# 3R - 228

# REPORTS

# DATE: 1997



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

February 27, 1998

RECEIVED

MAR 0 2 1998

Environmental Bureau Oil Conservation Division

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

### **Re: 1997 Groundwater Annual Report**

Dear Mr. Olson:

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

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

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

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

Sincerely,

Sinde & Milles

Såndra D. Miller Environmental Manager

- xc: Mr. Bill Liesse, BLM w/o enclosures
  - Mr. Denny Foust, NMOCD Aztec w/enclosures; Certified Mail #Z 295 387 298; #Z 295 387 299 Ms. Charmaine Tso, Navajo EPA w/enclosures; Certified Mail #Z 295 387 292

# SAN JUAN BASIN PIT CLOSURES San Juan Basin, New Mexico

# El Paso Field Services Pit Project Groundwater Report Annual Report

March 1998

**Prepared For** 

El Paso Field Services Farmington, New Mexico

Project 17520



# EPFS GROUNDWATER PITS 1997 ANNUAL GROUNDWATER REPORT

# OHIO C GOVT #3

Meter/Line ID - 72890

### SITE DETAILS

Sec: 26

Legals - Twn: 28N Rng: 11W NMOCD Hazard Ranking: 40 Operator: MARATHON OIL COMPANY Unit: P Land Type: FEDERAL

### **PREVIOUS ACTIVITIES**

Site Assessment: Sep-94 Re-Excavation: Sep-95 (1,098 cy) Excavation: Sep-94 (50 cy) Geoprobe: Oct-96 Soil Boring: Sep-95 Monitor Well: May-97

### **1997 ACTIVITIES**

Monitor Well Installation - One groundwater monitor well was installed in the center of the former pit.

**Quarterly Groundwater Monitoring** - Quarterly groundwater monitoring was initiated on 6/26/97. Groundwater analytical data are presented in Table 1.

### **CONCLUSIONS**

Based on groundwater levels collected from Geoprobe data, the groundwater flow trends to the east on this site, as presented in Figure 1. Groundwater samples collected from MW-1 have been below standards for BTEX since quarterly sampling was initiated. Twelve groundwater samples were collected up and down-gradient of MW-1 using a Geoprobe. One sample collected up-gradient of MW-1 was below standards for BTEX. Two groundwater samples collected down-gradient of MW-1 were slightly above standards for benzene only. The highest concentrations of contaminants were from groundwater samples collected cross-gradient and down-gradient of the operators production pit which is located down-gradient of MW-1.

Based on the high concentrations around the production pit, it appears that samples collected directly downgradient of EPFS's pit may be influenced by the operators production pit.

EPFS has excavated approximately 1,150 cubic yards of contaminated soil from the former pit, and has removed the majority of the source, as evident by four clean quarters of groundwater samples.

### **RECOMMENDATIONS**

- EPFS proposes to conduct no further action at this site, until the operator commences with further remediation of their production pit.
- Quarterly sampling will continue at MW-1 until four consecutive clean quarters are achieved.
- Following OCD approval for closure, MW-1 will be abandoned following OCD approved abandonment procedures.



	indwater Pits	al Groundwater Report
1	EPFS Groundwa	1997 Annual Gr



Total BTEX	9	9	9	9	
	V	V	v		
Fotal Xylenes (PPB)	3	3	3	3	
		V	. v		
Ethyl Benzene (PPB)		1	-	1	
	$\vee$	v	v	×.	
Toluene (PPB)	1	1	1	1	
	v	V	v	•.	
Beazene (PPB)	-	1	-		
		V	- V		
Project	Phase II Drilling - Initial	Sample 4 - 1st Qtr	Sample 4 - 2nd Qtr	Sample 4 - 3rd Qtr	
MW #	1	1	1		
Sample Date	5/22/97	6/26/97	9/12/97	12/4/97	
Site Name	Ohio C Govt #3	Ohio C Govt #3	Ohio C Govt #3	Ohio C Govt #3	
Meter' Line #	72890	72890	72890	72890	
sample #	970487	970606	970979	971272	

J.\17520\repart97\1997aw

### **RECORD OF SUBSURFACE EXPLORATION**



PHILIP ENVIRONMENTAL SERVICES INC. 4000 Monroe Road Farmington, New Mexico 87401 (505) 326-2262 FAX (505) 326-2388

Elevation	
Borehole Location	Tag-R 11-S 26-Ltr P
GWL Depth	12-3' B 65
Logged By	CM CHANCE
Drilled By	K Padilla
Date/Time Started	5/21/97/-0845
Date/Time Comple	ted 5/2//97 - 0445

•	-	Borehole # Well # Page <u>1</u>	BH-1 MW-1 of/
Project Name	EPFS GW PI	тѕ	
Project Number	17520	Phase	6001
Project Location	Ohio C	GoviJ	72890
Well Logged By Personnel On-Site Contractors On-Site	CM C D CH	HANCE ARLEY, J	Pencod
Client Personnel On-	Site		···· ··· ··· ··· ··· ··· ··· ··· ··· ·

4 1/4 ID HSA **Drilling Method** Air Monitoring Method

PID



### MONITORING WELL INSTALLATION RECORD

-- --

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

Elevation

GWL Depth 12. )' BGs Installed By K Padilla	Well Locatio	TARRIS	126 LTR P
Installed By K Padilla	GWL Depth	12. J' BGS	
	Installed By	K Padilla	

Date/Time Started	5/21/97 - 0945
Date/Time Completed	5/21/97-1100

placed on well

MWINSTAL.wk1

epths in Reference to Gr	ound Surface				Top of Protective Casing	t
	<del> </del>		_	_ !	Top of Riser	-
ltem	Material	Depth (feet)			Ground Surface	-
	8" steel well					
Top of Protective Casing	vault	+3.1				
Bottom of Protective Casing		1.9				
Top of Permanent Barabala Casing		NVA				
Bottom of						
Permanent Borehole Casing		N/A				
Top of Concrete		NA				
Bottom of Concrete		NA				
	Type I/II Portland					
Top of Grout	cement	NA		1		
	Powder Bentonite					
Bottom of Grout		NA				
T (MULTIN)	4" SCH 40 PVC					
lop of Well Riser		15.0				
Bottom of Well Riser	FLUSH THREAD	3.5				
······································	4" SCH 40 PVC					
Top of Well Screen		3.5			Top of Seal	
	0.01 SLOT		X X	X X		
Bottom of Well Screen	FLUSH THREAD	18.5	X X	X X		
	ENVIROPLUG		X X	X X		
Top of Peltonite Seal		0	X X	X X		
Bottom of Peltonite Seal	}	2.0	XX	XX	Top of Gravel Pack	
	10-20 SILICA				Top of Screen	
Top of Gravel Pack	SAND	<b>a</b> .o				
Bottom of Gravel Pack		18.5		-		
Top of Natural Cave-In		18.5				
Bottom of Natural Cave-In		30.		-		
Top of Groundwater		12.3			Bottom of Screen	
Total Depth of Borehole		20'			Bottom of Borehole	

Geologist Signature

T

Borehole # BH-1 Well # MW-1 Page 1 of 1 Project Name EPFS GW 17520 Project Number Phase 6002 Site Location Ohio 72890 Gart **On-Site Geologist** CM CHANCE D CHARLEY , J. Pan Personnel On-Site

+3.1'

0

2.0

3.5

18.

Contractors On-Site Client Personnel On-Site



# GEOPROBE

# SITE ACTIVITIES

21-Feb-97

·····

Meter/Line #: 72890

Location/Line #: Ohio C Govt 3

**MW#:** 

Depth to GW:

Depth to Product:

**Product Thickness:** 

Date: 10/1-3/96

Activity: Geoprobe. Installed piezos /collected GW samples

Comments: Installed 3 piezos & 10 probe holes. Collected GW samples from all.

# SITE ACTIVITIES

21-Feb-97

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**Meter/Line #: 72890** 

Location/Line #: Ohio C Govt #3

**MW#:** 

Depth to GW:

**Depth to Product:** 

**Product Thickness:** 

**Date:** 1/23/97

Activity: Install PZ4

Comments: Install PZ4 north of pit on potentiometric downgradient side.

