

3R - 205

REPORTS

DATE:

1999 - 1998

SAN JUAN BASIN PIT CLOSURES
San Juan Basin, New Mexico

El Paso Field Services Pit Project Groundwater Report
Annual Report

March 2000

RECEIVED

MAR 29 2000

ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

Prepared For

El Paso Field Services
Farmington, New Mexico

Project 62800158



EPFS GROUNDWATER PITS

1999 ANNUAL GROUNDWATER REPORT

K-31 LINE DRIP

Meter/Line ID - LD087

SITE DETAILS

Legals - Twn: 25N Rng: 6W Sec: 16 Unit: N
NMOCD Hazard Ranking: 40 Land Type: STATE
Operator: EL PASO FIELD SERVICES

PREVIOUS ACTIVITIES

Site Assessment: Jul-94 Excavation: Aug-94 (90 cy) Soil Boring: Sep-95
Monitor Well: Mar-97 Re-excavation: Nov-95 (1,786 cy) Quarterly Sampling Initiated: Jun-97
Well Points: Jul-97 Annual Sampling Initiated: June-99

1999 ACTIVITIES

Annual Groundwater Monitoring - Annual groundwater monitoring was initiated in 1999.

Monitor Well Installation - EPFS has requested permission from the State of New Mexico to drill downgradient monitoring wells. An archeological survey has been performed and other required information has been submitted to the State of New Mexico for approval.

SUMMARY TABLES

Groundwater analytical data are presented in Table 1. Copies of the laboratory data sheets and associated quality assurance/quality control data are presented as Attachment 1.

SITE MAP

A site map is presented as Figure 1.

GEOLOGIC LOGS AND WELL COMPLETION DIAGRAMS

There were no drilling activities at this site in 1999.

DISPOSITION OF GENERATED WASTES

There were no wastes generated at this site in 1999.

ISOCONCENTRATION MAPS

None generated for this site.

CONCLUSIONS

Analytical results of groundwater samples from MW-1 show levels of benzene above New Mexico Groundwater Standards.

Pertinent data from past groundwater reports include the following: Based on groundwater levels collected from temporary well point data, the groundwater flow trends to the southeast on this site. The pit is approximately 100-200 yards from Largo Wash and is in a very remote location. Groundwater samples collected from MW-1 have been in excess of standards for benzene since sampling was initiated.

EPFS GROUNDWATER PITS 1999 ANNUAL GROUNDWATER REPORT

RECOMMENDATIONS

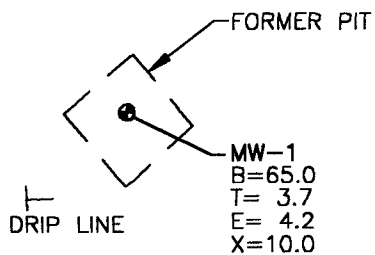
- Continue annual sampling.
- Get approval from the State of New Mexico for off-site drilling in order to install additional monitor wells to monitor and determine the extent of groundwater contamination as requested by the OCD.
- Following OCD approval for closure, MW-1 will be abandoned using OCD approved abandonment procedures.

DOG LEG

LARGO ROAD

PIPE LINE

LARGO WASH



LEGEND

● MW-1 MONITORING WELL NUMBER AND APPROXIMATE LOCATION

B BENZENE (ug\L)
T TOLUENE (ug\L)
E ETHYL BENZENE (ug\L)
X XYLENE (ug\L)

ug\L MICROGRAMS PER LITER

NOT TO SCALE



COL 175200-004



TITLE:

K-31 LINE DRIP
LD087
JUNE 14, 1999

DWN:

CJG

DES.:

CI

PROJECT NO.:

17520

CHKD:

CI

APPD:

DATE:

02/11/00

REV.:

0

EPFS GW PITS

FIGURE 1

EPFS Groundwater Pits
1999 Groundwater Report

TABLE 1

Sample #	Meter/Line #	Site Name	Sample Date	MW #	Project	Benzene (PPB)	Toluene (PPB)	Ethyl Benzene (PPB)	Total Xylenes (PPB)	Total BTEX
990284	LD087	K-31 Line Drip	06/14/99	1	Sample 4 - 6th Quarter	65	= 3.70	= 4.2	= 10.00	= 83

