3R - 176

REPORTS

DATE:

1998

EL PASO FIELD SERVICES

Certified Mail: #Z 211 324 121

March 31, 1999

RECEIVED

APR 05 1999

ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

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

RE: 1998 Pit Project Annual Groundwater Report

Dear Mr. Olson:

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

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

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

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

Sincerely,

Scott T. Pope

Scott T. Pope P.G.
Senior Environmental Scientist

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

El Paso Field Services Company 614 Reilly Avenue Farmington, New Mexico 87401 Phone (505) 325-2841 Fax (505) 599-2235

SAN JUAN BASIN PIT CLOSURES
San Juan Basin, New Mexico

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

December 1998

Prepared For

El Paso Field Services
Farmington, New Mexico

Project 17520
Book 1

PHILIP SERVICES CORP

EPFS GROUNDWATER PITS
1998 ANNUAL GROUNDWATER REPORT

RECEIVED
APR 0 5 1999
ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

GALLEGOS CANYON 124E
Meter/Line ID -95608

SITE DETAILS

Legals - Twn: 28N **Rng:** 12W **Sec:** 35 **Unit:** N
NMOCD Hazard Ranking: 20 **Land Type:** NAVAJO
Operator: AMOCO PRODUCTION COMPANY

PREVIOUS ACTIVITIES

Site Assessment: Jan-95 **Excavation:** Oct-95 (196 cy) **Soil Boring:** Mar-98
Monitor Well: Jun-98 **Quarterly Sampling Initiated:** Jun-98

1998 ACTIVITIES

Quarterly Groundwater Monitoring - Quarterly groundwater monitoring continued through the first two quarters of 1998. Groundwater analytical data are presented in Table 1. A site map is presented as Figure 1.

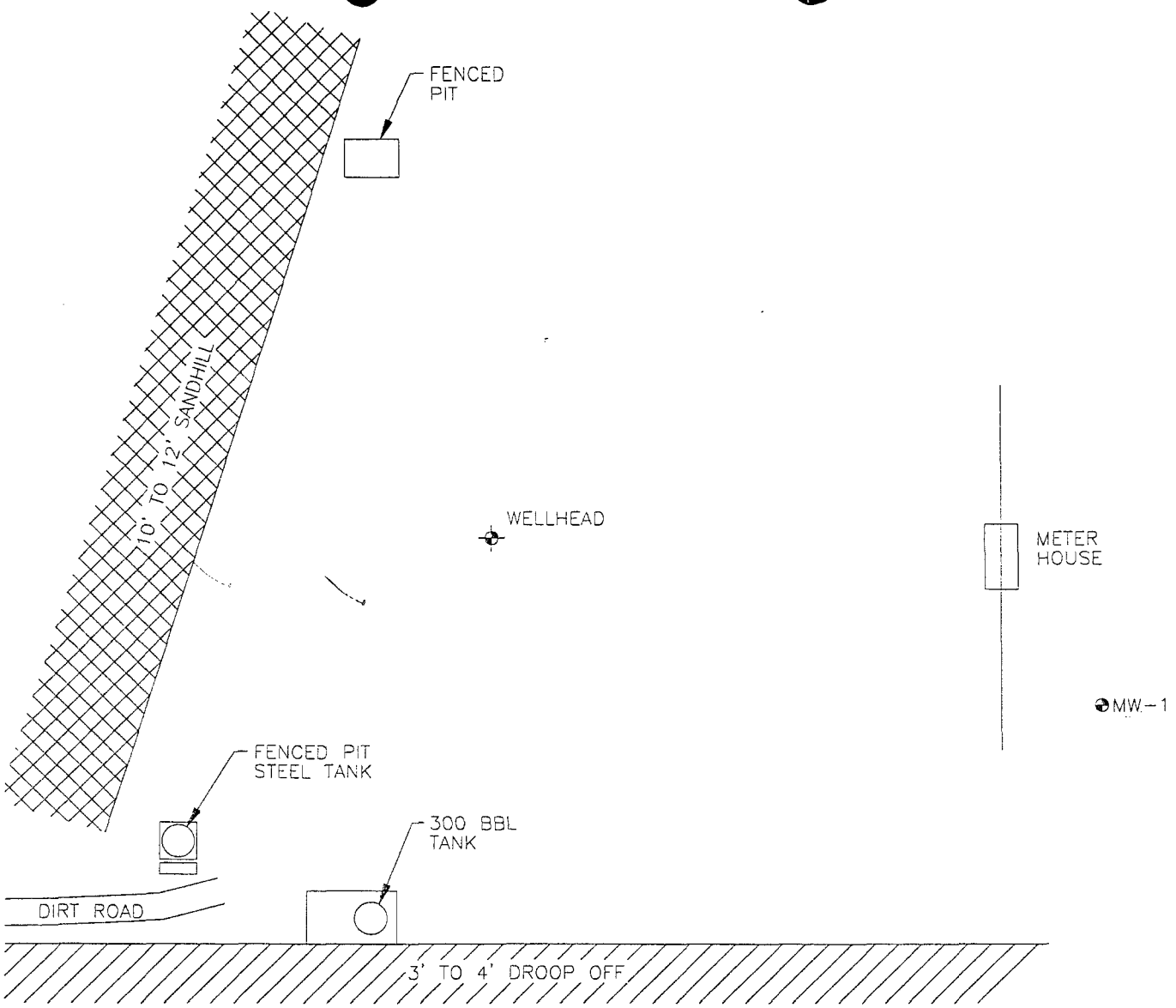
Monitor Well Installation – Monitor well MW-1 was installed in the abandoned pit on June 1, 1998. A boring log and well completion installation form are included with this report.

CONCLUSIONS

Analytical results of groundwater samples collected from MW-1 during December of 1998 show levels of for benzene, toluene and total xylenes above New Mexico Groundwater Standards.

RECOMMENDATIONS

- Install two temporary monitor wells to identify the groundwater gradient and identify other potential sources of hydrocarbon constituents in the groundwater.
- Continue quarterly sampling.



LEGEND

MW-1 APPROXIMATE MONITORING WELL LOCATION AND NUMBER

0 40
FEET

PHILIP SERVICES CORP.

