

3R - 242

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 cursive script that reads '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

TRUNK 2B DRIP X-1
Meter/Line ID - LD153

RECEIVED

APR 05 1999

SITE DETAILS

Legals - Twn: 27N Rng: 11W
NMOCD Hazard Ranking: 40
Operator: EL PASO FIELD SERVICES

Sec: 1 Unit: J
Land Type: FEDERAL

ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

PREVIOUS ACTIVITIES

Site Assessment: Oct-94 Excavation: Nov-94 (310 cy) Geoprobe: Nov-96
Soil Boring: Mar-97 Monitor Well: Mar-97

The pit was excavated to 10 feet beneath ground surface (bgs) where groundwater was encountered. A composite soil sample was collected from the excavation bottom and four side walls. Approximately 310 cubic yards of impacted soil were removed during excavation. The headspace soil reading from the excavation bottom was 147 ppm. Soil analytical was as follows; benzene - <0.025 mg/kg, total BTEX - 1.72 mg/kg, TPH (418.1) - 158 mg/kg.

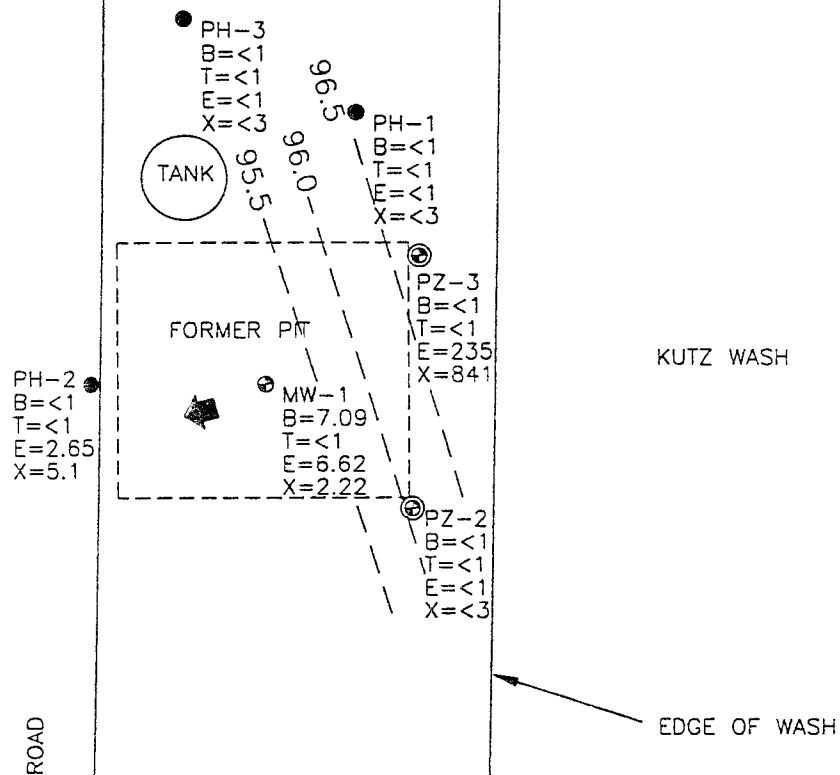
One soil boring was drilled in the center of the former pit. Groundwater was encountered at approximately 10 feet bgs and a monitoring well was installed. No soil samples were collected. Quarterly groundwater monitoring was initiated on 6/04/97 and continued through 3/27/98. Groundwater analytical data are presented in Table 1. Groundwater analytical data prior to 1998 has been previously submitted in the 1997 Annual Report, along with boring logs and well installation diagrams.

CONCLUSIONS

Initial groundwater sampling after monitoring well installation indicated benzene to be slightly above standards at 12 ppb. Subsequent quarterly sampling events has shown all BTEX compounds to be below standards, indicating minimal impact to groundwater. Geoprobe sampling of groundwater around the outside of the pit also indicated 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
- PH-1 APPROXIMATE PROBEHOLE 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
- ➔ APPROXIMATE GROUNDWATER GRADIENT

0 30
FEET



TITLE:
TRUNK 2B DRIP X-1
LD153

OWN: TMM	DES.: CC
CHKD: CC	APPD:
DATE: 1/13/98	REV.: 0

PROJECT NO.: 17520
EPFS GW PITS

FIGURE 1

FIELD PIT SITE ASSESSMENT FORM

GENERAL

Jol 2711

Meter: N/A Location: TRUNK 2B DRIP X-1
 Operator #: _____ Operator Name: EPNG P/L District: ANGEL PEAK
 Coordinates: Letter: PC 12584 Section 1 Township: 27 Range: 11
 Or Latitude _____ Longitude _____
 Pit Type: Dehydrator _____ Location Drip: _____ Line Drip: X Other: _____
 Site Assessment Date: 10/25/94 Area: 01 Run: 53

SITE ASSESSMENT

NMOCD Zone:

(From NMOCD
Maps)

Inside

Outside

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 KUTZ WASH

(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'

