Well Points	
DATE OF BTEX EXT. ANAL.:	10/25/97	10/25/97
TYPE DESCRIPTION:	PZ-3	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	< 1	PPB				
TOLUENE	1.50	PPB				
ETHYL BENZENE	< 1	PPB				
TOTAL XYLENES	< 3	PPB				
TOTAL BTEX	< 6	PPB				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 102.2 % for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative:

Toluene was detected in the associated vial blank at a concentration of 1.6 ppb

Approved By: _____

John Swick

Date: _____

10-28-97

971142BTEXWP, 10/28/97



E PASO FIELD SERVICES

FIELD SERVICES LABORATORY ANALYTICAL REPORT PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	CMC368	971143
MTR CODE SITE NAME:	02643	Mesa CPD
SAMPLE DATE TIME (Hrs):	10/22/97	1140
PROJECT:	Well Points	
DATE OF BTEX EXT. ANAL.:	10/25/97	10/25/97
TYPE DESCRIPTION:	PZ-4	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 102.3 % for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative:

luene was detected in the associated vial blank at a concentration of 1.6 ppb

Approved By: _____

Date: _____

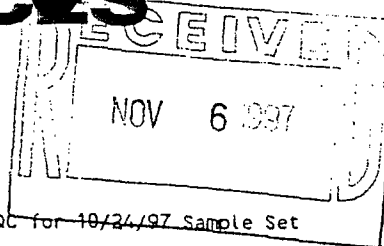
10-28-97

971143BTEXWP,10/28/97

EL PASO FIELD SERVICES

QUALITY CONTROL REPORT
EPA METHOD 8020 - BTEX

Samples: 971139 to 971151



QA/QC for 10/24/97 Sample Set

LABORATORY CALIBRATION CHECKS / LABORATORY CONTROL SAMPLES:

SAMPLE NUMBER	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE YES NO	
ICV LA-52589 50 PPB					RANGE	
Benzene	Standard	50.0	48.0	96.1	75 - 125 %	X
Toluene	Standard	50.0	47.8	96	75 - 125 %	X
Ethylbenzene	Standard	50.0	47.7	95	75 - 125 %	X
m & p - Xylene	Standard	100	95.4	95.4	75 - 125 %	X
o - Xylene	Standard	50.0	47.3	95	75 - 125 %	X
SAMPLE NUMBER	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE YES NO	
LCS LA-45476 25 PPB					RANGE	
Benzene	Standard	25.0	24.3	97.0	39 - 150	X
Toluene	Standard	25.0	24.1	97	46 - 148	X
Ethylbenzene	Standard	25.0	24.1	96	32 - 160	X
m & p - Xylene	Standard	50.0	48.3	97	Not Given	X
o - Xylene	Standard	25.0	24.3	97	Not Given	X
SAMPLE NUMBER	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE YES NO	
CCV LA-52589 50 PPB					RANGE	
Benzene	Standard	50.0	48.6	97.3	75 - 125 %	X
Toluene	Standard	50.0	48.6	97.3	75 - 125 %	X
Ethylbenzene	Standard	50.0	47.6	95.1	75 - 125 %	X
m & p - Xylene	Standard	100	95.0	95.0	75 - 125 %	X
o - Xylene	Standard	50.0	47.6	95	75 - 125 %	X
SAMPLE NUMBER	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE YES NO	
CCV LA-52589 50 PPB					RANGE	
Benzene	Standard	50.0	48.8	97.5	75 - 125 %	X
Toluene	Standard	50.0	48.5	97.0	75 - 125 %	X
Ethylbenzene	Standard	50.0	47.2	94.5	75 - 125 %	X
m & p - Xylene	Standard	100	93.9	93.9	75 - 125 %	X
o - Xylene	Standard	50.0	47.3	94.6	75 - 125 %	X

Narrative: Acceptable.

SAMPLE ID	TYPE	SAMPLE RESULT PPB	DUPLICATE RESULT PPB	RPD	ACCEPTABLE	
					YES	NO
971148					RANGE	
Benzene	Matrix Duplicate	<1	<1	0.00	+/- 20 %	X
Toluene	Matrix Duplicate	<1	1.3	200.00	+/- 20 %	X
Ethylbenzene	Matrix Duplicate	<1	<1	0.00	+/- 20 %	X
m & p - Xylene	Matrix Duplicate	<2	<2	0.00	+/- 20 %	X
o - Xylene	Matrix Duplicate	<1	<1	0.00	+/- 20 %	X

Narrative: Toluene was detected in the associated blank at the level shown. Data was qualified.

