

3R - 151

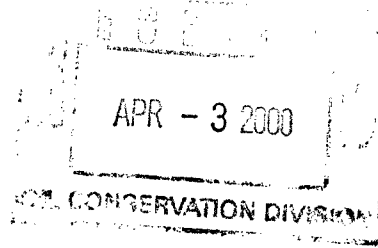
REPORTS

DATE:

2000 - 1999



Industrial Services Group
Central Region



March 22, 2000

Mr. William C. Olson
State Of New Mexico
Energy, Minerals and Natural Resources Department
Oil Conservation Division
2040 S. Pacheco
Santa Fe, New Mexico 87505

RE: Closure Report for the Blanco Field Station.

Dear Mr. Olson:

Philip Environmental Services Corp. (Philip) has prepared this closure report on behalf of El Paso Field Services (EPFS). This report describes the 1999 groundwater remediation activities and groundwater sampling activities at the Blanco Field Station.

On October 7, 1998, an air vent and groundwater sparging system went into operation at the Blanco Field Station and operated until May 19, 1999. The system was pulsed for 12-hour on 12-hour off operation. The groundwater sparge pump was operated on three sparge wells and the soil vapor extraction pump was connected to MW-4. The system was shut down one week prior to groundwater sampling.

Groundwater samples were collected on a quarterly basis at MW-3 and MW-4. Annual groundwater sampling was conducted on MW-1, MW-2, MW-3, MW-4, MW-5, and MW-6. Historical groundwater analytical data are presented in Table 1. Copies of the laboratory data sheets and associated quality assurance/quality control data are presented in Attachment 1. A site map is presented as Figure 1 showing the groundwater gradient.

Based on groundwater elevation data, the groundwater flow trends to the south at this site. Historical groundwater analytical data show MW-1, MW-2, MW-3, MW-5, and MW-6 below regulatory standards for BTEX in groundwater since May 1997. Monitoring Well #4 had elevated benzene levels from May 1997 until November 1998, when benzene levels decreased below regulatory standards when the air vent and sparging system was in operation. Current data show four quarters of analytical data below New Mexico Water Quality Control Commission Standards for BTEX in groundwater in all monitor wells.

Combining the Strengths of Philip Services Corp., Allwaste and Serv-Tech



Therefore, based on the successful application of the air vent and groundwater sparging system and the groundwater analytical data, El Paso Field Services requests closure of this site.

Sincerely,

PHILIP ENVIRONMENTAL SERVICES CORPORATION



Stephen Stellavato
Geologist

Attachments: Figure 1.
Table 1.
1999 Groundwater Analytical Data.

xc: Mr. Denny Foust, OCD Aztec District Office.
Mr. David Bays, El Paso Field Services.
Philip Project File.