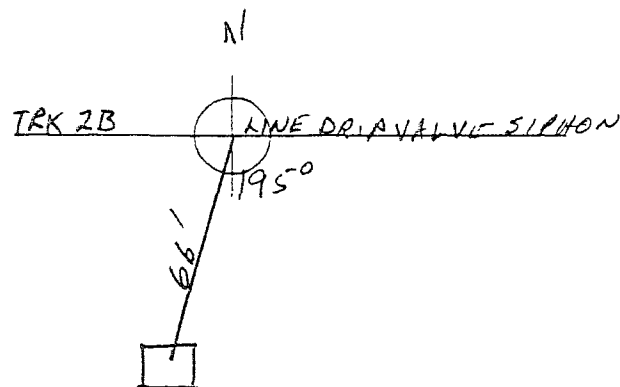
TOTAL HAZARD RANKING SCORE: 40 POINTS

Remarks : LOCATED ON WEST SIDE OF KUTZ WASH

NOTE: TANK COORDINATES AND ARIAL MAP SHOW DIFFERENT LOCATIONS

ORIGINAL PIT LOCATION

Original Pit : a) Degrees from North 195 Footage from ^{LINE DRIP VALVE} Wellhead 166
b) Length : 24 Width : 21 Depth : 24"



Remarks :

DRIP AND PIT ARE LOCATED ON WEST SIDE OF WASH, APPROXIMATELY
1 MILE WEST OF 74183. 43' CENTER OF PIT TO WASH FENCE

Completed By:

Ruby Corley
Signature

10/25/94
Date

PHASE I EXCAVATION

FIELD PIT REMEDIATION/CLOSURE FORM

GENERAL

Meter: N/A Location: Trunk ^{2B} ~~B-2~~ Drift x-1 11/2/94 PR

Coordinates: Letter: J Section 1 Township: 27 Range: 11

Or Latitude _____ Longitude _____

Date Started : 11/1/94 Area: 01 Run: 53

FIELD OBSERVATIONS

Sample Number(s): KP340

Sample Depth: 10' Feet

Final PID Reading 147 PID Reading Depth 10' Feet

Yes No

Groundwater Encountered ☒ (1) ☐ (2) Approximate Depth 10 Feet

CLOSURE

Remediation Method :

Excavation ☒ (1) Approx. Cubic Yards 310

Onsite Bioremediation ☐ (2)

Backfill Pit Without Excavation ☐ (3)

Soil Disposition:

Envirotech ☒ (1) ☐ (3) Tierra

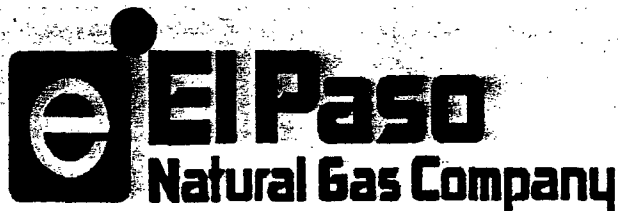
Other Facility ☐ (2) Name: _____

Pit Closure Date: 11/1/94 Pit Closed By: B.E.I

REMARKS

Remarks : Some line markers started remediation to 12'
soil dark gray with a smell. Hit water at 10'
SANDRA Miller told us to take out more than we do on a pit. Because
it is next to a wash, and she wanted to clean it up the most we
could.

Signature of Specialist: Kelly Padilla



FIELD SERVICES LABORATORY

ANALYTICAL REPORT

PIT CLOSURE PROJECT - Soil Samples Inside the GWV Zone

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	KP 340	946472
MTR CODE SITE NAME:	Trunk 23 Dip 21	N/A
SAMPLE DATE TIME (Hrs):	11-1-94	1430
SAMPLED BY:	N/A	
DATE OF TPH EXT. ANAL:	11-3-94	11-3-94
DATE OF BTEX EXT. ANAL:	11-8-94	11-12-94
TYPE DESCRIPTION:	VC	Brown/GRAY SAND & CLAY

REMARKS:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q	M(g)	V(ml)
BENZENE	<0.025	MG/KG	1			
TOLUENE	0.080	MG/KG	1			
ETHYL BENZENE	0.21	MG/KG	1			
TOTAL XYLENES	1.4	MG/KG	1			
TOTAL BTEX	1.72	MG/KG				
TPH (418.1)	0.8373158	MG/KG			2.16	28
HEADSPACE PID	147	PPM				
PERCENT SOLIDS	82.3	%				

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

1. Total Organic Recovery was at 108 % for this sample All QA/QC was acceptable.

Narrative:

All Results attached

DF = Dilution Factor Used

Approved By:

R.P.

Date:

11/24/94



Page _____ of _____

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



Analytical **Technologies**, Inc.

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

ATI I.D. 411319

November 15, 1994

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

Project Name/Number: PIT CLOSURE 24324

Attention: John Lambdin

On 11/04/94, Analytical Technologies, Inc., (ADHS License No. AZ0015), received a request to analyze **non-aqueous** samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

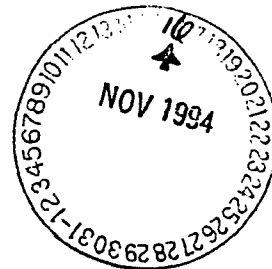
If you have any questions or comments, please do not hesitate to contact us at (505) 344-3777.