ATTACHMENT 1
1999 GROUNDWATER ANALYTICAL



FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	NA	990284
MTR CODE SITE NAME:	LD087	K-31 Line Drip
SAMPLE DATE TIME (Hrs):	6/14/99	1445
PROJECT:	Annual	
DATE OF BTEX EXT. ANAL.:	NA	6/21/99
TYPE DESCRIPTION:	MW-1	Water

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	65	PPB	1			
TOLUENE	3.7	PPB	1			
ETHYL BENZENE	4.2	PPB	1			
TOTAL XYLENES	10	PPB	1			
TOTAL BTEX	83	PPB				

--BTEX is by EPA Method 8021 Modified --

The Surrogate Recovery was at 99 % for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative:

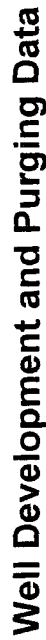
This sample was analyzed by Pinnacle Laboratories, Albuquerque, NM.

Approved By:

John Lawton

Date:

6/24/99



☐	Development
☒	Purging

Well Number 1-MW

Meter Code LD087

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

Water Volume Calculation

Initial Depth of Well (feet) 29.50
Initial Depth to Water (feet) 12.98
Height of Water Column in Well (feet) 16.52

Methods of Development

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

Instruments

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

Water Disposal

KUTZ SEPARATOR

Item	Water Volume in Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing		7.6	22.8
Gravel Pack			
Drilling Fluids			
Total			

Water Removal Data

[illegible]

Comments THE WELD BAILED ONLY 013.0 GALLONS.

Developer's Signature
Dennis Bird

Date 5-14-99 Reviewer John Landrum

Date 6/24/99

PINNACLE
LABORATORIES



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

Pinnacle Lab ID number 906067
June 22, 1999

EL PASO FIELD SERVICES
770 WEST NAVAJO
FARMINGTON, NM 87401

Project Name PIT MONITOR WELLS
Project Number (none)

Attention: JOHN LAMBDIN

On 6/18/99 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

MR: mt

Enclosure

H. Mitchell Rubenstein, Ph. D.
General Manager

Reviewed + Accepted
J. Lander
6/24/99



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	: 906067
PROJECT #	: (none)	DATE RECEIVED	: 6/18/99
PROJECT NAME	: PIT MONITOR WELLS	REPORT DATE	: 6/22/99

PIN	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
ID. #			
01	990282 - Mc# 75155, Ramente et al #1 -mw-1	AQUEOUS	6/14/99
02	990283 - Mc# 71816, Jannapah #1, mw-1	AQUEOUS	6/14/99
03	990284 - Mc# 6087, Lat K-31 Line Drip	AQUEOUS	6/14/99
04	990285 (TRIP BLANK) mw-1	AQUEOUS	6/14/99



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 : PIT MONITOR WELLS

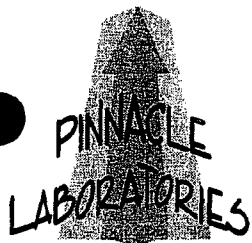
PINNACLE I.D.: 906067

SAMPLE			DATE	DATE	DATE	DIL.
ID. #	CLIENT I.D.	MATRIX	SAMPLED	EXTRACTED	ANALYZED	FACTOR
01	990282	AQUEOUS	6/14/99	NA	6/21/99	2
02	990283	AQUEOUS	6/14/99	NA	6/21/99	5
03	990284	AQUEOUS	6/14/99	NA	6/21/99	1

PARAMETER	DET. LIMIT	UNITS	990282	990283	990284
BENZENE	0.5	UG/L	5.6	9.6	65
TOLUENE	0.5	UG/L	11	110	3.7
ETHYLBENZENE	0.5	UG/L	75	70	4.2
TOTAL XYLENES	0.5	UG/L	510	520	10

