

3R - 210

REPORTS

DATE:

1999



Certified Mail: #Z 213 707 666 (Box 1 of 2)
#Z 213 707 664 (Box 2 of 2)

March 24, 2000

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

RECEIVED

MAR 23 2000

ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

RE: 1999 Pit Project Annual Groundwater Report

Dear Mr. Olson:

In accordance with reporting requirements, El Paso Field Services (EPFS) has enclosed annual updates for the 32 remaining groundwater impacted locations that were identified during our pit closure project of 1994 / 1995.

Of the 32 reports, EPFS hereby requests closure of 4 of these locations. The 4 sites EPFS is requesting closure on are presented in one separate binder entitled "San Juan Basin Pit Closures, El Paso Field Services, Pit Closure Reports".

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".

EPFS has also included for your information five Navajo sites in a separate binder and a separate report for the Bisti Flare Pit #1.

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

Sincerely,

A handwritten signature in dark ink that reads "Scott T. Pope".

Scott T. Pope P.G.
Senior Environmental Scientist

xc: Mr. Denny Foust, NMOCD, Aztec - w / enclosures; **Certified Mail # Z 213 707 667**
Mr. Bill Liesse, BLM - w / enclosures; **Certified Mail # Z 213 707 668**
Mr. John Jaquez, - w / Jaquez enclosures; **Certified Mail # Z 213 707 669**
Ms. Charmaine Tso, Navajo EPA - w / enclosures; **Certified Mail # Z 213 707 670**

bc: J. A. Lambdin w / enclosures

Philip Services Corp. – Cecil Irby, w / o enclosures

B. B. McDaniel / 24321 – NMOCD Regulatory w / o

SAN JUAN BASIN PIT CLOSURES
San Juan Basin, New Mexico

El Paso Field Services Pit Project Groundwater Report
Annual Report

March 2000

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ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

Prepared For

El Paso Field Services
Farmington, New Mexico

Project 62800158



EPFS GROUNDWATER PITS 1999 ANNUAL GROUNDWATER REPORT

LAT 3B-39 LINE DRIP
Meter/Line ID - LD146

RECEIVED

Legals - Twn: 29N Rng: 9W
NMOCD Hazard Ranking: 40
Operator: EL PASO FIELD SERVICES

SITE DETAILS
Sec: 10 Unit: M
Land Type: FEE

MAR 29 2000
ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

PREVIOUS ACTIVITIES

Site Assessment: Jan-94 Excavation: Jan-95 (60 cy) Soil Boring: Sep-95
Monitor Well: Sep-95 Geoprobe: Nov-96 Quarterly Sampling Initiated: Nov-96

1999 ACTIVITIES

Quarterly Groundwater Monitoring - Quarterly groundwater monitoring continued through 1999.

Monitor Well Installation - EPFS is in the process of obtaining permission to conduct off-site drilling for this location. The locations for the proposed monitor wells are identified on Figure 1.

Operator Notification - Operator notified of field activities.

SUMMARY TABLES

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

SITE MAP

A site map is presented as Figure 1 which includes the two proposed off-site monitoring well locations.

GEOLOGIC LOG 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 collected from MW-1 show levels of total xylenes above New Mexico Groundwater Standards.