Letitia Krakowski, Ph.D.
Project Manager

H. Mitchell Rubenstein, Ph.D.
Laboratory Manager

MR:jt

Enclosure



GAS CHROMATOGRAPHY RESULTS

TEST : BTEX (EPA 8020)
 CLIENT : EL PASO NATURAL GAS CO. ATI I.D.: 411319
 PROJECT # : 24324
 PROJECT NAME : PIT CLOSURE

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
07	946471	NON-AQ	11/01/94	11/08/94	11/10/94	20
08	946472	NON-AQ	11/01/94	11/08/94	11/12/94	1
09	946474	NON-AQ	11/02/94	11/08/94	11/10/94	20

PARAMETER	UNITS	07	08	09
BENZENE	MG/KG	<0.5	<0.025	<0.5
TOLUENE	MG/KG	9.7	0.080	18
ETHYLBENZENE	MG/KG	1.2	0.21	5.2
TOTAL XYLENES	MG/KG	11	1.4	42

SURROGATE:

BROMOFLUOROBENZENE (%) 101 108 71

GEOPROBE

PIEZOMETER INSTALLATION RECORD

Philip Environmental Services, Inc.

4000 Monroe Rd.

Farmington, NM 87401

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

Borehole # PZ - 1

Well # _____

Page 1 of 1

Project Name EPFS PITS

Project Number 16297 Phase 6004

Site Location Trunk 2B Drip X-1

Elevation _____

Well Location Center of Pit

GWL Depth 8.07 BGS

Installed By K PADILLA

On-Site Geologist CM CHANCE

Personnel On-Site D CHARLEY F. Rivera

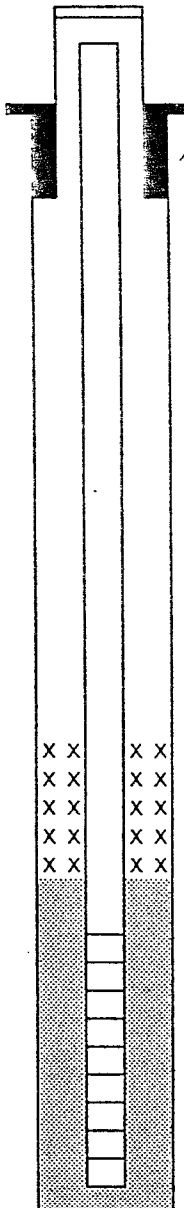
Contractors On-Site _____

Client Personnel On-Site _____

Date/Time Started 11/21/96

Date/Time Completed 11/21/96

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		
Bottom of Well Riser		
Top of Well Screen		
Bottom of Well Screen		
Top of Peltonite Seal		
Bottom of Peltonite Seal		
Top of Gravel Pack		
Bottom of Gravel Pack		
Top of Natural Cave-In		
Bottom of Natural Cave-In		
Top of Groundwater		
Total Depth of Borehole		



Top of Protective Casing NA

Top of Riser _____

Ground Surface _____

Top of Seal _____

Top of Gravel Pack _____

Top of Screen 4.35'

Bottom of Screen 9.35'

Bottom of Borehole _____

Comments: 5' screen 5' riser

PIEZOMETER INSTALLATION RECORD

Philip Environmental Services, Inc.

4000 Monroe Rd.

Farmington, NM 87401

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

Borehole # PZ-2

Well # _____

Page 1 of 1

Project Name EPFS PITS

Project Number 16297 Phase 6004

Site Location Trunk 2B Dsg X-1

On-Site Geologist CM CHANCE

Personnel On-Site D-CHARLEY F. Rivera

Contractors On-Site _____

Client Personnel On-Site _____

Elevation _____

Well Location SE of P1+

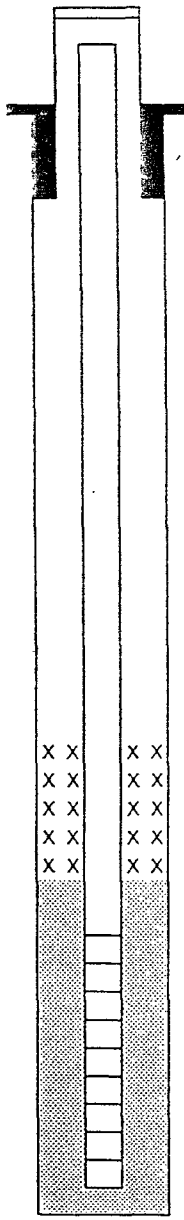
GWL Depth 3-9 BGS

Installed By K PADILLA

Date/Time Started 11/21/96

Date/Time Completed 11/21/96

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		
Bottom of Well Riser		
Top of Well Screen		
Bottom of Well Screen		
Top of Peltonite Seal		
Bottom of Peltonite Seal		
Top of Gravel Pack		
Bottom of Gravel Pack		
Top of Natural Cave-In		
Bottom of Natural Cave-In		
Top of Groundwater		
Total Depth of Borehole		