SURROGATE:
BROMOFLUOROBENZENE (%) 104 93 99
SURROGATE LIMITS (80 - 120)

CHEMIST NOTES:
N/A



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 : PIT MONITOR WELLS

PINNACLE I.D.: 906067

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
04	990285 (TRIP BLANK)	AQUEOUS	6/14/99	NA	6/21/99	1

PARAMETER	DET. LIMIT	UNITS	990285 (TRIP BLANK)
BENZENE	0.5	UG/L	< 0.5
TOLUENE	0.5	UG/L	< 0.5
ETHYLBENZENE	0.5	UG/L	< 0.5
TOTAL XYLENES	0.5	UG/L	< 0.5

SURROGATE:

BROMOFLUOROBENZENE (%)

92

SURROGATE LIMITS (80 - 120)

CHEMIST NOTES:

N/A



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.	: 906067
BLANK I. D.	: 062199	DATE EXTRACTED	: N/A
CLIENT	: EL PASO FIELD SERVICES	DATE ANALYZED	: 6/21/99
PROJECT #	: (none)	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: PIT MONITOR WELLS		

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 (%) 93
SURROGATE LIMITS: (80 - 120)
CHEMIST NOTES:
N/A



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	PINNACLE I.D.	: 906067
MSMSD #	: 062199	DATE EXTRACTED	: N/A
CLIENT	: EL PASO FIELD SERVICES	DATE ANALYZED	: 6/21/99
PROJECT #	: (none)	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: PIT MONITOR WELLS	UNITS	: UG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
BENZENE	<0.5	20.0	22.1	111	22.0	110	0	(80 - 120)	20
TOLUENE	<0.5	20.0	19.8	99	20.1	101	2	(80 - 120)	20
ETHYLBENZENE	<0.5	20.0	21.4	107	20.5	103	4	(80 - 120)	20
TOTAL XYLENES	<0.5	60.0	61.2	102	59.1	99	3	(80 - 120)	20

CHEMIST NOTES:
N/A

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

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

2066067

PLEASE FILL THIS FORM IN COMPLETELY.

DISTRIBUTION: Widespread - AEN, Canary - Origin



Certified Mail: #Z 211 324 121

March 31, 1999

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

RECEIVED

APR 05 1999

ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

RE: 1998 Pit Project Annual Groundwater Report

Dear Mr. Olson:

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

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

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

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

Sincerely,

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

Scott T. Pope P.G.
Senior Environmental Scientist

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

EPFS GROUNDWATER PITS
1998 ANNUAL GROUNDWATER REPORT

K-31 LINE DRIP
Meter/Line ID - LD087

RECEIVED

APR 05 1999

SITE DETAILS

Legals - Twn: 25N Rng: 6W
NMOCD Hazard Ranking: 40
Operator: EL PASO FIELD SERVICES

Sec: 16 Unit: N
Land Type: STATE

ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

PREVIOUS ACTIVITIES

Site Assessment: Jul-94 Excavation: Aug-94 (90 cy) Soil Boring: Sep-95
Monitor Well: Mar-97 Re-excavation: Nov-95 (1,786 cy) Quarterly Sampling Initiated: Jun-97
Well Points: Jul-97

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.

CONCLUSIONS

Analytical results of groundwater samples from MW-1 show levels of benzene above New Mexico Groundwater Standards.

Pertinent data from the 1997 groundwater report include the following: Based on groundwater levels collected from temporary well point data, the groundwater flow trends to the southeast on this site, as presented in Figure 1. The pit is approximately 100-200 yards from Largo Wash and is in a very remote location.

Groundwater samples collected from MW-1 have been in excess of standards for benzene since quarterly sampling was initiated. Four groundwater samples were collected from temporary monitoring wells up and down-gradient of MW-1. It appears that some down-gradient migration of contaminants has occurred at this site.

RECOMMENDATIONS

- Discontinue quarterly sampling and initiate sampling on an annual basis.
- Perform ORC nutrient injection and sample after two months to determine effectiveness.
- The OCD requests that EPFS install additional groundwater monitoring wells to monitor and determine the extent of groundwater contamination.
- Following OCD approval for closure, MW-1 will be abandoned using OCD approved abandonment procedures.