### PIEZOMETER INSTALLATION RECORD

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

Elevation

I

Well Location	SEo	F 11+	
GWL Depth 13.09-1	2.71	TOR	
Installed By K PAC	DILLA		

Date/Time Started 10/1/96 Date/Time Completed 10/1/96

ltem	Material	Depth	ļſ	<u>ור</u>	Ground Surf
		(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				x x	Top of Sea
Bottom of Well Screen			XX		
Top of Peltonite Seal			x x	x x	T
Bottom of Peltonite Seal				Î	
Top of Gravel Pack					100 01 2016
Bottom of Gravel Pack					
Top of Natural Cave-In					
Bottom of Natural Cave-In	<u> </u>	_			
Top of Groundwater					Bottom of s
Total Depth of Borehole					Bottom of I

Comments:

	Borehole # Well # Page 1	PZ -
Project Name	EPFS PITS	
Project Number	16297	Phase 6004
Site Location	Ohio C. Govi J	72890
On-Site Geologist Personnel On-Site	CM CHANCE D CHARLEY	
Contractors On-Si Client Personnel O	te	

Top of Protective Casing Top of Riser Ground Surface	<u>NA</u>
Top of Seal Top of Gravel Pack Top of Screen	8.5'
Bottom of Screen Bottom of Borehole	<u>12.5</u>



### PIEZOMETER INSTALLATION RECORD

Philip Environmental Services, Inc. 4000 Monroe Rd.

Farmington, NM 87401 (506) 326-2262 FAX (506) 326-2388

Elevation		
Well Location	NOF PH	
GWL Depth	10.98 TOR	
Installed By K	PADILLA	

Date/Time Started 10/1/96 Date/Time Completed 10/1/96

Depths in Reference to Grou	und Surface		<b>F</b>	=	Top of Protective Casing	
ltem	Material	Depth (feet)	┛Г		Ground Surface	
Top of Protective Casing						
Bottom of Protective Casing	<u> </u>					
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			<b>v</b> v		Top of Seal	
Bottom of Well Screen		_	x x	x x		
Top of Peltonite Seal			x x	x x		
Bottom of Peltonite Seal					Top of Sereco	
Top of Gravel Pack			F	1		
Bottom of Gravel Pack			F	1		
Top of Natural Cave-in	 					
Bottom of Natural Cave-In			F			
Top of Groundwater			E	1	Bottom of Screen	1
Total Depth of Borehole			<u></u>		Dottom of Borenole	

Comments:

	Borehole # Well # Page 1 of 1
Project Name Project Number 16297 Site Location	EPFS PITS Phase 6004 in C Gara 72840
On-Site Geologist Personnel On-Site Contractors On-Site Client Personnel On-Site	CM CHANCE D CHARLEY

ſ

Geologist Signature

### PIEZOMETER INSTALLATION RECORD

 Philip Environmental Services, Inc.

 4000 Monroe Rd.

 Farmington, NM 87401

 (506) 326-2262

 FAX (505) 326-2388

Elevation	
Well Location	NW FPIN
GWL Depth	9-3-863 12.29 TUR
Installed By K P	ADILLA
Date/Time Starte	d

Date/Time Completed

Depths in Reference to Gro	und Surface		F===-7	Top of Protective Casing	NA
ltem	Material	Depth (feet)		Ground Surface	
Top of Protective Casing					
Bottom of Protective Casing				I.	
Top of Permanent Borehole Casing		N/A			
Bottom of Permanent Borehole Casing		N/A			
Top of Concrete					
Bottom of Concrete	<u> </u>				
Top of Grout					
Bottom of Grout					
Top of Well Riser	··				
Bottom of Well Riser					
Top of Well Screen				Top of Seal	
Bottom of Well Screen	· ·		x x x x x x x x x x x x x x x x x x x		
Top of Peltonite Seal	· · · · · · · · · · · · · · · · · · · ·		x x x x x x x x x x x x x x x x x x x		
Bottom of Peltonite Seal				Top of Gravel Pack	
Top of Gravel Pack		_		Top of Screen	7.0
Bottom of Gravel Pack					
Top of Natural Cave-In					
Bottom of Natural Cave-In					
Top of Groundwater				Bottom of Screen	12.0
Total Depth of Borehole				Bottom of Borehole	

Comments:

	Borehole #	PZ - 3
	Well #	
	Page 1	of <u>1</u>
Project Name	EPFS PITS	
Project Number 16	297	Phase 6004
Site Location	Ship ( Gevi3	72890
On-Site Geologist	CM CHANCE	<u></u> ,
Personnel On-Site	D CHARLEY	
Contractors On-Site		
<b>Client Personnel On-S</b>	ite	



# EL PASO FIELD SERVICES

# FIELD SERVICES LABORATORY ANALYTICAL REPORT PIT CLOSURE PROJECT

# SAMPLE IDENTIFICATION

	Field ID	Lab ID			
SAMPLE NUMBER:	CMC285	970019			
MTR CODE   SITE NAME:	72890	Ohio C Govt #3			
SAMPLE DATE   TIME (Hrs):	01/23/97	1000			
PROJECT:	Geo	probe			
DATE OF BTEX EXT.   ANAL.:	1/24/97	1/24/97			
TYPE   DESCRIPTION:	PZ4 Water				

Field Remarks:

### RESULTS PARAMETER RESULT UNITS QUALIFIERS DF 0 BENZENE 18.8 PPB TOLUENE 265 PPB D1 ETHYL BENZENE 24.0 PPB TOTAL XYLENES 378 PP8 TOTAL BTEX 686 PPB

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 83.2 % for this sample All QA/QC was acceptable. DF = Dilution Factor Used

The "D1" qualifier indicates that the analyte concentration exceeded the calibration curve limit.

Narrative:

Approved By: Our Fart Con

Date: 1-29-97

970019.XLS,1/28/97

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A 2339			Remarks	weten	OLIOCAULI 72890	)	Slark		PZ3 sample had	product about to it.	ish high dissalve dereg							Date/Time 27 Peceived by: (Signature)	-46 9:45	Date/Time Received by: (Signature)		(Signature)	san juan repro Form 71-55 A
		Requested Analysis			P23	PH3	Trip (		No+e -	-ctra-	Potest			4	/			ture) [	ill 10-2	ture) [	 Remarks:	Date Results Reported / by:	
al Gas Company	<b>JSTODY RECORD</b>		Leserador Les		HCL /	Her V	2					<i>3</i> ]	/					Relinquished by: (Signat	percent of tard	Relinquished by: (Signat	Date/Time		
<b>E</b> I P Natura	CHAIN OF CU	Pits (Pit Clarie Prejoct) Type		AB Sample Number ers	/ CMCDOU 2	CMCDDI D	Trip Black	-										Date/Time Received by: (Signature)	10/1/96/17011 Xeles 372/000	Date/Time Received by: (Signature)	Date/Time Received for Laboratory by: (Signature)	Carrier Phone No.	
	Geoprope	roject No. Project Name しんりフ EPFS	ampiers (signature) CM Chunch	Date Time Comp. GR	~ STC1 96/1/01 016L1	1911 V 1200												elinguished by: (Signature)	Les Class	elinquished by: (Signature)	elinquished by: (Signature)	arrier Co:	ir Bill 100.:



	Field ID	Lab ID
SAMPLE NUMBER:	CMC200	947910
MTR CODE   SITE NAME:	72890	Ohio C Govt #3
SAMPLE DATE   TIME (Hrs):	10/1/96	1315
PROJECT:	GEO	PROBE
DATE OF BTEX EXT.   ANAL.:	10/4/96	10/7/96
TYPE   DESCRIPTION:	WG	PZ3

Field Remarks:

# RESULTS

PARAMETER	RESULT	RESULT UNITS		QUALIFIERS				
BENZENE	505	PPB	5	D				
TOLUENE	36.5	РРВ	5	D				
ETHYL BENZENE	419	РРВ	5	D				
TOTAL XYLENES	3300	PPB	5	D,D1				
TOTAL BTEX	4260	РРВ						

-BTEX is by EPA Method 8020 -

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

The "D1" gualifier indicates that the analyte concentration exceeded the calibration curve limit.

95.6 % for this sample All QA/QC was acceptable. The Surrogate Recovery was at Narrative:

= Dilution Factor Used John Latch

Approved By: \_\_\_\_

Date: \_\_\_\_\_\_\_ 10 - 8 - 96

PTPRJWTR.XLS,10/7/96



	Field ID	Lab ID
SAMPLE NUMBER:	CMC201	947911
MTR CODE   SITE NAME:	72890	Ohio C Govt #3
SAMPLE DATE   TIME (Hrs):	10/1/96	1500
PROJECT:	GEOF	PROBE
DATE OF BTEX EXT.   ANAL.:	10/4/96	10/7/96
TYPE   DESCRIPTION:	WG	РНЗ

Field Remarks:

# RESULTS

PARAMETER	RESULT			QUALIFIE	RS	
			DF	0		
BENZENE	<1	PPB	1			
TOLUENE	<1	PPB	1			
ETHYL BENZENE	134	РРВ	5	D		
TOTAL XYLENES	613	PPB	5	D,J,X3		
TOTAL BTEX	747	PPB				

--BTEX is by EPA Method 8020 --

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

The "J" qualifier indicates that the analyte was analyzed for and positively identified, but the associated numerical value is an estimated quantity.

The "X3" qualifier indicates that the analyte identification and quantification of peaks was complicated by matrix interference: GC/MS confirmation is recommended.