TITLE:
GALLEGOS CANYON UNIT 124E
METER 95608
6/25/98

DWN:	DES.:
TMM	CI
CHKD:	APPD:
CI	
DATE:	REV.:
3/3/99	0

PROJECT NO.: 17520
EPFS GW PITS

FIGURE 1

COL. 17520BQ-001

TABLE 1

Sample #	Meter/ Line #	Site Name	Sample Date	MW #	Project	Benzene (PPB)	Toluene (PPB)	Ethyl Benzene (PPB)	Total Xylenes (PPB)	Total BTEX
980493	95608	GCU #124E	06/25/98	1	Sample 4 - Initial	= 340	= 271	= 111.0	= 510	= 1232
980642	95608	GCU #124E	09/14/98	1	Sample 4 - 1st Qtr	= 410	= 251	= 68.3	= 220	= 949
980869	95608	GCU #124E	12/15/98	1	Sample 4 - 2nd Qtr	= 710	= 1300	= 160.0	= 940	= 3100

MONITOR WELL INSTALLATION FORM

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

Borehole # BH-1
Well # MW1
Page 1 of 1

Project Name EPFS PITS >10
Project Number 19643 Phase 1002
Site Location Gallegos Unit 124E
95608

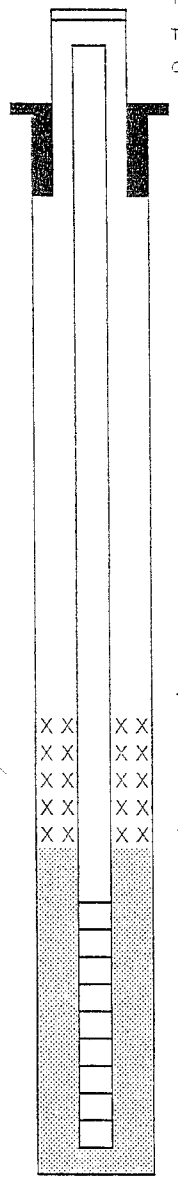
On-Site Geologist C CHANCE
Personnel On-Site D. Charely
Contractors On-Site
Client Personnel On-Site

Elevation
Well Location Center of Pit
GWL Depth ~26 BGS
Installed By K PADILLA

Date/Time Started 6/1/98
Date/Time Completed 6/1/98

Depths in Reference to Ground Surface

Item	Material	Depth (feet)
Top of Protective Casing		
Bottom of Protective Casing		
Top of Permanent Borehole Casing		
Bottom of Permanent Borehole Casing		
Top of Concrete		
Bottom of Concrete		
Top of Grout	CEMENT/	0
Bottom of Grout	BENTONITE SLURRY	14
Top of Well Riser	4" SCH 40	+3
Bottom of Well Riser	PVC	19
Top of Well Screen	0.010 SLOT SCH 40	19
Bottom of Well Screen	4" PVC	34
Top of Peltonite Seal	BENTONITE	14
Bottom of Peltonite Seal	CHIPS	16
Top of Gravel Pack	10-20 SILICA	16
Bottom of Gravel Pack	SAND	34
Top of Natural Cave-In		34
Bottom of Natural Cave-In		34
Top of Groundwater		~26
Total Depth of Borehole		34



Top of Protective Casing	
Top of Riser (survey elev.)	+3
Ground Surface	0
Top of Seal	14
Top of Gravel Pack	16
Top of Screen	19
Bottom of Screen	34
Bottom of Borehole	34

Comments Set well @ 34' BGS. Hydrated seal w/ 10 gal potable water. Well will be completed as above ground completion.

Geologist Signature Cory Chaney

MWINSTAL.wk1

RECORD OF SUBSURFACE EXPLORATION

PHILIP SERVICES CORP.
1000 Monroe Road
Farmington, New Mexico 87401
(505) 326-2262 FAX (505) 326-2388

Borehole # BH-1
Well #
Page 1 of

Project Number: 19007 Phase: 1001
Project Name: EPFS 5 Wellhead Protection Pits
Project Location: GALLEGOS CANYON UNIT Well No. 124E T28N, R12W, Sec 35, N/ 951,608 Meters ±

Elevation:
Borehole Location: GALLEGOS / CANYON UNIT 124E
GWL Depth: 26.8
Drilled By: K. Padilla
Well Logged By: S. Pope
Date Started: 3/24/98 1000
Date Completed: 3/24/98 1215

Drilling Method: 4 1/4 ID HSA
Air Monitoring Method: PID

Depth (Feet)	Sample Number	Sample Interval	Sample Type & Recover (inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: PPM BZ	BH	S	Drilling Conditions & Blow Counts
0										
5	1	5 7	13	Reddish Brown SAND Trace SILT Fine-Med grained, Loose, Dry			0	0	0	10 20 HS=0.5
10	2	10 12	13	TAN SAND Fine-Med Grained, trace SILT, some cementation Hard, Dry		10	0	0	13	Hit Refusal on spoon @ 18" 1030 HS=2.8 ppm
15	3	15 17	18	Light Brown SAND, Med Coarse Grained trace SILT, Hard, DRY		15	0	0	286	Refusal on spoon @ 18" 1040 HS= 326ppm
20	4	20 22	18	SAA			1	175	287	Refusal @ 18" 1100 HS= 346 ppm
25	5	25 27	14	SAA w/Some CLAY		▽ 26.8	0	195	326	Refusal @ 1" 1120 Very hard Drilling HS=287ppm
30	6	30 32	14	BROWN SAND Med-Coarse Grained Medium-Dense, SATURATED			0	230	1	Refusal @ 2" WATER IN BORING Rose to 26.8' BGS HS= 7ppm
				TOB - 31.0'						
35										
40										

Comments: SAMPLE Above WATER 25-27 Collected for BTEX and TPH Borehole grouted to surface. SAMPLE # STP-39

Geologist Signature

1/19/98\DRILG5PT.XLS

1998 GROUNDWATER ANALYTICAL

PHILIP ENVIRONMENTAL

Location No. MW-1

WATER SAMPLING DATA

Serial No. WSD-

Group List Number

Sample Type: ☒ Groundwater ☐ Surface Water ☐ Other

Date 6-25-98

Project Name EPFS WELL SAMPLE

Project No. 19643

Project Manager SCOTT POPE

Phase.Task No. 1004.77

Site Name GALLEGOS CANYON UNIT #124E

Sampling Specifications

Requested Sampling Depth Interval (feet) TOP 3'

Requested Wait Following Development/Purging (hours) NONE

Initial Measurements

Time Elapsed From Final Development/Purging (hours) 24 MIN.