LARGO ROAD

PIPE LINE

LARGO WASH

FORMER PIT

DRIP LINE

MW-1
B=98.3
T=1.48
E=27.2
X=14.7

LEGEND

● MW-1 APPROXIMATE MONITORING WELL LOCATION AND NUMBER

B BENZENE (ug\L)
T TOLUENE (ug\L)
E ETHYL BENZENE (ug\L)
X XYLENE (ug\L)

ug\L MICROGRAMS PER LITER

NOT TO SCALE



COL 175200-003



TITLE:
K-31 LINE DRIP
LD087
JUNE 2, 1998

DWN: TMM	DES.: CI
CHKD: CI	APPD:
DATE: 2/9/99	REV.: 0

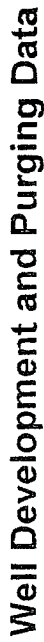
PROJECT NO.: 17520 EPFS GW PITS
FIGURE 1

EPFS Groundwater Pits
1998 Groundwater Report

TABLE 1

Sample #	Meter/Line #	Site Name	Sample Date	MW #	Project	Benzene (PPB)	Toluene (PPB)	Ethyl Benzene (PPB)	Total Xylenes (PPB)	Total BTEX
980240	LD087	K-31 Line Drip	03/19/98	1	Sample 4 - 4th Quarter	= 61.2	< 1.00	= 17.8	= 2.35	= 81
980426	LD087	K-31 Line Drip	06/02/98	1	Sample 4 - 5th Quarter	= 98.3	= 1.48	= 27.2	= 14.70	= 142

**1998 GROUNDWATER
ANALYTICAL**



☐	Development
☒	Purging

Well Number MW-1

Meter Code 20087

Site Name K-31 CINE DRIP

Development Criteria

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

Water Volume Calculation

Initial Depth of Well (feet) 29.50

Initial Depth of Well (feet)	21.00
Initial Depth to Water (feet)	17.59

Height of Water Column in Well (feet) 11.91

4 Diameter (inches): Well Gravel Pack

Methods of Development

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

Instruments

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

Water Disposal

KV72 SEPARATOR

Item	Water Volume in Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing		7.9	23.6
Gravel Pack			
Drilling Fluids			
Total			

Water Removal Data

[illegible]

Comments THE WELL BAILED DRY P 12.0 GALLONS

Developer's Signature Dennis Bird

Date 3-19-98 Reviewer _____

John Fowler

Date 3/25/98



EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY

ANALYTICAL REPORT

PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

Field ID

Lab ID

SAMPLE NUMBER:

N/A

980240

MTR CODE | SITE NAME:

LD087

K-31 Line Drip

SAMPLE DATE | TIME (Hrs):

3/19/98

1131

PROJECT:

Sample 4 4th Quarter

DATE OF BTEX EXT. | ANAL.:

3/23/98

3/23/98

TYPE | DESCRIPTION:

MW-1

Water

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	61.2	PPB				
TOLUENE	< 1	PPB				
ETHYL BENZENE	17.8	PPB				
TOTAL XYLENES	2.35	PPB				
TOTAL BTEX	81	PPB				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at
DF = Dilution Factor Used

106.2

% for this sample All QA/QC was acceptable.

Narrative:

Approved By:

Date:

3/25/98

980240BTEXMW, 3/25/98

SAMPLE 4 47497



五、四、三、二、一

Natural Gas Company

A 2621

CHAIN OF CUSTODY RECORD

[illegible]



Well Number NW-1
Meter Code LD087

Site Name K-31 LINE DRIP

Development Criteria

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

Methods of Development

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

Other ☐

Water Volume Calculation

Initial Depth of Well (feet) 29.50
Initial Depth to Water (feet) 17.98
Height of Water Column in Well (feet) 11.52

4 Diameter (inches): Well Gravel Pack

Item	Water Volume in Well			Gallons to be Removed
	Cubic Feet	Gallons		
Well Casing		7.6		22.8
Gravel Pack				
Drilling Fluids				
Total				

Instruments

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

Temperature Meter
Other D.O. CHEMETS KIT

Water Disposal

Water Disposal
K072 SEPAPATOP

Water Removal Data

[illegible]

THE WELL BAILED OVER 10.0 GALLONS.