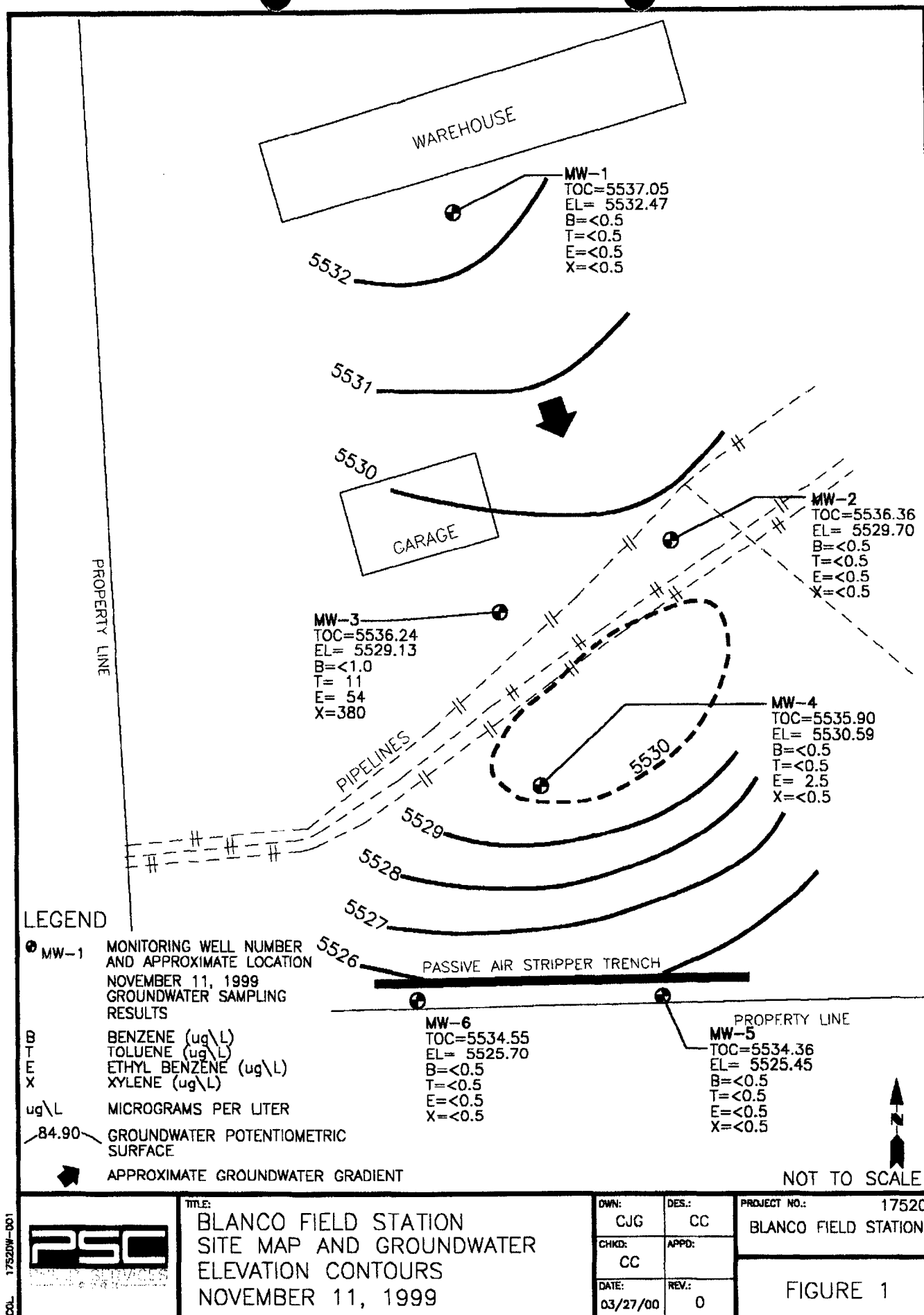


TABLE 1
BLANCO FIELD STATION
HISTORICAL ANALYTICAL RESULTS

SITE NAME	SAMPLE DATE	MW	BENZENE (ppb)	TOLUENE (ppb)	ETHYL BENZENE (ppb)	TOTAL XYLENES (ppb)	TOTAL BTEX (ppb)
Old Blanco Field Yard	May 97	1	< 1.0	< 1.0	< 1.0	< 3.0	< 6.0
Old Blanco Field Yard	Aug 97	1	< 1.0	< 1.0	< 1.0	< 3.0	< 6.0
Old Blanco Field Yard	Nov 97	1	< 1.0	< 1.0	< 1.0	< 3.0	< 6.0
Old Blanco Field Yard	Feb 98	1	< 1.0	< 1.0	< 1.0	< 3.0	< 6.0
Old Blanco Field Yard	May 98	1	< 1.0	< 1.0	< 1.0	< 3.0	< 6.0
Old Blanco Field Yard	Aug 98	1	< 1.0	< 1.0	< 1.0	< 3.0	< 6.0
Old Blanco Field Yard	Nov 98	1	< 1.0	< 1.0	< 1.0	< 3.0	< 6.0
Old Blanco Field Yard	Nov 99	1	< 0.5	< 0.5	< 0.5	< 0.5	< 2.0
Old Blanco Field Yard	May 97	2	< 1.0	< 1.0	< 1.0	< 3.0	< 6.0
Old Blanco Field Yard	Aug 97	2	< 1.0	< 1.0	< 1.0	< 3.0	< 6.0
Old Blanco Field Yard	Nov 97	2	< 1.0	< 1.0	< 1.0	< 3.0	< 6.0
Old Blanco Field Yard	Feb 98	2	< 1.0	< 1.0	< 1.0	< 3.0	< 6.0
Old Blanco Field Yard	May 98	2	< 1.0	< 1.0	< 1.0	< 3.0	< 6.0
Old Blanco Field Yard	Aug 98	2	< 1.0	< 1.0	< 1.0	< 3.0	< 6.0
Old Blanco Field Yard	Nov 98	2	< 1.0	< 1.0	< 1.0	< 3.0	< 6.0
Old Blanco Field Yard	Nov 99	2	< 0.5	< 0.5	< 0.5	< 0.5	< 2.0
Old Blanco Field Yard	May 97	3	< 1.0	= 5.42	= 168	= 400	= 574
Old Blanco Field Yard	Aug 97	3	= 1.43	= 3.86	= 104	= 229	= 338
Old Blanco Field Yard	Nov 97	3	< 1.0	= 1.22	= 70.9	= 243	= 316
Old Blanco Field Yard	Feb 98	3	< 1.0	= 5.71	= 219	= 534	= 759
Old Blanco Field Yard	May 98	3	< 1.0	= 3.11	= 83.3	= 276	= 363
Old Blanco Field Yard	Aug 98	3	< 1.0	= 4.61	= 135	= 387	= 527
Old Blanco Field Yard	Nov 98	3	< 1.0	= 1.84	= 93.6	= 320	= 416
Old Blanco Field Yard	Dec 98	3	< 1.0	= 5.1	= 169	= 427	= 601
Old Blanco Field Yard	Feb 99	3	< 1.0	= 3.95	= 131	= 371	= 506
Old Blanco Field Yard	May 99	3	< 0.5	< 0.5	= 35	= 123	= 159
Old Blanco Field Yard	Aug 99	3	< 1.0	= 2.66	= 72	= 304	= 379
Old Blanco Field Yard	Nov 99	3	< 1.0	= 11.0	= 54	= 380	= 446

