

3R - 155

REPORTS

DATE:

1997



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

February 27, 1998

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

RECEIVED

MAR 02 1998

Environmental Bureau
Oil Conservation Division

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,

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

Sandra D. Miller
Environmental Manager

xc: Mr. Bill Liese, 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

PHILIP
ENVIRONMENTAL

EPFS GROUNDWATER PITS

1997 ANNUAL GROUNDWATER REPORT

CANADA MESA #2
Meter/Line ID - 87640

SITE DETAILS

Legals - Twn: 24N Rng: 6W Sec: 24 Unit: 1
NMOCD Hazard Ranking: 40 Land Type: FEDERAL
Operator: MERRION OIL AND GAS CORP.

PREVIOUS ACTIVITIES

Site Assessment: Jul-94 Excavation: Aug-94 (80 cy) Soil Boring: Aug-95
Monitor Well: Aug-95

1997 ACTIVITIES

Quarterly Groundwater Monitoring - Quarterly groundwater monitoring was initiated on 11/4/96 and has continued into 1997. Groundwater analytical data are presented in Table 1.

Well Point Installation - Groundwater samples were collected from temporary monitoring wells. In addition, groundwater gradient was determined using the temporary monitoring wells.

Product Removal - A passive product removal system was installed in MW-1 on 8/28/97. Quarterly groundwater sampling was discontinued when product removal was initiated.

CONCLUSIONS

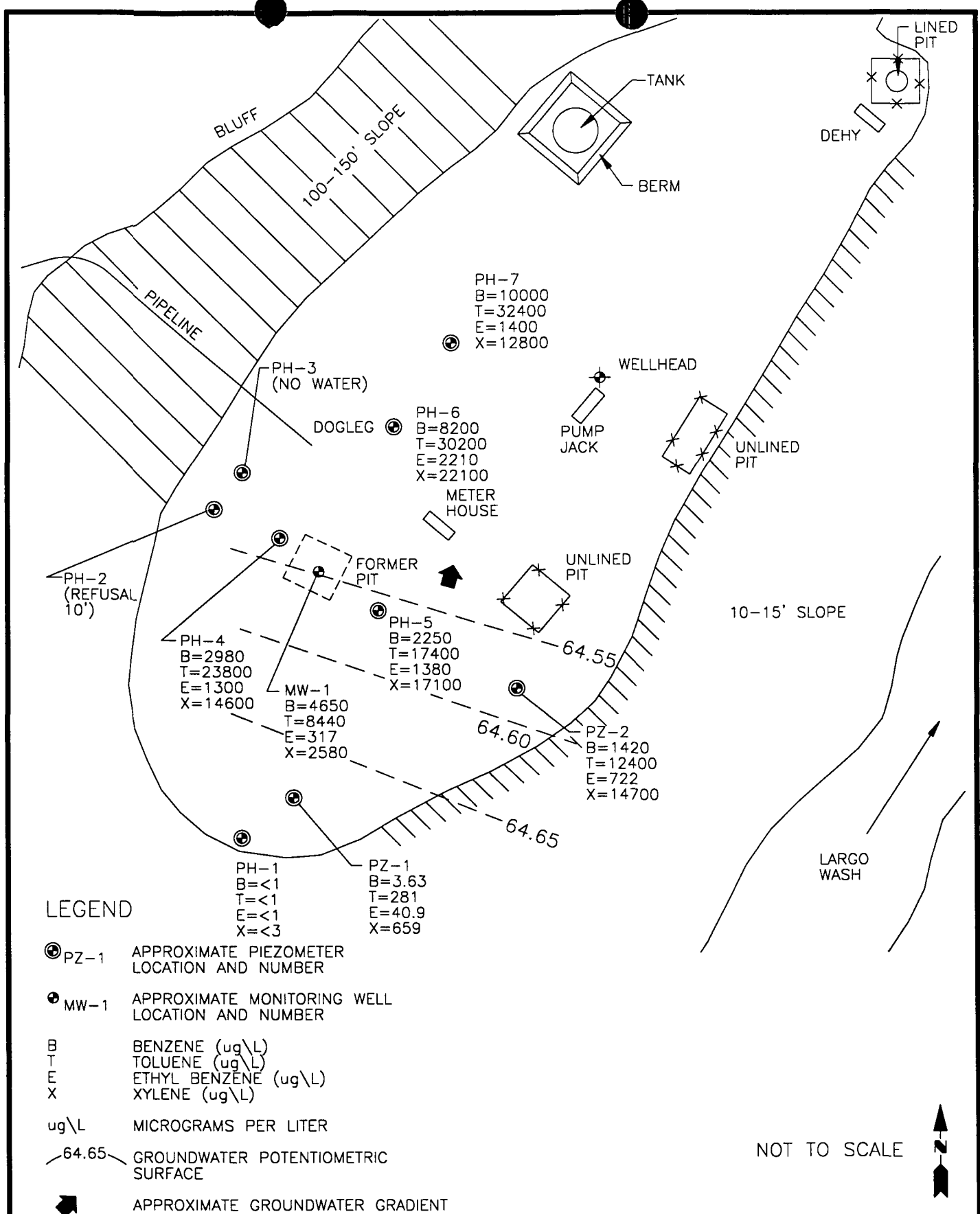
Based on groundwater levels collected from Well Point data, the groundwater flow trends to the northeast on this site, as presented in Figure 1. The northwestern side of the site is bound by sandstone bluffs, and the eastern edge is bordered by Largo Wash.

Less than one foot of product has been measured in MW-1 since installation. Approximately 9 gallons of product has been removed since the installation of the product skimmer. All product has been disposed of at EPFS' Kutz Separator in Bloomfield, NM. Seven groundwater samples were collected from temporary monitoring wells up and downgradient of MW-1. Two downgradient samples and three cross-gradient samples were all above standards for BTEX. One up-gradient sample collected from PH-1 was below standards for BTEX. No product was measured in any of the temporary wells, after they stabilized for 24 hours. The northeastern and eastern extent of contamination have not been defined at this time. Offsite work will be required to determine the eastern extent of contamination.

In addition to EPFS's former pit, there are two unlined pits on-site which may also be potential contaminant sources.

RECOMMENDATIONS

- EPFS proposes to conduct no further action at this site, until the operator commences with remediation of their production pits.
- Continue product removal at MW-1.
- Discontinue quarterly groundwater sampling at MW-1 until product removal is complete.
- Site is extremely remote. Once free phase product is removed, site may be candidate for risk based closure.