Comments _____

Developer's Signature *Dennis Bird* _____

John F. Tully.

6-2-98

Reviewer

Date _____



FIELD SERVICES LABORATORY

ANALYTICAL REPORT

PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	980426
MTR CODE SITE NAME:	LD087	K-31 Line Drip
SAMPLE DATE TIME (Hrs):	6/2/98	1446
PROJECT:	Sample 4 5th Quarter	
DATE OF BTEX EXT. ANAL.:	6/5/98	6/5/98
TYPE DESCRIPTION:	MW-1	Water

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	98.3	PPB				
TOLUENE	1.48	PPB				
ETHYL BENZENE	27.2	PPB				
TOTAL XYLENES	14.7	PPB				
TOTAL BTEX	142	PPB				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 92.7 % for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative:

Approved By:

John F. J. J.

Date:

6/10/98

980426BTEXMW,6/8/98

SAMPLE 4 SHQTR

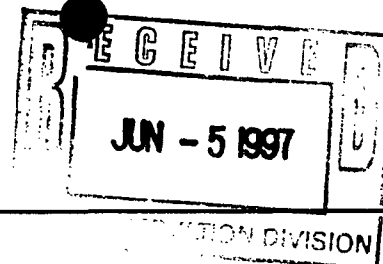


Natural Gas Company

A 2361

CHAIN OF CUSTODY RECORD

[illegible]



Bill Olson
New Mexico Oil Conservation Commission
2040 South Pacheco Street
Santa Fe, New Mexico 87505

Date: June 2, 1997

Subject: Semi-Annual El Paso Field Services Pit Project Groundwater Report

Mr. Olson,

El Paso Field Services (EPFS) has encountered groundwater at various locations while investigating and or remediating exempt hydrocarbon unlined pits. The enclosed list includes all locations which are in this category. Please find enclosed, the locations and status of each individual pit.

These pits are being remediated according to the "EPFS Remediation Plan for Groundwater Encountered During Pit Closure Activities" dated November 29, 1995.

EPFS requests that future reports for this project be submitted on a yearly basis to begin December 1, 1997 which will include soil boring logs, monitoring well completion diagrams, analytical data, groundwater elevation data, any risk analysis and type of remediation method.

For questions regarding this report please contact Ricky Cosby at (505)599-2158.

A handwritten signature in cursive script that reads 'Ricky D. Cosby'.

Ricky D. Cosby
Compliance Specialist

cc: Denny Foust - Aztec District

El Paso Field Services
Pit Project Ground Water Report

Location/Line Name	UTR	Sec	TN	RG	Marker	Well Status	Depth to GW	Product Level
MCGRATH #1	F	07	30	11	+1	GW encountered during drilling activities, MW results below standards, Develop Closure Plan	17'	No
Mae Gail Com #1	E	24	29	11		PZ1 in center of pit below standards. All other samples below standards. Develop Closure Plan	0.5'-8'	No
NM COM G1	P	36	30	10		MW1 was removed during site re-excavation, PZ1 installed with samples below standards. Develop Closure Plan.	17'-18'	No
MARY ACKROYD #1	J	18	30	11		Geoprobe samples all below standards. Develop Closure Plan.	3'-8'	No
JACQUEZ #3	E	25	30	09	-1	MW1 removed during re-excavation. 3 piezos and 1 probehole around pit all below standards. Operator has placed a production tank over the pit location. Develop Closure Plan.	13'-15'	No
SALAZAR G 34-1	K	34	25	06	+1	MW1 results all below standards. Develop Closure Plan.	35'	No
ANDERSON GAS COM A#1 PC	C	28	29	10		PH4 in center of pit is below standards. All of PH's around pit below standards. Develop Closure Plan.	5'-9'	No
GALLEGOS CANYON UT 145 E	D	26	29	12		PZ1 in center of pit below standards.	6'-9'	No
JOHNSTON FEDERAL #3A	I	12	30	09	+1	Develop Closure Plan. 4 clean quarters.	67.5'	No
FLORANCE #1	J	08	30	11	+1	MW1 installed 05/07/97. Develop and sample MW1.	14'	No
DE-NA-HAZ-ZA #1	D	18	26	08	+1	MW1 installed 05/06/97. Develop and sample MW1.	14'	No
Ramanta Et Al #1	J	13	27	09	+1	MW1 installed 05/06/97. Develop and sample MW1.	5'-9'	No
HAMMOND 41 A	O	25	27	08	+1	MW1 installed 05/05/97. Develop and sample MW1.	15'-24'	No
VALDEZ GAS UNIT A #1E CH	G	24	29	11	-1, +1	MW1 installed 05/07/97. Develop and sample MW1.	11'-12'	No