Top of Protective Casing NA

Top of Riser _____

Ground Surface _____

Top of Seal _____

Top of Gravel Pack _____

Top of Screen 2.25

Bottom of Screen 7.75

Bottom of Borehole _____

Comments: 5' screen 3' riser

Geologist Signature _____

PIEZOMETER INSTALLATION RECORD

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

Borehole # PZ-3
Well # _____
Page 1 of 1

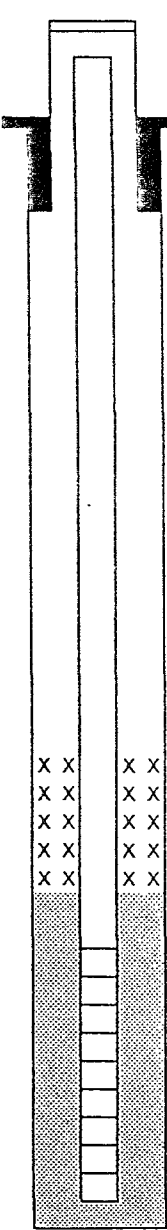
Project Name EPFS PITS
Project Number 16297 Phase 6004
Site Location Truck AB Dip X-1

Elevation _____
Well Location NE of Pit
GWL Depth 4.22 BGS
Installed By K PADILLA

On-Site Geologist CM CHANCE
Personnel On-Site D CHARLEY F. Rivera
Contractors On-Site _____
Client Personnel On-Site _____

Date/Time Started 11/21/96
Date/Time Completed 11/21/96

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		
Bottom of Well Riser		
Top of Well Screen		
Bottom of Well Screen		
Top of Peltonite Seal		
Bottom of Peltonite Seal		
Top of Gravel Pack		
Bottom of Gravel Pack		
Top of Natural Cave-In		
Bottom of Natural Cave-In		
Top of Groundwater		
Total Depth of Borehole		



Top of Protective Casing NA

Top of Riser _____

Ground Surface _____

Top of Seal _____

Top of Gravel Pack _____

Top of Screen 5.5

Bottom of Screen 5.55

Bottom of Borehole _____

Comments: 5' screen

CHAIN OF CUSTODY RECORD

[illegible]



EL PASO FIELD SERVICES



FIELD SERVICES LABORATORY

ANALYTICAL REPORT

PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	CMC266	948029
MTR CODE SITE NAME:	LD153	Trunk 2B Drip X-1
SAMPLE DATE TIME (Hrs):	11/21/96	1400
PROJECT:	Geoprobe	
DATE OF BTEX EXT. ANAL.:	11/29/96	11/29/96
TYPE DESCRIPTION:	PZ1	Water

Field Remarks: STONIS Prod. Cdr. Potential Free Product

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	12.4	PPB				
TOLUENE	< 1	PPB				
ETHYL BENZENE	68.5	PPB				
TOTAL XYLENES	120	PPB				
TOTAL BTEX	201	PPB				

—BTEX is by EPA Method 8020 —

The Surrogate Recovery was at 93.7 % for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative:

Approved By: John Lueder

Date: 12/4/96



ED PASO FIELD SERVICES



FIELD SERVICES LABORATORY ANALYTICAL REPORT PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	CMC267	948030
MTR CODE SITE NAME:	LD153	Trunk 2B Drip X-1
SAMPLE DATE TIME (Hrs):	11/21/96	1425
PROJECT:	Geoprobe	
DATE OF BTEX EXT. ANAL.:	11/29/96	11/29/96
TYPE DESCRIPTION:	PZ2	Water

Field Remarks: Slight odor. Reacted with HCl

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 93.9 % for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative:

Approved By: John L. L...

Date: 12/4/96



EPASO FIELD SERVICES



FIELD SERVICES LABORATORY ANALYTICAL REPORT PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	CMC268	948031
MTR CODE SITE NAME:	LD153	Trunk 2B Drip X-1
SAMPLE DATE TIME (Hrs):	11/21/96	1435
PROJECT:	Geoprobe	
DATE OF BTEX EXT. ANAL.:	11/29/96	11/29/96
TYPE DESCRIPTION:	PZ3	Water

Field Remarks:

Strong odor. Reacted with HCL.

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	< 1	PPB	2	D		
TOLUENE	< 1	PPB	2	D		
ETHYL BENZENE	235	PPB	2	D		
TOTAL XYLENES	841	PPB	2	D		
TOTAL BTEX	1100	PPB				

—BTEX is by EPA Method 8020 —

The Surrogate Recovery was at
DF = Dilution Factor Used

92.0

% for this sample All QA/QC was acceptable.