LABORATORY SPIKES:

SAMPLE ID	SPIKE ADDED PPB	SAMPLE RESULT PPB	SPIKE SAMPLE RESULT PPB	%R	ACCEPTABLE	
					YES	NO
2nd Analysis 971148					RANGE	
Benzene	50	<1	49.0	97.9	75 - 125 %	X
Toluene	50	<1	49.2	98	75 - 125 %	X
Ethylbenzene	50	<1	48.3	97	75 - 125 %	X
m & p - Xylene	100	<2	96.6	96.6	75 - 125 %	X
o - Xylene	50	<1	48.1	96	75 - 125 %	X

Narrative: Acceptable

AUTO BLANK	SOURCE	PPB (2 analyzed with set)	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 (1 analyzed with set)	STATUS
Benzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Toluene	Vial + Boiled Water	1.62	NOTED
Ethylbenzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Total Xylenes	Vial + Boiled Water	<3.0	ACCEPTABLE

Narrative: Data for associated samples was qualified.

CONTAMINATION CARRYOVER CHECK	SOURCE	PPB (none 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.

10/23/97 TRIP BLANK	SOURCE	PPB (2 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: CV

Approved By: *John Stude*

Date: 11-3-97



El Paso
Natural Gas Company

CHAIN OF CUSTODY RECORD

Well P₄₅

Page _____ of _____

PROJECT NUMBER # 24324		PROJECT NAME Pit Closure Project		DATE 10/24/97		FIELD ID		TOTAL NUMBERS OF CONTAINERS		SAMPLE TYPE		REQUESTED ANALYSIS		CONTRACT LABORATORY P. O. NUMBER	
LAB ID		DATE		TIME		MATRIX						EPA 418.1 BTEX EPA 8020 LAB PID		SEQUENCE #	
971158	10/24/97	1020	W	W	W	W	W	1	TB	✓				TRIP BLANK	
971159	10/24/97	1020	W	W	W	W	W	2	VG	✓				Mesa CPD 02643 PZ2	
RECEIVED NOV 12 1997 <i>Conc 10/24/97</i> Cool & Intact															
RELINQUISHED BY: (Signature) <i>Conc</i>		DATE/TIME 10/24/97 1200		RECEIVED BY: (Signature) <i>Conc</i>		DATE/TIME 10/28/97 1343		RELINQUISHED BY: (Signature) <i>Conc</i>		DATE/TIME 10/28/97 1343		RECEIVED BY: (Signature) <i>Madan Elhassen</i>		RECEIVED OF LABORATORY BY: (Signature)	
REQUESTED TURNAROUND TIME: ☐ ROUTINE ☐ RUSH		CARRIER CO.		SAMPLE RECEIPT REMARKS		RESULTS & INVOICES TO:		FIELD SERVICES' LABORATORY EL PASO NATURAL GAS COMPANY P. O. BOX 4990 FARMINGTON, NEW MEXICO 87499							
BILL NO.:		CHARGE CODE				505-599-2144		FAX: 505-599-2261							



FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	Trip Blank	971158
MTR CODE SITE NAME:	02643	Mesa CPD
SAMPLE DATE TIME (Hrs):	10/24/97	1020
PROJECT:	Well Points	
DATE OF BTEX EXT. ANAL.:	11/5/97	11/5/97
TYPE DESCRIPTION:	Trip Blank	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 91.2 % for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative:

Approved By:

John Ladd

Date:

11/10/97

971158BTEXWPTB.11/7/97



EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY ANALYTICAL REPORT PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	CMC365	971159
MTR CODE SITE NAME:	02643	Mesa CPD
SAMPLE DATE TIME (Hrs):	10/24/97	1020
PROJECT:	Well Points	
DATE OF BTEX EXT. ANAL.:	11/6/97	11/6/97
TYPE DESCRIPTION:	PZ-2	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	76.3	PPB	5	D		
TOLUENE	252	PPB	5	D		
ETHYL BENZENE	53.0	PPB	5	D		
TOTAL XYLENES	369	PPB	5	D		
TOTAL BTEX	750	PPB				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 91.4 % for this sample All QA/QC was acceptable.