COL. 17520AW-001



TITLE: CANADA MESA #2
87640

OWN: TMM	DES.: CC
CHKD: CC	APPD:
DATE: 1/20/98	REV.: 0

PROJECT NO.: 17520
EPFS GW PITS

FIGURE 1

TABLE 1

Sample #	Meter/ Line #	Site Name	Sample Date	MW #	Project	Benzene (PPB)	Toluene (PPB)	Ethyl Benzene (PPB)	Total Xylenes (PPB)	Total BTEX
960918	87640	Canada Mesa #2	11/04/96	1	Sample 4 - 1st Quarter	= 5520	= 8880	= 469	= 3920	= 18789
970069	87640	Canada Mesa #2	2/5/97	1	Sample 4 - 2nd Qtr	= 3450	= 5200	= 214	= 1770	= 10634
970397	87640	Canada Mesa #2	5/7/97	1	Sample 4 - 3rd Qtr	= 4650	= 8440	= 317	= 2580	= 16000

07-61 Ballard

RECORD OF SUBSURFACE EXPLORATION

PHILIP ENVIRONMENTAL

4000 Monroe Road

Farmington, New Mexico 87401

(505) 326-2282 FAX (505) 326-2388

Borehole # BH-1

Well #

Page 1 of 2

Project Name

EPNG PITS

Project Number

14509

Phase

6000 77

Project Location

Canada Mesa #2 87640

Elevation

Borehole Location QI-S24-T24-R6

GWL Depth

Logged By CM CHANCE

Drilled By K Padilla

Date/Time Started 8/14/95-1230

Date/Time Completed 8/15/95-1220

Well Logged By

CM Chance

Personnel On-Site

K Padilla, D. Charlie, H. K. Kil

Contractors On-Site

Client Personnel On-Site

Drilling Method

4 1/4" ID HSA to 35' / 8 1/4" I.D. to 43.5'

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 HS	
0				Backfill 7' 12'						
5										
10										
15	1	15-17	18"	lt gry silty SAND, loose, sl moist vf-f sand, oter			1	80	541 295	-1232 h
20	2	20-22	12"	Br-BLK clayey SAND, vf-f sand, med dense, sl moist, oter medium sand			0	39	462 190	-1239
25	3	25-27	12"	Br-BLK SAND, vf-f sand med dense, dry			11	48	320 273	-1248
30	4	30-32	8"	lt Br sandy CLAY, vf sand, med stiff med plastic, sl moist Reddish Br Sandstone, subxaly, hard			22	51	148 219	-1258
35	5	35-35.1	0"	No Recovery			10	20	NA	-1311 -GW @ 33.5' BGS after 15 min
40										8/15/95

Comments:

GW @ 33.5' after setting 15 min. Will ream hole to 43.5' w/ 8 1/4" I.D. auger.
 MC 74 (30-32') sent to lab (BTEX, TPH). Will finish reaming hole & set well on 8/15/95

Geologist Signature

Cory Chance

RECORD OF SUBSURFACE EXPLORATION

PHILIP ENVIRONMENTAL

4000 Monroe Road

Farmington, New Mexico 87401

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

Borehole # BH-1

Well # _____

Page 2 of 2

Project Name

EPNG PITS

Project Number

14509

Phase

6000 77

Project Location

Canada Mesa #2 87640

Elevation _____

Borehole Location QI-S24-T24-R6

GWL Depth _____

Logged By CM CHANCE

Drilled By K Padilla

Date/Time Started 8/14/95-1230

Date/Time Completed 8/19/95-1220

Well Logged By

CM Chance

Personnel On-Site

K Padilla, D Charlie, H. Keil

Contractors On-Site _____

Client Personnel On-Site _____

Drilling Method

4 1/4" ID HSA / Ream w/ 8 1/4 I.D.

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			Drilling Conditions & Blow Counts
							Units: PPM	Σ	HS	
BZ	BH	HS								
40										Saturated cuttings
45										
50										
55										
60										
65										
70										
75										
80										

Comments:

Geologist Signature

CM Chance

MONITORING WELL INSTALLATION RECORD

Philip Environmental Services Corp.
4000 Monroe Road
Farmington, New Mexico 87401
(505) 326-2262 FAX (505) 326-2388

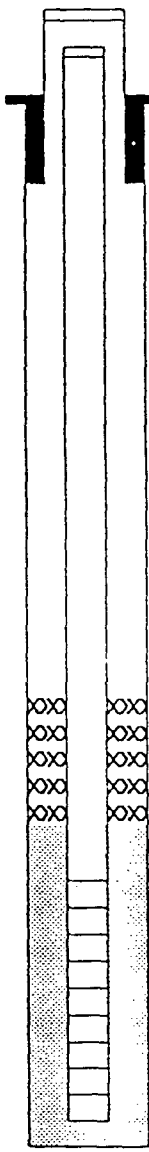
Borehole # BH-1
Well # MW-1
Page 1 of 1

Project Name EPNG Pits
Project Number 14509 Phase 6001.77
Project Location Canada Mesa #2 87640

Elevation _____
Well Location QI-S24-T24-R6
GWL Depth 33.5'
Installed By K. Padilla

On-Site Geologist CM Chance
Personnel On-Site F. Rivera, D. Charlie
Contractors On-Site _____
Client Personnel On-Site _____

Date/Time Started 8/15/95 - 1230
Date/Time Completed 8/15/95 - 1500

Depths in Reference to Ground Surface				
Item	Material	Depth		
Top of Protective Casing		NA		Top of Protective Casing <u>NA</u>
Bottom of Protective Casing		NA		Top of Riser <u>+2'</u>
Top of Permanent Borehole Casing		NA		Ground Surface <u>0'</u>
Bottom of Permanent Borehole Casing		NA		
Top of Concrete		NA		
Bottom of Concrete		NA		
Top of Grout	9-94# Type II Portland Cement	0'		
Bottom of Grout	.5-50# Powder bentonite	23'		
Top of Well Riser	30'-Sch 40 PVC			
Bottom of Well Riser	4" dia flush thread	28'		
Top of Well Screen	15'-sch 40 PVC 4" dia flush thread	28'		
Bottom of Well Screen	0.01 slot	43'		Top of Seal <u>23'</u>
Top of Peltonite Seal	2-50# bags	23'		
Bottom of Peltonite Seal	Enviroplug chips Bentonite	25'		Top of Gravel Pack <u>25'</u>
Top of Gravel Pack	24-50# bags	25'		Top of Screen <u>28'</u>
Bottom of Gravel Pack	10-20 silica sand	44'		
Top of Natural Cave-In		44'		
Bottom of Natural Cave-In		45'		
Top of Groundwater		33.5'		Bottom of Screen <u>43'</u>
Total Depth of Borehole		45'		Bottom of Borehole <u>45'</u>