Narrative:

Approved By:

John Larch

Date:

12/4/96



EPASO FIELD SERVICES



FIELD SERVICES LABORATORY

ANALYTICAL REPORT

PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	CMC269	948032
MTR CODE SITE NAME:	LD153	Trunk 2B Drip X-1
SAMPLE DATE TIME (Hrs):	11/21/96	1510
PROJECT:	Geoprobe	
DATE OF BTEX EXT. ANAL.:	11/29/96	11/29/96
TYPE DESCRIPTION:	PH1	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 91.4 % for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative: _____

Approved By: John Smith

Date: 12/4/96



EL PASO FIELD SERVICES



FIELD SERVICES LABORATORY

ANALYTICAL REPORT

PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	CMC270	948033
MTR CODE SITE NAME:	LD153	Trunk 2B Drip X-1
SAMPLE DATE TIME (Hrs):	11/22/96	900
PROJECT:	Geoprobe	
DATE OF BTEX EXT. ANAL.:	11/29/96	11/29/96
TYPE DESCRIPTION:	PH2	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	<1	PPB				
TOLUENE	<1	PPB				
ETHYL BENZENE	2.85	PPB				
TOTAL XYLENES	5.10	PPB				
TOTAL BTEX	7.75	PPB				

-BTEX is by EPA Method 8020 -

The Surrogate Recovery was at 92.0 % for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative: _____

Approved By: _____

Date: 12/3/96



EL PASO FIELD SERVICES



FIELD SERVICES LABORATORY ANALYTICAL REPORT PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	CMC271	948034
MTR CODE SITE NAME:	LD153	Trunk 2B Drip X-1
SAMPLE DATE TIME (Hrs):	11/22/96	930
PROJECT:	Geoprobe	
DATE OF BTEX EXT. ANAL.:	11/29/96	11/29/96
TYPE DESCRIPTION:	PH3	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	O		
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 91.9 % for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative: _____

Approved By: John LandaDate: 12/3/96

PHASE II SOIL BORING

RECORD OF SUBSURFACE EXPLORATION

PHILIP ENVIRONMENTAL SERVICES INC.

100 Monroe Road

Princeton, 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 TRUNK 2B DRIP X-1-LO153

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

Elevation

Borehole Location T27 R11 - S1 - Ltr J

GWL Depth 10' BGS (PZ1)

Logged By D CESARK

Drilled By M DONOHUE

Date/Time Started 3/4/97 - 0830

Date/Time Completed 4 - 0900

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						
10				10' GWC 6' BGS						
15										
20										
25										
30										
35										
40										

Comments:

PZ1 LOCATED IN CTR. OF FORMER PIT. MEASURED DEPTH TO GW (6' BGS)
PULLED PZ1 INSTALLED MW-1 @ FORMER PZ1 LOCN. TD = 16' - PLEASE
REFER TO MW COMPLETION DIAGRAM. NO SAMPLE COLLECTED.

Geologist 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

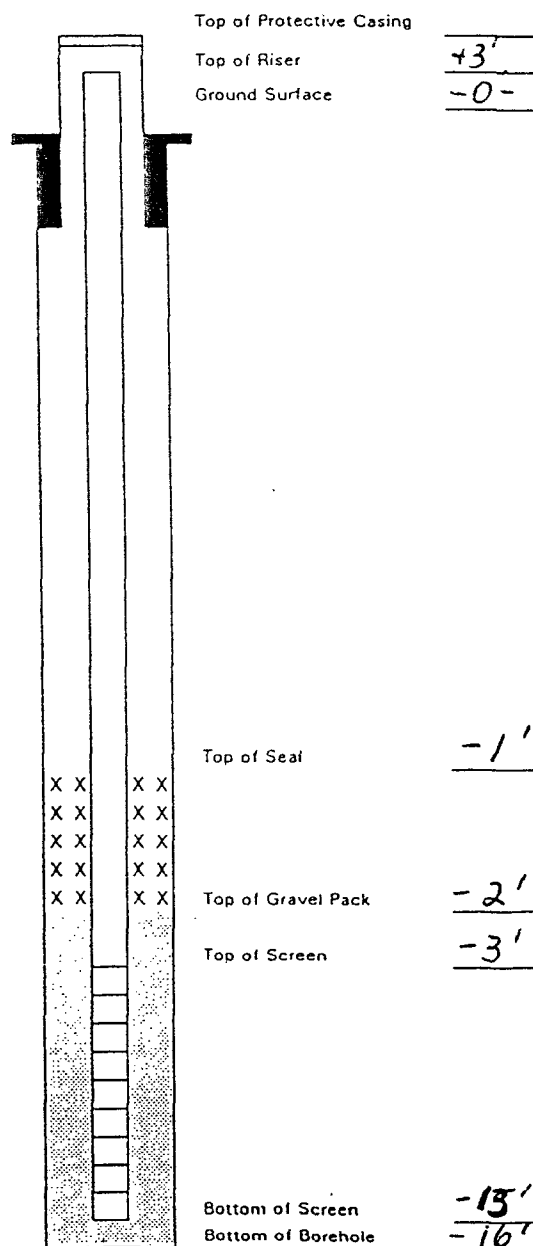
Project Name EPFS GWPITS
Project Number 17520 Phase 6002-77
Site Location TRUNK 2B DRIP X-1 - L0153