The Surrogate Recovery was at <u>95.6</u>% for this sample All QA/QC was acceptable.

DF = Dilution Factor Used	$\mathcal{D}$ $\mathcal{D}$
Approved By:	abelin

Date: 10-8-96

947911.XLS,10/8/96



	Field ID	Lab ID
SAMPLE NUMBER:	N/A	10/1/1996 TRIP BLANK
MTR CODE   SITE NAME:	72890	Ohio C Govt #3
SAMPLE DATE   TIME (Hrs):	10/1/96	945
PROJECT:	GE	OPROBE
DATE OF BTEX EXT.   ANAL.:	10/4/96	10/4/96
TYPE   DESCRIPTION:	Irip Blank	N/A

Field Remarks: TRIP BLANK

RESULTS

PARAMETER	PARAMETER RESULT UNIT	UNITS		QUALIF	LIFIERS		
			DF	٥			
BENZENE	<1	РРВ					
TOLUENE	<1	PPB					
ETHYL BENZENE	<1	РРВ					
TOTAL XYLENES	< 3	PPB					
TOTAL BTEX	< 6	PPB	<u> </u>				

-BTEX is by EPA Method 8020 --

The Surrogate Recovery was at	105	% for this sample	All QA/QC was acceptable.
Narrative:		-	

DF = Dilution Factor Used

John Fartelin proved By: \_

Date: \_\_\_\_ 10 - 8 - 96

947911.XLS,10/8/96

	0	Natural Gas Company		<b>A</b> 2340
	CHAIN	OF CUSTODY RECORD		
roject No. Project Name	PITS	Type	Requested Analysis	
amplers: (Signature)	Date: $Date: 1 0 / \lambda / 9 \zeta$	And No. Of Sample Sample		Remarks
VDate Time Com	GRAB Sample Number	Contain-		
77913 10/2/96 0750	V CMC 202	> Her /	PZ à	Ohio C#3 72890
1914 1 Ogoo	V,CMC 203	6	62)	11
0401 51615	V, CMC204	X X	PH7	
1916 1240	CMCDOS	、   く	PHG	
1965 1 1330	, CMC206	۲ ۲	PH IJ	
1450 mg	WCMC207	۲ -	PH8	~
.01	CMC 208		PHO	CM1 ( 10/2/26
7 5161	Trip BLANK		Trip &/	a.K
			Note: P	HII, PHS had product
			alor H	potential dissolved
			phase	or odvet.
			-	
lelinquished by: (Signature)	Date/Time Received by: (Signature)	Relinquished by: (Sign	ature) Date	1 ime 387 Heceived by: (Signature)
may have	10/2/96/1700 / Pally Starle	ruuzza	phecial Juni	4:40
lelinquished by: (Signature)	Date/Time Received by: (Signature)	Relinquisted by: (Sign	ature) Date	Time Received by: (Signature)
>				
lelinquished by: (Signature)	$\frac{\text{Date/Time}}{\sqrt{0/3/96}} \frac{\text{Received for Laboratory by: (S)}}{\sqrt{0/3/96}} \frac{1}{\sqrt{0.000}} \frac{1}{\sqrt{0.0000}} \frac{1}{0.0000000000000000000000000000000000$	ignature) Date/Time	Remarks:	
arrier Co:	Carrier Pho	ne No.	Date Results Reported / by: (Si	(nature)
ir Bill No.:				san juan repro Form 71-55 A



# SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	CMC202	947913
MTR CODE   SITE NAME:	72890	Ohio C Govt #3
SAMPLE DATE   TIME (Hrs):	10/2/96	750
PROJECT:	GEOF	PROBE
DATE OF BTEX EXT.   ANAL.:	10/4/96	10/4/96
TYPE   DESCRIPTION:	VG	PZ2

Field Remarks:

# RESULTS

PARAMETER	AMETER RESULT UNITS	QUALIFIERS				
			DF	٥		<u> </u>
BENZENE	<1	РРВ				
TOLUENE	<1	РРВ				
ETHYL BENZENE	<1	РРВ				
TOTAL XYLENES	< 3	РРВ				
FOTAL BTEX	< 6	РРВ				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at	96.8	_% for this sample	All QA/QC was acceptable.
Narrative:			•

DF = Dilution Factor Used John Fart a roved By:

Date: 0 - 1 - 26



	Field ID	Lab ID
SAMPLE NUMBER:	CMC203	947914
MTR CODE   SITE NAME:	72890	Ohio C Govt #3
SAMPLE DATE   TIME (Hrs):	10/2/96	900
PROJECT:	GEO	PROBE
DATE OF BTEX EXT.   ANAL.:	10/4/96	10/4/96
TYPE   DESCRIPTION:	VG	PZ1

Field Remarks:

# RESULTS

PARAMETER	RESULT	UNITS		QUALIF	IERS	
			DF	٥		
BENZENE	<1	РРВ				
TOLUENE	<1	РРВ				
ETHYL BENZENE	<1	РРВ				
TOTAL XYLENES	< 3	РРВ				
TOTAL BTEX	< 6	PPB				

### -BTEX is by EPA Method 8020 -

The Surrogate Recovery was at	94.9	% for this sample	All QA/QC was acceptable.
Narrative:			

DF = Dilution Factor Used olin Leabler proved By:

Date:	iU	- F	-96	



# SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	CMC204	947915
MTR CODE   SITE NAME:	72890	Ohio C Govt #3
SAMPLE DATE   TIME (Hrs):	10/2/96	1020
PROJECT:	GEOF	PROBE
DATE OF BTEX EXT.   ANAL.:	10/4/96	10/5/96
TYPE   DESCRIPTION:	VG	PH7

Field Remarks:

# RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	٥		
BENZENE	<1	PPB				
TOLUENE	<1	PPB				
ETHYL BENZENE	< 1	РРВ				
TOTAL XYLENES	< 3	PPB				
TOTAL BTEX	< 6	РРВ				

-BTEX is by EPA Method 8020 -

The Surrogate Recovery was at	95.1	% for this sample	All QA/QC was acceptable.
Narrative:			

DF = Dilution Factor Used

John Faitch roved By: \_

Date: 10-8-96



	Field ID	Lab ID
SAMPLE NUMBER:	CMC205	947916
MTR CODE   SITE NAME:	72890	Ohio C Govt #3
SAMPLE DATE   TIME (Hrs):	10/2/96	1240
PROJECT:	GEOI	PROBE
DATE OF BTEX EXT.   ANAL.:	10/7/96	10/7/96
TYPE   DESCRIPTION:	VG	РН9

Field Remarks:

# RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	<u>a</u>		
BENZENE	<1	РРВ				
TOLUENE	<1	РРВ				
ETHYL BENZENE	<1	РРВ				i
TOTAL XYLENES	< 3	РРВ				
TOTAL BTEX	< 6	РРВ				

-BTEX is by EPA Method 8020 -

The Surrogate Recovery was at \_\_\_\_\_86.8 % for this sample All QA/QC was acceptable. Narrative:

DF = Dilution Factor Used John Feola roved By:

Date: 10 - 8 -90



	Field ID	Lab ID
SAMPLE NUMBER:	CMC206	947917
MTR CODE   SITE NAME:	72890	Ohio C Govt #3
SAMPLE DATE   TIME (Hrs):	10/2/96	1330
PROJECT:	GEOI	PROBE
DATE OF BTEX EXT.   ANAL.:	10/7/96	10/7/96
TYPE   DESCRIPTION:	VG	PH11

Field Remarks:

# RESULTS

PARAMETER	RESULT U	UNITS	QUALIFIERS			
			DF	٥		
BENZENE	112	РРВ	10	D		
TOLUENE	<1	РРВ	10	D		
ETHYL BENZENE	641	РРВ	10	D		
TOTAL XYLENES	4650	РРВ	10	D		
TOTAL BTEX	5403	РРВ				

### -BTEX is by EPA Method 8020 -

The "D" qualifier indicates that the analyte is calculated based on a secondary dilution factor. The Surrogate Recovery was at 82.6 % for this sample All QA/QC was acceptable. Narrative:

DF = Dilution	Factor Used	
Froved By:	An Zalil	<u>k.</u>

Date: 10-8-96



	Field ID	Lab ID
SAMPLE NUMBER:	CMC207	947918
MTR CODE   SITE NAME:	72890	Ohio C Govt #3
SAMPLE DATE   TIME (Hrs):	10/2/96	1450
PROJECT:	GEO	PROBE
DATE OF BTEX EXT.   ANAL.:	10/5/96	10/5/96
TYPE   DESCRIPTION:	VG	PH8

Field Remarks:

# RESULTS

PARAMETER	RESULT UNITS	UNITS	QUALIFIERS			
		L	DF	Q		
BENZENE	6280	PPB	100	D		
TOLUENE	15750	РРВ	100	D		
ETHYL BENZENE	600	РРВ	100	D		
TOTAL XYLENES	7280	РРВ	100	D		
TOTAL BTEX	29910	РРВ				