Comments: Bentonite hydrated w/ 10 gal potable water

Geologist Signature

Cory Chance

WELLPOINTS



Natural Gas Company

Well Points

CHAIN OF CUSTODY RECORD

Page _____ of _____

PROJECT NUMBER # 24324		PROJECT NAME Pit Closure Project		DATE 8/6/97		REQUESTED ANALYSIS				CONTRACT LABORATORY P. O. NUMBER		
SAMPLERS (Signature)		DATE		TIME		MATRIX		FIELD ID		REMARKS		
LAB ID	DATE	TIME	MATRIX	FIELD ID		TOTAL NUMBERS OF CONTAINERS		SAMPLE TYPE	TPH EPA 418.1	BTEX EPA 8020	LAB PID	SEQUENCE #
970818	8/6/97	1000	Water	CMC 32b		2	V6		✓			D Loop Drip LP 169 PZ2
970819				Trip Blank		1	TB		✓			Trip Blank
970820	1310			CMC 327		2	V6		✓			Canada Mesa #287640 PZ1
970821	1430			CMC 327		2	V6		✓			11 PZ2
		*	SAMPLE BOTTLE TAKEN			2	1430	LISTED	25	CMC 328		Indw 1050
See 8/6/97												
35°												
RELINQUISHED BY: (Signature)		DATE/TIME		RECEIVED BY: (Signature)		DATE/TIME		RELINQUISHED BY: (Signature)		DATE/TIME		RECEIVED BY: (Signature)
Gary Chave		8/6/97 1700						Car Williams		8-7971037		
RELINQUISHED BY: (Signature)		DATE/TIME		RECEIVED BY: (Signature)		DATE/TIME		RELINQUISHED BY: (Signature)		DATE/TIME		RECEIVED BY: (Signature)
										8/7/97 1037		Mark J. Jaramila
REQUESTED TURNAROUND TIME: <input type="checkbox"/> ROUTINE <input type="checkbox"/> RUSH				SAMPLE RECEIPT REMARKS				RESULTS & INVOICES TO:				
CARRIER CO.								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:	CMC327	970820
MTR CODE SITE NAME:	87640	Canada Mesa #2
SAMPLE DATE TIME (Hrs):	8/6/97	1310
PROJECT:	WellPoints	
DATE OF BTEX EXT. ANAL.:	8/11/97	8/11/97
TYPE DESCRIPTION:	PZ-1	Water

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	3.63	PPB				
TOLUENE	281	PPB		D1		
ETHYL BENZENE	40.9	PPB				
TOTAL XYLENES	659	PPB		D1		
TOTAL BTEX	985	PPB				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 97.5 % for this sample All QA/QC was acceptable.

DF = Dilution Factor Used

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

Narrative:

Approved By:

Date:

8/13/97



FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	CMC328	970821
MTR CODE SITE NAME:	87640	Canada Mesa #2
SAMPLE DATE TIME (Hrs):	8/6/97	1430
PROJECT:	WellPoints	
DATE OF BTEX EXT. ANAL.:	8/12/97	8/12/97
TYPE DESCRIPTION:	PZ-2	Water

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	1420	PPB	25	D		
TOLUENE	12400	PPB	100	D		
ETHYL BENZENE	722	PPB	25	D		
TOTAL XYLENES	14700	PPB	100	D		
TOTAL BTEX	29242	PPB				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 93.4 % 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 Sutter

Date:

8/13/97

970821,8/13/97



EL PASO FIELD SERVICES

QUALITY CONTROL REPORT

EPA METHOD 8020 - BTEX

Samples: 970815 - 970821, 970828, 970830 - 970834

QA/QC for 8/11/97 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	47.4	94.8	75 - 125 %	X
Toluene	Standard	50.0	47.6	95.1	75 - 125 %	X
Ethylbenzene	Standard	50.0	47.8	95.7	75 - 125 %	X
m & p - Xylene	Standard	100	94.3	94.3	75 - 125 %	X
o - Xylene	Standard	50.0	48.3	96.5	75 - 125 %	X
LCS LA-45476 25 PPB						
Benzene	Standard	25.0	24.0	96.1	39 - 150	X
Toluene	Standard	25.0	24.4	97.6	46 - 148	X
Ethylbenzene	Standard	25.0	24.5	98.2	32 - 160	X
m & p - Xylene	Standard	50.0	48.3	96.6	Not Given	X
o - Xylene	Standard	25.0	24.0	96.0	Not Given	X
CCV LA-52589 50 PPB						
Benzene	Standard	50.0	47.7	95.4	75 - 125 %	X
Toluene	Standard	50.0	47.5	94.9	75 - 125 %	X
Ethylbenzene	Standard	50.0	47.6	95.3	75 - 125 %	X
m & p - Xylene	Standard	100	93.5	93.5	75 - 125 %	X
o - Xylene	Standard	50.0	48.1	96.2	75 - 125 %	X
CCV LA-52589 50 PPB						
Benzene	Standard	50.0	47.0	93.9	75 - 125 %	X
Toluene	Standard	50.0	46.4	92.8	75 - 125 %	X
Ethylbenzene	Standard	50.0	46.3	92.5	75 - 125 %	X
m & p - Xylene	Standard	100	90.3	90.3	75 - 125 %	X
o - Xylene	Standard	50.0	46.8	93.6	75 - 125 %	X

Narrative: Acceptable.

EL PASO FIELD SERVICES LAB

QUALITY CONTROL REPORT

EPA METHOD 8020 - BTEX

Samples: 970815 - 970821, 970828, 970830 - 970834

LABORATORY DUPLICATES:

SAMPLE ID	TYPE	SAMPLE RESULT PPB	DUPLICATE RESULT PPB	RPD	ACCEPTABLE	
					YES	NO
970816					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 970816					RANGE	
Benzene	50	<1	48.4	96.9	75 - 125 %	X
Toluene	50	<1	47.5	95.0	75 - 125 %	X
Ethylbenzene	50	<1	47.7	95.4	75 - 125 %	X
m & p - Xylene	100	<2	93.9	93.9	75 - 125 %	X
o - Xylene	50	<1	48.2	96.4	75 - 125 %	X

Narrative: Acceptable

ADDITIONAL ANALYTICAL BLANKS:

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

Narrative: Acceptable.