TABLE 1
BLANCO FIELD STATION
HISTORICAL ANALYTICAL RESULTS

SITE NAME	SAMPLE DATE	MW	BENZENE (ppb)	TOLUENE (ppb)	ETHYL BENZENE (ppb)	TOTAL XYLENES (ppb)	TOTAL BTEX (ppb)
Old Blanco Field Yard	May 97	4	= 62.5	= 3.51	= 8.90	= 171	= 245
Old Blanco Field Yard	Aug 97	4	= 28.6	< 1.0	= 7.39	= 16.4	= 53
Old Blanco Field Yard	Nov 97	4	= 29.7	< 1.0	= 26.7	= 21.1	= 78
Old Blanco Field Yard	Feb 98	4	= 60.4	= 5.21	= 87.4	= 78.4	= 231
Old Blanco Field Yard	May 98	4	= 41.4	= 3.0	= 62.6	= 27	= 134
Old Blanco Field Yard	Aug 98	4	= 38.3	= 3.81	= 69.3	= 35.8	= 147
Old Blanco Field Yard	Nov 98	4	= 1.75	< 1.0	= 10.5	= 4.58	= 15
Old Blanco Field Yard	Dec 98	4	= 5.05	< 1.0	= 7.08	= 2.09	= 9
Old Blanco Field Yard	Feb 99	4	= 4.42	< 1.0	= 7.78	< 3	= 12
Old Blanco Field Yard	May 99	4	< 0.5	< 0.5	< 0.5	< 1.5	< 3.0
Old Blanco Field Yard	Aug 99	4	< 1.0	< 1.0	< 1.0	< 3.0	< 6.0
Old Blanco Field Yard	Nov 99	4	< 0.5	< 0.5	= 2.5	< 0.5	< 4.0
Old Blanco Field Yard	May 97	5	< 1.0	< 1.0	< 1.0	< 3.0	< 6.0
Old Blanco Field Yard	Aug 97	5	< 1.0	< 1.0	< 1.0	< 3.0	< 6.0
Old Blanco Field Yard	Nov 97	5	< 1.0	< 1.0	< 1.0	< 3.0	< 6.0
Old Blanco Field Yard	Feb 98	5	< 1.0	< 1.0	< 1.0	< 3.0	< 6.0
Old Blanco Field Yard	May 98	5	< 1.0	< 1.0	< 1.0	< 3.0	< 6.0
Old Blanco Field Yard	Aug 98	5	< 1.0	< 1.0	< 1.0	< 3.0	< 6.0
Old Blanco Field Yard	Nov 98	5	< 1.0	< 1.0	< 1.0	< 3.0	< 6.0
Old Blanco Field Yard	Nov 99	5	< 0.5	< 0.5	< 0.5	< 0.5	< 2.0
Old Blanco Field Yard	May 97	6	< 1.0	< 1.0	< 1.0	< 3.0	< 6.0
Old Blanco Field Yard	Aug 97	6	< 1.0	< 1.0	< 1.0	< 3.0	< 6.0
Old Blanco Field Yard	Nov 97	6	< 1.0	< 1.0	< 1.0	< 3.0	< 6.0
Old Blanco Field Yard	Feb 98	6	< 1.0	= 2.4	< 1.0	< 3.0	< 6.0
Old Blanco Field Yard	May 98	6	< 1.0	< 1.0	< 1.0	< 3.0	< 6.0
Old Blanco Field Yard	Aug 98	6	< 1.0	< 1.0	< 1.0	< 3.0	< 6.0
Old Blanco Field Yard	Nov 98	6	< 1.0	< 1.0	< 1.0	< 3.0	< 6.0
Old Blanco Field Yard	Nov 99	6	< 0.5	< 0.5	< 0.5	< 0.5	< 2.0

ATTACHMENT 1
1999 GROUNDWATER ANALYTICAL

January 8, 1999

ANALYTICAL REPORT

**Blanco Field Yard
Monitor Well Results
Lab Sample #'s 980878 to 980879**

**Sampled 12/29/98
Sampled by Dennis Bird**

REMARKS:

These samples represent the third sampling event on MW-3 and MW-4 since the vent and air injection system was placed in service.