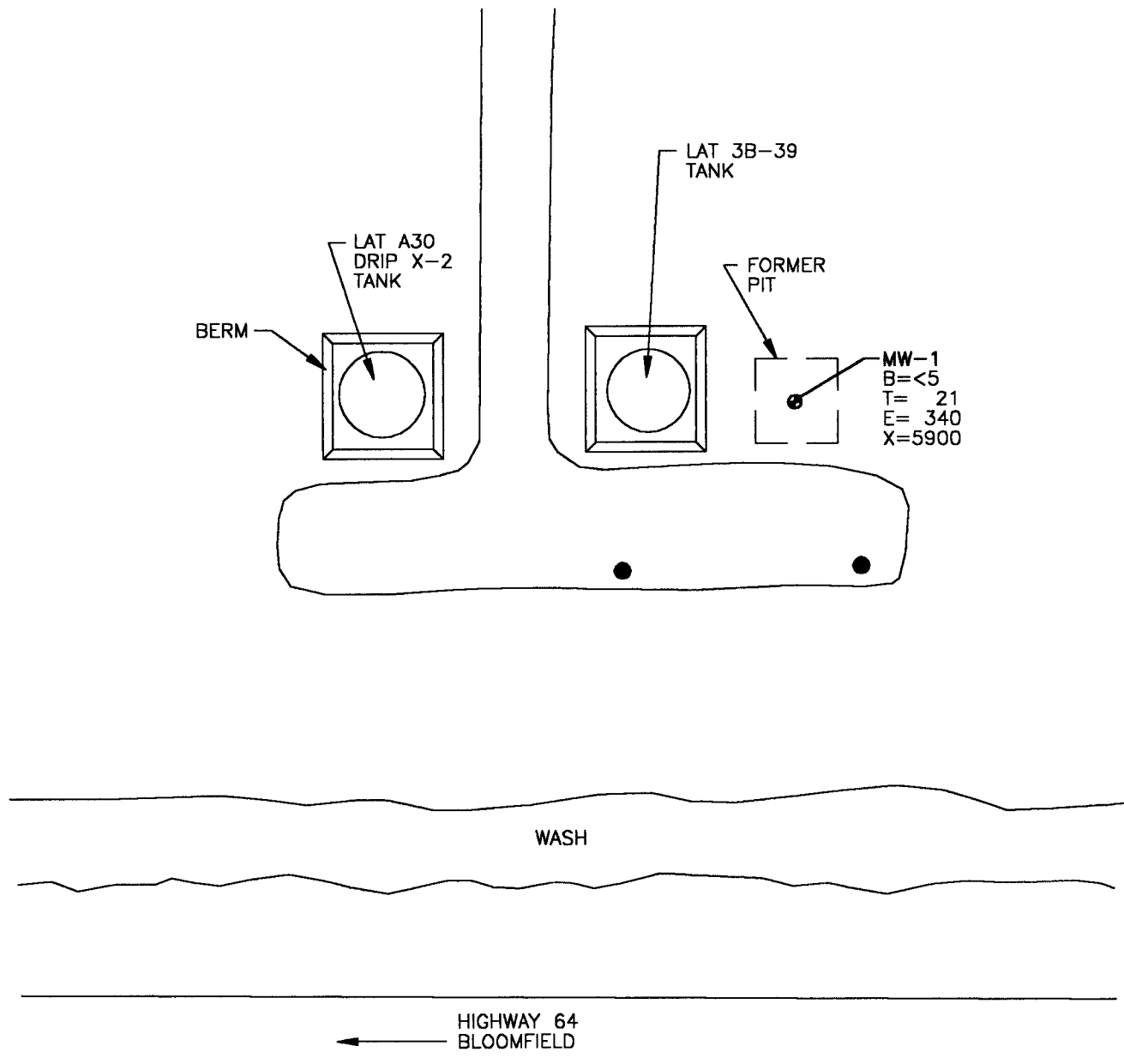
Pertinent data from past groundwater reports include the following: Geoprobe groundwater samples, collected from various points outside the boundaries of the former pit and analyzed for hydrocarbon constituents, were within acceptable limits for New Mexico Groundwater Standards. Based on Geoprobe data, there does not appear to have been any migration of contaminants.

EPFS GROUNDWATER PITS

1999 ANNUAL GROUNDWATER REPORT

RECOMMENDATIONS

- Quarterly sampling will continue at MW-1 until analytical results show hydrocarbon constituents are below New Mexico Groundwater Standards for four consecutive quarters.
- 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.



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

● APPROXIMATE LOCATIONS FOR PROPOSED MONITORING WELLS

NOT TO SCALE



COL 17520BG-003



TITLE:
 LAT 3B-39 LINE DRIP
 LD146
 NOVEMBER 9, 1999

DWN:	DES.:
CJG	CI
CHKD:	APPD:
CI	
DATE:	REV.:
02/24/00	0

PROJECT NO.: 17520
 EPFS GW PITS

FIGURE 1

EPFS Groundwater Pits
1999 Annual 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
990024	LD146	Lat 3B-39 Line Drip	02/02/99	1	Sample 4 - 8th Quarter	= 7.92	= 21	= 409	= 7306	= 7744
990247	LD146	Lat 3B-39 Line Drip	05/19/99	1	Sample 4 - 9th Quarter	= 7.13	= 15	= 381	= 4630	= 5033
990380	LD146	Lat 3B-39 Line Drip	08/30/99	1	Sample 4 - 10th Quarter	< 10.00	= 54	= 290	= 6500	= 6844
990443	LD146	Lat 3B-39 Line Drip	11/09/99	1	Sample 4 - 11th Quarter	< 5.00	= 21	= 340	= 5900	= 6266

ATTACHMENT 1
1999 GROUNDWATER ANALYTICAL

- History -
- Date Recd - 2-17-99

A 2426



CHAIN OF CUSTODY RECORD

SAMPLES 4 STATION

Project No.	Project Name	Requested Analysis			Type and No. of Sample Containers	Preservation Technique	Remarks
Samplers: (Signature) <i>Dennis Bird</i> Date: 2-2-99							
DATE	Time	Comp.	GRAB	Sample Number			
WATER 2-2-99 1535			X	990024	52 34°F X		LAT. 3B-39 LINE DRIP MW-1
WATER 2-2-99 1535			X	990025	52 34°F X		LAT. 3B-39 LINE DRIP FIELD DUP
[The following rows are crossed out with a diagonal line]							
Relinquished by: (Signature) <i>Dennis Bird</i> Date/Time 2-2-99 1721		Received by: (Signature)		Relinquished by: (Signature)		Date/Time	
Relinquished by: (Signature)		Received by: (Signature)		Relinquished by: (Signature)		Date/Time	
Relinquished by: (Signature)		Received for Laboratory by: (Signature) <i>[Signature]</i>		Date/Time 2/3/99 1230		Remarks:	
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	990024
MTR CODE SITE NAME:	LD146	Lateral 3B-39 Line Drip
SAMPLE DATE TIME (Hrs):	2/2/99	1535
PROJECT:	Sample 4 8th Quarter	
DATE OF BTEX EXT. ANAL.:	NA	2/3/99 + 2/4/99
TYPE DESCRIPTION:	MW-1	Water