SOIL VIAL BLANK	SOURCE Lot MB1461	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.

CONTAMINATION CARRYOVER CHECK	SOURCE	PPB (Four 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: J.F.Approved By: John LanderDate: 8/14/97



Well Points

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



FIELD SERVICES LABORATORY

ANALYTICAL REPORT

PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	CMC329	970830
MTR CODE SITE NAME:	87640	Canada Mesa #2
SAMPLE DATE TIME (Hrs):	8/7/97	1050
PROJECT:	WellPoints	
DATE OF BTEX EXT. ANAL:	8/11/97	8/11/97
TYPE DESCRIPTION:	PH-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 94.4 % for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative: _____

Approved By: _____

Date: 8/13/97

970830,8/13/97



FIELD SERVICES LABORATORY

ANALYTICAL REPORT

PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	NA	970831
MTR CODE SITE NAME:	87640	Canada Mesa #2
SAMPLE DATE TIME (Hrs):	8/7/97	1050
PROJECT:	WellPoints	
DATE OF BTEX EXT. ANAL.:	8/11/97	8/11/97
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 97.3 % for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative: _____

Approved By: _____

Date: 8/13/97

970831,8/13/97



EL PASO FIELD SERVICES

QUALITY CONTROL REPORT

EPA METHOD 8020 - BTEX

Samples: 970815 - 970821, 970828, 970830 - 970834

QA/QC for 8/11/97 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	47.4	94.8	75 - 125 %	X
Toluene	Standard	50.0	47.6	95.1	75 - 125 %	X
Ethylbenzene	Standard	50.0	47.8	95.7	75 - 125 %	X
m & p - Xylene	Standard	100	94.3	94.3	75 - 125 %	X
o - Xylene	Standard	50.0	48.3	96.5	75 - 125 %	X
SAMPLE NUMBER	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE	
LCS LA-45476 25 PPB					YES	NO
					RANGE	
Benzene	Standard	25.0	24.0	96.1	39 - 150	X
Toluene	Standard	25.0	24.4	97.6	46 - 148	X
Ethylbenzene	Standard	25.0	24.5	98.2	32 - 160	X
m & p - Xylene	Standard	50.0	48.3	96.6	Not Given	X
o - Xylene	Standard	25.0	24.0	96.0	Not Given	X
SAMPLE NUMBER	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE	
CCV LA-52589 50 PPB					YES	NO
					RANGE	
Benzene	Standard	50.0	47.7	95.4	75 - 125 %	X
Toluene	Standard	50.0	47.5	94.9	75 - 125 %	X
Ethylbenzene	Standard	50.0	47.6	95.3	75 - 125 %	X
m & p - Xylene	Standard	100	93.5	93.5	75 - 125 %	X
o - Xylene	Standard	50.0	48.1	96.2	75 - 125 %	X
SAMPLE NUMBER	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE	
CCV LA-52589 50 PPB					YES	NO
					RANGE	
Benzene	Standard	50.0	47.0	93.9	75 - 125 %	X
Toluene	Standard	50.0	46.4	92.8	75 - 125 %	X
Ethylbenzene	Standard	50.0	46.3	92.5	75 - 125 %	X
m & p - Xylene	Standard	100	90.3	90.3	75 - 125 %	X
o - Xylene	Standard	50.0	46.8	93.6	75 - 125 %	X

Narrative: Acceptable.

EL PASO FIELD SERVICES LAB

QUALITY CONTROL REPORT

EPA METHOD 8020 - BTEX

Samples: 970815 - 970821, 970828, 970830 - 970834

LABORATORY DUPLICATES:

SAMPLE ID	TYPE	SAMPLE RESULT PPB	DUPLICATE RESULT PPB	RPD	ACCEPTABLE	
					YES	NO
970816					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 970816					RANGE	
Benzene	50	<1	48.4	96.9	75 - 125 %	X
Toluene	50	<1	47.5	95.0	75 - 125 %	X
Ethylbenzene	50	<1	47.7	95.4	75 - 125 %	X
m & p - Xylene	100	<2	93.9	93.9	75 - 125 %	X
o - Xylene	50	<1	48.2	96.4	75 - 125 %	X

Narrative: Acceptable

ADDITIONAL ANALYTICAL BLANKS:

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

Narrative: Acceptable.

SOIL VIAL BLANK	SOURCE	PPB	STATUS
	Lot MB1461	(None analyzed with this set)	
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	STATUS
		(Four analyzed with this set)	
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: J.F.Approved By: John Santolini

Date: _____

CHAIN OF CUSTODY RECORD

Page _____ of _____

PROJECT NUMBER # 24324		PROJECT NAME Pit Closure Project		DATE 8/11/97		FIELD ID		TOTAL NUMBERS OF CONTAINERS		SAMPLE TYPE		REQUESTED ANALYSIS				CONTRACT LABORATORY P. O. NUMBER	
LAB ID		DATE	TIME	MATRIX								TPH EPA 418.1	BTEX EPA 8020	LAB PID	SEQUENCE #	REMARKS	
970843	8/11/97	-	1135	Water				1	7B			✓				Trip Blank	
970844			1135					2	V6			✓				Canada Mesa #2 87640 PH4	
970845			1330					2	V6			✓				PH5	
970846			1450					2	V6			✓				PH6	
Note: PH6 HCL reacted vigorously w/ GW.																	
<div style="border: 2px solid black; padding: 10px; display: inline-block;"> RECEIVED SEP - 9 1997 </div>																	
RELINQUISHED BY: (Signature) <i>Cory Chane</i>		DATE/TIME 8/11/97 1700		RECEIVED BY: (Signature) <i>Cory Chane</i>		DATE/TIME 8/12/97 0745		RELINQUISHED BY: (Signature) <i>Cory Chane</i>		DATE/TIME 8/12/97 0745		RECEIVED BY: (Signature) <i>Marlow Armenta</i>					
RELINQUISHED BY: (Signature) <i>Cory Chane</i>		DATE/TIME 8/11/97 1700		RECEIVED BY: (Signature) <i>Cory Chane</i>		DATE/TIME 8/12/97 0745		RELINQUISHED BY: (Signature) <i>Cory Chane</i>		DATE/TIME 8/12/97 0745		RECEIVED BY: (Signature) <i>Marlow Armenta</i>					
REQUESTED TURNAROUND TIME: <input type="checkbox"/> ROUTINE <input type="checkbox"/> 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:

N/A

970843

MTR CODE | SITE NAME:

87640

Canada Mesa #2

SAMPLE DATE | TIME (Hrs):

8/11/97

1135

PROJECT:

Well Points

DATE OF BTEX EXT. | ANAL.:

8/13/97

8/13/97

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 90.0 % for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative:

Approved By: John L. LaddDate: 8/28/97

970843 Trip Blank BTEX, 8/28/97



FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	CMC330	970844
MTR CODE SITE NAME:	87640	Canada Mesa #2
SAMPLE DATE TIME (Hrs):	8/11/97	1135
PROJECT:	Well Points	
DATE OF BTEX EXT. ANAL:	8/13/97	8/13/97
TYPE DESCRIPTION:	PH-4	Water

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	2980	PPB	100	D		
TOLUENE	23800	PPB	100	D		
ETHYL BENZENE	1300	PPB	100	D		
TOTAL XYLENES	14600	PPB	100	D		
TOTAL BTEX	42680	PPB				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 84.4 % 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. Ladd

Date:

8/28/97



FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	CMC331	970845
MTR CODE SITE NAME:	87640	Canada Mesa #2
SAMPLE DATE TIME (Hrs):	8/11/97	1330
PROJECT:	Well Points	
DATE OF BTEX EXT. ANAL.:	8/13/97	8/13/97
TYPE DESCRIPTION:	PH-5	Water

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	2250	PPB	100	D		
TOLUENE	17400	PPB	100	D		
ETHYL BENZENE	1380	PPB	100	D		
TOTAL XYLENES	17100	PPB	100	D		
TOTAL BTEX	38130	PPB				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 84.0 % 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 T. Linder

Date: 8/28/97

970845 PH-5 BTEX, 8/28/97



FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	CMC332	970846
MTR CODE SITE NAME:	87640	Canada Mesa #2
SAMPLE DATE TIME (Hrs):	8/11/97	1450
PROJECT:	Well Points	
DATE OF BTEX EXT. ANAL:	8/13/97	8/13/97
TYPE DESCRIPTION:	PH-6	Water

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	8260	PPB	200	D		
TOLUENE	30200	PPB	200	D		
ETHYL BENZENE	2210	PPB	200	D		
TOTAL XYLENES	22100	PPB	200	D		
TOTAL BTEX	62770	PPB				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 81.1 % 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 Furbie

Date: 8/28/97



EL PASO FIELD SERVICES

QUALITY CONTROL REPORT EPA METHOD 8020 - BTEX

Samples: 970842 to 970846, 970853, 970854

QA/QC for 8/13/97 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	45.9	91.8	75 - 125 %	X
Toluene	Standard	50.0	46.2	92	75 - 125 %	X
Ethylbenzene	Standard	50.0	46.4	93	75 - 125 %	X
m & p - Xylene	Standard	100	91.8	91.8	75 - 125 %	X
o - Xylene	Standard	50.0	46.8	94	75 - 125 %	X
LCS LA-45476 25 PPB					RANGE	
Benzene	Standard	25.0	23.1	92.3	39 - 150	X
Toluene	Standard	25.0	23.4	94	46 - 148	X
Ethylbenzene	Standard	25.0	23.4	94	32 - 160	X
m & p - Xylene	Standard	50.0	46.2	92	Not Given	X
o - Xylene	Standard	25.0	23.8	95	Not Given	X
CCV LA-52589 50 PPB					RANGE	
Benzene	Standard	50.0	45.6	91.3	75 - 125 %	X
Toluene	Standard	50.0	45.5	91.0	75 - 125 %	X
Ethylbenzene	Standard	50.0	45.7	91.3	75 - 125 %	X
m & p - Xylene	Standard	100	89.8	89.8	75 - 125 %	X
o - Xylene	Standard	50.0	46.1	92	75 - 125 %	X
CCV LA-52589 50 PPB					RANGE	
Benzene	Standard	50.0	44.3	88.6	75 - 125 %	X
Toluene	Standard	50.0	43.8	87.7	75 - 125 %	X
Ethylbenzene	Standard	50.0	43.8	87.7	75 - 125 %	X
m & p - Xylene	Standard	100	86.0	86.0	75 - 125 %	X
o - Xylene	Standard	50.0	44.4	88.8	75 - 125 %	X

Narrative: Acceptable.

SAMPLE NUMBER CCV LA-52589 50 PPB	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	RPD	ACCEPTABLE	
					YES	NO
					RANGE	
Benzene	Standard	50.0	41.8	83.5	75 - 125 %	X
Toluene	Standard	50.0	41.6	83.1	75 - 125 %	X
Ethylbenzene	Standard	50.0	41.4	82.8	75 - 125 %	X
m & p - Xylene	Standard	100	81.3	81.3	75 - 125 %	X
o - Xylene	Standard	50.0	41.9	83.8	75 - 125 %	X

Narrative: Acceptable.

LABORATORY DUPLICATES:

SAMPLE ID 970842	TYPE	SAMPLE RESULT PPB	DUPLICATE RESULT PPB	RPD	ACCEPTABLE	
					YES	NO
					RANGE	
Benzene	Matrix Duplicate	<1	<1	0.00	+/- 20 %	X
Toluene	Matrix Duplicate	11.7	11.7	0.60	+/- 20 %	X
Ethylbenzene	Matrix Duplicate	<1	<1	0.00	+/- 20 %	X
m & p - Xylene	Matrix Duplicate	<1	<1	0.00	+/- 20 %	X
o - Xylene	Matrix Duplicate	<1	<1	0.00	+/- 20 %	X

Narrative: Acceptable.

LABORATORY SPIKES:

SAMPLE ID 2nd Analysis 970842	SPIKE ADDED PPB	SAMPLE RESULT PPB	SPIKE SAMPLE RESULT PPB	%R	ACCEPTABLE	
					YES	NO
					RANGE	
Benzene	50	<1	46.3	92.5	75 - 125 %	X
Toluene	50	11.7	56.1	89	75 - 125 %	X
Ethylbenzene	50	<1	45.6	91	75 - 125 %	X
m & p - Xylene	100	<1	89.8	89.8	75 - 125 %	X
o - Xylene	50	<1	46.2	92	75 - 125 %	X

Narrative: Acceptable

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

Narrative: Acceptable.