Distribution: David Bays
Scott Pope, Philip Services Corp.
Results File
Historic Analytical Excel



FIELD SERVICES LABORATORY
ANALYTICAL REPORT
OLD BLANCO FIELD YARD

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	980878
MTR CODE SITE NAME:	N/A	Old Blanco Field Yard
SAMPLE DATE TIME (Hrs):	12/29/98	1128
PROJECT:	Monitor Well	
DATE OF BTEX EXT. ANAL.:	1/5/99	1/5/99
TYPE DESCRIPTION:	MW-3	Water

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	< 1	PPB				
TOLUENE	5.10	PPB				
ETHYL BENZENE	169	PPB				
TOTAL XYLENES	427	PPB				
TOTAL BTEX	601	PPB				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 105.8 % for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative:

Approved By:

John Lardi

Date:

1-5-99

980878BTEXMWOldBlanco, 1/5/99



FIELD SERVICES LABORATORY
ANALYTICAL REPORT
OLD BLANCO FIELD YARD

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	980879
MTR CODE SITE NAME:	N/A	Old Blanco Field Yard
SAMPLE DATE TIME (Hrs):	12/29/98	1213
PROJECT:	Monitor Well	
DATE OF BTEX EXT. ANAL.:	1/5/99	1/5/99
TYPE DESCRIPTION:	MW-4	Water

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	5.05	PPB				
TOLUENE	<1	PPB				
ETHYL BENZENE	7.08	PPB				
TOTAL XYLENES	2.09	PPB				
TOTAL BTEX	9.2	PPB				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 86.3 % for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative:

Approved By:

John Linder

Date:

1-5-99

980879BTEXMWOldBlanco, 1/5/99



QUALITY CONTROL REPORT
EPA METHOD 8020 - BTEX

Samples: 980878 and 980879

QA/QC for 1/5/99 Sample Set

LABORATORY CALIBRATION CHECKS / LABORATORY CONTROL SAMPLES:

SAMPLE NUMBER	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE	
					YES	NO
ICV LA-52589 100 PPB					RANGE	
Benzene	Standard	100.0	97.8	97.8	75 - 125 %	X
Toluene	Standard	100.0	98.6	99	75 - 125 %	X
Ethylbenzene	Standard	100.0	101.1	101	75 - 125 %	X
m & p - Xylene	Standard	200	201.5	100.8	75 - 125 %	X
o - Xylene	Standard	100.0	98.4	98	75 - 125 %	X
LCS LA-45476 100 PPB					RANGE	
Benzene	Standard	100.0	101.1	101	39 - 150	X
Toluene	Standard	100.0	103.4	103	46 - 148	X
Ethylbenzene	Standard	100.0	103.4	103	32 - 160	X
m & p - Xylene	Standard	200.0	209.9	105	Not Given	X
o - Xylene	Standard	100.0	102.9	103	Not Given	X

LABORATORY DUPLICATES:

SAMPLE ID	TYPE	SAMPLE RESULT PPB	DUPLICATE RESULT PPB	RPD	ACCEPTABLE	
					YES	NO
980879					RANGE	
Benzene	Matrix Duplicate	5.1	4.9	3.43	+/- 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	7.08	6.8	4.05	+/- 20 %	X
o - Xylene	Matrix Duplicate	1.60	1.43	11.14	+/- 20 %	X

Narrative: Acceptable.

LABORATORY SPIKES:

SAMPLE ID	SPIKE ADDED PPB	SAMPLE RESULT PPB	SPIKE SAMPLE RESULT PPB	%R	ACCEPTABLE	
					YES	NO
2nd Analysis 980879					RANGE	
Benzene	100	5.1	104.9	99.9	75 - 125 %	X
Toluene	100	<1	99.6	100	75 - 125 %	X
Ethylbenzene	100	<1	109.1	109	75 - 125 %	X
m & p - Xylene	200	7.1	204.9	98.9	75 - 125 %	X
o - Xylene	100	1.6	99.6	98	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 (1 analyzed with set)	STATUS
Benzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Toluene	Vial + Boiled Water	<1.0	ACCEPTABLE
Ethylbenzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Total Xylenes	Vial + Boiled Water	<3.0	ACCEPTABLE

Narrative: Acceptable.

CONTAMINATION CARRYOVER CHECK	SOURCE	PPB (none analyzed with this set)	STATUS
Benzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Toluene	Vial + Boiled Water	<1.0	ACCEPTABLE
Ethylbenzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Total Xylenes	Vial + Boiled Water	<3.0	ACCEPTABLE

Narrative: Acceptable.

TRIP BLANK	SOURCE	PPB (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 L. L. L.