Initial Water Depth (feet) 22.21' TOR

Nonaqueous Liquids Present (Describe) NONE

Water Quality/Water Collection

DO = Dissolved Oxygen; Cond. = Conductivity

Date	Time	Sampler Initials	Water Quality Readings				Water Collection Data					Notes (Explain in Comment Below)
			Temp. (°C)	pH	DO (mg/L)	Cond. (µmhos/cm)	Volume Removed (gallons)	Removal Rate (gal/min)	Pump Intake Depth (ft)	Bail	Final Water Depth ft)	
	SEE	WELL	DEVELOPMENT	AND	PURGING	DATA	FORM					

Container Type: G = Clear Glass; A = Amber Glass; P = Plastic; V = VOA Vial (Glass); O = Other (Specify)

Sample Containers

Preservatives: H = HCl; N = HNO_3; S = H_2SO_4; A = NaOH; O = Other (Specify); -- = None

Analytical Parameter List	Container			Field Filtered		Preserved	Cooled During Collection		Comments
	Number	Type	Volume (mL)	Yes	No		Yes	No	
BTEX 8020	2	V	40		X	H	X		SAMPLED AT

Filter Type NONE

Chain-of-Custody Form Number EPFS

Comments

Signature Robert Champion

Date 6-25-98

Reviewer

Date

PHILIP ENVIRONMENTAL

Well Number MW-1

Serial No. WDPD-

☒ Development
☐ Purging

WELL DEVELOPMENT AND PURGING DATA

Page 1 of 1

Project Name EPFS WELL SAMPLE

Project Manager SCOTT POPE

Project No. 19643

Client Company EL PASO FIELD SERVICE

Phase.Task No. 1004.77

Site Name GALLEGOS CANYON UNIT #124E

Site Address NAPI

Development Criteria

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

Methods of Development

Pump
☐ Centrifugal
☐ Submersible
☐ Peristaltic

Bailer
☐ Bottom Valve
☒ Double Check Valve
☐ Stainless-steel Kemmerer

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 36.81' TOR
Initial Depth to Water (feet) 27.21' TOR
Height of Water Column in Well (feet) 9.60'
Diameter (inches): Well 4" Gravel Pack

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing	6.27	6.27 x 5	31.35
Gravel Pack			
Drilling Fluids			
Total			31.35

Instruments

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

Water Disposal

ON GROUND ON SITE

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/L)	Comments
6·25·98	0903		X				5	5			19.0	8.47	1110		BROWN - SILTY
6·25-98	0918		X				5	10			17.8	8.32	990		BROWN - SILTY
6·25·98	0931		X				5	15			17.8	8.21	960		BROWN - SILTY
6·25·98	0944		X				5	20			16.9	8.01	920		BROWN - SILTY
6·25·98	0953		X				5	25			17.2	7.89	910		BROWN - SILTY
6·25·98	1004		X				5	30			17.8	7.81	910		BROWN - SILTY
6·25·98	1015		X				5	35			17.3	7.80	900		BROWN - SILTY
6·25·98	1026		X				5	40			17.0	7.77	910		BROWN - SILTY

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

Comments

Developer's Signature(s) Robert Thompson Date 6-25-98 Reviewer _____ Date _____

Form A0101 Rev. 10/6/94

F:\NEWFORM\PE_A0101.DOT 1/31/96

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	RT-11	980493
MTR CODE | SITE NAME:	95608	Gallegos Canyon Unit #124E
SAMPLE DATE | TIME (Hrs):	6/25/98	1050
PROJECT:	Sample 4 - Initial	
DATE OF BTEX EXT. | ANAL.:	7/6/98	7/6/98
TYPE | DESCRIPTION:	MW-1	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	340	PPB	5	D		
TOLUENE	271	PPB	5	D		
ETHYL BENZENE	111	PPB	5	D		
TOTAL XYLENES	510	PPB	5	D		
TOTAL BTEX	1232	PPB				

--BTEX is by EPA Method 8020 --

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

DF = Dilution Factor Used

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

Narrative:

Approved By: John Fowler Date: 7/15/98

980493BTEXMWInitial,7/14/98

~~DRILLING INITIAL WE~~ ~~SAMPLE~~

El Paso Natural Gas Company

SAMPLE 4 - Initial

CHAIN OF CUSTODY RECORD

Page 1 of 1

PROJECT NUMBER	PROJECT NAME
# 24324	Pit Closure Project

SAMPLERS: (*Signature*) DATE:

LAB ID	DATE	TIME	MATRIX	FIELD ID	TOTAL NUMBER OF CONTAINERS	SAMPLE TYPE	TPH EPA 418.1	BTEX EPA 8020	LAB PID			SEQUENCE #	REMARKS
980493	6-25-98	1050	WATER	RT-11	2	VG		X					~~MW-1~~ GALLEGOS CANYON UNIT #124E - 95608
980494	6-25-98	1055	WATER	TRIP BLANK	1								

CONTRACT LABORATORY P. O. NUMBER

42°F

RELINQUISHED BY: (*Signature*)	DATE/TIME	RECEIVED BY: (*Signature*)	RELINQUISHED BY: (*Signature*)	DATE/TIME	RECEIVED BY: (*Signature*)
Bert Champson	6-25-98 1425				
RELINQUISHED BY: (*Signature*)	DATE/TIME	RECEIVED BY: (*Signature*)	RELINQUISHED BY: (*Signature*)	DATE/TIME	RECEIVED OF LABORATORY BY: (*Signature*)
				6/25/98 1425	Marlon Hoppe

REQUESTED TURNAROUND TIME:
☐ ROUTINE ☐ RUSH

CARRIER CO.

BILL NO.:

SAMPLE RECEIPT REMARKS

CHARGE CODE

RESULTS & INVOICES TO:

FIELD SERVICES LABORATORY
EL PASO NATURAL GAS COMPANY
P. O. BOX 4990
FARMINGTON, NEW MEXICO 87499

505-599-2144 FAX: 505-599-2261

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

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

EL PASO FIELD SERVICES

Well Development and Purging Data

☐ Development
☒ Purging

Well Number MW-1

Meter Code 95608

Site Name GCU #124E

Development Criteria

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

Methods of Development

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

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 36.81
Initial Depth to Water (feet) 27.50
Height of Water Column in Well (feet) 9.31
Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well Cubic Feet	Water Volume in Well Gallons	Gallons to be Removed
Well Casing		6.2	18.5
Gravel Pack			
Drilling Fluids			
Total			

Instruments

- ☒ pH Meter
- ☐ DO Monitor
- ☒ Conductivity Meter
- ☒ Temperature Meter
- ☒ Other D.O. CHEMETS KIT

Water Disposal

KUTZ SEPARATOR

Water Removal Data

Date	Time	Development Method Pump	Development Method Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gal) Increment	Water Volume Removed (gal) Cumulative	Product Volume Removed (gallons) Increment	Product Volume Removed (gallons) Cumulative	Temperature °C	pH	Conductivity µmho/cm	Dissolved Oxygen mg/L	Comments
7-14-98	1426										19.1	6.50	1084		
7-14-98	1435						5.0	5.0			18.0	6.44	1096		
7-14-98	1440						5.0	10.0			18.0	6.55	1060		
7-14-98	1450						5.0	15.0			18.2	6.67	1103		
7-14-98	1457						5.0	20.0			18.0	6.73	1050		
7-14-98	1505						5.0	25.0			18.0	6.86	1053	3.5	