-BTEX is by EPA Method 8020 -

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

The Surrogate Recovery was at	90.9	% for this sample	All QA/QC was acceptable.	
Narrative:				
DF = Dilution Factor Used $\swarrow$	0		_	
Toved By:	vdr-		Date: (0 - 8 - 90	



# SAMPLE IDENTIFICATION

	Field ID	Lab iD
SAMPLE NUMBER:	N/A	947919
MTR CODE   SITE NAME:	72890	Ohio C Govt #3
SAMPLE DATE   TIME (Hrs):	10/2/96	957
PROJECT:	GEO	PROBE
DATE OF BTEX EXT.   ANAL.:	10/4/96	10/4/96
TYPE   DESCRIPTION:	Trip Blank	N/A

Field Remarks:

TREP BLANK

# RESULTS

PARAMETER	RESULT UNITS		QUALIFIERS			
			DF	٥		
BENZENE	<1	РРВ				
TOLUENE	<1	ррв				
ETHYL BENZENE	<1	РРВ				
TOTAL XYLENES	<3	PPB				
TOTAL BTEX	< 6	РРВ				

-BTEX is by EPA Method 8020 -

The Surrogate Recovery was at	103	% for this sample	All QA/(	QC was acceptable.	
Narrative: DF = Dilution Factor Used	I. i. A			le a Gl	
Proved By:	Jan Un		Date:	10-810	

947918.XLS,10/7/96

A 2341			Remarks		()hio (#3 728%0		Xr						ime.38 Received by: (Signature)	. i. i.	ime Received by: (Signature)			ature)	san juan repro Form 71-55 A
		Requested Analysis			PH b	PHS 1	Trip Bla						ure) Date/T	TWall 10-9-96	ure) Date/T		Remarks:	Date Results Reported / by: (Sign	
ural Gas Company	CUSTODY RECORD		enbiuy:	ain- Rrke TIS	HCL V		>						Relinquished by: (Signat	- feeer S	Relinquished by (Signat		re) Date/Time		
	CHAIN OF C	Type 170	Date: Date: N/ n/ n/ average of	AB Sample Number ers	/CMC 208	CMC 207	Trip Blank						Date/Time Received by: (Signature)	Marth 11 and 1 and 1 and 1	Date/Time Heveived by (Signature)		Date/Time Received for Laboratory by: (Signatur $10/4/96_0930000000000000000000000000000000000$	Carrier Phone No.	
		Project No. Project Name	Samplers: (Signature)	Date Time Comp. GRA	V 0100 10/5/01 02611	10/2/01 242	1921 10/3/9%						Relinquished by: (Signature)		Relinquished by: (Signature)	>	Relinquished by: (Signature)	Carrier Co:	Air Bill No.:



# SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	CMC208	947920
MTR CODE   SITE NAME:	72890	Ohio C Govt #3
SAMPLE DATE   TIME (Hrs):	10/3/96	910
PROJECT:	GEOF	PROBE
DATE OF BTEX EXT.   ANAL.:	10/5/96	10/5/96
TYPE   DESCRIPTION:	VG	PH6

Field Remarks:

# RESULTS

PARAMETER	RESULT	UNITS		QUALIFIERS					
			DF	٥					
BENZENE	282	РРВ	50	D					
TOLUENE	1380	РРВ	50	D					
ETHYL BENZENE	177	РРВ	50	D					
TOTAL XYLENES	2560	РРВ	50	D					
TOTAL BTEX	4400	РРВ							

### -BTEX is by EPA Method 8020 --

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

91.2 % for this sample All QA/QC was acceptable. The Surrogate Recovery was at Narrative:

DF = Dilution Factor Used

proved By:

Date: 10-8-96



# SAMPLE IDENTIFICATION

Field ID Lab ID N/A 947921 SAMPLE NUMBER: Ohio C Govt #3 MTR CODE | SITE NAME: 72890 SAMPLE DATE | TIME (Hrs): 10/3/96 930 GEOPROBE **PROJECT:** DATE OF BTEX EXT. | ANAL.: 10/4/96 10/4/96 TYPE | DESCRIPTION: Blank N/A Irip

Field Remarks:

Blank IRIP

# RESULTS

PARAMETER	RESULT	UNITS		QUALIF	IERS	
			DF	٥		
BENZENE	<1	РРВ				
TOLUENE	<1	РРВ				
ETHYL BENZENE	<1	РРВ				
TOTAL XYLENES	<3	РРВ				
TOTAL BTEX	< 6	РРВ				

-BTEX is by EPA Method 8020 -

The Surrogate Re	coverv was at	104	% for this sample		DC was acceptable.	
Narrative:						
$DF \Rightarrow Dilution Fac$	ctor Used	1 0				
proved By:	John O	fulle		Date:	16-5-90	

	•					0		as Company				4	2342	
						CHAIN O	F CUST	<b>FODY RECC</b>	<b>DRD</b>					
oject N	r) Pro	ject Name	$d \sum_{i=1}^{n}$	571			Type	~		Requested Analysis				
	(Signature)	6	, , , , , , , , , , , , , , , , , , ,		Date: / [j]/ -(-	1415	No. of Sample	Depuid no	>				Remarks	
	Date	ime Con	Jp. GRAB		Sample Number	~	ontain- ers		7	//				
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vir Bill No	::													n iuan repro Form 71-65 A
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# SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	CMC210	947922
MTR CODE   SITE NAME:	72890	Ohio C Govt #3
SAMPLE DATE   TIME (Hrs):	10/4/96	1040
PROJECT:	GEOF	PROBE
DATE OF BTEX EXT.   ANAL.:	10/7/96	10/7/96
TYPE   DESCRIPTION:	VG	PH13

Field Remarks:

# RESULTS

PARAMETER	RESULT	UNITS		QUALIF	IERS	
			DF	٥		
BENZENE	14.2	РРВ				
TOLUENE	132	РРВ				
ETHYL BENZENE	17.6	РРВ				
TOTAL XYLENES	219	PPB				
TOTAL BTEX	383	РРВ				

### --BTEX is by EPA Method 8020 --

The Surrogate Recovery was at	87.6	% for this sample	All QA/QC was acceptable.
Narrative:			

DF = Dilution Factor Used Au Fallh roved By:

Date: <u>10-8-96</u>



# SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	CMC211	947923
MTR CODE   SITE NAME:	72890	Ohio C Govt #3
SAMPLE DATE   TIME (Hrs):	10/4/96	1150
PROJECT:	GEOF	PROBE
DATE OF BTEX EXT.   ANAL.:	10/7/96	10/8/96
TYPE   DESCRIPTION:	VG	PH12

Field Remarks:

# RESULTS

PARAMETER	RESULT	UNITS		QUALIF	IERS	
			DF	Q		
BENZENE	39.8	РРВ				
TOLUENE	134	PPB	i			
ETHYL BENZENE	14.1	РРВ				
TOTAL XYLENES	199	PPB				
TOTAL BTEX	387	РРВ				

-BTEX is by EPA Method 8020 -

The Surrogate Recovery was at 84.4 % for this sample All QA/QC was acceptable. Narrative:

DF = Dilution Factor Used ohn Karlen roved By:

Date: 10-5-96



	Field ID	Lab ID
SAMPLE NUMBER:	N/A	947924
MTR CODE   SITE NAME:	72890	Ohio C Govt #3
SAMPLE DATE   TIME (Hrs):	10/4/96	955
PROJECT:	GEO	PROBE
DATE OF BTEX EXT.   ANAL.:	10/7/96	10/7/96
TYPE   DESCRIPTION:	TETP Blank VG	N/A

# RESULTS

PARAMETER	RESULT	UNITS		QUALIF	IERS	
			DF	٥		
BENZENE	<1	РРВ				
TOLUENE	<1	РРВ				
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. Narrative:

DF = Dilution Factor Used Approved By: \_\_\_\_\_\_Alu-Zallh

Date: <u>10 - 8 - 96</u>

		CHAIN OF CUR	STODY RECORD		<b>A</b> 2344	ELPASO
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ELPASO NO.REG.LAB

EL PASO FIELD SERVICES

## FIELD SERVICES LABORATORY

<u>ID</u>:505-599-2261

### ANALYTICAL REPORT

# **PIT CLOSURE PROJECT**

# SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	CMC220	947943
MTR CODE   SITE NAME:	72890	Ohio C Govt #3
SAMPLE DATE   TIME (Hrs):	10/22/96	915
PROJECT:	Geo	probe
DATE OF BTEX EXT.   ANAL.:	10/23/96	10/23/96
TYPE   DESCRIPTION:	PHZ Grab	-PH2- Water

Field Remarks:

## RESULTS

PARAMETER	RESULT	UNITS	DF	QUALIFIE	RS	
BENZENE	<1	РРВ				
TOLUENE	18.3	РРВ				
ETHYL BENZENE	133	РРВ				
TOTAL XYLENES	1350	РРВ		F		
TOTAL BTEX	1501	РРВ				

-BTEX is by EPA Method 8020 -

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

DF = Dilution Factor Used

The "F" qualifier indicates the analyte is taken from the FID.