Date: 1-5-99

March 11, 1999

ANALYTICAL REPORT

**Blanco Field Yard
Monitor Well Results
Lab Sample #'s 990044 to 990046
Sampled 2/23/99
Sampled by Dennis Bird**

REMARKS:

These samples represent the 1st Quarter 1999 compliance samples for this location.

Distribution: David Bays
Cecil Irby, Philip Services
Historic Excel Database
Results File

El Paso Field Services Company
Blanco Field Office
Groundwater Monitoring Well Results - 1999

First Quarter - February 1999

Sample ID#	990044	990045	990046
Well ID #	MW-3	MW-4	MW-4 Duplicate
Benzene	<1.0	4.42	6.26
Ethylbenzene	131	7.78	7.57
Toluene	3.95	<1.0	<1.0
Total Xylenes	534	<3.0	<3.0
Nitrate as NO ₃ -N	29.5	2.1	2.0
ORC - 12/18/96	OUT	OUT	

Second Quarter - May 1998

Sample ID#	980398	980399	980400	980401	980403	980404	980402
Well ID #	MW-1	MW-2R	MW-3	MW-4	MW-5	MW-6	MW-4 Duplicate
Benzene	<1.0	<1.0	<1.0	41.4	<1.0	<1.0	44.0
Ethylbenzene	<1.0	<1.0	83.3	62.6	<1.0	<1.0	67.3
Toluene	<1.0	<1.0	3.11	3.00	<1.0	<1.0	3.16
Total Xylenes	<3.0	<3.0	276	27	<3.0	<3.0	29
Nitrate as NO ₃ -N			80.7	0.56			0.63
ORC - 12/18/96			IN	IN			

ORC has not been replaced. They were removed in May of 1998.

Third Quarter - August 1998

Sample ID#	980579	980580	980581	980582	980584	980585	980583
Well ID #	MW-1	MW-2R	MW-3	MW-4	MW-5	MW-6	MW-4 Duplicate
Benzene	<1.0	<1.0	<1	38.3	<1.0	<1.0	42.9
Ethylbenzene	<1.0	<1.0	135	69.30	<1.0	<1.0	72.6
Toluene	<1.0	<1.0	4.61	3.81	<1.0	<1.0	4.29
Total Xylenes	<3.0	<3.0	387	35.8	<3.0	<3.0	37.0
Nitrate as NO ₃ -N			33.4	0.4			0.4
ORC - 12/18/96			OUT	OUT			

ORC has not been replaced. They were removed in May of 1998.

Fourth Quarter - November 1998

Sample ID#	980808	980809	980810	980811	980813	980814	980812
Well ID #	MW-1	MW-2R	MW-3	MW-4	MW-5	MW-6	MW-4 Duplicate
Benzene	<1.0	<1.0	<1.0	1.8	<1.0	<1.0	2.0
Ethylbenzene	<1.0	<1.0	93.6	10.5	<1.0	<1.0	10.1
Toluene	<1.0	<1.0	1.84	<1	<1.0	<1.0	<1
Total Xylenes	<3.0	<3.0	320	4.6	<3.0	<3.0	4.7
Total Naphthalenes			53	11.8			
Benzo(a)Pyrene			<1.0	<0.1			
Nitrate as NO ₃ -N			254	0.3			
ORC - 12/18/96			OUT	OUT			

CHAIN OF CUSTODY RECORD

Project No.		Project Name		Requested Analysis		Remarks	
Samplers: (Signature)		Date		Type and No. of Sample Containers		Preservation Technique	
Dennis Bied		Date: 2-23-99					
Date	Time	Comp.	GRAB	Sample Number			
2-23-99	1119		X	990044	5-1 34F	X	MONITOR WELL MW-3
2-23-99	1210		X	990045	5-1 34F	X	MONITOR WELL MW-4
2-23-99	1210		X	990046	5-1 34F	X	MONITOR WELL MW-4 FIELD
2-23-99	—		X	—	5-1 34F	X	TRIP BOTTLE
Relinquished by: (Signature)		Date/Time		Received by: (Signature)		Date/Time	
Dennis Bied		2-23-99 1723					
Relinquished by: (Signature)		Date/Time		Relinquished by: (Signature)		Date/Time	
Relinquished by: (Signature)		Date/Time		Received for Laboratory by: (Signature)		Remarks:	
				John Suda		2-24-98 1430	
Carrier Co.		Carrier Phone No.		Date Results Reported / by: (Signature)			



FIELD SERVICES LABORATORY
ANALYTICAL REPORT
OLD BLANCO FIELD YARD

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	990044
MTR CODE SITE NAME:	N/A	Old Blanco Field Yard
SAMPLE DATE TIME (Hrs):	2/23/99	1119
PROJECT:	Monitor Well	
DATE OF BTEX EXT. ANAL.:	N/A	2/24/99
TYPE DESCRIPTION:	MW-3	Water