DF = Dilution Factor Used

The "D" qualifier indicates that the analyte calculated is based on a secondary dilution factor.

Narrative: _____

Approved By: _____

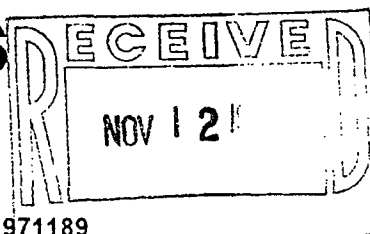
John L. Sullivan

971159BTEXWP,11/7/97

Date: 11/10/97

EL PASO FIELD SERVICES

QUALITY CONTROL REPORT
EPA METHOD 8020 - BTEX



Samples: 971158 to 971159, 971175 to 971176, 971178^{to} 971183, 971185 to 971189

QA/QC for 11/5/97 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	46.1	92.3	75 - 125 %	X
Toluene	Standard	50.0	46.1	92	75 - 125 %	X
Ethylbenzene	Standard	50.0	46.1	92	75 - 125 %	X
m & p - Xylene	Standard	100	92.4	92.4	75 - 125 %	X
o - Xylene	Standard	50.0	46.0	92	75 - 125 %	X
SAMPLE NUMBER	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE YES NO RANGE	
LCS LA-45476 25 PPB						
Benzene	Standard	25.0	23.4	93.5	39 - 150	X
Toluene	Standard	25.0	23.6	94	46 - 148	X
Ethylbenzene	Standard	25.0	23.3	93	32 - 160	X
m & p - Xylene	Standard	50.0	47.1	94	Not Given	X
o - Xylene	Standard	25.0	23.4	94	Not Given	X
SAMPLE NUMBER	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE YES NO RANGE	
CCV LA-52589 50 PPB						
Benzene	Standard	50.0	46.4	92.8	75 - 125 %	X
Toluene	Standard	50.0	46.2	92.4	75 - 125 %	X
Ethylbenzene	Standard	50.0	46.1	92.1	75 - 125 %	X
m & p - Xylene	Standard	100	91.9	91.9	75 - 125 %	X
o - Xylene	Standard	50.0	46.1	92	75 - 125 %	X
SAMPLE NUMBER	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE YES NO RANGE	
CCV LA-52589 50 PPB						
Benzene	Standard	50.0	46.2	92.4	75 - 125 %	X
Toluene	Standard	50.0	46.4	92.7	75 - 125 %	X
Ethylbenzene	Standard	50.0	45.4	90.7	75 - 125 %	X
m & p - Xylene	Standard	100	90.6	90.6	75 - 125 %	X
o - Xylene	Standard	50.0	45.5	91.1	75 - 125 %	X

Narrative: Acceptable.

Benzene	Standard	50.0	45.3	90.7	75 - 125 %	X
Toluene	Standard	50.0	44.8	89.5	75 - 125 %	X
Ethylbenzene	Standard	50.0	44.0	88.0	75 - 125 %	X
m & p - Xylene	Standard	100	87.0	87.0	75 - 125 %	X
o - Xylene	Standard	50.0	44.2	88.4	75 - 125 %	X

Narrative: Acceptable.

LABORATORY DUPLICATES:

SAMPLE ID	TYPE	SAMPLE RESULT PPB	DUPLICATE RESULT PPB	RPD	ACCEPTABLE	
					YES	NO
971179					RANGE	
Benzene	Matrix Duplicate	<1	<1	0.00	+/- 20 %	X
Toluene	Matrix Duplicate	<1	<1	0.00	+/- 20 %	X
Ethylbenzene	Matrix Duplicate	<1	<1	0.00	+/- 20 %	X
m & p - Xylene	Matrix Duplicate	<2	<2	0.00	+/- 20 %	X
o - Xylene	Matrix Duplicate	<1	<1	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 971179					RANGE	
Benzene	50	<1	46.6	93.2	75 - 125 %	X
Toluene	50	<1	46.3	93	75 - 125 %	X
Ethylbenzene	50	<1	46.2	92	75 - 125 %	X
m & p - Xylene	100	<2	92.1	92.1	75 - 125 %	X
o - Xylene	50	<1	46.2	92	75 - 125 %	X

Narrative: Acceptable.