SOIL VIAL BLANK	SOURCE Lot MB1461	PPB (2 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.

8/13/97 TRIP BLANK	SOURCE	PPB (2 analyzed with)	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 F. Ladd

Date: 9-8-97



Natural Gas Company

CHAIN OF CUSTODY RECORD

Page _____ of _____

PROJECT NUMBER # 24324		PROJECT NAME Pit Closure Project		REQUESTED ANALYSIS				CONTRACT LABORATORY P. O. NUMBER			
LAB ID		DATE	TIME	MATRIX	FIELD ID	SAMPLE TYPE	TPH EPA 418.1	BTEX EPA 8020	LAB PID	SEQUENCE #	REMARKS
970859		8/12/97	1140	Water	CMC 333	V6		✓			Canada Mesa #287640 PH7
970860		-	-	-	Trip Blank	1 TB		✓			Trip Blank
<div style="border: 1px solid black; padding: 5px; display: inline-block; transform: rotate(-90deg); transform-origin: center;">RECEIVED SEP - 9 1997</div>											Product may be present in CMC 333
<i>See 8/12/97</i>											
RELINQUISHED BY: (Signature)		DATE/TIME		RECEIVED BY: (Signature)		DATE/TIME		RELINQUISHED BY: (Signature)		DATE/TIME	
<i>Cory Chase</i>		8/12/97 1700		<i>Cory Chase</i>		8/14/97 1020		<i>Cory Chase</i>		8/14/97 1020	
RELINQUISHED BY: (Signature)		DATE/TIME		RECEIVED BY: (Signature)		DATE/TIME		RELINQUISHED BY: (Signature)		DATE/TIME	
<i>Cory Chase</i>		8/12/97 1700		<i>Cory Chase</i>		8/14/97 1020		<i>Cory Chase</i>		8/14/97 1020	
REQUESTED TURNAROUND TIME: <input type="checkbox"/> ROUTINE <input type="checkbox"/> RUSH				SAMPLE RECEIPT REMARKS				RESULTS & INVOICES TO:			
CARRIER CO.								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:	CMC333	970859
MTR CODE SITE NAME:	87640	Canada Mesa #2
SAMPLE DATE TIME (Hrs):	8/12/97	1140
PROJECT:	Well Points	
DATE OF BTEX EXT. ANAL.:	8/14/97	8/14/97
TYPE DESCRIPTION:	PH-7	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	10000	PPB	100	D		
TOLUENE	32400	PPB	200	D		
ETHYL BENZENE	1400	PPB	100	D		
TOTAL XYLENES	12800	PPB	100	D		
TOTAL BTEX	56600	PPB				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 101 % 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 Ladd

Date: 8/28/97



EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY ANALYTICAL REPORT PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	970860
MTR CODE SITE NAME:	87640	Canada Mesa #2
SAMPLE DATE TIME (Hrs):	8/12/97	1140
PROJECT:	Well Points	
DATE OF BTEX EXT. ANAL.:	8/14/97	8/14/97
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 98 % for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative: _____

Approved By: _____

John J. J. J.

Date: _____

8/28/97

970860 Trip Blank, 8/28/97



EL PASO FIELD SERVICES

QUALITY CONTROL REPORT EPA METHOD 8020 - BTEX

Samples: 970841, 970852, 970859, 970860

QA/QC for 8/14/97 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	49.3	98.6	75 - 125 %	X
Toluene	Standard	50.0	49.4	99	75 - 125 %	X
Ethylbenzene	Standard	50.0	49.5	99	75 - 125 %	X
m & p - Xylene	Standard	100	98.7	98.7	75 - 125 %	X
o - Xylene	Standard	50.0	48.7	97	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	24.7	98.8	39 - 150	X
Toluene	Standard	25.0	24.8	99	46 - 148	X
Ethylbenzene	Standard	25.0	24.8	99	32 - 160	X
m & p - Xylene	Standard	50.0	49.8	100	Not Given	X
o - Xylene	Standard	25.0	24.8	99	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	48.8	97.7	75 - 125 %	X
Toluene	Standard	50.0	48.8	97.6	75 - 125 %	X
Ethylbenzene	Standard	50.0	48.9	97.7	75 - 125 %	X
m & p - Xylene	Standard	100	97.4	97.4	75 - 125 %	X
o - Xylene	Standard	50.0	48.7	97	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	48.7	97.4	75 - 125 %	X
Toluene	Standard	50.0	48.6	97.1	75 - 125 %	X
Ethylbenzene	Standard	50.0	48.5	97.0	75 - 125 %	X
m & p - Xylene	Standard	100	96.8	96.8	75 - 125 %	X
o - Xylene	Standard	50.0	48.4	96.7	75 - 125 %	X

Narrative: Acceptable.

LABORATORY DUPLICATES:

SAMPLE ID	TYPE	SAMPLE RESULT PPB	DUPLICATE RESULT PPB	RPD	ACCEPTABLE	
					YES	NO
970852					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 970852					RANGE	
Benzene	50	<1	48.8	97.6	75 - 125 %	X
Toluene	50	<1	49.8	100	75 - 125 %	X
Ethylbenzene	50	<1	49.6	99	75 - 125 %	X
m & p - Xylene	100	<2	99.2	99.2	75 - 125 %	X
o - Xylene	50	<1	50.1	100	75 - 125 %	X

Narrative: Acceptable

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

Narrative: Acceptable.

SOIL VIAL BLANK	SOURCE Lot MB1461	PPB (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 (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.