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	<1	PPB				
TOLUENE	3.95	PPB				
ETHYL BENZENE	131	PPB				
TOTAL XYLENES	371	PPB				
TOTAL BTEX	506	PPB				

--BTEX is by EPA Method 8020 --

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

Narrative:

Approved By:

John L. Smith

Date:

3/11/99

990044BTEXMWOldBlanco,3/11/99



FIELD SERVICES LABORATORY
ANALYTICAL REPORT
OLD BLANCO FIELD YARD

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	990045
MTR CODE SITE NAME:	N/A	Old Blanco Field Yard
SAMPLE DATE TIME (Hrs):	2/23/99	1210
PROJECT:	Monitor Well	
DATE OF BTEX EXT. ANAL.:	N/A	2/24/99
TYPE DESCRIPTION:	MW-4	Water

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	4.42	PPB				
TOLUENE	<1.0	PPB				
ETHYL BENZENE	7.78	PPB				
TOTAL XYLENES	<3.0	PPB				
TOTAL BTEX	12	PPB				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 151 % for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative:

Matrix interference on BFB.

Approved By: John Larch

Date: 3/11/99

990045BTEXMWOldBlanco,3/11/99



FIELD SERVICES LABORATORY
ANALYTICAL REPORT
OLD BLANCO FIELD YARD

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	990046
MTR CODE SITE NAME:	N/A	Old Blanco Field Yard
SAMPLE DATE TIME (Hrs):	2/23/99	1210
PROJECT:	Monitor Well	
DATE OF BTEX EXT. ANAL.:	N/A	2/24/99
TYPE DESCRIPTION:	MW-4 Field Duplicate	Water

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	6.26	PPB				
TOLUENE	<1.0	PPB				
ETHYL BENZENE	7.57	PPB				
TOTAL XYLENES	<3.0	PPB				
TOTAL BTEX	14	PPB				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 109 % for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative:

Approved By:

John L. ...

Date:

3/11/99

990046BTEXMWOldBlanco,3/11/99



Field Services Laboratory
Analytical Report

SAMPLE IDENTIFICATION

EPFS LAB ID:	990044
DATE SAMPLED:	02/23/99
TIME SAMPLED (Hrs):	1119
SAMPLED BY:	Dennis Bird
MATRIX:	Water
METER CODE:	N/A
SAMPLE SITE NAME:	Old Blanco Field Yard
SAMPLE POINT:	MW-3

FIELD REMARKS:

GENERAL CHEMISTRY WATER ANALYSIS RESULTS

PARAMETER	RESULT	UNITS	DATE ANALYZED
Nitrate as $\text{NO}_3\text{-N}$	29.5	PPM	02/25/99
Nitrite as $\text{NO}_2\text{-N}$	0.94	PPM	02/25/99

Lab Remarks:

Reported By: DB

Approved By: John Litch

Date: 3/11/99

990044Nitrate-Nitrite, 3/11/99



Field Services Laboratory
Analytical Report

SAMPLE IDENTIFICATION

EPFS LAB ID:	990045
DATE SAMPLED:	02/23/99
TIME SAMPLED (Hrs):	1210
SAMPLED BY:	Dennis Bird
MATRIX:	Water
METER CODE:	N/A
SAMPLE SITE NAME:	Old Blanco Field Yard
SAMPLE POINT:	MW-4

FIELD REMARKS:

GENERAL CHEMISTRY WATER ANALYSIS RESULTS

PARAMETER	RESULT	UNITS	DATE ANALYZED
Nitrate as $\text{NO}_3\text{-N}$	2.1	PPM	02/24/99
Nitrite as $\text{NO}_2\text{-N}$	<0.1	PPM	02/24/99

Lab Remarks:

Reported By: DB

Approved By: John L. Larch

Date: 3/11/99

990045 Nitrate-Nitrite, 3/11/99



Field Services Laboratory
Analytical Report

SAMPLE IDENTIFICATION

EPFS LAB ID:	990046
DATE SAMPLED:	02/23/99
TIME SAMPLED (Hrs):	1210
SAMPLED BY:	Dennis Bird
MATRIX:	Water
METER CODE:	N/A
SAMPLE SITE NAME:	Old Blanco Field Yard
SAMPLE POINT:	MW-4 Field Duplicate

FIELD REMARKS:

GENERAL CHEMISTRY WATER ANALYSIS RESULTS

PARAMETER	RESULT	UNITS	DATE ANALYZED
Nitrate as $\text{NO}_3\text{-N}$	2.0	PPM	02/24/99
Nitrite as $\text{NO}_2\text{-N}$	<0.1	PPM	02/24/99

Lab Remarks:

Reported By: DB

Approved By: John L. Smith

Date: 3/11/99

990046 Nitrate-Nitrite, 3/11/99



QUALITY CONTROL REPORT

EPA METHOD 8020 - BTEX

Samples: 990038, 39 and 990044 to 990049

QA/QC for 02/24/99 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	51.8	103.7	75 - 125 %	X
Toluene	Standard	50.0	51.6	103.1	75 - 125 %	X
Ethylbenzene	Standard	50.0	51.6	103.2	75 - 125 %	X
m & p - Xylene	Standard	100	103.9	103.9	75 - 125 %	X
o - Xylene	Standard	50.0	51.8	103.6	75 - 125 %	X
LCS LA-45476 25 PPB					RANGE	
Benzene	Standard	25.0	24.9	100	39 - 150	X
Toluene	Standard	25.0	24.9	100	46 - 148	X
Ethylbenzene	Standard	25.0	25.1	100	32 - 160	X
m & p - Xylene	Standard	50.0	50.2	100	Not Given	X
o - Xylene	Standard	25.0	25.2	101	Not Given	X

Narrative: Acceptable.

LABORATORY DUPLICATES:

SAMPLE ID	TYPE	SAMPLE RESULT PPB	DUPLICATE RESULT PPB	RPD	ACCEPTABLE	
					YES	NO
990045					RANGE	
Benzene	Matrix Duplicate	4.4	4.4	1.46	+/- 20 %	X
Toluene	Matrix Duplicate	<1	<1	0.00	+/- 20 %	X
Ethylbenzene	Matrix Duplicate	7.8	7.7	1.67	+/- 20 %	X
m & p - Xylene	Matrix Duplicate	<2	<2	0.00	+/- 20 %	X
o - Xylene	Matrix Duplicate	<1	<1	0.00	+/- 20 %	X

Narrative: Acceptable.

LABORATORY SPIKES:

SAMPLE ID	SPIKE ADDED PPB	SAMPLE RESULT PPB	SPIKE SAMPLE RESULT PPB	%R	ACCEPTABLE	
					YES	NO
2nd Analysis 990045					RANGE	
Benzene	25	4.4	24.0	78	75 - 125 %	X
Toluene	25	<1	19.0	76	75 - 125 %	X
Ethylbenzene	25	7.8	27.2	77	75 - 125 %	X
m & p - Xylene	50	<2	39.2	78	75 - 125 %	X
o - Xylene	25	<1	19.5	78	75 - 125 %	X

Narrative: Acceptable.

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 BLANK 021699 & 022399	SOURCE	PPB (two 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: John Larkin

Date: 2/26/99

July 14, 1999

ANALYTICAL REPORT

**Blanco Field Yard
Monitor Well Results (MW-3 and 4)
Lab Sample #'s 990250 to 990251
Sampled 5/24/99
Sampled by Dennis Bird**

REMARKS:

These samples represent the 2nd Quarter 1999 compliance samples for this location.

Distribution: Scott Pope
Cecil Irby, Philip Services
Historic Excel Database
Results File

El Paso Field Services Company
Blanco Field Office
Groundwater Monitoring Well Results - 1999

First Quarter - February 1999

Sample ID#	990044	990045	990046
Well ID #	MW-3	MW-4	MW-4
			Duplicate
Benzene	<1.0	4.42	6.26
Ethylbenzene	131	7.78	7.57
Toluene	3.95	<1.0	<1.0
Total Xylenes	534	<3.0	<3.0
Nitrate as NO ₃ -N	29.5	2.1	2.0
ORC - 12/18/96	OUT	OUT	

ORC has not been replaced. They were removed in May of 1998.

Second Quarter - May 1999

Sample ID#	990250	990251	990252
Well ID #	MW-3	MW-4	MW-4
			Duplicate
Benzene	<0.5	<0.5	<0.5
Ethylbenzene	35	<0.5	<0.5
Toluene	<0.5	<0.5	<0.5
Total Xylenes	123	<1.5	<1.5
Total Naphthalenes	37.3	<2.35	Not Run
Benzo(a)pyrene	<0.94	<0.094	Not Run
Nitrate as NO ₃ -N	67	0.18	<0.05
ORC - 12/18/96	OUT	OUT	

ORC has not been replaced. They were removed in May of 1998.



PARAGON ANALYTICS, INC.

225 Commerce Drive ♦ Fort Collins, CO 80524 ♦ (800) 443-1511 ♦ (970) 490-1511 ♦ FAX (970) 490-1522

July 13, 1999

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



RE: Paragon Workorder: 99-05-166
Client Project Name: Old Blanco Field
Client Project Number: None Submitted

Dear Mr. Lambdin:

Four water samples were received from El Paso Field Services on May 25, 1999. The samples were scheduled for Aromatic Volatile Organics (pages 1-11) and PAHs by HPLC (pages 1-7) analyses. The results for these analyses are contained in the enclosed reports.