Comments

Developer's Signature Dennis Bird Date 9-14-98 Reviewer John Falchi Date 9/24/98

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	980642
MTR CODE | SITE NAME:	95608	GCU #124E
SAMPLE DATE | TIME (Hrs):	9/14/98	1521
PROJECT:	Sample 4 1st Quarter	
DATE OF BTEX EXT. | ANAL.:	9/18/98	9/18/98
TYPE | DESCRIPTION:	MW-1	Water

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	410	PPB	5	D		
TOLUENE	251	PPB	5	D		
ETHYL BENZENE	68.3	PPB	5	D		
TOTAL XYLENES	220	PPB	5	D		
TOTAL BTEX	949	PPB				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 91.6 % for this sample All QA/QC was acceptable.

DF = Dilution Factor Used

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

Narrative:

Approved By: John Sarda Date: 9/24/98

980642BTEXMW,9/23/98

EL PASO FIELD SERVICES

QUALITY CONTROL REPORT
EPA METHOD 8020 - BTEX

Samples: 980641 to 980646

QA/QC for 9/17/98 Sample Set

LABORATORY CALIBRATION CHECKS / LABORATORY CONTROL SAMPLES:

SAMPLE NUMBER ICV LA-52589 50 PPB	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE RANGE	YES	NO
Benzene	Standard	50.0	47.6	95.3	75 - 125 %	X	
Toluene	Standard	50.0	47.9	96	75 - 125 %	X	
Ethylbenzene	Standard	50.0	48.1	96	75 - 125 %	X	
m & p - Xylene	Standard	100	96.9	96.9	75 - 125 %	X	
o - Xylene	Standard	50.0	48.0	96	75 - 125 %	X	

SAMPLE NUMBER LCS LA-45476 25 PPB	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE RANGE	YES	NO
Benzene	Standard	25.0	23.8	95.1	39 - 150	X	
Toluene	Standard	25.0	24.1	97	46 - 148	X	
Ethylbenzene	Standard	25.0	24.2	97	32 - 160	X	
m & p - Xylene	Standard	50.0	48.6	97	Not Given	X	
o - Xylene	Standard	25.0	24.3	97	Not Given	X	

SAMPLE NUMBER CCV LA-52589 50 PPB	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE RANGE	YES	NO
Benzene	Standard	50.0	46.4	92.8	75 - 125 %	X	
Toluene	Standard	50.0	46.4	92.7	75 - 125 %	X	
Ethylenzene	Standard	50.0	46.1	92.3	75 - 125 %	X	
m & p - Xylene	Standard	100	92.5	92.5	75 - 125 %	X	
o - Xylene	Standard	50.0	46.6	93	75 - 125 %	X	

SAMPLE NUMBER CCV LA-52589 50 PPB	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE RANGE	YES	NO
Benzene	Standard	50.0	48.1	96.3	75 - 125 %	X	
Toluene	Standard	50.0	47.9	95.7	75 - 125 %	X	
Ethylbenzene	Standard	50.0	47.5	95.1	75 - 125 %	X	
m & p - Xylene	Standard	100	95.0	95.0	75 - 125 %	X	
o - Xylene	Standard	50.0	48.1	96.1	75 - 125 %	X	

Narrative: Acceptable.

LABORATORY DUPLICATES:

SAMPLE ID 980643	TYPE	SAMPLE RESULT PPB	DUPLICATE RESULT PPB	RPD	ACCEPTABLE RANGE	YES	NO
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 2nd Analysis 980643	SPIKE ADDED PPB	SAMPLE RESULT PPB	SPIKE SAMPLE RESULT PPB	%R	ACCEPTABLE RANGE	YES	NO
Benzene	50	<1	46.9	93.7	75 - 125 %	X	
Toluene	50	<1	46.5	93	75 - 125 %	X	
Ethylbenzene	50	<1	46.3	93	75 - 125 %	X	
m & p - Xylene	100	<2	92.7	92.7	75 - 125 %	X	
o - Xylene	50	<1	46.8	94	75 - 125 %	X	

Narrative: Acceptable

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

Narrative: Acceptable.

SOIL VIAL BLANK	SOURCE Lot MB1461	PPB (none analyzed with set)	STATUS
Benzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Toluene	Vial + Boiled Water	<1.0	ACCEPTABLE
Ethylbenzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Total Xylenes	Vial + Boiled Water	<3.0	ACCEPTABLE

Narrative: Acceptable.

CONTAMINATION 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 (2 analyzed with this set)	STATUS
Benzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Toluene	Vial + Boiled Water	<1.0	ACCEPTABLE
Ethylbenzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Total Xylenes	Vial + Boiled Water	<3.0	ACCEPTABLE

Narrative: Acceptable.

Reported By: CW Approved By: John Lutcher Date: 9/24/98

EL PASO FIELD SERVICES

Field Services Laboratory

Analytical Report

SAMPLE IDENTIFICATION

EPFS LAB ID:	980642
DATE SAMPLED:	09/14/98
TIME SAMPLED (Hrs):	1521
SAMPLED BY:	Dennis Bird
MATRIX:	Water
METER CODE:	95608
SAMPLE SITE NAME:	GCU #124E
SAMPLE POINT:	MW-1

FIELD REMARKS:

GENERAL CHEMISTRY WATER ANALYSIS RESULTS

PARAMETER	RESULT	UNITS	DATE ANALYZED
Laboratory pH	7.11	Units	09/17/98
Alkalinity as $C0_3$	0	PPM	09/17/98
Alkalinity as $HC0_3$	264	PPM	09/17/98
Calcium as Ca	91	PPM	09/17/98
Magnesium as Mg	21	PPM	09/17/98
Total Hardness as $CaC0_3$	314	PPM	09/17/98
Chloride as Cl	70	PPM	09/16/98
Sulfate as $S0_4$	188	PPM	09/16/98
Fluoride as F	0.37	PPM	09/17/98
Nitrate as $N0_3$-N	1.5	PPM	09/16/98
Nitrite as $N0_2$-N	<0.1	PPM	09/16/98
Ammonium as NH_4^+	<0.1	PPM	09/17/98
Phosphate as PO_4	<0.1	PPM	09/16/98
Potassium as K	3.0	PPM	09/17/98
Sodium as Na	91	PPM	09/17/98
Total Dissolved Solids	664	PPM	09/17/98
Conductivity	975	umhos/cm	09/17/98
Anion/Cation %	0.2%	%, <5.0 Accepted	09/23/98

Lab Remarks:

Reported By: CRV Approved By: John Sanchez Date: 9/24/98

PARAGON ANALYTICS, INC.
225 Commerce Drive ◆ Fort Collins, CO 80524 ◆ (800) 443-1511 ◆ (970) 490-1511 ◆ FAX (970) 490-1522

October 1, 1998

Mr. John Lambdin
El Paso Field Services
770 West Navajo
Farmington, NM 87401

RE: Paragon Workorder: 98-09-111
Client Project Name: GCU #124E
Client Project Number: None Submitted

Dear Mr. Lambdin:

One water sample was received from El Paso Field Services on September 17, 1998. The sample was scheduled for Total Recoverable Metals analysis. The results for this analysis are contained in the enclosed report pages 1-8.