AUTO BLANK	SOURCE	PPB (1 analyzed with set)	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 (1 analyzed with 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	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.

10/5/97 TRIP BLANK	SOURCE	PPB (3 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: che

Approved By: John Laidi

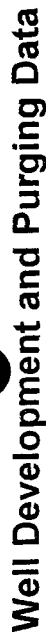
Date: 11/10/97

QUARTERLY MONITORING RESULTS

Mol

Sample #	Meter/ Line #	Site Name	Sample Date	Project	S1	Benzene (PPB)	S2	Toluene (PPB)	S3	Ethyl Benzene (PPB)	S4	Total Xylenes (PPB)	S7	Total BTEX PPB
970261 *	02643	Mesa CPD	4/11/97	Phase II Drilling - Initial	<	1	<	1	<	1	<	3	<	6
970685 *	02643	Mesa CPD	7/17/97	Sample 4 - 1st Qtr	<	1	=	16.5	<	1	<	3	<	17
971151 *	02643	Mesa CPD	10/24/97	Sample 4 - 2nd Qtr	<	1	<	1	<	1	<	3	<	6
980013	02643	Mesa CPD	1/7/98	Sample 4 - 3rd Qtr	<	1	<	1	<	1	<	3	<	6
980320	02643	Mesa CPD	4/27/98	Sample 4 - 4th Qtr	<	1	=	18.4	<	1	<	3	=	18

* Analytical reports provided to NMOCD in prior annual report.



Well Development and Purging Data

☐	Development
☒	Purging

Well Number

Meter Code 02643

Development Criteria

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

Methods of Development

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

Water Volume Calculation

Initial Depth of Well (feet) 16.35
Initial Depth to Water (feet) 8.11
Height of Water Column in Well (feet) 8.34

Diameter (inches):	Well	Gravel Pack
	4	

Item	Water Volume in Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing		5.4	16.3
Gravel Pack			
Drilling Fluids			
Total			

Instruments

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

Water Disposal

KUTZ SEPARATOR

Water Removal Data

[illegible]

Comments

Emmie Bird
Developer's Signature

Date 1-7-98

Der Tabak:

Date 1/21/98



EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY ANALYTICAL REPORT PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	980013
MTR CODE SITE NAME:	02643	Mesa CPD
SAMPLE DATE TIME (Hrs):	1/7/98	1435
PROJECT:	Sample 4 3rd Quarter	
DATE OF BTEX EXT. ANAL.:	1/12/98	1/12/98
TYPE DESCRIPTION:	MW-1	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	<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 100.6 % for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative: _____

Approved By: _____

John Lardi

Date: _____

1/21/98

980013BTEXMonitorWell, 1/16/98

SAMPLE 4 3RD QTR



CHAIN OF CUSTODY RECORD

A 2179

Project No.	Project Name	Requested Analysis		Type and No. of Sample Containers	Preservation Technique	Remarks
MC# 02643						
Date: 1-7-98						
Samplers: (Signature) <i>Dennis Bird</i>						
Date	Time	Comp.	GRAB	Sample Number		
1-7-98	1435		X	980013	51 40C X	MESA CPD MW-1
[The following rows in the table are crossed out with a diagonal line.]						
Relinquished by: (Signature)		Date/Time		Received by: (Signature)		Date/Time
<i>Dennis Bird</i>		1-7-98 1541				
Relinquished by: (Signature)		Date/Time		Received by: (Signature)		Date/Time
Relinquished by: (Signature)		Date/Time		Received for Laboratory by: (Signature)		Date/Time
				<i>Martin Chapler</i>		
				Date/Time		Remarks:
				1/12/98 0745		
Carrier Co:		Carrier Phone No.		Date Results Reported / by: (Signature)		
Air Bill No.:						

☐	Development
☒	Purging

Meter Code 02643

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

Initial Depth of Well (feet) 16.35
Initial Depth to Water (feet) 7.96
Height of Water Column in Well (feet) 8.39
Diameter (inches): Well 4 Gravel Pack _____

☒	pH Meter
☐	DO Monitor
☒	Conductivity Meter
☒	Temperature Meter
☒	Other <i>DO, CH</i>