Elevation CTR OF PIT (PZ1) T27N-R12W-
Well Location TRUNK 2B DRIP X-1 - L0153
GWL Depth -10' 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 3/4/97-0900
Date/Time Completed " - 1000

Depths in Reference to Ground Surface				
Item	Material	Depth (feet)		
Top of Protective Casing			Top of Protective Casing	
Bottom of Protective Casing			Top of Riser <u>+3'</u>	
Top of Permanent Borehole Casing		N/A	Ground Surface <u>-0-</u>	
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	.010 SLOT	-3'		
Bottom of Well Screen	"	-13'		
Top of Peltonite Seal	ENTIROPLUG	-1'		
Bottom of Peltonite Seal	"	-2'		
Top of Gravel Pack	10-20 SAND	-2'		
Bottom of Gravel Pack	"	-15'		
Top of Natural Cave-In		-15'		
Bottom of Natural Cave-In		-16'		
Top of Groundwater		-6'		
Total Depth of Borehole		-16'		



Comments: _____



Well Development and Purging Data

☒ Development
☐ Purging

Well Number MW1

Serial No. WDPP

Page 1 of 1

Project Name EPFS GW PITS

Project Manager Cary Chazare

Project No. 17520

Client Company ELPaso Field Services

Phase/Task No. 0003 27

Site Name TRUNK 23 Drip XL LUIS3

Site Address _____

Development Criteria

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

Water Volume Calculation

Initial Depth of Well (feet) 110.18
Initial Depth to Water (feet) 9.04
Height of Water Column in Well (feet) 7.14
Diameter (Inches): Well 4 Gravel Pack _____

Methods of Development

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

Instruments

- Serial No. (if applicable) 015722
☒ pH Meter
☐ DO Monitor
☒ Conductivity Meter
☒ Temperature Meter
☐ Other _____

Water Disposal

Disposed + Dumped at KWS SDC-20
in 3 compartments

Water Removal Data

Date	Time	Development Method	Pump (gall)	Removal Rate (gall/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons)		Purge Volumes (gallons)		Temperature (°C)	pH	Conductivity (umhos/cm)	Dissolved Oxygen (mg/L)	Comments
							Incremental	Cumulative	Incremental	Cumulative					
3-11-97	0920	X					5	5			10.9	6.36	231		Gravel SILETY
	0930						5	10			10.9	6.73	262		"
	0942						5	15			11.1	6.88	284		"
	0952						5	20			11.6	6.93	289		Gravel SILETY
	1025						5	25			11.6	7.08	320		Gravel SILETY
3-11-97	1030	Y					5	30			11.7	7.09	321		Gravel SILETY

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

Comments

Developer's Signature(s) [Signature]

Date 3-11-97

Reviewer _____

Date _____



Water Sampling Data

Station No. MW01Serial No. WSD-Group List Number Sample Type: ☒ Groundwater ☐ Surface Water ☐ Other Date 3-11-97Project Name EPFS GW Pits Project No. 17520Project Manager Cort Chance Phase/Task No. 0003.77Site Name TRUNK 2B 2nd XI LOIS3

Sampling Specifications

Requested Sampling
Depth Interval (feet) 10' 3'
Requested Wait Following
Development/Purging (hours) —

Initial Measurements

Time Elapsed From Final Development/Purging ^{MIN}(hours) 9
Initial Water Depth (feet) 9.04
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)	
See well		Development and Purging										data sheet 6

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	G	40			P/H	X		JAL-LOIS3-01 T: 1045

Filter Type Chain-of-Custody Form Number C-3059Comments Signature James E. [Signature] Date 3-11-97 Reviewer Date



5-21-97

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

Field ID

Lab ID

SAMPLE NUMBER:

JAL LD153-01

970205

MTR CODE | SITE NAME:

LD153

Trunk 2B Drip X-1

SAMPLE DATE | TIME (Hrs):

3/10/97

1045

PROJECT:

Phase II Drilling - Initial

DATE OF BTEX EXT. | ANAL.:

3/14/97

3/14/97

TYPE | DESCRIPTION:

Monitor Well

Water

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	12.1	PPB				
TOLUENE	<1	PPB				
ETHYL BENZENE	30.2	PPB				
TOTAL XYLENES	27.1	PPB				
TOTAL BTEX	69.4	PPB				

-BTEX is by EPA Method 8020 -

The Surrogate Recovery was at
DF = Dilution Factor Used

99.0

for this sample All QA/QC was acceptable.