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	7.92	PPB	1			
TOLUENE	21.0	PPB	1			
ETHYL BENZENE	409	PPB	10	D		
TOTAL XYLENES	7306	PPB	10	D		
TOTAL BTEX	7744	PPB				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 90.2 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 Padden Date: 2-16-99

990025BTEXMonitorWel,2/16/99



FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	990025
MTR CODE SITE NAME:	LD146	Lateral 3B-39 Line Drip
SAMPLE DATE TIME (Hrs):	2/2/99	1535
PROJECT:	Sample 4 8th Quarter	
DATE OF BTEX EXT. ANAL.:	NA	2/3/99 + 2/4/99
TYPE DESCRIPTION:	MW-1 Field Duplicate	Water

Field Remarks: Field Duplicate

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	8.44	PPB	1			
TOLUENE	22.6	PPB	1			
ETHYL BENZENE	439	PPB	10	D		
TOTAL XYLENES	7620	PPB	10	D		
TOTAL BTEX	8090	PPB				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 81.6% 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. Smith Date: 2-16-99

990024BTEXMonitorWel, 2/16/99



EL PASO FIELD SERVICES

QUALITY CONTROL REPORT
EPA METHOD 8020 - BTEX
Samples: 990021 to 990025

QA/QC for 02/03/99 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	46.4	92.7	75 - 125 %	X
Toluene	Standard	50.0	46.9	93.8	75 - 125 %	X
Ethylbenzene	Standard	50.0	47.7	95.4	75 - 125 %	X
m & p - Xylene	Standard	100	93.9	93.9	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	
LCS LA-45476 25 PPB					YES	NO
					RANGE	
Benzene	Standard	25.0	29.8	119	39 - 150	X
Toluene	Standard	25.0	29.8	119	46 - 148	X
Ethylbenzene	Standard	25.0	29.6	118	32 - 160	X
m & p - Xylene	Standard	50.0	61.3	123	Not Given	X
o - Xylene	Standard	25.0	31.2	125	Not Given	X

Narrative: Acceptable.

LABORATORY DUPLICATES:

SAMPLE ID	TYPE	SAMPLE RESULT PPB	DUPLICATE RESULT PPB	RPD	ACCEPTABLE	
					YES	NO
990024					RANGE	
Benzene	Matrix Duplicate	7.9	8.4	5.96	+/- 20 %	X
Toluene	Matrix Duplicate	21.0	22.3	6.07	+/- 20 %	X
Ethylbenzene	Matrix Duplicate	389	413	5.91	+/- 20 %	X
m & p - Xylene	Matrix Duplicate	3422	3519	2.81	+/- 20 %	X
o - Xylene	Matrix Duplicate	1175	1213	3.19	+/- 20 %	X

Narrative: Acceptable.

LABORATORY SPIKES:

SAMPLE ID	SPIKE ADDED PPB	SAMPLE RESULT PPB	SPIKE SAMPLE RESULT PPB	%R	ACCEPTABLE	
					YES	NO
2nd Analysis 990024					RANGE	
Benzene	25	7.9	32.8	100	75 - 125 %	X
Toluene	25	21.0	46.8	104	75 - 125 %	X
Ethylbenzene	25	389	437	192	75 - 125 %	X
m & p - Xylene	50	3422	3530	216	75 - 125 %	X
o - Xylene	25	1175	1235	241	75 - 125 %	X

Narrative: Acceptable. Sample result for EB, MPX and OX exceeded spike by > 5X.

AUTO BLANK	SOURCE	PPB (1 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 (one 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 (one 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	3.2	ACCEPTABLE

Narrative: Acceptable.

TRIP BLANK 020299	SOURCE	PPB (one 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: JM

Approved By: John Lard

Date: 2-4-99



EL PASO FIELD SERVICES

QUALITY CONTROL REPORT

EPA METHOD 8020 - BTEX

Samples: 990021 to 990027

QA/QC for 02/04/99 Sample Set

LABORATORY CALIBRATION CHECKS / LABORATORY CONTROL SAMPLES:

SAMPLE NUMBER	TYPE	EXPECTED	ANALYTICAL	%R	ACCEPTABLE	
		RESULT	RESULT		YES	NO
ICV LA-52589		PPB	PPB		RANGE	
50 PPB						
Benzene	Standard	50.0	54.1	108.2	75 - 125 %	X
Toluene	Standard	50.0	55.0	110.0	75 - 125 %	X
Ethylbenzene	Standard	50.0	56.3	112.5	75 - 125 %	X
m & p - Xylene	Standard	100	112.4	112.4	75 - 125 %	X
o - Xylene	Standard	50.0	56.3	112.6	75 - 125 %	X
SAMPLE NUMBER	TYPE	EXPECTED	ANALYTICAL	%R	ACCEPTABLE	
		RESULT	RESULT		YES	NO
LCS LA-45476		PPB	PPB		RANGE	
25 PPB						
Benzene	Standard	25.0	30.1	120	39 - 150	X
Toluene	Standard	25.0	30.1	120	46 - 148	X
Ethylbenzene	Standard	25.0	29.7	119	32 - 160	X
m & p - Xylene	Standard	50.0	59.8	120	Not Given	X
o - Xylene	Standard	25.0	30.9	124	Not Given	X

Narrative: Acceptable.