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

KUTZ SEPARATOR

[illegible]

Dennis Bird

Date 4-21-78 Reviewer

Stengelsen

Date 5/1/68



EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY

ANALYTICAL REPORT

PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	980320
MTR CODE SITE NAME:	02643	Mesa CPD
SAMPLE DATE TIME (Hrs):	4/27/98	1253
PROJECT:	Sample 4 4th Quarter	
DATE OF BTEX EXT. ANAL.:	4/29/98	4/29/98
TYPE DESCRIPTION:	MW-1	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	<1	PPB				
TOLUENE	18.4	PPB				
ETHYL BENZENE	<1	PPB				
TOTAL XYLENES	<3	PPB				
TOTAL BTEX	18	PPB				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 97.4 % for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative: _____

Approved By: _____

John Lueder

Date: _____

5/1/98

980320BTEXMW,4/30/98



CHAIN OF CUSTODY RECORD

[illegible]



QUALITY CONTROL REPORT
EPA METHOD 8020 - BTEX

Samples: 980007, 980009, 980012, 980013, 980015, 980016, 980019, 980020

QA/QC for 1/12/98 Sample Set

LABORATORY CALIBRATION CHECKS / LABORATORY CONTROL SAMPLES:

SAMPLE NUMBER	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE	
					YES	NO
ICV LA-52589 50 PPB					RANGE	
Benzene	Standard	50.0	50.4	100.9	75 - 125 %	X
Toluene	Standard	50.0	48.5	97	75 - 125 %	X
Ethylbenzene	Standard	50.0	48.2	96	75 - 125 %	X
m & p - Xylene	Standard	100	96.0	96.0	75 - 125 %	X
o - Xylene	Standard	50.0	48.2	96	75 - 125 %	X
LCS LA-45476 25 PPB					RANGE	
Benzene	Standard	25.0	24.7	98.8	39 - 150	X
Toluene	Standard	25.0	23.9	96	46 - 148	X
Ethylbenzene	Standard	25.0	23.7	95	32 - 160	X
m & p - Xylene	Standard	50.0	47.3	95	Not Given	X
o - Xylene	Standard	25.0	23.7	95	Not Given	X
CCV LA-52589 50 PPB					RANGE	
Benzene	Standard	50.0	51.8	103.5	75 - 125 %	X
Toluene	Standard	50.0	49.3	98.5	75 - 125 %	X
Ethylbenzene	Standard	50.0	48.7	97.4	75 - 125 %	X
m & p - Xylene	Standard	100	97.2	97.2	75 - 125 %	X
o - Xylene	Standard	50.0	48.8	98	75 - 125 %	X
CCV LA-52589 50 PPB					RANGE	
Benzene	Standard	50.0	52.3	104.5	75 - 125 %	X
Toluene	Standard	50.0	49.4	98.8	75 - 125 %	X
Ethylbenzene	Standard	50.0	48.6	97.2	75 - 125 %	X
m & p - Xylene	Standard	100	97.2	97.2	75 - 125 %	X
o - Xylene	Standard	50.0	48.8	97.7	75 - 125 %	X

Narrative: Acceptable.

LABORATORY DUPLICATES:

SAMPLE ID	TYPE	SAMPLE RESULT PPB	DUPLICATE RESULT PPB	RPD	ACCEPTABLE	
					YES	NO
980007					RANGE	
Benzene	Matrix Duplicate	11.7	11.5	1.42	+/- 20 %	X
Toluene	Matrix Duplicate	<1	<1	0.00	+/- 20 %	X
Ethylbenzene	Matrix Duplicate	3.30	3.29	0.04	+/- 20 %	X
m & p - Xylene	Matrix Duplicate	<2	<2	0.00	+/- 20 %	X
o - Xylene	Matrix Duplicate	<1	<1	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 980007					RANGE	
Benzene	50	11.7	61.6	99.8	75 - 125 %	X
Toluene	50	<1	49.8	100	75 - 125 %	X
Ethylbenzene	50	3.3	52.4	98	75 - 125 %	X
m & p - Xylene	100	<2	99.3	99.3	75 - 125 %	X
o - Xylene	50	<1	49.1	98	75 - 125 %	X

Narrative: Acceptable

AUTO BLANK	SOURCE	PPB (1 analyzed with set)	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 (none analyzed with 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	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.