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Location/Line Name	LTR	Sec	TN	BO	Marker Status	Well Status	Depth to GW	Product Level
GALLEGOS CANYON COM A142E	G	25	29	12	+1	MW1 Developed and sampled 03/10/97. Evaluate Data.	13'	No
GALLEGOS CANYON UT D#160	I	27	29	12	+1	MW1 Developed and sampled 03/10/97. Evaluate Data.	19.1'	No
HARRINGTON #1	M	31	27	07	+1	MW1 Developed and sampled 04/02/97. Evaluate Data.	13'	No
Turner A1 "PM" (Pit #2)	G	34	31	11	+1	MW1 Developed and sampled 03/12/97. Evaluate Data.	2.3'-2.5'	No
TURNER #1A (Pit #1)	K	34	31	11	+1	Same as Above	5'	No
SAN JUAN 28-6 UNIT #79 MV	M	11	27	06	+1	MW1 Developed and sampled 04/14/97. Evaluate Data.	30'	No
KNIGHT #1	A	05	30	13	+4	Installed Oxygenate Socks 11/25/96. Geoprobe 02/25/97. Evaluate Data. Install MW1 and sample quarterly.	22'-25'	No
Ohio C. Govt. #3	P	26	28	11		MW1 Developed and sampled 03/28/97. Evaluate Data.	6'-16'	No
NICKLES #1	K	11	31	13	+1		12'-15'	No
BUD-DOS-PAH #1	M	19	26	08		Soil Boring 02/19/97. Operator has placed a compressor over excavated pit area. Evaluate Data.		No
SANCHEZ GAS COM B#1	G	28	29	10	+1	MW1 Developed and sampled 03/11/97. Evaluate Data.	13'	No
GE-ELE-GU-LITHE #2	L	07	26	08		Soil Boring 02/20/97. Operator has placed a compressor over excavated pit area. Evaluate Data.	6'-9'	No
JOHN CHARLES #8	B	13	27	09	+1	MW1 Developed and sampled 03/13/97. Evaluate Data.	13'	No
CANDADO 23 MV	B	09	26	07	+1	MW1 Developed and sampled 04/16/97. Evaluate Data.	19'	No
							6'-9'	No