Narrative:

Approved By: John Katch

Date: 10/29/46

OCT 29'96 9:00 No.001 P.02

947943.XLS,10/25/98

ELPASO NO.REG.LAB



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		EXPECTED	ANALYTICAL		ACC	EPTAEL	LE
NUMBER	TYPE	RESULT	RESULT	%R			
ICV LA-52589		PPB	PPB			YES	NO
60 PPB					RANGE		
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 %	<u> </u>	
SAMPLE		EXPECTED	ANALYTICAL		ACC	Ертав	LE
NUMBER	TYPE	RESULT	RESULT	%R			
LCS LA-45476		PPB	PPB			YES	NO
25 PPB					RANGE		
Benzene	Standard	25.0	26.7	107	39 - 150	×	
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	<u> </u>	
					the second s	1000 B R R R R R R R R R R R R R R R R R	
SAMPLE		EXPECTED	ANALYTICAL		ACC	EPTAB	ILE
SAMPLE NUMBER	TYPE	EXPECTED RESULT	ANALYTICAL RESULT	%R	ACC	ертае	ile:
SAMPLE NUMBER CCV LA+52589	түре	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACC	YES	ILE NO
SAMPLE NUMBER CCV LA-52589 60 PPB	түре	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACC RANGE	YES	ILE NO
SAMPLE NUMBER CCV LA-52589 60 PPB Benzene	TYPE Standard	EXPECTED RESULT PPB 50.0	ANALYTICAL RESULT PPB 52.7	%R 105	ACC RANGE 75 - 125 %	YES	NO
SAMPLE NUMBER CCV LA+52589 50 PPB Benzene Toluene	TYPE Standard Standard	EXPECTED RESULT PPB 50.0 50.0	ANALYTICAL RESULT PPB 52.7 52.2	%R 105 104	ACC RANGE 75 - 125 % 75 - 125 %	EPTAB YES X X	ILE NO
SAMPLE NUMBER CCV LA-52589 60 PPB Benzene Toluene Ethylenzene	TYPE Standard Standard Standard Standard	EXPECTED RESULT PPB 50.0 50.0 50.0	ANALYTICAL RESULT PPB 52.7 52.2 52.1	%R 105 104 104	ACC RANGE 75 - 125 % 75 - 125 % 75 - 125 %	EPTAH YES X X X	ILE NO
SAMPLE NUMBER CCV 1.A-52589 50 PPB Benzene Toluene Ethylenzene m & p - Xylene	TYPE Standard Standard Standard Standard Standard	EXPECTED RESULT PPB 50.0 50.0 50.0 100	ANALYTICAL RESULT PPB 52.7 52.2 52.1 104	%R 105 104 104 104	ACC RANGE 75 - 125 % 75 - 125 % 75 - 125 % 75 - 125 %	YES X X X X X X	NO NO
SAMPLE NUMBER CCV LA-52589 60 PPB Benzene Toluene Ethylenzene m & p - Xylene o - Xylene	TYPE Standard Standard Standard Standard Standard Standard	EXPECTED RESULT PPB 50.0 50.0 50.0 100 50.0	ANALYTICAL RESULT PPB 52.7 52.2 52.1 104 52.0	%R 105 104 104 104 104	ACC RANGE 75 - 125 % 75 - 125 % 75 - 125 % 75 - 125 % 75 - 125 %	ЕРТАН YES Х Х Х Х Х Х	ILE NO
SAMPLE NUMBER CCV 1.A-52589 50 PPB Benzene Toluene Ethylenzene m & p - Xylene o - Xylene SAMPLE	TYPE Standard Standard Standard Standard Standard Standard	EXPECTED RESULT PPB 50.0 50.0 50.0 100 50.0 EXPECTED	ANALYTICAL RESULT PPB 52.7 52.2 52.1 104 52.0 ANALYTICAL	%R 105 104 104 104 104	ACC RANGE 75 - 125 % 75 - 125 % ACC	YES X X X X X X X X ZEPTAI	ILE NO 3ILE
SAMPLE NUMBER CCV LA-52589 60 PPB Benzene Toluene Ethylenzene m & p - Xylene o - Xylene SAMPLE NUMBER	TYPE Standard Standard Standard Standard Standard Standard	EXPECTED RESULT PPB 50.0 50.0 50.0 100 50.0 EXPECTED RESULT	ANALYTICAL RESULT PPB 52.7 52.2 52.1 104 52.0 ANALYTICAL RESULT	%R 105 104 104 104 104 104	ACC RANGE 75 - 125 % 75 - 125 % 75 - 125 % 75 - 125 % 75 - 125 % ACC	EPTAE YES X X X X X X CEPTAI	ILE NO 3LE
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SAMPLE NUMBER CCV LA-52589 50 PPB Benzene Toluene Ethylenzene m & p - Xylene o - Xylene SAMPLE NUMBER CCV LA-52589 50 PPB	TYPE Standard Standard Standard Standard Standard TYPE	EXPECTED RESULT PPB 50.0 50.0 50.0 100 50.0 EXPECTED RESULT PPB	ANALYTICAL RESULT PPB 52.7 52.2 52.1 104 52.0 ANALYTICAL RESULT PPB	%R 105 104 104 104 104 104	ACC RANGE 75 - 125 % 75 - 125 % 75 - 125 % 75 - 125 % 75 - 125 % ACI RANGE	EPTAB YES X X X X CEPTAI YES	ILE NO 3LE NO
SAMPLE NUMBER CCV LA-52589 50 PPB Benzene Toluene Ethylenzene m & p - Xylene o - Xylene SAMPLE NUMBER CCV LA-52589 50 PPB Benzene	TYPE Standard Standard Standard Standard Standard TYPE Standard	EXPECTED RESULT PPB 50.0 50.0 50.0 100 50.0 EXPECTED RESULT PPB 50.0	ANALYTICAL RESULT PPB 52.7 52.2 52.1 104 52.0 ANALYTICAL RESULT PPB	%R 105 104 104 104 104 8%R 104	ACC RANGE 75 - 125 % 75 - 125 % 75 - 125 % 75 - 125 % ACC RANGE 75 - 125 %	YES YES X X X X CEPTAL YES	ILE NO BLE NO
SAMPLE NUMBER CCV LA-52589 50 PPB Benzene Toluene Ethylenzene m & p - Xylene o - Xylene SAMPLE NUMBER CCV LA-52589 50 PPB Benzene Toluene	TYPE Standard Standard Standard Standard Standard TYPE Standard Standard	EXPECTED RESULT PPB 50.0 50.0 50.0 100 50.0 EXPECTED RESULT PPB 50.0 50.0	ANALYTICAL RESULT PPB 52.7 52.2 52.1 104 52.0 ANALYTICAL RESULT PPB 52.0 51.2	%R 105 104 104 104 104 104 104	ACC RANGE 75 - 125 % 75 - 125 % 75 - 125 % 75 - 125 % ACC ACC RANGE 75 - 125 % 75 - 125 % 75 - 125 % 75 - 125 %	YES YES X X X X X X X YES X X X	ILE NO 3LE NO
SAMPLE NUMBER CCV LA-52589 50 PPB Benzene Toluene Ethylenzene m & p - Xylene o - Xylene o - Xylene SAMPLE NUMBER CCV LA-52589 50 PPB Benzene Toluene Ethylbenzene	TYPE Standard Standard Standard Standard Standard TYPE Standard Standard Standard	EXPECTED RESULT PPB 50.0 50.0 50.0 100 50.0 50.0 EXPECTED RESULT PPB 50.0 50.0 50.0	ANALYTICAL RESULT PPB 52.7 52.2 52.1 104 52.0 ANALYTICAL RESULT PPB 52.0 51.2 50.9	%R 105 104 104 104 104 104 104 102 102	ACC RANGE 75 - 125 % 75 - 125 % 75 - 125 % 75 - 125 % 75 - 125 % ACC RANGE 75 - 125 % 75 - 125 % 75 - 125 % 75 - 125 %	YES X X X X X X X YES X X X X X	ILE NO BLE NO
SAMPLE NUMBER CCV LA-52589 50 PPB Benzene Toluene Ethylenzene m & p - Xylene o - Xylene o - Xylene SAMPLE NUMBER CCV LA-52589 50 PPB Benzene Toluene Ethylbenzene m & p - Xylene	TYPE Standard Standard Standard Standard Standard TYPE Standard Standard Standard Standard Standard	EXPECTED RESULT PPB 50.0 50.0 50.0 100 50.0 EXPECTED RESULT PPB 50.0 50.0 50.0 50.0	ANALYTICAL RESULT PPB 52.7 52.2 52.1 104 52.0 ANALYTICAL RESULT PPB 52.0 51.2 50.9 101	%R 105 104 104 104 104 104 104 104 102 102 101	ACC RANGE 75 - 125 % 75 - 125 % 75 - 125 % 75 - 125 % ACC RANGE 75 - 125 % 75 - 125 %	YES X X X X X X X X X X X X X X X X X X X	ILE NO BLE NO

Narrative: Acceptable.