LABORATORY DUPLICATES:

SAMPLE ID	TYPE	SAMPLE RESULT	DUPLICATE RESULT	RPD	ACCEPTABLE	
		PPB	PPB		YES	NO
990021					RANGE	
Benzene	Matrix Duplicate	48.0	50.2	4.56	+/- 20 %	X
Toluene	Matrix Duplicate	12.0	13.1	8.72	+/- 20 %	X
Ethylbenzene	Matrix Duplicate	27.1	18.0	40.21	+/- 20 %	X
m & p - Xylene	Matrix Duplicate	122	125	2.24	+/- 20 %	X
o - Xylene	Matrix Duplicate	9.7	17.1	55.40	+/- 20 %	X

Narrative: Acceptable. Matrix interference observed on EB and MPX.

LABORATORY SPIKES:

SAMPLE ID	SPIKE ADDED	SAMPLE RESULT	SPIKE SAMPLE RESULT	%R	ACCEPTABLE	
		PPB	PPB		YES	NO
2nd Analysis 990021					RANGE	
Benzene	25	48.0	76.4	114	75 - 125 %	X
Toluene	25	12.0	36.4	97	75 - 125 %	X
Ethylbenzene	25	27.1	50.1	92	75 - 125 %	X
m & p - Xylene	50	122	169	94	75 - 125 %	X
o - Xylene	25	9.7	34.6	99	75 - 125 %	X

Narrative: Acceptable.

AUTO BLANK	SOURCE	PPB (1 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 (one 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	NA	ACCEPTABLE
Toluene	Vial + Boiled Water	NA	ACCEPTABLE
Ethylbenzene	Vial + Boiled Water	NA	ACCEPTABLE
Total Xylenes	Vial + Boiled Water	NA	ACCEPTABLE

Narrative: Acceptable.

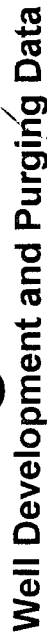
TRIP BLANK 020499	SOURCE	PPB (one analyzed with this set)	STATUS
Benzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Toluene	Vial + Boiled Water	<1.0	ACCEPTABLE
Ethylbenzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Total Xylenes	Vial + Boiled Water	<3.0	ACCEPTABLE

Narrative: Acceptable.

Reported By: JAL

Approved By: John Savdi

Date: 2-4-99



Well Development and Purging Data

☐	Development
☒	Purging

Well Number W-1

Meter Code LD146

Development Criteria

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

Water Volume Calculation

Initial Depth of Well (feet) 44.31

[illegible]Height of Water Column in Well (feet) 6.69

4 Diameter (inches): Well
Gravel Pack

Methods of Development

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

Instruments

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

Temperature Meter
Other D.O. CHEMETS KIT

Water Disposal

Water Disposal
K072 SEPAPPA TOP

Item	Water Volume in Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing		44	13.3
Gravel Pack			
Drilling Fluids			
Total			

☐ other

Water Removal Data

[illegible]

Comments THE WATER HAD A STRONG HYDROCARBON SMELL.

Developer's Signature Tennia Bied

Date 2-2-99 Reviewer J. S. S. S.

Date 2-4-09



SAMPLE 4 97407P

CHAIN OF CUSTODY RECORD

Project Number		Project Name		Contract Laboratory P.O. Number	
Samplers: (Signature) <i>Benjie Bird</i>		MC # LD146		Date: 5-19-99	
Lab ID	Date	Time	Matrix	Sample Number	Total No. of Containers
	5/19/99	1640	WATER	990247	2
				Composite or Grab	
				BTX	X
				Requested Analysis	
				Remarks	ATTENTION 3B-37 LINE DRUM
Relinquished by: (Signature) <i>Benjie Bird</i>		Date/Time		Received by: (Signature)	Date/Time
Relinquished by: (Signature)		Date/Time		Received by: (Signature)	Date/Time
Requested Turnaround Time:		Routine ☐ Rush ☐		Sample Receipt Remarks	
Carrier Co.				TEMP 342F	
Bill No.:		Charge Code		Results & Invoices to:	
				North Region Laboratory El Paso Natural Gas Company P. O. Box 4990 Farmington, New Mexico 87499	
		505-599-2144		FAX: 505-599-2261	

White-Testing Lab

Yellow-EPNG Lab

Pink-Field Sampler



FIELD SERVICES LABORATORY
ANALYTICAL REPORT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	NA	990247
MTR CODE SITE NAME:	LD146	Lateral 3B-39 Line Drip
SAMPLE DATE TIME (Hrs):	5/19/99	1640
PROJECT:	Sample 4 - 9th Quarter	
DATE OF BTEX EXT. ANAL:	NA	5/21/99
TYPE DESCRIPTION:	MW-1	Water

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	7.13	PPB				
TOLUENE	14.9	PPB				
ETHYL BENZENE	381	PPB				
TOTAL XYLENES	4630	PPB	10	D,D1		
TOTAL BTEX	5033	PPB				

—BTEX is by EPA Method 8021 —

The Surrogate Recovery was at 94.8 % for this sample All QA/QC was acceptable.