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Location/Line Name	LTR	Sec	TN	RD	Monitor Status	Well Status	Depth to GW	Product Level
GALLEGOS CANYON UNIT 188E	B	30	29	12	+1	MW1 Developed and sampled 04/03/97. Evaluate Data.	3'-5'	No
JOHNSON #1E	P	21	31	13	+1	MW1 Developed and sampled 03/28/97. Evaluate Data.	3'-9'	No
MILES FEDERAL #1E	N	05	26	07	+1	MW1 Developed and sampled 04/02/97. Evaluate Data.	13.5'-30'	No
TRUJILLO GAS COM A#1	C	28	29	10	+1	MW1 Developed and sampled 04/03/97. Evaluate Data.	3'-9'	No
ANDERSON GAS COM A#1 CH	C	28	29	10	+1	MW1 Developed and sampled 03/11/97. Evaluate Data.	5'-9'	No
TRUNK D LINE DRIP (LOOPD8)	F	20	28	08	+1	MW1 Developed and sampled 03/31/97. Evaluate Data.	10.8'-24'	No
K-31 LINE DRIP	N	18	25	06	+1	MW1 Developed and sampled 04/16/97. Evaluate Data.	18'-24'	No
K-17 LINE DRIP	C	28	27	08	+1	MW1 Developed and sampled 03/31/97. Evaluate Data.	17.8'-27'	No
TRUNK 2B DRIP X-1	J	01	27	11	+1	MW1 Developed and sampled 03/11/97. Evaluate Data.	6'-10'	No
Trujillo Gas Com #1 PC	M	21	29	10		Install MW1	4'	No
OHIO C GOVERNMENT #3 TD	P	26	28	11		Install MW1	6'-18'	No
LINDRITH B #24	N	09	24	03		Install MW1	21'-27'	No
K - 51 Line Drip	A	34	26	06		Install MW1	10'	No
Mesa CPD	C	04	29	14	+1	Install well points around pit and sample. MW1 needs 3 more clean quarters.	3'-6.5'	No
STANDARD OIL COM #1	N	36	29	09	+1	Install well points on four sides of pit to establish gradient.	20.89'	No
W.D. HEATH B#5	M	31	30	09	+1	Install well points on four sides of pit to establish gradient.	30'-36'	No
CANYON LARGO UNIT 304	C	11	24	06	+1	Install downgradient well points and sample.	17.5'-18'	No

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Location/Line Name	LTR	Sec	TN	RG	Monitor Status	Well Status	Depth to GW	Product Level
K-27 LINE DRIP	E	04	25	06	+1	Establish gradient with well points.	40'	No
LAT 0-21 LINE DRIP	O	12	30	09	+1	Establish gradient with well points.	33'-36'	No
Trunk D loop Line Drip	I	33	28	08	+1	Establish gradient with well points.	33'-36'	No
Bisti Flare Pit	C	21	12	26		Establish GW gradient	15'	No
LAT L-40 LINE DRIP	H	13	28	04	+1	Install downgradient well points and sample.	40'	No
HAMNER #9	A	20	29	09	+1	Establish gradient with well points.	29'-31'	No
GARTNER LS #7	K	26	30	08		NMOCD Closure Approved	NA	No
HAMMOND FED #1	L	25	27	08	+1	NMOCD Closure Approved	NA	No
BURROUGHS COM #1	H	36	27	08		NMOCD Closure Approved	NA	No
CLEVELAND #6	B	21	27	09	+1	NMOCD Closure Approved	NA	No
CHARLEY PAH 4	K	12	27	09		NMOCD Closure Approved	NA	No
GRACE PEARCE #1	O	22	29	11		NMOCD Closure Approved	NA	No
HAMMOND #7	G	26	27	08		NMOCD Closure Approved	NA	No
ONA MCGEE #1	P	04	30	11		NMOCD Closure Approved	NA	No
CUTLER #2	A	14	24	06		NMOCD Closure Approved	NA	No
LINDRITH UNIT #23	D	09	24	03		NMOCD Closure Approved	NA	No
GREEN COM #1	E	36	29	09		NMOCD Closure Approved	NA	No
HAMMOND FED #5	D	25	27	08	+1	NMOCD Closure Approved	NA	No
FLORA VISTA #1	F	22	30	12		NMOCD Closure Approved	NA	No
MARSHALL B #1J	O	14	27	09		NMOCD Closure Approved	NA	No
HAMMOND #92	O	25	27	08		NMOCD Closure Approved	NA	No
PRICE #3	A	15	28	08		NMOCD Closure Approved	NA	No