## ELPASO NO.REG.LAB

ID:505-599-2261

OCT 29'96 9:03 No.001 P.05

# EL PASO FIELD SERVICES LAB QUALITY CONTROL REPORT EPA METHOD 8020 - BTEX

Samples: 947943 - 947948 and 960880 & 960881

# BORATORY DUPLICATES:

and the second

·.'.'

BAMP22 [D 947935	TYPE	SAMPLE RESULT PPB	DUPLICATE RESULT PPB	RPD	ACI RANGE	CEPTABI YES	e No
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	

Narrative: Acceptable.

### LABORATORY SPIKES:

SAMPLE ID 2nd Analysis 947935	SPIKE Added PP8	SAMPLE RESULT PPB	SPIKE SAMPLE RESULT PPB	%R	RA	A NGE	CCERTABLE YES NO	
Benzene	50	4.07	57.2	106	75 -	125 %	, X	٦
Toluene	50	<1	53.6	107	75 -	125 %	X	Ĩ
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	

ative: 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	<b>^</b> <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

live: Acceptable.

Reported By: Mdu

Approved By: John Jana

Date: 10/29/46

# **1997 GROUNDWATER ANALYTICAL**

DRILLING	M TAFINE	EL .	SAN	u u					i.
A E 1 150 Natural Gas Company		CH/	VIN OF	CUSTO	NY RECO	RD		Pageofof	
PROJECT NUMBER PROJECT NAME # 24324 Pit Closure Project		583 83	-	REQ	<b>JESTED AN</b>	ALYSIS		CONTRACT LABORATORY P. O. NUMBER	
AMPLENS: (Signature)	DATE: S·22 JT	amun Ja Buiatno Buiatna	118.1 H 179E	8050 EX	ыр		INCE		
	FIELD ID	101 0F C	dT AT	978 9 493	8 <b>A</b> J		# anoas	REMARKS	<u> </u>
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CARRIER CO.								EL PASO NATURAL GAS COMPANY P. O. BOX 4990	
BILL NO.:	CHARGE CODE						599-2144	FARMINGTON, NEW MEXICO 87499	
White - Testing Laboratory Canary - EPNG Lab Pink	: - Field Sampler								

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

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FIELD SERVICES LABORATORY ANALYTICAL REPORT PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	RT6	970487
MTR CODE   SITE NAME:	72890	Ohio C Govt #3
SAMPLE DATE   TIME (Hrs):	5/22/97	1515
PROJECT:	Phase II Dri	illing - Initial
DATE OF BTEX EXT.   ANAL.:	5/27/97	5/27/97
TYPE   DESCRIPTION:	Monitor Well	Water

Field Remarks:

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

The Surrogate Recovery was at DF = Dilution Factor Used

96.0 for this sample All QA/QC was acceptable.

Narrative:

Approved By: \_\_\_\_\_\_ Olu Lalla 970487,6/2/97

Date: 6/3/97

PHL		Well	Number_	- M W	-	ł		velopmēnt ging	3	ELL בור	Deve	ELOP	MENT	AND F	ourgi		۷
Project Name	EPE!	Serial h	No. WDPD.			1	Prc	oject Ma		Cory	chi	ANCE		Project	Page_	of	
Client Company	V EI	ASD	Feld :	Service	ų		I							Phase.	Task No	12-2009	ļ
Site Name O	Ηïο	jo Jo	VERNME	NT #2			sit	e Addre:	SAM SAM	I I	AN C	N · · ·	٤				I
Development (	Criter J Volu of Ind	ia mes of icator P	Water Re arameters	smoval		Water \ Initial De Initial De Height o	/olume apth of apth to Mater	Calcula Well (fee Water (fi Columr	ation et) eet) in Well	1-75 14-85 (feet)_	ToR ToR 6.86	<u> </u>	strumen' di pH Me	S ter nitor		Vo. (If applicable VSTer	~
Methods of De Pump	svelo Ba	pment ller				Diamet. Item		es): Well Water Volt Jbic Feet	Gallor Gallor		ack illons to be emoved		🛱 Condu 🕅 Tempe	ctivity Me rature Me	eter <b>6</b> ater 0	vster	<b>•</b>
Centrifugal Submersible		Bottom Double	Valve Check V	/alve		Well Casir Gravel Pc	<del>و</del> يزلا	98.	<u>н.н</u>		22.45	<del>, , , , , , , , , , , , , , , , , , , </del>		ŧ			
Other		Stainle:	ss-steel Kt	emmerei		Drilling Flu	lids Total			<u> </u>	2-45	>	/ater Dis	posal		•	
Water Remove	al Da	ta										1	S NO	סת אס			J
		Developm Method	ient Remova fi faal/min	al Intake De J [feet]	ipth Ending Water Der (feel)	th Water	Volume Re (gallons)	a pevore	Product Vol temoved [g(	ume Te allons)	mperature (°C)	Ħ	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/L)		Comments	r
Date	me	Pump Bal	<u>ō</u>			Increme	L C VI	ulative In	cremen Cur	walive							
5-22-97 14	20					Ś					5.8	7.67	3560		Kisht	Brown	
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Developer's Sig	natur	(s)	Red	Ð	Ann	Ś			_D ate	5-22	-97	ية الا	viewer	D	te		I
Form A0101 Rev. 10,	16/94													i.	NEWFORM\PE		96

	ENTALS	Locatic	on No	<u>Mw-</u>	· .			VVA	IEK	JAI		
		Serial No	. WSD-						G	iroup	List Nun	nber
Sample Type	e: 🗴	Groundw	vater	🗆 Surfa	ce Wa	ter 🛛	Other				Date_5	5-22-97
Project Nam	EPF	FS Gu	J PI	+1					F	Projec	t No	7520
Project Mana	ager_C	ory (	chan	1 ve					F	Phase	.Task No	6003.77
Site Name _	OHic	<u> </u>	NERN	MENT	#3							
Sampling Requested Depth In Requested	<b>Specif</b> Samplir nterval Wait Fo	ications ng (feet) Noving	TOP 3	3'	-	<b>Initial</b> Time Initia	<b>Measure</b> Elapsed F I Water De	ments from Fina epth (feet	l Develop	menti 6-5	/Purging 36	(hours) <u>45 (</u>
Develop	oment/P	urging (ho	ours) _[	NONE	<u>~</u>	Nona	aqueous Li	quids Pre	sent (Des	cribe	<u> </u>	ONC
Vater Qua	ality/W	later Col	llection	<b>1</b>					DO = Dis	solved	Oxygen; (	Cond. = Conducti Notes
Date Time		Sampler Initials	w	ater Qua	lity Re	eadings		Water	Collection	Data		(Explain in Comm Below)
			Temp. (°C)	ρН	DO (mg/L)	Cond ) (µmhos/	Volume I. Removed (cm) (gallons)	Hemoval Rate (gal/min)	Pump Intake Depth (ft)	Bail	Final Water Depth ft)	
	sec	well	Deve	lopm	ent	ANC	Pur	fins t	Ata	<u>s</u> Le	et-	
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Sample Co	ontaine	ci ers er	ontainer T	үре:G = м. H = H	Clear G	lass; A =	Amber Glass;	P = Plast	ic; V = V0/ Ω = Other ()	A Vial	(Glass); O	= Other (Specify
Sample Co Analytical Parameter Li		ci ers pr C	eservative	ype:G = es:H = H	Clear G Cl; N =	lass; A = = HNO3; S Field Filtered	Amber Glass; = H2SO4; A Preserved	P = Plast = NaOH; Cooled During Collection	ic; V = VO	A Vial	(Glass); 0 / ); = N Comme	= Other (Specify Ione NtS
Sample Co Analytical Parameter Li		Ca Ers Pr C Number	ontainer T reservative Containe Type	ype: G = es: H = H r Volume (	Clear G Cl; N =	lass; A = = HNO3; S Field Filtered (es No	Amber Glass; = H <sub>2</sub> SO4; A Preserved	P = Plast = NaOH; Cooled During Collection Yes No	ic; V = V0	A Vial	(Glass); 0 /): = N Comme	= Other (Specify None NtS
Analytical Parameter Li BTC2		Ci ers Pr Ci Number	ontainer T reservative Containe Type Y	ype: G = es: H = H r Volume ( 40	Clear G Cl; N =  mL} Y	lass; A = HNO3; S Field Filtered Yes No	Amber Glass; = H2SO4; A Preserved	P = Plast = NaOH; Cooled During Collection Yes No	ic; $V = VO$ O = Other (1) SAMP	A Vial Specify	(Glass); 0 / ); = N Commen	= Other (Specify None Ints 1515
Sample Co Analytical Parameter Li BTcy	ontaine ist	Ci ers Pr C Number	ontainer T reservative Containe Type Y	ype: $G =$ es: $H = H$ r Volume ( 40	Clear G Cl; N = (mL) Y	lass; A = = HNO3; S Field Filtered Y	Amber Glass; = H <sub>2</sub> SO4; A Preserved	P = Plast = NaOH; Cooled During Collection Yes No X	ic; V = V0 0 = Other ( 5AMP	A Vial Specify	(Glass); 0 / ): = N Commen ) AT	= Other (Specify None Its /SIS
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Sample Co Analytical Parameter Li BTcy		Carlor Provide Carlor	ontainer T reservative Containe Type Y	ype: G = es: H = H r Volume ( 40	Clear G Cl; N = (mL) Y	lass; A = = HNO <sub>3</sub> ; S Field Filtered V V	Amber Glass; = H <sub>2</sub> SO <sub>4</sub> ; A Preserved	P = Plast = NaOH; Cooled During Collection Yes No	ic; V = V0 0 = Other ( 5AMP	A Vial	(Glass); 0 (): = N Comment ) AT	= Other (Specify None Its ISIS
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Sample Co Analytical Parameter Li BTcp IBTcp	S		ontainer T reservative Containe Type Y	ype: $G =$ s: $H = H$ r Volume (	Clear G Cl: N = (mL) Y	lass; A = Field Filtered y	Amber Glass; = H <sub>2</sub> SO <sub>4</sub> ; A Preserved H H Chain-of	P = Plast = NaOH; Cooled During Collection Yes No X X -	ic; V = VO	A Vial Specify	(Glass); O (): = N Commen ) AT	= Other (Specify None Its ISIS
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ANALYTICAL REPORT PIT CLOSURE PROJECT

# SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	970606
MTR CODE   SITE NAME:	72890	Ohio C Govt #3 MW-1
SAMPLE DATE   TIME (Hrs):	6/26/97	1353
PROJECT:	Sample 4	- 1st Quarter
DATE OF BTEX EXT.   ANAL.:	6/27/97	6/27/97
TYPE   DESCRIPTION:	Monitor Well	Water

Field Remarks:

RESULTS PARAMETER RESULT UNITS QUALIFIERS DF 0 BENZENE PPB <1 TOLUENE <1 PPB ETHYL BENZENE <1 PPB TOTAL XYLENES PPB <3 TOTAL BTEX <6 PPB --BTEX is by EPA Method 8020 -for this sample All QA/QC was acceptable. The Surrogate Recovery was at 99.5 DF = Dilution Factor Used Narrative: Jon Lardin Date: 7-/0-57 Approved By: 970606~1.XLS,7/10/97





**Field Services Laboratory** 

**Analytical Report** 

# SAMPLE IDENTIFICATION

EPFS LAB ID:	970606	
DATE SAMPLED:	06/26/97	
TIME SAMPLED (Hrs):	1353	
SAMPLED BY:	Dennis Bird	
MATRIX:	Water	
METER CODE:	72890	
SAMPLE SITE NAME:	Ohio C Govt #3	<u> </u>
SAMPLE POINT:	MW-1	

FIELD REMARKS:

# **GENERAL CHEMISTRY WATER ANALYSIS RESULTS**

PARAMETER	RESULT	UNITS	DATE ANALYZED
Laboratory pH	7.5	Units	07/01/97
Alkalinity as C0 <sub>3</sub>	0.0	PPM	07/01/97
Alkalinity as HC0 <sub>3</sub>	647	РРМ	07/01/97
Calcium as Ca	496	РРМ	06/27/97
Magnesium as Mg	35	PPM	06/27/97
Total Hardness as CaC0 <sub>3</sub>	1,383	PPM	06/27/97
Chloride as Cl	10	PPM	06/27/97
Sulfate as SO <sub>4</sub>	1,970	PPM	06/27/97
Fluoride as F	1.1	PPM	06/27/97
Nitrate as N0 <sub>3</sub> -N	<1.1	PPM	06/27/97
Nitrite as N0 <sub>2</sub> -N	<1.1	РРМ	06/27/97
Ammonium as NH <sub>4</sub> <sup>+</sup>	<0.2	PPM	06/27/97
Phosphate as PO <sub>4</sub>	<1.1	РРМ	06/27/97
Potassium as K	7.16	РРМ	06/27/97
Sodium as Na	566	PPM	06/27/97
Total Dissolved Solids	3,560	РРМ	07/01/97
Conductivity	3,910	umhos/cm	07/01/97
Anion/Cation %	0.4%	%, <5.0 Accepted	07/10/97

Lab Remarks:

Reported By:\_\_\_\_\_Maa

Approved By: Alu Falle

Date: 7-10-91 970606GC.XLS

FIELD SERVICES LABORATORY

**FIELD SERVICES** 

ANALYTICAL REPORT

### SAMPLE IDENTIFICATION

SAMPLE NUMBER:	970606
SAMPLE DATE:	06/26/97
SAMPLE TIME (Hrs):	1353
SAMPLED BY:	D. Bird
MATRIX:	Water
METER CODE:	72890
SAMPLE SITE NAME:	Huerfano Pipeline
SAMPLE POINT:	Ohio C Govt. #3 MW-1

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REMARKS:

### RESULTS

PARAMETER	TOTAL RESULT (mg/L)	N. M. WOCC LIMIT (mg/L)
ARSENIC	<0.029	0.100
BARIUM	0.07	1.00
CADMIUM	0.0003	0.010
CHROMIUM	<0.004	0.050
LEAD	<0.003	0.050
MERCURY	<0.0002	0.002
SELENIUM	<0.005	0.050
SILVER	0.0008	0.050

### **References:**

Method 3015, Microwave Assisted Acid Digestion of Aqueous Samples and Extracts, Test Methods for Evaluating Solid Waste, SW-846, Sept., 1994. Method 7061A, Arsenic (Atomic Absorption, Gaseous Hydride), Test Methods for Evaluating Solid Waste, SW-846, USEPA, July, 1992. Method 7081, Barium (Atomic Absorption, Furnace Technique), Test Methods for Evaluating Solid Waste, SW-846, USEPA, July, 1992. Method 7131, Cadmium (Atomic Absorption, Furnace Technique), Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept., 1986. Method 7191, Chromium (Atomic Absorption, Furnace Technique), Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept., 1986. Method 7421, Lead (Atomic Absorption, Furnace Technique), Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept., 1986. Method 245.5, Mercury (Automated Cold Vapor Technique), Methods for the Determination of Metals in Environmental Samples, EPA 600/4-91/010, USEPA, June, 1991.

Method 7741A, Selenium (Atomic Absorption, Gaseous Hydride), Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept., 1994. pod 7761, Silver (Atomic Absorption, Furnace Technique), Test Methods for Evaluating Solid Waste, SW-846, USEPA, July, 1992.

Reported By: m

Approved By: Achitarde

Date: 9-4-97



# QUALITY CONTROL REPORT

Sample ID: 970606 Date Reported: 08/28/97

### STANDARD REFERENCE MATERIAL

Analyte	Found Result (mg/L)	Known Value (mg/L)	% Recovery
Arsenic	0.031	0.032	96.6%
Barium	0.061	0.065	94.6%
Cadmium	0.0026	0.0024	110%
Chromium	0.005	0.005	103%
Lead	0.013	0.012	108%
Mercury	0.0044	0.0046	95.2%
Selenium	0.038	0.041	94.3%
Silver	0.0066	0.0068	97.6%
[	DUPLICATE ANALYS	IS (mg/L)	

### Duplicate Original Analyte Sample Sample % RPD Result Result Arsenic 0.0077 0.0084 8.7% Barium 0.222 0.216 2.7% Cadmium ND ND NA Chromium 0.004 0.004 1.0% Lead ND ND NA Mercury ND ND NA Selenium ND ND NA Silver 0.0004 0.0002 NA

### SPIKE ANALYSIS (mg/L)

Analyte	Original Sample Result	Spike Sample Result	Spike Added	Recovery Percent
Arsenic	0.0077	0.126	0.100	118%
Barium	0.222	1.247	1.00	94.2%
Cadmium	ND	0.0117	0.010	117%
Chromium	0.004	0.054	0.050	101%
Lead	ND	0.044	0.050	88.3%
Mercury	ND	0.0017	0.0020	85.0%
Selenium	ND	0.053	0.050	101%
Silver	ND	0.0550	0.050	110%

### **METHOD BLANK**

Analyte	Found Result (mg/L)	Detection Level (mg/L)
Arsenic	ND	0.026
Barium	ND	0.019
Cadmium	ND	0.0002
Chromium	ND	0.004
Lead	ND	0.003
Mercury	ND	0.0002
Selenium	ND	0.005
Silver	ND	0.0004

Ader Sall

ND: Not Detected at stated detection level.