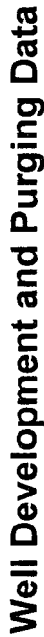
DF = Dilution Factor Used

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

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

Narrative:

Approved By: John L. Linder Date: 5/24/99



Site Name LATERAL 3B-39 LINE DRIP

☐	Development
☒	Purging

Well Number MW-1

Meter Code LD146

Development Criteria

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

Water Volume Calculation

Initial Depth of Well (feet) 44.31

Initial Depth to Water (feet) 34.96

Height of Water Column in Well (feet) 6.35

Diameter (inches): Well 4 Gravel Pack

Methods of Development

- | | | | |
|--------------------------|-------------|-------------------------------------|--------------------------|
| ☐ | Pump | ☐ | Bailer |
| ☐ | Centrifugal | ☒ | Bottom Valve |
| ☐ | 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		4.2	12.6
Gravel Pack			
Drilling Fluids			
Total			

☐ other

Water Removal Data

[illegible]

Comments THE WATER HAD A STRONG HYDROCARBON SMELL.

Developer's Signature Lennis Bied

Date 5-19-99 Reviewer

Jon Tard

Date 5/24/99



QUALITY CONTROL REPORT

EPA METHOD 8020 - BTEX

Samples: 990245 to 990247

QA/QC for 05/21/99 Sample Set

LABORATORY CALIBRATION CHECKS / LABORATORY CONTROL SAMPLES:

SAMPLE NUMBER ICV LA-52589 50 PPB	TYPE	EXPECTED	ANALYTICAL	%R	ACCEPTABLE	
		RESULT	RESULT		YES	NO
		PPB	PPB		RANGE	
Benzene	Standard	50.0	47.7	95.5	75 - 125 %	X
Toluene	Standard	50.0	47.4	94.7	75 - 125 %	X
Ethylbenzene	Standard	50.0	47.7	95.3	75 - 125 %	X
m & p - Xylene	Standard	100	97.2	97.2	75 - 125 %	X
o - Xylene	Standard	50.0	48.3	96.6	75 - 125 %	X
SAMPLE NUMBER LCS LA-45476 25 PPB	TYPE	EXPECTED	ANALYTICAL	%R	ACCEPTABLE	
		RESULT	RESULT		YES	NO
		PPB	PPB		RANGE	
Benzene	Standard	25.0	23.5	94.0	39 - 150	X
Toluene	Standard	25.0	23.4	93.7	46 - 148	X
Ethylbenzene	Standard	25.0	23.7	95.0	32 - 160	X
m & p - Xylene	Standard	50.0	47.9	95.9	Not Given	X
o - Xylene	Standard	25.0	24.0	96.1	Not Given	X

Narrative: Acceptable.

LABORATORY DUPLICATES:

SAMPLE ID	TYPE	SAMPLE RESULT PPB	DUPLICATE RESULT PPB	RPD	ACCEPTABLE	
					YES	NO
990246					RANGE	
Benzene	Matrix Duplicate	136.7	141.5	3.47	+/- 20 %	X
Toluene	Matrix Duplicate	89.42	92.67	3.57	+/- 20 %	X
Ethylbenzene	Matrix Duplicate	67.25	69.68	3.54	+/- 20 %	X
m & p - Xylene	Matrix Duplicate	122.11	125.06	2.38	+/- 20 %	X
o - Xylene	Matrix Duplicate	18.46	18.57	0.60	+/- 20 %	X

Narrative: Acceptable.

LABORATORY SPIKES:

SAMPLE ID	SPIKE ADDED PPB	SAMPLE RESULT PPB	SPIKE SAMPLE RESULT PPB	%R	ACCEPTABLE	
					YES	NO
					RANGE	
2nd Analysis 990246						
Benzene	50	68.4	110.5	84	75 - 125 %	X
Toluene	50	44.7	87.9	86	75 - 125 %	X
Ethylbenzene	50	33.6	82.1	97	75 - 125 %	X
m & p - Xylene	100	61.1	160.6	100	75 - 125 %	X
o - Xylene	50	9.23	54.1	90	75 - 125 %	X

Narrative: Acceptable.

LABORATORY AND FIELD BLANKS:

AUTO BLANK	SOURCE	PPB (one 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 (one 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 (one 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 BLK 05/19/99	SOURCE	PPB (one 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. L.

Approved By: J. L. Ladd

Date: 5/24/99

FIELD SERVICES

FIELD SERVICES LABORATORY

ANALYTICAL REPORT PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	990380
MTR CODE SITE NAME:	LD146	3B-39 Line Drip
SAMPLE DATE TIME (Hrs):	08/30/1999	1053
PROJECT:	Sample 4 10th Quarter	
DATE OF BTEX EXT. ANAL:	NA	09/10/1999
TYPE DESCRIPTION:	MW-1	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	<10	PPB	20	D		
TOLUENE	54	PPB	20	D		
ETHYL BENZENE	290	PPB	20	D		
TOTAL XYLENES	6500	PPB	20	D		
TOTAL BTEX	6844	PPB				

—BTEX is by EPA Method 8020 —

The Surrogate Recovery was at 102.0 % for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative:

Sample analyzed by Pinnacle Laboratories, Albuquerque NM.