Thank you for your confidence in Paragon Analytics, Inc. Should you have any questions, please call.

Sincerely,

Adrienne Mackzum

Paragon Analytics, Inc.
Adrienne Mackzum
Project Manager

AAM/kmp
Enclosure: Report

Reviewed and Accepted
J.L. 10/6/98

Paragon Analytics, Incorporated

Sample Number(s) Cross-Reference Table

Paragon OrderNum: 9809111
Client Name: El Paso Field Services
Client Project Name: GCU #124E
Client Project Number:
Client PO Number:

Client Sample	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
980642	9809111-1		Water	9/14/98	15:21

PARAGON ANALYTICS, INC.
22[illegible] Commerce Drive Ft. Collins, CO 80524

(800) 443-1511 or (970) 490-1511
(970) 490-1522 - Fax

CHAIN OF CUSTODY

DATE 7-15-98 Page 1 of 1

*ACCESSION NUMBER (LAB ID) 980911

REPORT TO: JOHN LAMBDIN
COMPANY: EL PASO FIELD SERVICE
ADDRESS: 614 REILLY AVENUE
FARMINGTON NM 87401

SAMPLER: Dennis Bird
PHONE NO. 505-599-2144 FAX NO. 505-599-2261

ANALYSIS REQUESTED

SAMPLE ID	DATE	TIME	MATRIX	LAB ID	Oil & Grease 9070/9071/413.2	418.1 - TRPH	8015 Mod. - Gasoline	8015 Mod. - Diesel	8015m/8020 - Gasoline/BETX	8020 - BETX only	8240/8260 - GC/MS VOC's	8270 - GC/MS SVOC's	8080 - Pesticides/PCB's	8080 - PCB's only	8310/610 - HPLC PNA's	8150 - Herbicides	8141/614 - OP Pesticides	TOX - EOX - AOX - TX	Total Metals *(specify in comments)	TCLP: *(specify parameters in comments)	Gross Alpha / Beta	Gross Gamma	Gamma Spec	Isotopic Plutonium	Isotopic Uranium	Total Uranium (KPA)	Radium 226 / 228	Tritium (H3)	Strontium 89 / 90	8315 - Formaldehyde	% Moisture	8 RCRA METALS				Number of Containers
980642	7-14-98	1521	WATER	01																												X				1

PROJECT INFORMATION
PROJECT NUMBER:
PROJECT NAME: GCU #1246
P.O. NUMBER:
TAT: X STANDARD RUSH DUE
SAMPLE DISPOSAL: HAZ WASTE $5.00 ea RAD CHEM $15.00 ea RETURN

SAMPLE RECEIPT
TOTAL NO. OF CONTAINERS
CHAIN OF CUSTODY SEALS Y / N
SEALS INTACT? Y / N / NA
REC'D GOOD COND./COLD?

COMMENTS:

RELINQUISHED BY: 1	RELINQUISHED BY: 2	RELINQUISHED BY: 3
Sign. Dennis Bird Time 1505	Sign. Time	Sign. Time
Print DENNIS BIRD Date 7-15-98	Print Date	Print Date
Company EL PASO FIELD SERVICE	Company Tedy	Company

RECEIVED BY: 1	RECEIVED BY: 2	RECEIVED BY: 3
Sign. Time	Sign. J Hunter Time 930	Sign. Time
Print Date	Print J Hunter Date 7/17/98	Print Date
Company Tedy	Company PAI	Company

* DO NOT WRITE IN SHADED AREAS

DISTRIBUTION: White - Company; PARAGON ANALYTICS, INC.; Pink - [illegible]

Paragon Analytics, Inc. - Fort Collins, Colorado

CONDITION OF SAMPLE UPON RECEIPT

CLIENT: Blasfield Service SHIPPING CONTAINER #: Client

WORKORDER NO. 9809111 INITIALS: H DATE: 9/17/98

1.	Does this project require special handling according to NEESA, Level 3, or CLP protocols? If yes, complete a. and b. a. Cooler Temperature_____ b. Lot No's._____ c. Airbill Number		Yes	No
2.	Are custody seals on the cooler intact? If so, how many	N/A	Yes	No
3.	Are custody seals on sample containers intact?	N/A	Yes	No
4.	Is there a Chain of Custody (COC) or other representative documents, letters or shipping memos?		Yes	No
5.	Is the COC complete? Relinquished: Yes / No Requested Analysis: Yes / No	N/A	Yes	No
6.	Is the COC in agreement with the samples received? No. of Samples: Yes / No___ Sample ID's: Yes / No___ Matrix: Yes / No No. of Containers: Yes / No		Yes	No
7.	Are the samples requiring chemical preservation preserved correctly?	N/A	Yes	No
8.	Is there enough sample? If so, are they in the proper containers?		Yes	No
	Are all samples within holding times for the requested analyses?		Yes	No
	Were the sample(s) shipped on ice?	N/A	Yes	No
11.	Were all sample containers received intact? (not broken or leaking, etc.)		Yes	No
12.	Are samples requiring no headspace, headspace free?	N/A	Yes	No
13.	Do the samples require quarantine?		Yes	No
14.	Do samples require Paragon disposal?		Yes	No
15.	Did the client return any unused bottles?		Yes	No

Describe "NO" items (except No's 1, 13, & 14):_____

Was the client contacted? Yes____ No____

If yes, Date:_____ Name of person contacted:_____

Describe actions taken or client instructions:_____

Group Leader's Signature:_____ Date:_____

Cooler Temperature: 3°

FRM 201FC7 (30/7/97)

Paragon Analytics, Inc.