Reported By: CV

Approved By: 

Date: 9-8-97

**1997 GROUNDWATER
ANALYTICAL**



A 2665

Project No.	Project Name		Requested Analysis		Remarks	
Samplers: (Signature)	Date	Time	Comp.	GRAB	Sample Number	
<i>Donnie Bird</i>	11-4-96	1218	X		960918	
<i>Donnie Bird</i>	11-4-96	—	X		—	
<div style="display: flex; justify-content: space-between;"> <div> <div>Requested Analysis</div> <div>RTK5</div> <div>GENERAL ANALYSIS</div> <div>PERCENT METALS</div> </div> <div> <div>Preservation Technique</div> <div>4°C</div> <div>4°C</div> </div> <div> <div>Type and No. of Sample Containers</div> <div>2</div> <div>5-1</div> </div> </div>						
CANADA MESA #2 MW-1 MC 37840						
TRIP BLANK						
<div style="display: flex; justify-content: space-between;"> <div>Relinquished by: (Signature)</div> <div>Date/Time</div> <div>Received by: (Signature)</div> </div>						
<i>Donnie Bird</i>	11-4-96	1710				
<div style="display: flex; justify-content: space-between;"> <div>Relinquished by: (Signature)</div> <div>Date/Time</div> <div>Received by: (Signature)</div> </div>						
<div style="display: flex; justify-content: space-between;"> <div>Relinquished by: (Signature)</div> <div>Date/Time</div> <div>Received by: (Signature)</div> </div>						
<div style="display: flex; justify-content: space-between;"> <div>Carrier Co:</div> <div> <div>Received for Laboratory by: (Signature)</div> <div><i>Michael Hopper</i></div> </div> <div> <div>Remarks:</div> <div>11/16/96 0730</div> </div> </div>						
<div style="display: flex; justify-content: space-between;"> <div>Carrier Co:</div> <div> <div>Date Results Reported / by: (Signature)</div> <div></div> </div> <div> <div>Phone No.</div> <div></div> </div> </div>						
Air Bill No.:						



EL PASO FIELD SERVICES



FIELD SERVICES LABORATORY

ANALYTICAL REPORT PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	960918
MTR CODE SITE NAME:	87640	Canada Mesa #2 MW-1
SAMPLE DATE TIME (Hrs):	11/4/96	1218
PROJECT:	Sample 4 - 1st Quarter	
DATE OF BTEX EXT. ANAL.:	11/6/96	11/6/96
TYPE DESCRIPTION:	Monitor Well	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	5520	PPB	100	D		
TOLUENE	8880	PPB	100	D		
ETHYL BENZENE	469	PPB	100	D		
TOTAL XYLENES	3920	PPB	100	D		
TOTAL BTEX	18800	PPB				

—BTEX is by EPA Method 8020 —

The Surrogate Recovery was at 106 % 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 F. Fodor

Date: _____

11/12/96



Field Services Laboratory

Analytical Report

SAMPLE IDENTIFICATION

EPFS LAB ID:	960918
DATE SAMPLED:	11/04/96
TIME SAMPLED (Hrs):	1218
SAMPLED BY:	D. Bird
MATRIX:	Water
METER CODE:	87640
SAMPLE SITE NAME:	Huerfano
SAMPLE POINT:	Canada Mesa #2 MW-1

FIELD REMARKS:

GENERAL CHEMISTRY WATER ANALYSIS RESULTS

PARAMETER	RESULT	UNITS	DATE ANALYZED
Laboratory pH	7.4	Units	11/06/96
Alkalinity as CO ₃	0.0	PPM	11/06/96
Alkalinity as HCO ₃	635	PPM	11/06/96
Calcium as Ca	436	PPM	11/06/96
Magnesium as Mg	43	PPM	11/06/96
Total Hardness as CaCO ₃	1,265	PPM	11/06/96
Chloride as Cl	188	PPM	11/06/96
Sulfate as SO ₄	2,490	PPM	11/06/96
Fluoride as F	0.7	PPM	11/06/96
Nitrate as NO ₃ -N	<0.6	PPM	11/06/96
Nitrite as NO ₂ -N	<0.6	PPM	11/06/96
Ammonium as NH ₄ ⁺	<0.6	PPM	11/06/96
Phosphate as PO ₄	<0.6	PPM	11/06/96
Potassium as K	7.7	PPM	11/06/96
Sodium as Na	919	PPM	11/06/96
Total Dissolved Solids	4,490	PPM	11/06/96
Conductivity	4,750	umhos/cm	11/06/96
Anion/Cation %	1.7%	%, <5.0 Accepted	11/07/96

Remarks:

Reported By:

mh

Approved By:

John Latch

Date:

11/12/96



FIELD SERVICES LABORATORY ANALYTICAL REPORT

SAMPLE IDENTIFICATION

SAMPLE NUMBER:	960918
SAMPLE DATE:	11/04/96
SAMPLE TIME (Hrs):	1218
SAMPLED BY:	D. Bird
MATRIX:	Water
METER CODE:	87640
SAMPLE SITE NAME:	Huerfano
SAMPLE POINT:	Canada Mesa #2 MW-1

REMARKS: _____

RESULTS

PARAMETER	TOTAL RESULT (mg/L)	N. M. WQCC LIMIT (mg/L)
ARSENIC	<0.010	0.100
BARIUM	0.04	1.00
CADMIUM	<0.0002	0.010
CHROMIUM	0.002	0.050
LEAD	<0.004	0.050
MERCURY	<0.00024	0.002
SELENIUM	<0.003	0.050
SILVER	<0.0005	0.050

NOTE: The sample results have been corrected for volume adjustment associated with Method 3015.

References:

Method 3015, Microwave Assisted Acid Digestion of Aqueous Samples and Extracts, Test Methods for Evaluating Solid Waste, SW-846, Sept., 1994.
Method 7061A, Arsenic (Atomic Absorption, Gaseous Hydride), Test Methods for Evaluating Solid Waste, SW-846, USEPA, July, 1992.
Method 7081, Barium (Atomic Absorption, Furnace Technique), Test Methods for Evaluating Solid Waste, SW-846, USEPA, July, 1992.
Method 7131, Cadmium (Atomic Absorption, Furnace Technique), Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept., 1986.
Method 7191, Chromium (Atomic Absorption, Furnace Technique), Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept., 1986.
Method 7421, Lead (Atomic Absorption, Furnace Technique), Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept., 1986.
Method 245.5, Mercury (Automated Cold Vapor Technique), Methods for the Determination of Metals in Environmental Samples, 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.
Method 7761, Silver (Atomic Absorption, Furnace Technique), Test Methods for Evaluating Solid Waste, SW-846, USEPA, July, 1992.