1/12/98 TRIP BLANK	SOURCE	PPB (4 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: llv

Approved By: John Tardis

Date: 1/21/98



QUALITY CONTROL REPORT
EPA METHOD 8020 - BTEX

Samples: 980311 to 980320

QA/QC for 4/29/98 Sample Set

LABORATORY CALIBRATION CHECKS / LABORATORY CONTROL SAMPLES:

SAMPLE NUMBER	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE	
					YES	NO
ICV LA-52589 50 PPB					RANGE	
Benzene	Standard	50.0	51.7	103.4	75 - 125 %	X
Toluene	Standard	50.0	52.8	106	75 - 125 %	X
Ethylbenzene	Standard	50.0	53.8	108	75 - 125 %	X
m & p - Xylene	Standard	100	108.2	108.2	75 - 125 %	X
o - Xylene	Standard	50.0	52.8	106	75 - 125 %	X
LCS LA-45476 25 PPB					RANGE	
Benzene	Standard	25.0	26.1	104.5	39 - 150	X
Toluene	Standard	25.0	26.7	107	46 - 148	X
Ethylbenzene	Standard	25.0	27.1	109	32 - 160	X
m & p - Xylene	Standard	50.0	55.1	110	Not Given	X
o - Xylene	Standard	25.0	26.8	107	Not Given	X
CCV LA-52589 50 PPB					RANGE	
Benzene	Standard	50.0	51.0	102.0	75 - 125 %	X
Toluene	Standard	50.0	52.1	104.2	75 - 125 %	X
Ethylbenzene	Standard	50.0	53.4	106.7	75 - 125 %	X
m & p - Xylene	Standard	100	107.2	107.2	75 - 125 %	X
o - Xylene	Standard	50.0	52.1	104	75 - 125 %	X
CCV LA-52589 50 PPB					RANGE	
Benzene	Standard	50.0	50.5	101.0	75 - 125 %	X
Toluene	Standard	50.0	51.2	102.4	75 - 125 %	X
Ethylbenzene	Standard	50.0	51.8	103.5	75 - 125 %	X
m & p - Xylene	Standard	100	104.3	104.3	75 - 125 %	X
o - Xylene	Standard	50.0	51.1	102.3	75 - 125 %	X

Narrative: Acceptable.

SAMPLE NUMBER	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE	
					YES	NO
CV LA-52589 50 PPB					RANGE	
Benzene	Standard	50.0	49.7	99.3	75 - 125 %	X
Toluene	Standard	50.0	50.2	100.5	75 - 125 %	X
Ethylbenzene	Standard	50.0	51.4	102.7	75 - 125 %	X
m & p - Xylene	Standard	100	103.6	103.6	75 - 125 %	X
o - Xylene	Standard	50.0	50.2	100.4	75 - 125 %	X

Narrative: Acceptable.

LABORATORY DUPLICATES:

SAMPLE ID	TYPE	SAMPLE RESULT PPB	DUPLICATE RESULT PPB	RPD	ACCEPTABLE	
					YES	NO
980311					RANGE	
Benzene	Matrix Duplicate	18.2	18.4	1.40	+/- 20 %	X
Toluene	Matrix Duplicate	<1	<1	0.00	+/- 20 %	X
Ethylbenzene	Matrix Duplicate	5.82	5.84	0.42	+/- 20 %	X
m & p - Xylene	Matrix Duplicate	5.50	5.5	0.51	+/- 20 %	X
o - Xylene	Matrix Duplicate	<1	<1	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 980311					RANGE	
Benzene	50	18.2	66.1	95.8	75 - 125 %	X
Toluene	50	<1	52.2	104	75 - 125 %	X
Ethylbenzene	50	5.8	57.4	103	75 - 125 %	X
m & p - Xylene	100	5.5	109.5	104.0	75 - 125 %	X
o - Xylene	50	<1	51.7	103	75 - 125 %	X

Narrative: Acceptable

AUTO BLANK	SOURCE	PPB (1 analyzed with set)	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 (1 analyzed with 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	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.

TRIP BLANK	SOURCE	PPB (3 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: CRU

Approved By: John Lavelle

Date: 5/1/98