TOTAL RECOVERABLE METALS CASE NARRATIVE

El Paso Field Services

GCU #124E

Order Number - 9809111

1. This report consists of 1 water sample.
2. The sample was received cool and intact on 09/17/98.
3. The sample had been correctly preserved for the requested analyses.
4. The sample was prepared for analysis based on SW-846, 3rd Edition procedures.

   For analysis by Trace ICP the sample was digested following method 3005A.
5. The sample was analyzed following SW-846 protocols by Trace ICP (Method 6010B).
6. All standards and solutions are NIST traceable and were used within their recommended shelf life.
7. The sample was prepared and analyzed within the established hold times.
8. Sample results which are below PAI's standard reporting limits are reported as "ND" on the enclosed report.

All in house quality control procedures were followed, as described below.

9. General quality control procedures.
   - A preparation (method) blank and laboratory control sample were digested and analyzed with the samples in each digestion batch. There were not more than 20 samples in each digestion batch.
   - The preparation (method) blank results associated with each batch were below the reporting limits for the requested analytes. This indicates that no contaminants were introduced to the samples during the digestion procedure.
   - The laboratory control sample associated with each batch was within acceptance limits. This indicates complete digestion according to the method.

- All initial and continuing calibration blanks associated with each batch were below the reporting limits for the requested analytes. This indicates a valid calibration and stable instrument conditions.
- All initial and continuing calibration verifications associated with each batch were within acceptance criteria for the requested analytes. This indicates a valid calibration and stable instrument conditions.
- The interference check samples, and high standard readbacks associated with Method 6010B analyses were within acceptance criteria.

10. Samples from other Order Numbers were used as the QC samples for these batches.
    - A matrix spike and matrix spike duplicate were digested and analyzed with each batch. All acceptance criteria for accuracy were met.
    - A sample duplicate and spike duplicate were digested and analyzed with each batch. All acceptance criteria for precision were met.
    - A serial dilution was analyzed with the Trace ICP batch. All acceptance criteria were met.

The data contained in the following report have been reviewed and approved by the personnel listed below:

Kim Hamacher — 9/29/98

Kim Hamacher
Senior Inorganic Chemist

Date

SW — 9/29/98

Reviewer's Initials

Date

CERTIFICATION

Paragon Analytics, Inc. certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.

Paragon Analytics, Incorporated

Sample Number(s) Cross-Reference Table

Paragon OrderNum: 9809111
Client Name: El Paso Field Services
Client Project Name: GCU #124E
Client Project Number:
Client PO Number:

Client Sample	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
980642	9809111-1		Water	9/14/98	15:21

TOTAL RECOVERABLE METALS

Lab Name: Paragon Analytics, Inc.
Client Name: El Paso Field Services
Client Project ID: GCU #124E
Lab Sample ID: RB 9809111

Sample ID

Reagent Blank

Date Collected: N/A
Prep Date: 09/21, 23/98
Date Analyzed: 09/22, 25/98

Analyte	Concentration mg/L	Reporting Limit mg/L
Arsenic	ND	0.01
Barium	ND	0.1
Cadmium	ND	0.005
Chromium	ND	0.01
Lead	ND	0.003
Mercury	ND	0.0002
Selenium	ND	0.005
Silver	ND	0.01

ND = Not detected at or above the reporting limit.

TOTAL RECOVERABLE METALS

Lab Name: Paragon Analytics, Inc.
Client Name: El Paso Field Services
Client Project ID: GCU #124E
Lab Sample ID: 9809111-1

Sample Matrix: Water

Sample ID

980642

Date Collected: 09/14/98
Prep Date: 09/21, 23/98
Date Analyzed: 09/22, 25/98

Analyte	Concentration mg/L	Reporting Limit mg/L
Arsenic	ND	0.01
Barium	0.3	0.1
Cadmium	ND	0.005
Chromium	ND	0.01
Lead	0.005	0.003
Mercury	ND	0.0002
Selenium	0.023	0.005
Silver	ND	0.01

ND = Not detected at or above the reporting limit.

TOTAL RECOVERABLE METALS
MATRIX SPIKE

Lab Name: Paragon Analytics, Inc.
Client Name: El Paso Field Services
Lab Sample ID: 9808151-9

Sample ID
In House

Sample Matrix: Water

Prep Date: 09/23/98
Date Analyzed: 09/25/98

Analyte	Spike Added mg/L	Sample Conc. mg/L	MS Conc. mg/L	% Rec. (limits 80-120%)	Flags
Arsenic	2.00	< 0.01	2.04	102	
Barium	2.0	< 0.1	2.0	100	
Cadmium	0.050	< 0.005	0.049	98	
Chromium	0.20	< 0.01	0.19	95	
Lead	0.500	< 0.003	0.480	96	
Selenium	2.00	< 0.005	2.18	109	
Silver	0.05	< 0.01	0.05	100	

Analyte	MSD Conc. mg/L	MSD % Rec. (limits 80-120%)	Relative % Difference (limits 0-20%)	Flags
Arsenic	2.04	102	0	
Barium	2.0	100	0	
Cadmium	0.049	98	0	
Chromium	0.19	95	0	
Lead	0.478	96	0	
Selenium	2.19	110	0	
Silver	0.05	100	0	

TOTAL RECOVERABLE METALS
MATRIX SPIKE

Lab Name: Paragon Analytics, Inc.
Client Name: El Paso Field Services
Lab Sample ID: 9809096-6

Sample ID

In House

Prep Date: 09/21/98
Date Analyzed: 09/22/98

Sample Matrix: Water

Analyte	Spike Added mg/L	Sample Conc. mg/L	MS Conc. mg/L	% Rec. (limits 80-120%)	Flags
Mercury	0.0020	< 0.0002	0.0020	100	

Analyte	MSD Conc. mg/L	MSD % Rec. (limits 80-120%)	Relative % Difference (limits 0-20%)	Flags
Mercury	0.0020	100	0	

Sample 4 1st QTR

EI Paso Natural Gas Company

A 2394

CHAIN OF CUSTODY RECORD

Project No.	Project Name: MC# 95608
Samplers: (Signature) Dennis Bird	Date: 9-14-98

Matrix	Date	Time	Comp.	GRAB	Sample Number	Type and No. of Sample Containers	Preservation Technique	Requested Analysis: BTXE	Requested Analysis: GENERAL CHEMISTRY			Remarks
WATER	9-14-98	1521		X	980642	G-1	4°C	X	X			GCU #124E MW-1

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Dennis Bird	9-14-98 1625				

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks:
		Marlon Hopper	9/15/98 0930	

Carrier Co:	Carrier Phone No.	Date Results Reported / by: (Signature)
Air Bill No.:		