Reported By: mh

Approved By: John Zuber

Date: 12/18/96

QUALITY CONTROL REPORT

Sample ID: 960918
Date Sampled: 11/04/96

Date Reported: 12/16/96

STANDARD REFERENCE MATERIAL

Analyte	Found Result (µg/L)	Known Value (µg/L)	% Recovery
Arsenic	30.6	32.4	94%
Barium	63.4	64.9	98%
Cadmium	2.75	2.38	116%
Chromium	5.07	4.76	107%
Lead	28.8	29.7	97%
Mercury	4.86	4.59	106%
Selenium	36.3	40.5	90%
Silver	4.81	4.32	111%

DUPLICATE ANALYSIS (mg/L)

Analyte	Original Sample Result	Duplicate Sample Result	% RPD
Arsenic	ND	ND	NA
Barium	0.04	0.04	0.0%
Cadmium	ND	ND	NA
Chromium	0.002	0.002	0.0%
Lead	ND	ND	NA
Mercury	ND	ND	NA
Selenium	ND	ND	NA
Silver	ND	ND	NA

SPIKE ANALYSIS (µg/L)

Analyte	Original Sample Result	Spike Sample Result	Spike Added	Recovery Percent
Arsenic	ND	115	100	105%
Barium	40	911	1000	87%
Cadmium	ND	9.53	10.0	95%
Chromium	2.3	51.6	50.0	99%
Lead	ND	40.2	50.0	80%
Mercury	ND	1.82	2.00	91%
Selenium	ND	47.9	50.0	96%
Silver	ND	49.6	50.0	99%

METHOD BLANK

Analyte	Found Result (µg/L)	Detection Level (µg/L)
Arsenic	ND	10
Barium	ND	10
Cadmium	ND	0.2
Chromium	ND	2
Lead	ND	4
Mercury	ND	0.24
Selenium	ND	3
Silver	ND	0.5

ND: Not Detected at stated detection level.

NA: Not Applicable.

Reported By: mh

Approved By: John L. Lash

Date: 12/18/96

Date 11/12/11

Water Disposal
KUTZ SEP 25 21 02

CHAIN OF CUSTODY RECORD

Project No.	Project Name		Requested Analysis		Remarks	
Samplers: (Signature)	Date	Time	Comp.	GRAB	Sample Number	Date: 2-5-97
MATRY	2-5-97	1235		X	970069	
WATER	2-5-97			X		
WATER	2-5-97			X		
<div style="display: flex; justify-content: space-between;"> <div> <p>Project Name: 07170 PIPELINE</p> <p>Samplers: (Signature) <i>Dennis Bird</i></p> </div> <div> <p>Date: 2-5-97</p> </div> </div>						
<div style="display: flex; justify-content: space-between;"> <div> <p>Requested Analysis: BTKE</p> <p>Remarks: CANADA MESA #2 MW / MC 87840</p> </div> <div> <p>Sample Number: 970069</p> </div> </div>						
<div style="display: flex; justify-content: space-between;"> <div> <p>Project Name: 07170 PIPELINE</p> <p>Samplers: (Signature) <i>Dennis Bird</i></p> </div> <div> <p>Date: 2-5-97</p> </div> </div>						
<div style="display: flex; justify-content: space-between;"> <div> <p>Requested Analysis: BTKE</p> <p>Remarks: CANADA MESA #2 MW / MC 87840</p> </div> <div> <p>Sample Number: 970069</p> </div> </div>						



FIELD SERVICES LABORATORY

ANALYTICAL REPORT

PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

SAMPLE NUMBER:	Field ID N/A	Lab ID 970069
MTR CODE SITE NAME:	87640	Canada Mesa #2 MW-1
SAMPLE DATE TIME (Hrs):	2/5/97	1235
PROJECT:	Sample 4 - 2nd Quarter	
DATE OF BTEX EXT. ANAL.:	2/6/97	2/6/97
TYPE DESCRIPTION:	Monitor Well	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	3450	PPB	100	D		
TOLUENE	5200	PPB	100	D		
ETHYL BENZENE	214	PPB	100	D		
TOTAL XYLENES	1770	PPB	100	D		
TOTAL BTEX	10600	PPB				

—BTEX is by EPA Method 8020 —

The Surrogate Recovery was at 94.8 % 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 Zarda

Date: _____

2-14-97



Well Development and Purging Data

Well Number MW-1
Meter Code 87640

<input type="checkbox"/>	Development
<input checked="" type="checkbox"/>	Purging

Site Name CANADA MESA #2

Development Criteria

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

Methods of Development

- | | | | |
|--------------------------|--------------------------|-------------------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Pump | Centrifugal | Bailer | Bottom Valve |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Submersible | Double Check Valve | | |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Peristaltic | Stainless-steel Kemmerer | | |

Water Volume Calculation

Initial Depth of Well (feet) 45.52
Initial Depth to Water (feet) 34.35
Height of Water Column in Well (feet) 11.17

4 Diameter (Inches): Well

Item	Water Volume In Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing		7.4	22.2
Gravel Pack			
Drilling Fluids			
Total			

Instruments

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

Water Disposal

KUTZ SEPARATOR

Water Removal Data

[illegible]

Comments 0.71' OF FREE FLOATING HYDROCARBON. STRONG HYDROCARBON SMELL.

Developer's Signature Dennis Bivab Date 2-25-97 Reviewer [Signature] Date 2-26-97



Natural Gas Company

A 1942

CHAIN OF CUSTODY RECORD

Project No.		Project Name		Requested Analysis		Remarks									
Samplers: (Signature)		Date		Type and No. of Sample Containers		Preservation Technique									
Date	Time	Comp.	GRAB	Sample Number											
WATER 5-7-97	1138		X	970397	G-2	4°C	X								
WATER 5-7-97	—		X	—	G-1	4°C	X								
<div>CAUTION MESA #2 MW-1 MC 877640 TRIP BLANK</div>															
Relinquished by: (Signature)		Date/Time		Received by: (Signature)		Date/Time									
Dennis Bied		5-7-97 1614													
Relinquished by: (Signature)		Date/Time		Received by: (Signature)		Date/Time									
Relinquished by: (Signature)		Date/Time		Received for Laboratory by: (Signature)		Remarks:									
				M. J. Hopper		5/19/97 0805									
Carrier Co:		Carrier Phone No.		Date Results Reported / by: (Signature)											
Air Bill No.:															



FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	970397
MTR CODE SITE NAME:	87640	Canada Mesa #2 MW-1
SAMPLE DATE TIME (Hrs):	5/7/97	1138
PROJECT:	Sample 4 - 3rd Quarter	
DATE OF BTEX EXT. ANAL.:	5/14/97	5/14/97
TYPE DESCRIPTION:	Monitor Well	Water

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	4650	PPB	50	D		
TOLUENE	8440	PPB	50	D		
ETHYL BENZENE	317	PPB	50	D		
TOTAL XYLENES	2580	PPB	50	D		
TOTAL BTEX	16000	PPB				

The Surrogate Recovery was at 96.8 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 Lach

Date:

6/3/97



5/27/67

KUTZ SEPARATOR