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Location/Line Name	LTR	Sec	TN	RG	Monitor Status	Well Status	Depth to GW	Product Level
KRAUSE WN FEDERAL #1E	C	32	28	11		NMOCD Closure Approved	NA	No
CANYON LARGO UNIT #298	A	03	24	06		NMOCD Closure Approved	NA	No
ARGO #1E	N	18	27	10		NMOCD Closure Approved	NA	No
CANYON LARGO UNIT #302	J	03	24	06		NMOCD Closure Approved	NA	No
FEDERAL 6 #32 CH	G	06	26	07		NMOCD Closure Approved	NA	No
SANCHEZ GAS COM C #1	A	28	29	10		NMOCD Closure Approved	NA	No
VALDEZ #2	G	24	29	11	-1	NMOCD Closure Approved	NA	No
FEDERAL R #2	P	15	27	08	+1	NMOCD Closure Approved	NA	No
CANYON LARGO UNIT #336	C	24	25	06		NMOCD Closure Approved	NA	No
CANDELARIA GAS COM C #1	C	27	29	10		NMOCD Closure Approved	NA	No
HOWELL #3	C	03	27	08		NMOCD Closure Approved	NA	No
LAT 2C-55 LINE DRIP	F	17	25	07	+1	NMOCD Closure Approved	NA	No
HORTON 1-E	H	28	31	09	+1	MW1 above B standards. Inject nutrient slurry in corners of pit.	5.3'	No
LAT 3B-39	M	10	29	09	+1	MW1 above B standards. Inject nutrient slurry in corners of pit.	31'-36'	No
JOHNSTON FEDERAL #4	H	33	31	09	+3	Determine Remedial Design Options.	48.94'--50.38'	Yes
STATE GAS COM N #1	H	16	31	12	+4	Determine Remedial Design Options.	75.66'--76.90'	Yes
COLDIRON COM A #1	K	02	30	11	+1	Determine Remedial Design Options.	35.4'	Yes
JOHNSTON FEDERAL #6A	F	35	31	09	+4	Determine Remedial Design Options.	40'-44.6'	Yes
JAMES F. BELL #1E	P	10	30	13	+4	Determine Remedial Design Options.	23.5'-24.5'	Yes
CANADA MESA #2	I	24	24	06	+1	Determine Remedial Design Options.	30'	Yes

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Location/Line Name	LTB	Sec	TR	ISO	Monitor	Well Status	Depth to GW	Product Level
FIELDS A #7A	E	34	32	11	+4	Confirm groundwater gradient. Initiate product removal from MW4.	21.8'-28.8'	Yes
FOGELSON 4-1 COM #14	P	04	29	11	+1	Re-excavate site. Evaluate operators open pits as sources of contamination.	31'-36'	No
SANDOVAL GAS COM A 1A	C	35	30	09	+1	Refusal with Geoprobe. Re-excavate pit and re-install MW1.	35'	No
MILES FEDERAL 1A (CH)	F	05	28	07	+1	Evaluate Data. Sandstone refusal at 25'.	29'	Yes
SHEETS #2	H	28	31	09	+4	Sample Quarterly. Steady drop in B analysis through 4 quarters.	46.3'--50.31'	No
JENNAPAH #1	H	36	28	09	+1	Sample Quarterly. Develop and Sample MW1 03/13/97.	20'	No
FLORANCE C LS 7	F	30	28	08	+1	Sample Quarterly. Need 2 more clean quarters.	40'	No
GRAHAM #53	L	10	27	08	+1	Sample Quarterly. Need 3 more clean samples	28.33'	No
MILES FEDERAL 1 A MV	F	05	28	07	+1	Sample Quarterly. Need 2 more clean quarters.	27.8'	No
LAT. H-37 DRIP Y-3	F	01	31	13	+4	Sample Quarterly. Remove socks. 4 clean quarters with ORB socks.	24.5'-25'	No
2C-22 #1 LINE DRIP	N	35	24	06	+1	Develop Closure Plan. 4 clean quarters.	28.8'	No
2C-22 #3 LINE DRIP	G	13	24	06	+1	Sample Quarterly. Need 3 more clean quarters.	14'-24'	No
2C - 45 Line Drip	P	13	25	06	+1	Sample Quarterly. Need 3 more clean quarters.	42.2'	No
USSELMAN GAS COM #1	B	04	31	10	+1	Sample Quarterly. Need 2 more clean quarters	10'	No
Note:								
MW = Monitor Well								
PZ = Piezometer								
BH = Bore Hole								