San Juan region Form 71-55 A

EL PASO FIELD SERVICES

Well Development and Purging Data

☐ Development
☒ Purging

Well Number MW-1

Site Name GCU #124E

Meter Code 95608

Development Criteria

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

Methods of Development

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

Water Volume Calculation

Initial Depth of Well (feet) 36.81
Initial Depth to Water (feet) 28.16
Height of Water Column in Well (feet) 8.65
Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing		5.7	17.2
Gravel Pack			
Drilling Fluids			
Total			

Instruments

☒ pH Meter
☐ DO Monitor
☒ Conductivity Meter
☒ Temperature Meter
☒ Other D.O. CHEMETS KIT

Water Disposal

KUTZ SEPARATOR

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gal): Increment	Water Volume Removed (gal): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature °C	pH	Conductivity µmho/cm	Dissolved Oxygen mg/L	Comments
12-15-98	1505										15.0	6.66	1056		
12-15-98	1511						5.0	5.0			16.1	6.55	1061		
12-15-98	1516						5.0	10.0			15.9	6.65	1058		
12-15-98	1526						5.0	15.0			15.9	6.79	1023		
12-15-98	1534						5.0	20.0			15.2	6.87	1057	2.5	

Comments THE WELL HAD 0.55' OF FREE FLOATING HYDROCARBON WITH OILY APPEARANCE.

Developer's Signature Dennis Bird Date 12-15-98 Reviewer John Scalia Date 1-11-99

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	980869
MTR CODE | SITE NAME:	95608	GCU #124E
SAMPLE DATE | TIME (Hrs):	12/15/98	1545
PROJECT:	Sample 4 2nd Quarter	
ATE OF BTEX EXT. | ANAL.:	NA	12/28/98
TYPE | DESCRIPTION:	MW-1	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	710	PPB	25			
TOLUENE	1300	PPB	25			
ETHYL BENZENE	160	PPB	25			
TOTAL XYLENES	940	PPB	25			
TOTAL BTEX	3110	PPB				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 117 for this sample All QA/QC was acceptable.

DF = Dilution Factor Used

Narrative:

Sample Analyzed by Pinnical laboratory.

Approved By: John Sandoval Date: 1-11-99

980869BTEXMW,1/11/99

PINNACLE LABORATORIES

2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

JAN 1999 RECEIVED

Pinnacle Lab ID number **812083**
December 30, 1998

980867 to 980869
980872 to 980874
+ 2 Trip Blanks

EL PASO FIELD SERVICES
770 WEST NAVAJO
FARMINGTON, NM 87401

Project Name QTRLY MONITOR WELL
Project Number (none)

Attention: JOHN LAMBDIN

On 12/22/98 Pinnacle Laboratories, Inc. Inc., (ADHS License No. AZ0592), received a request to analyze **aqueous** samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

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

Kimberly D. McNeill
Project Manager

H. Mitchell Rubenstein, Ph. D.
General Manager

MR: mt

Enclosure

Reviewed & Approved
J. Sarch
1-6-99

PINNACLE LABORATORIES

2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

CLIENT	: EL PASO FIELD SERVICES	PINNACLE ID	: 812083
PROJECT #	: (none)	DATE RECEIVED	: 12/22/98
PROJECT NAME	: QTRLY MONITOR WELL	REPORT DATE	: 12/30/98

LAB ID. #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	980867	AQUEOUS	12/15/98
02	980868	AQUEOUS	12/15/98
03	980869	AQUEOUS	12/15/98
04	980872	AQUEOUS	12/15/98
05	980873	AQUEOUS	12/17/98
06	980874	AQUEOUS	12/17/98
07	TRIP BLANK	AQUEOUS	12/15/98
08	TRIP BLANK	AQUEOUS	12/17/98

PINNACLE LABORATORIES

2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8021 MODIFIED
CLIENT : EL PASO FIELD SERVICES
PROJECT # : (none)
PROJECT NAME : QTRLY MONITOR WELL

PINNACLE I.D.: 812083

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
01	980867	AQUEOUS	12/15/98	NA	12/29/98	10
02	980868	AQUEOUS	12/15/98	NA	12/28/98	1
03	980869	AQUEOUS	12/15/98	NA	12/28/98	25

PARAMETER	DET. LIMIT	UNITS	980867	980868	980869
BENZENE	0.5	UG/L	7.3	9.8	710
TOLUENE	0.5	UG/L	15	79	1300
ETHYLBENZENE	0.5	UG/L	100	61	160
TOTAL XYLENES	0.5	UG/L	820	460	940

SURROGATE:

BROMOFLUOROBENZENE (%)			100	112	117
SURROGATE LIMITS	(80 - 120)				

CHEMIST NOTES:
N/A

PINNACLE LABORATORIES

2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8021 MODIFIED
CLIENT : EL PASO FIELD SERVICES
PROJECT # : (none)
PROJECT NAME : QTRLY MONITOR WELL

PINNACLE I.D.: 812083

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
04	980872	AQUEOUS	12/15/98	NA	12/28/98	1
05	980873	AQUEOUS	12/17/98	NA	12/29/98	1
06	980874	AQUEOUS	12/17/98	NA	12/29/98	1

PARAMETER	DET. LIMIT	UNITS	980872	980873	980874
BENZENE	0.5	UG/L	100	89	330
TOLUENE	0.5	UG/L	29	25	1.6
ETHYLBENZENE	0.5	UG/L	1.1	0.9	30
TOTAL XYLENES	0.5	UG/L	5.8	4.9	150

SURROGATE:					
BROMOFLUOROBENZENE (%)			104	104	114
SURROGATE LIMITS	(80 - 120)				

CHEMIST NOTES:
N/A

PINNACLE LABORATORIES

2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8021 MODIFIED
CLIENT : EL PASO FIELD SERVICES
PROJECT # : (none)
PROJECT NAME : QTRLY MONITOR WELL

PINNACLE I.D.: 812083

SAMPLE I.D. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
07	TRIP BLANK	AQUEOUS	12/15/98	NA	12/29/98	1
08	TRIP BLANK	AQUEOUS	12/17/98	NA	12/29/98	1

PARAMETER	DET. LIMIT	UNITS	TRIP BLANK	TRIP BLANK
BENZENE	0.5	UG/L	< 0.5	< 0.5
TOLUENE	0.5	UG/L	< 0.5	< 0.5
ETHYLBENZENE	0.5	UG/L	< 0.5	< 0.5
TOTAL XYLENES	0.5	UG/L	< 0.5	< 0.5

SURROGATE:

BROMOFLUOROBENZENE (%)		110	107
SURROGATE LIMITS	(80 - 120)		