Narrative:

Approved By:

Date:

4/5/97

970205,4/4/97

PHILIP

ENVIRONMENTAL
PROCESSES
ANALYSIS

Chain of Custody Record

4000 Monroe Road
Farmington, NM 87401

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

COC Serial No. C 3059

Project Name <i>EPFS GWPITS</i>		Phase Task <i>6003 . 77</i>		Type of Analysis and Bottle		Total Number of Bottles	Comments
Project Number <i>17570</i>	Phase Task <i>6003 . 77</i>						
Samplers <i>J. Long</i>		Name <i>EPN</i>					
Laboratory		Location <i>Farmington NM</i>					
Sample Number (and depth)	Date	Time	Matrix				
<i>JAL T.R.P. BLANK</i>	<i>3-10-97</i>	<i>1115</i>	<i>WATER</i>	<i>X</i>			
<i>JAL 14046.01</i>	<i>3-10-97</i>	<i>1245</i>	<i>WATER</i>	<i>✓</i>			
<i>JSL 04906.01</i>	<i>3-10-97</i>	<i>1610</i>	<i>WATER</i>	<i>✓</i>			
<i>JSL T.R.P. BLANK</i>	<i>3-11-97</i>	<i>1000</i>	<i>WATER</i>	<i>✓</i>			
<i>JSL 60153.01</i>	<i>3-11-97</i>	<i>1045</i>	<i>WATER</i>	<i>✓</i>			
<i>JSL 95210.01</i>	<i>3-11-97</i>	<i>1325</i>	<i>WATER</i>	<i>✓</i>			
<i>JAL 75220.01</i>	<i>3-11-97</i>	<i>1530</i>	<i>WATER</i>	<i>✓</i>			
<i>JSL T.R.P. BLANK</i>	<i>3-12-97</i>	<i>1150</i>	<i>WATER</i>	<i>✓</i>			
<i>JAL 71676.01</i>	<i>3-12-97</i>	<i>1155</i>	<i>WATER</i>	<i>✓</i>			
<i>JSL T.R.P. BLANK</i>	<i>3-13-97</i>	<i>1000</i>	<i>WATER</i>	<i>✓</i>			
<i>JAL 75016.01</i>	<i>3-13-97</i>	<i>1010</i>	<i>WATER</i>	<i>✓</i>			

Relinquished by:

Received By:

Signature	Date	Time	Signature	Date	Time
<i>[Signature]</i>	<i>3-13-97</i>	<i>1130</i>	<i>[Signature]</i>	<i>3/13/97</i>	<i>1435</i>

Samples Iced: ☒ Yes ☐ No

Preservatives (ONLY for Water Samples)

☐ Cyanide Sodium hydroxide (NaOH)

☒ Volatile Organic Analysis Hydrochloric acid (HCl)

☐ Metals Nitric acid (HNO3)

☐ TPH (418.1) Sulfuric acid (H2SO4)

☐ Other (Specify) _____

☐ Other (Specify) _____

Carrier: *Hand Delivered*

Shipping and Lab Notes:

Rec'd - Cool and IN-TACT

Airbill No.

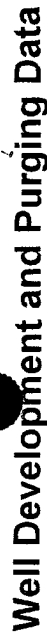
QUARTERLY MONITORING RESULTS

4

for

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
970205 *	LD153	Trunk 2B Drip X-1	3/10/97	Phase II Drilling - Initial	=	12.1	<	1	=	30.2	=	27.1	=	70
970525 *	LD153	Trunk 2B Drip X-1	6/4/97	Sample 4 - 1st Qtr	=	9.82	<	1	=	10.8	<	3	=	21
971043 *	LD153	Trunk 2B Drip X-1	9/22/97	Sample 4 - 2nd Qtr	=	7.55	<	1	=	8.8	=	4.14	=	20
971298 *	LD153	Trunk 2B Drip X-1	12/12/97	Sample 4 - 3rd Qtr	=	7.09	<	1	=	6.62	=	2.22	=	16
980261	LD153	Trunk 2B Drip X-1	3/27/98	Sample 4 - 4th Qtr	=	9.13	<	1	=	14.8	=	3.31	=	27

* Analytical reports provided to NMOCD in prior annual report.



Well Development and Purging Data

☐	Development
☒	Purging

Well Number MW-1
Meter Code LD 153

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

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

Initial Depth of Well (feet) 15.8
Initial Depth to Water (feet) 8.73
Height of Water Column in Well (feet) 7.09

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

Water Disposal

KUTZ SEPARATOR

Water Removal Data

[illegible]

Comments: THE WATER HAD A LIGHT HYDROGEN SULFIDE SMELL.

Developer's Signature Dennis Bied

Date 3-27-98

John-Louis

Date 4/14/98



FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	980261
MTR CODE SITE NAME:	LD153	Trunk 2B Drip X-1
SAMPLE DATE TIME (Hrs):	3/27/98	1312
PROJECT:	Sample 4 4th Quarter	
DATE OF BTEX EXT. ANAL:	4/6/98	4/6/98
TYPE DESCRIPTION:	MW-1	Water

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	9.13	PPB				
TOLUENE	<1	PPB				
ETHYL BENZENE	14.8	PPB				
TOTAL XYLENES	3.31	PPB				
TOTAL BTEX	27	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:

Approved By:

John Lardner

Date:

4/23/98

980261BTEXMW,4/23/98

CHAIN OF CUSTODY RECORD

[illegible]