Approved By: _____

Date: _____

9-16-99

990380 BTEX Monitor Well, 09/16/1999



Well Number MW-1
Meter Code LD146

Site Name LATERAL 3B-39 LINE DRIP

Development Criteria

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

Water Volume Calculation

Initial Depth of Well (feet) 44.31
Initial Depth to Water (feet) 33.27
Height of Water Column in Well (feet) 8.04
Diameter (inches): Well 4 Gravel Pack

Methods of Development

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

☐ Other

Water Removal Data

[illegible]

Comments THE WATER HAD A STRONG HYDROCARBON SMELL.

Developer's Signature *Genniv Bied*

Date 8-30-99 Reviewer

John F. Smith

Date 9-16-6

PINNACLE
LABORATORIES



Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

Pinnacle Lab ID number 909032
September 14, 1999

EL PASO FIELD SERVICES
770 WEST NAVAJO
FARMINGTON, NM 87401

990380 - MC LD 146 3B-39 Line Drip
990382 - MC 93388 Horton #1 E
990383 - MC 93388 Horton #1 E FD

Project Name PIT MONITOR WELLS
Project Number (none)

Attention: JOHN LAMB DIN

On 9/9/99 Pinnacle Laboratories, Inc. Inc., (ADHS License No. AZ0592 pending), 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.

H. Mitchell Rubenstein, Ph. D.
General Manager

MR: mt

Enclosure

Reviewed & Approved
J. Lash 9-16-99

CLIENT	: EL PASO FIELD SERVICES	PINNACLE ID	: 909032
PROJECT #	: (none)	DATE RECEIVED	: 9/9/99
PROJECT NAME	: PIT MONITOR WELLS	REPORT DATE	: 9/14/99

PIN ID. #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	990380	AQUEOUS	8/30/99
02	990382	AQUEOUS	9/2/99
03	990383	AQUEOUS	9/2/99
04	TRIP BLANK	AQUEOUS	8/30/99
05	TRIP BLANK	AQUEOUS	9/2/99

GAS CHROMATOGRAPHY RESULTS

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

PINNACLE I.D.: 909032

SAMPLE			DATE	DATE	DATE	DIL.
ID. #	CLIENT I.D.	MATRIX	SAMPLED	EXTRACTED	ANALYZED	FACTOR
01	990380	AQUEOUS	8/30/99	NA	9/10/99	20
02	990382	AQUEOUS	9/2/99	NA	9/10/99	1
03	990383	AQUEOUS	9/2/99	NA	9/10/99	1
PARAMETER		DET. LIMIT	UNITS	990380	990382	990383
BENZENE		0.5	UG/L	< 10	120	120
TOLUENE		0.5	UG/L	54	30	31
ETHYLBENZENE		0.5	UG/L	290	1.8	1.8
TOTAL XYLENES		0.5	UG/L	6500	5.8	5.3

SURROGATE:

BROMOFLUOROBENZENE (%)

102

88

89

SURROGATE LIMITS (80 - 120)

CHEMIST NOTES:

N/A

GAS CHROMATOGRAPHY RESULTS

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

PINNACLE I.D.: 909032

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
04	TRIP BLANK	AQUEOUS	8/30/99	NA	9/10/99	1
05	TRIP BLANK	AQUEOUS	9/2/99	NA	9/10/99	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	
METHYL-t-BUTYL ETHER	2.5		UG/L	< 2.5	< 2.5	

SURROGATE:

BROMOFLUOROBENZENE (%)

103

88

SURROGATE LIMITS (80 - 120)

CHEMIST NOTES:
N/A

GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

TEST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 909032
BLANK I. D.	: 091099	DATE EXTRACTED	: NA
CLIENT	: EL PASO FIELD SERVICES	DATE ANALYZED	: 9/10/99
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 (%) 103
SURROGATE LIMITS: (80 - 120)
CHEMIST NOTES:
N/A

GAS CHROMATOGRAPHY QUALITY CONTROL
MSMSD

TEST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 909032
MSMSD #	: 091099	DATE EXTRACTED	: NA
CLIENT	: EL PASO FIELD SERVICES	DATE ANALYZED	: 9/10/99
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	18.3	92	19.3	97	5	(80 - 120)	20
TOLUENE	<0.5	20.0	19.1	96	19.9	100	4	(80 - 120)	20
ETHYLBENZENE	<0.5	20.0	19.0	95	19.7	99	4	(80 - 120)	20
TOTAL XYLENES	<0.5	60.0	58.0	97	60.2	100	4	(80 - 120)	20

CHEMIST NOTES:
N/A

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

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

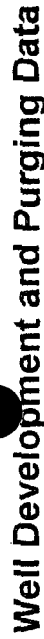
PLEASE FILL THIS FORM IN COMPLETELY.

**MC# LD169, D Loop Line Drip,
MW-1 : Sample 4 - 13th Quarter**

**MC#70445, Standard Oil Com
#1, MW-1 : Sample 4 - 13th Qtr.**

**● MC#97213, Hamner #9, MW-1 :
Sample 4 - 13th Quarter**

**MC# LD146, Lat. 3B-39 Line
Drip, MW-1 : Sample 4 - 11th
Quarter**



☐	Development
☒	Purging

Well Number MW-1

Meter Code **LD169**

Development Criteria

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

Methods of Development

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

☐ Other

Water Removal Data

[illegible]

Comments THE WATER HAD A LIGHT HYDROGEN SULFIDE SMELL.