NA: Not Applicable.

Reported By: \_\_\_\_\_

Approved By:\_

Date:\_ 9-4-97

lopment and Purging Data	<ul> <li>Development Well Number ハルン/</li> <li>Purging Meter Code フ2 P分の</li> </ul>	lation Instruments	eet) 2.6.7 Conductivity Meter Gravel Pack	In Vieil Gallons to be CHCMCI 3 NU	デノ /デン Water Disposal	KUTZ SEPARATOR				Ime Product Volume Temperature Conduct/vfty Dissolved Commants	umulativ increment [cumulative] printment mg/L	201 6.77 4130	50 186 6.95 4100	20 2/2 40/0 3.0				nata 6-26-97 Ravianuer Ale Miller Data 7-10-97	
Well Dev	. An I	Nater Volume Calc nttal Depth of Well (feet)	leight of Water Column in Well Diameter (Inches): Well 🥢	ttern Cubic Feet	Well Casing	Gravel Pack	Dritting Fluids	Total		Ending Water V Denth Remove	(feet) Increment		S S	077			ALLONS.		
	Site Name OHIO C GOUT.	Development Criteria	Methods of Development	Pump Baller Centrifugal X Bottom Valve	Submersible Double Check Valve	Peristatitic Ctainless-steel Kemmerer		Other	Water Removal Data	Development Removal Intake Data Mathod Rata Darth	Pump Baller (gal/min) (feet)	6-26-97 13-09	62697 1315	6.21.67 1335			Comments BANGED DAV P 7.0 6	Printered Standing Ulmini Blill	

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plers: (Signature) CONNA MM Date Time Comp. GR.	i Briel Suid	Date: 9-17-97 mple Number	type and No. Sample contain- ers	-7408994 19	endiuse	YUN		Remar	ŝ	<u> </u>
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nquished by: (Signature)	Date/Time	Received for Laboratory by: (5	lignature)	9/5/9	te/Time	Remarks:				
tier Co: au No -		cartier fr	Sne No.			Date Results	Reported / by: (Signatur	(a		



# FIELD SERVICES LABORATORY ANALYTICAL REPORT PIT CLOSURE PROJECT

# SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	970979
MTR CODE   SITE NAME:	72890	Ohio C Govt #3
SAMPLE DATE   TIME (Hrs):	9/12/97	1429
PROJECT:	Sample 4	2nd Quarter
DATE OF BTEX EXT.   ANAL.:	9/16/97	9/16/97
TYPE   DESCRIPTION:	MW-1	Water

Field Remarks: \_\_\_\_\_

DADAMETED	BESHI T	LINITS			EDC	
FRIDANCELEN	ACSUCI	JAIIS	DF	Q		
BENZENE	<1	РРВ				
TOLUENE	<1	РРВ			<u> </u>	
ETHYL BENZENE	<1	РРВ				L
TOTAL XYLENES	<3	РРВ			<u> </u>	
TOTAL BTEX	<6	РРВ				

Narrative:

Approved By:	Volu	Lard		Date:	9-22-97	
	Sec		970971BTEXMW,9/18/97			

			smets kit	17aR			Comments					Date 4-22-97
	er MW-1 e 77,890	struments X h Meter D Monitor X Conductivity Meter	X Temperature Meter	ater Disposal VUT2 SEDARA			PH Conductivity Dissolved Dygen	59 3220	78 3230			John Neille.
id Purging Data	ent Well Numb Meter Cod	<b>ב</b> 	ons to be hoved	2			t Volume Temperature 1 (gallons) °C Cumulative	22.0 6	306 6			12-97 Reviewer
Development an	Developme	Calculation	Y Gravel Pack Volume in Well Gall Feet Gallons Ren	25 13			ater Volume Product emoved (gal) Removed ent Cumulative Increment		0 20		SALLONS	Date 94
Well	, er	Water Volume ( Initial Depth of Well (feet), Initial Depth to Water (fee Height of Water Column	Diameter (inches) Well Water Item Cubic I	Well Casing Gravel Pack	Drilling Fluids Total		e Ending Water Wi h Depth Ri i) (feet) Incremi		190		NRV P 9.0 0	ud .
	HID C GOUT #	Criteria sing Volumes of Water Removel ion of Indicator Parameters	al X Bottom Valve	Ible Double Check Valve		ul Data	Development Removal Intak Method Rate Depti Pump Bailer (gal/min) (feet				WELL BAILED 1	Dennio Bis
	Site Name	Development ( 3 to 5 Cas Stabilizati	MIBILIOUS OF UE Pump Centrifug	Submersi Peristatitic	other	Water Remova	Date	<u> 2, 12, 97 13, 43</u>	P/2/2/1347		comments 7716	Developer's Signature

SAMPLE 4	LLOON E	Û		<b>dSC</b> fas Comp	hue			A 2151	N.98
ct No. Brajact Name		CHAIN	OF CUS	TODY R	ECORD			_	
	NC # 72B	с К	Type			Request Analysi	pe		
plers: (Signatura) DANU	" Bied	Date: 12-4-97	Sample Sample	TREASER.	andrus			Remarks	
TRUX Date Time Comp. G	RAB	iampie Number	Contain-						
EP 1247 1358	6 X	71272	5-1	< Jort			HID C Gol	1-4 E# 21	
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quished by: (Signature)	Date/Time	Received by: (Sinnature)		Belinoniek			t i		$\bigwedge$
ennio Bird	12-497 160 9					6		received by: (Signature)	
nquisfied by: (Signature)	Date/Time	Received by: (Signature)		Relinquishe	d by: (Signatur	6	Date/Time	Received by: (Signature)	
(Slandhurd)									
Anialian by. (Digitaline)		Heceived for Laboratory by: (S	ignature)	12/ Dete		emarks:			
ler Co:		Carrier Pho	ne No.	Lbe 1	0420	ate Results Re	ported / by: (Signature)		
iii No.:									

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# FIELD SERVICES LABORATORY ANALYTICAL REPORT PIT CLOSURE PROJECT

# SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	971272
MTR CODE   SITE NAME:	72890	Ohio C Govt. #3
SAMPLE DATE   TIME (Hrs):	12/4/97	1358
PROJECT:	Sample 4	3rd Quarter
DATE OF BTEX EXT.   ANAL.:	12/5/97	12/5/97
TYPE   DESCRIPTION:	MW-1	Water

Field Remarks:

# RESULTS

PARAMETER	RESULT	UNITS	DF	OVALIFI Q	ERS	
BENZENE	<1	РРВ				
TOLUENE	<1	РРВ				
ETHYL BENZENE	<1	РРВ				
TOTAL XYLENES	<3	РРВ				
TOTAL BTEX	<6	РРВ				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 98.8 % for this sample All QA/QC was acceptable.

John Farch

DF = Dilution Factor Used

Narrative:

Approved By:

971272BTEXMW,1/6/98

Date: 1/6/48

ite Name OHIO C GOUT HE evelopment Criteria						
evelopment Criteria	-	Development Purging	Well Num Meter Co	lber MW~1 de 72890		
Other Other Indicator Parameters Intital Dept	<b>Volume Calculatio</b> of Well (feet)	298	-	nstruments X pH Meter D Do Monttol	or <i>ity</i> Meter	
Aethods of Development Diameter (i Pump Bailer Contrifugal X Bottom Valve Item	nches): Well	Pack Gallons to be Removed	<b>[</b> ]	C Temperature C C C C C C C C C C C C C C C C C C C	D. D. CHEMETS	<b>M</b>
Submersible Double Check Valve Well Casin	5.3	15.8		Water Disposal	1 Endbard	
Deristatitic Cavel Pac Drilling Flu	ds ds			0	1-1-11inda	ł
Other Total			[]			
Vater Removal Data						
Development         Removal         Intake         Ending W           Date         Time         Method         Rate         Depth         Depth           Pump         Bailer         (gal/min)         (feet)         (feet)	ater Volume Removed (gal) Increment Cumulat	Product Volume Removed ( gallons) Ive Increment   Cumulati	Temperature °C ve	DH Luctivity	y Dissolved Oxygen Comn ma/L	ents
3-4-97 1308			16.4	256 4000		
12-497/3/2	3.0 3.0		145	7.19 4360		
2.497/323	2.0 5.0		13.4	7.25 4340		
2497/333	3.0 8.0		132	6.92 4370		
12-497/346	2.0 10.5	0	12.0	200 4460	35	
THE WELL BAILED DAY P.	12.0 SALON	s v				
Nonni Pind		12-497		La la	V.	