EL PASO FIELD SERVICES

QUALITY CONTROL REPORT
EPA METHOD 8020 - BTEX

Samples: 980260 to 980265, 980267 to 980273, 980276 to 980278

QA/QC for 4/6/98 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	48.9	97.9	75 - 125 %	X
Toluene	Standard	50.0	52.7	105	75 - 125 %	X
Ethylbenzene	Standard	50.0	53.3	107	75 - 125 %	X
m & p - Xylene	Standard	100	107.8	107.8	75 - 125 %	X
o - Xylene	Standard	50.0	52.5	105	75 - 125 %	X
LCS LA-45476 25 PPB					RANGE	
Benzene	Standard	25.0	24.3	97.2	39 - 150	X
Toluene	Standard	25.0	26.2	105	46 - 148	X
Ethylbenzene	Standard	25.0	26.5	106	32 - 160	X
m & p - Xylene	Standard	50.0	54.1	108	Not Given	X
o - Xylene	Standard	25.0	26.2	105	Not Given	X
CCV LA-52589 50 PPB					RANGE	
Benzene	Standard	50.0	45.9	91.8	75 - 125 %	X
Toluene	Standard	50.0	52.0	104.0	75 - 125 %	X
Ethylbenzene	Standard	50.0	53.6	107.1	75 - 125 %	X
m & p - Xylene	Standard	100	108.1	108.1	75 - 125 %	X
o - Xylene	Standard	50.0	52.2	104	75 - 125 %	X
CCV LA-52589 50 PPB					RANGE	
Benzene	Standard	50.0	47.7	95.4	75 - 125 %	X
Toluene	Standard	50.0	51.5	103.1	75 - 125 %	X
Ethylbenzene	Standard	50.0	51.7	103.4	75 - 125 %	X
m & p - Xylene	Standard	100	104.3	104.3	75 - 125 %	X
o - Xylene	Standard	50.0	51.3	102.6	75 - 125 %	X

Narrative: Acceptable.

SAMPLE NUMBER CCV LA-52589 50 PPB	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE	
					YES	NO
					RANGE	
Benzene	Standard	50.0	49.4	98.7	75 - 125 %	X
Toluene	Standard	50.0	50.9	101.7	75 - 125 %	X
Ethylbenzene	Standard	50.0	52.0	104.0	75 - 125 %	X
m & p - Xylene	Standard	100	104.8	104.8	75 - 125 %	X
o - Xylene	Standard	50.0	50.9	101.7	75 - 125 %	X

Narrative: Acceptable.

SAMPLE NUMBER CCV LA-52589 50 PPB	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE	
					YES	NO
					RANGE	
Benzene	Standard	50.0	49.5	99.0	75 - 125 %	X
Toluene	Standard	50.0	49.9	99.7	75 - 125 %	X
Ethylbenzene	Standard	50.0	50.4	100.8	75 - 125 %	X
m & p - Xylene	Standard	100	101.0	101.0	75 - 125 %	X
o - Xylene	Standard	50.0	49.5	98.9	75 - 125 %	X

Narrative: Acceptable.

LABORATORY DUPLICATES:

SAMPLE ID 980260	TYPE	SAMPLE RESULT PPB	DUPLICATE RESULT PPB	RPD	ACCEPTABLE	
					YES	NO
					RANGE	
Benzene	Matrix Duplicate	9.1	9.3	1.59	+/- 20 %	X
Toluene	Matrix Duplicate	<1	<1	0.00	+/- 20 %	X
Ethylbenzene	Matrix Duplicate	14.80	14.84	0.25	+/- 20 %	X
m & p - Xylene	Matrix Duplicate	<2	<2	0.00	+/- 20 %	X
o - Xylene	Matrix Duplicate	2.90	2.92	0.65	+/- 20 %	X

Narrative: Acceptable.

LABORATORY SPIKES:

SAMPLE ID 2nd Analysis 980260	SPIKE ADDED PPB	SAMPLE RESULT PPB	SPIKE SAMPLE RESULT PPB	%R	ACCEPTABLE	
					YES	NO
					RANGE	
Benzene	50	9.1	52.8	87.3	75 - 125 %	X
Toluene	50	<1	52.3	105	75 - 125 %	X
Ethylbenzene	50	14.8	66.0	102	75 - 125 %	X
m & p - Xylene	100	<2	107.7	107.7	75 - 125 %	X
o - Xylene	50	2.9	54.5	103	75 - 125 %	X

Narrative: Acceptable

LABORATORY DUPLICATES:

SAMPLE ID 980271	TYPE	SAMPLE RESULT PPB	DUPLICATE RESULT PPB	RPD	ACCEPTABLE	
					YES	NO
					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
Lab Analysis 980271					RANGE	
Benzene	50	<1	49.5	99.0	75 - 125 %	X
Toluene	50	<1	51.2	102	75 - 125 %	X
Ethylbenzene	50	<1	51.4	103	75 - 125 %	X
m & p - Xylene	100	<2	103.9	103.9	75 - 125 %	X
o - Xylene	50	<1	51.0	102	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 (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 CHECK/OVER 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 (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: CLC Approved By: John F. Smith Date: 4/10/98