Developer's Signature *Dennis Bied*

Date 11-9-99

Reviewer

Polong Takt di-

Date 11/30/99

Water Volume Calculation

Initial Depth of Well (feet) 43.48
Initial Depth to Water (feet) 34.66
Height of Water Column in Well (feet) 8.82

Diameter (inches): Well 4 Gravel Pack

Instruments

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

Water Disposal

KUTZ SEPARATOR



Well Development and Purging Data

Site Name STANDARD OIL COMPANY

☐ Development
☒ Purging

Well Number MW-1

Meter Code 70445

Development Criteria

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

Methods of Development

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

Water Volume Calculation

Initial Depth of Well (feet) 52.93
Initial Depth to Water (feet) 19.91
Height of Water Column in Well (feet) 13.02

Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing		<u>8.6</u>	<u>25.8</u>
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		Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gal)		Product Volume Removed (gallons)		pH	Conductivity $\mu\text{mho/cm}$	Dissolved Oxygen mg/L	Comments
		Pump	Bailer				Increment	Cumulative	Increment	Cumulative				
11-9-99	1123													
11-9-99	1131						5.0	5.0			7.11	4810		
11-9-99	1139						5.0	10.0			7.11	4940		
11-9-99	1149						5.0	15.0			7.30	5020		
11-9-99	1156						5.0	20.0			7.34	5040		
11-9-99	1205						5.0	25.0			7.32	5040		
											7.38	5010	0.5	

Comments THE WATER HAD A STRONG HYDROGEN SULFIDE SMELL.

Developer's Signature Lennie Bird

Date 11-9-99

Reviewer

John Funder

Date

11/30/99



Well Number 9W-1
Meter Code 97213

Site Name HAMMER #9

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

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

Initial Depth of Well (feet) 40.91
Initial Depth to Water (feet) 32.19
Height of Water Column in Well (feet) 8.73

Diameter (inches): Well 4 Gravel Pack

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

NOT SEPARATED

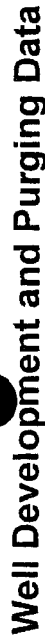
[illegible]

Comments THE WELL BAILED ONLY 6.0 GALLONS. THE WATER HAD A LIGHT HYDROGEN SULFIDE SMELL.

Developer's Signature *Dennis Bird*

Date 11-9-99 Reviewer _____

John Fardli Date 11/30/99



☐	Development
☒	Purging

Well Number MW-1

Meter Code **LD146**

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

Water Volume Calculation

Initial Depth of Well (feet) 413
Initial Depth to Water (feet) 32.99
Height of Water Column in Well (feet) 8.32

Diameter (inches): Well 4 Gravel Pack

☒ Temperature Meter
☒ Other *D.O. CHEMETS KIT*

Water Disposal

K072 SEPARATOR

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

☐ Other _____[illegible]

Comments THE WATER HAD A STRONG HYDROCARBON SMELL.

Developer's Signature Dennis Bied

Date 11-9-99

John Funder

Date 11/30/99

PINNACLE
LABORATORIES

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

Pinnacle Lab ID number
November 19, 1999

911051



EL PASO FIELD SERVICES
770 WEST NAVAJO
FARMINGTON, NM 87401

Project Name PIT MONITOR WELLS
Project Number (none)

*Multiphase Wells
Shown on Next Page*

Attention: JOHN LAMBDIN

On 11/16/99 Pinnacle Laboratories, Inc. Inc., (ADHS License No. AZ0592 pending), 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: jt

Enclosure

*Reviewed & Accepted
J. J. J. 11/30/99*



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	: 911051
PROJECT #	: (none)	DATE RECEIVED	: 11/16/99
PROJECT NAME	: PIT MONITOR WELLS	REPORT DATE	: 11/19/99

PIN			DATE
ID. #	CLIENT DESCRIPTION	MATRIX	COLLECTED
01	990440 - mc# LD169, D LOOP Line Drip	AQUEOUS	11/9/99
02	990441 - mc# 70445, Standard Oil Co. #1	AQUEOUS	11/9/99
03	990442 - mc# 97213, Hammerz #9	AQUEOUS	11/9/99
04	990443 - mc# 2D146, Lateral 3B-39 Line Drip	AQUEOUS	11/9/99
05	TRIP BLANK	AQUEOUS	11/9/99

GAS CHROMATOGRAPHY RESULTS

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

PINNACLE I.D.: 911051

SAMPLE		MATRIX	DATE	DATE	DATE	DIL.
ID. #	CLIENT I.D.		SAMPLED	EXTRACTED	ANALYZED	FACTOR
01	990440	AQUEOUS	11/9/99	NA	11/16/99	10
02	990441	AQUEOUS	11/9/99	NA	11/16/99	20
03	990442	AQUEOUS	11/9/99	NA	11/16/99	20
PARAMETER		DET. LIMIT	UNITS	990440	990441	990442
BENZENE		0.5	UG/L	410	240	120
TOLUENE		0.5	UG/L	21	98	39
ETHYLBENZENE		0.5	UG/L	330	180	75
TOTAL XYLENES		0.5	UG/L	230	1500	170