CHEMIST NOTES:
N/A

PINNACLE LABORATORIES

2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

TEST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 812083
BLANK I. D.	: 122898	DATE EXTRACTED	: NA
CLIENT	: EL PASO FIELD SERVICES	DATE ANALYZED	: 12/28/98
PROJECT #	: (none)	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: QTRLY MONITOR WELL		

PARAMETER	UNITS	
BENZENE	UG/L	<0.5
TOLUENE	UG/L	<0.5
ETHYLBENZENE	UG/L	<0.5
TOTAL XYLENES	UG/L	<0.5

SURROGATE:
BROMOFLUOROBENZENE (%) 113
SURROGATE LIMITS: (80 - 120)
CHEMIST NOTES:
N/A

PINNACLE LABORATORIES

2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

TEST	: EPA 8021 MODIFIED	PINNACLE I.D.	:	812083
BLANK I. D.	: 122998	DATE EXRACTED	:	NA
CLIENT	: EL PASO FIELD SERVICES	DATE ANALYZED	:	12/29/98
PROJECT #	: (none)	SAMPLE MATRIX	:	AQUEOUS
PROJECT NAME	: QTRLY MONITOR WELL			

PARAMETER	UNITS	
BENZENE	UG/L	<0.5
TOLUENE	UG/L	<0.5
ETHYLBENZENE	UG/L	<0.5
TOTAL XYLENES	UG/L	<0.5

SURROGATE:
BROMOFLUOROBENZENE (%) 111
SURROGATE LIMITS: (80 - 120)
CHEMIST NOTES:
N/A

PINNACLE LABORATORIES

2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

GAS CHROMATOGRAPHY QUALITY CONTROL
MSMSD

TEST	: EPA 8021 MODIFIED			
MSMSD #	: 122998	PINNACLE I.D.	:	812083
CLIENT	: EL PASO FIELD SERVICES	DATE EXTRACTED	:	NA
PROJECT #	: (none)	DATE ANALYZED	:	12/29/98
PROJECT NAME	: QTRLY MONITOR WELL	SAMPLE MATRIX	:	AQUEOUS
		UNITS	:	UG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
BENZENE	<0.5	10.0	9.3	93	9.5	95	2	(80 - 120)	20
TOLUENE	<0.5	10.0	10.4	104	10.5	105	1	(80 - 120)	20
ETHYLBENZENE	<0.5	10.0	10.3	103	10.5	105	2	(80 - 120)	20
TOTAL XYLENES	<0.5	30.0	30.5	102	31.1	104	2	(80 - 120)	20

CHEMIST NOTES:
N/A

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

American Environmental Network (NM), Inc.

CHAIN OF CUSTODY

DATE 12/21/98 PAGE 1 OF 1

AEN(NM) Accession #: 812083

SHADED AREAS ARE FOR LAB USE ONLY.

PLEASE FILL THIS FORM IN COMPLETELY.

PROJECT MANAGER: John Lambdin

COMPANY: El Paso Field Services

ADDRESS: 770 W. Navajo
Farmington, NM 87401

PHONE: (505) 599-2144

FAX: (505) 599-2261

BILL TO: (Same As Above)

COMPANY:

ADDRESS:

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	LAB I.D.	Petroleum Hydrocarbons (418.1) TRPH	(MOD.8015) Diesel/Direct Inject	(M8015) Gas/Purge & Trap	8021 (BTEX)/8015 (Gasoline)	8021 (BTEX) ☐ MTBE ☐ TMB ☐ PCE	8021 (TCL)	8021 (EDX)	8021 (HALO)	8021 (CUST)	504.1 EDB ☐ / DBCP ☐		8260 (TCL) Volatile Organics	8260 (Full) Volatile Organics	8260 (CUST) Volatile Organics	8260 (Landfill) Volatile Organics	Pesticides /PCB (608/8081)	Herbicides (615/8151)	Base/Neutral/Acid Compounds GC/MS (625/8270)	Polynuclear Aromatics (610/8310)	General Chemistry:			Priority Pollutant Metals (13)	Target Analyte List Metals (23)	RCRA Metals (8)	RCRA Metals by TCLP (Method 1311)	Metals:		NUMBER OF CONTAINERS
980867	12-15-98	1115	Water	01					X																								2
980868	12-15-98	1252	Water	02					X																								2
980869	12-15-98	1545	Water	03					X																								2
980872	12-17-98	1121	Water	04					X																								2
980873	12-17-98	1121	Water	05					X																								2
980874	12-17-98	1443	Water	06					X																								2
TRIP BLANK	12-15-98	NA	Water	07					X																								1
TRIP BLANK	12-17-98	NA	Water	08					X																								1

PROJECT INFORMATION

PROJ. NO.: NA

PROJ. NAME: Qtrly Monitor Well

P.O. NO.: NA

SHIPPED VIA: Fed-X

SAMPLE RECEIPT

NO. CONTAINERS	
CUSTODY SEALS	Y / N / NA
RECEIVED INTACT	
BLUE ICE/ICE	

PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS

(RUSH) ☐ 24hr ☐ 48hr ☐ 72hr ☐ 1 WEEK (NORMAL) ☒

CERTIFICATION REQUIRED: ☐ NM ☐ SDWA ☐ OTHER

METHANOL PRESERVATION ☐

COMMENTS: FIXED FEE ☐

RELINQUISHED BY: 1.

Signature: John Lambdin Time: 1330

Printed Name: John Lambdin Date: 12/21/98

Company: El Paso Field Services

RELINQUISHED BY: 2.

Signature: Time:

Printed Name: Date:

Company:

RECEIVED BY: 1.

Signature: Time:

Printed Name: Date:

Company:

RECEIVED BY: (LAB) 2.

Signature: Francine Tonno Time: 1025

Printed Name: Francine Tonno Date: 12/22/98

American Enviromental Network (NM), Inc.

SAMPLE 4 2WD QTR

EL PASO Natural Gas Company

1-12-99 92-Hist.
1-12-99 Acid.
1-12-99 Chem.

A 2418

CHAIN OF CUSTODY RECORD

Project No.	Project Name: MC # 95608
Samplers: (Signature) Dennis Bird	Date: 12-15-98

MATRIX	Date	Time	Comp.	GRAB	Sample Number	Type and No. of Sample Containers	Preservation Technique	Requested Analysis: BTXE				Remarks
WATER	12-15-98	1545		X	980869	G-1	38°F	X				GCU #124E MW-1

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Dennis Bird	12-15-98 1700				
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks:	
		Madon Hopper	12/17/98 0700		

Carrier Co:

Carrier/Phone No.

Date Results Reported / by: (Signature)

Air Bill No.:

san juan repro Form 71-55 A