SURROGATE:
BROMOFLUOROBENZENE (%) 107 95 101
SURROGATE LIMITS (80 - 120)

CHEMIST NOTES:
N/A

LD 169
D Loop Line Drip
Sample 4 13th Qtr
70445
Standard Oil
Com #1
Sample 4
13th Qtr
97213
Hammer #9
Sample 4
13th Qtr

GAS CHROMATOGRAPHY RESULTS

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

PINNACLE I.D.: 911051

PROJECT NAME: TPA MONITOR WELLS						
SAMPLE			DATE	DATE	DATE	DIL.
ID. #	CLIENT I.D.	MATRIX	SAMPLED	EXTRACTED	ANALYZED	FACTOR
04	990443	AQUEOUS	11/9/99	NA	11/16/99	10
05	TRIP BLANK	AQUEOUS	11/9/99	NA	11/17/99	1

PARAMETER	DET. LIMIT	UNITS	990443	TRIP BLANK
BENZENE	0.5	UG/L	< 5.0	< 0.5
TOLUENE	0.5	UG/L	21	< 0.5
ETHYLBENZENE	0.5	UG/L	340	< 0.5
TOTAL XYLENES	0.5	UG/L	5900(D50)	< 0.5

SURROGATE:
BROMOFLUOROBENZENE (%) 98 111
SURROGATE LIMITS (80 - 120)

CHEMIST NOTES:
(D50) = 50 X DILUTION ANALYZED ON 11/17/99.

LD146
Lateral 38-39
Line Drip
Sample 4
11th Qtr



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.	: 911051
BLANK I. D.	: 111699	DATE EXTRACTED	: NA
CLIENT	: EL PASO FIELD SERVICES	DATE ANALYZED	: 11/16/99
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 (%) 100
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.	: 911051
BLANK I. D.	: 111799	DATE EXTRACTED	: NA
CLIENT	: EL PASO FIELD SERVICES	DATE ANALYZED	: 11/17/99
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 (%) 103

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	PINNACLE I.D.	: 911051
MSMSD #	: 111699	DATE EXTRACTED	: NA
CLIENT	: EL PASO FIELD SERVICES	DATE ANALYZED	: 11/17/99
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	17.5	88	17.4	87	1	(80 - 120)	20
TOLUENE	<0.5	20.0	18.9	95	18.5	93	2	(80 - 120)	20
ETHYLBENZENE	<0.5	20.0	19.6	98	19.5	98	1	(80 - 120)	20
TOTAL XYLENES	<0.5	60.0	59.6	99	59.1	99	1	(80 - 120)	20

CHEMIST NOTES:
N/A

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

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

Immaculate Laboratories Inc.

CHAIN OF CUSTODY

DATE: 11-9-99 PAGE: 1 OF 1

PL Accession # 91051

SHADED AREAS ARE FOR LAB USE ONLY.

PLEASE FILL THIS FORM IN COMPLETELY.

PROJECT MANAGER: DEAN CAMBON

COMPANY: EL PASO FIELD SERVICES

ADDRESS: 720 WEST ANHAWOOD

PHONE: (505) 599-2144

FAX: (505) 599-8261

BILL TO: STAKE AS ABOVE

COMPANY:

ADDRESS:

SAMPLE ID	DATE	TIME	MATRIX	LAB ID	Petroleum Hydrocarbons (418.1) TRPH	(MOD.8015) Diesel/Direct Inject	(M8015) Gas/Purge & Trap	8021 (BTEX)/8015 (Gasoline) MTBE	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 (608/8081/8082)	Herbicides (615/8151)	Base/Neutral/Acid Compounds GC/MS (625/8270)	Polynuclear Aromatics (610/8310/8270-SIMS)	General Chemistry:	Priority Pollutant Metals (13)	Target Analyte List Metals (23)	RCRA Metals (8)	RCRA Metals by TCLP (Method 1311)	Metals:
990440	11-9-99	1232	WATER	01				X																				
990441	11-9-99	1217	WATER	02				X																				
990442	11-9-99	1428	WATER	03				X																				
990443	11-9-99	1610	WATER	04				X																				
TRIP BLANKS	11-9-99		WATER	05				X																				

PROJECT INFORMATION

PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS

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

CERTIFICATION REQUIRED: ☐ NM ☐ SDWA ☐ OTHER

METHANOL PRESERVATION ☐

COMMENTS: ☐ FIXED FEE ☐

SAMPLE RECEIPT

NO. CONTAINERS: 9

CUSTODY SEALS: VIN (NA)

RECEIVED INTACT: YES

BLUE ICE/ICE: NO

RELINQUISHED BY:

Signature: Deanna Bird Time: 1135

Printed Name: DEANNA BIRD Date: 11-9-99

Company: EL PASO FIELD SERVICES

See reverse side (Force Majeure)

Signature: _____ Time: _____

Printed Name: _____ Date: _____

Company: _____

RELINQUISHED BY:

Signature: _____ Time: _____

Printed Name: _____ Date: _____

Company: _____

Signature: _____ Time: _____

Printed Name: _____ Date: _____

Company: _____