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

Sincerely,

Paragon Analytics, Inc.
Debbie Fazio
Project Manager

DF/rm
Enclosure: Report

Reviewed & Accepted
7/14/99
J. Fazio

Paragon Analytics, Incorporated

Sample Number(s) Cross-Reference Table

Paragon OrderNum: 9905166

Client Name: El Paso Field Services

Client Project Name: Old Blanco Field ✓

Client Project Number:

Client PO Number:

Client Sample	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
990250	9905166-1		WATER	5/24/99	10:45
990251	9905166-2		WATER	5/24/99	12:25
990252	9905166-3		WATER	5/24/99	12:25
990265 TB	9905166-4		WATER	5/24/99	

PROJECT MANAGER: PAUL CAMPBELL

COMPANY: EL PASO FIELD SERVICES

ADDRESS: 444 PERLA AVENUE

HARMINISTON NM 87401

PHONE: 505-377-2444

FAX: 505-377-2421

BILL TO: SAME AS ABOVE

COMPANY: _____

ADDRESS: _____

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

DATE	TIME	LOCATION	ANALYST
9/20/50	5:24:59	1045 WATER	OT
9/20/51	5:24:59	1025 WATER	OT
9/20/52	5:24:59	1025 WATER	OT
9/20/53	5:24:59	1025 WATER	OT
9/20/54	5:24:59	1025 WATER	OT
9/20/55	5:24:59	1025 WATER	OT
9/20/56	5:24:59	1025 WATER	OT
9/20/57	5:24:59	1025 WATER	OT
9/20/58	5:24:59	1025 WATER	OT
9/20/59	5:24:59	1025 WATER	OT
9/20/60	5:24:59	1025 WATER	OT
9/20/61	5:24:59	1025 WATER	OT
9/20/62	5:24:59	1025 WATER	OT
9/20/63	5:24:59	1025 WATER	OT
9/20/64	5:24:59	1025 WATER	OT
9/20/65	5:24:59	1025 WATER	OT
9/20/66	5:24:59	1025 WATER	OT
9/20/67	5:24:59	1025 WATER	OT
9/20/68	5:24:59	1025 WATER	OT
9/20/69	5:24:59	1025 WATER	OT
9/20/70	5:24:59	1025 WATER	OT
9/20/71	5:24:59	1025 WATER	OT
9/20/72	5:24:59	1025 WATER	OT
9/20/73	5:24:59	1025 WATER	OT
9/20/74	5:24:59	1025 WATER	OT
9/20/75	5:24:59	1025 WATER	OT
9/20/76	5:24:59	1025 WATER	OT
9/20/77	5:24:59	1025 WATER	OT
9/20/78	5:24:59	1025 WATER	OT
9/20/79	5:24:59	1025 WATER	OT
9/20/80	5:24:59	1025 WATER	OT
9/20/81	5:24:59	1025 WATER	OT
9/20/82	5:24:59	1025 WATER	OT
9/20/83	5:24:59	1025 WATER	OT
9/20/84	5:24:59	1025 WATER	OT
9/20/85	5:24:59	1025 WATER	OT
9/20/86	5:24:59	1025 WATER	OT
9/20/87	5:24:59	1025 WATER	OT
9/20/88	5:24:59	1025 WATER	OT
9/20/89	5:24:59	1025 WATER	OT
9/20/90	5:24:59	1025 WATER	OT
9/20/91	5:24:59	1025 WATER	OT
9/20/92	5:24:59	1025 WATER	OT
9/20/93	5:24:59	1025 WATER	OT
9/20/94	5:24:59	1025 WATER	OT
9/20/95	5:24:59	1025 WATER	OT
9/20/96	5:24:59	1025 WATER	OT
9/20/97	5:24:59	1025 WATER	OT
9/20/98	5:24:59	1025 WATER	OT
9/20/99	5:24:59	1025 WATER	OT
9/20/100	5:24:59	1025 WATER	OT

Logged in by S. Smith per Database per Database Request

5/24/99 8M

PLEASE FILL THIS FORM IN COMPLETELY.

SHADED AREAS ARE FOR LAB USE ONLY

PROJECT INFORMATION		PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS	
PROJ. NO.:			

Paragon Analytics, Inc. - Fort Collins, Colorado

CONDITION OF SAMPLE UPON RECEIPT FORM

CLIENT: ELFS

PROJECT MANAGER: Fazio

WORKORDER NO: 99051000 INITIALS: mc DATE: 5-25-99

1.	Does this project require any special handling in addition to standard PAI procedures? PRESCREEN REQUIRED (Rad, DOE, etc.)	Yes	<u>No</u>
2.	Are custody seals on the cooler intact? If so, how many	<u>N/A</u>	Yes
3.	Are custody seals on sample containers intact?	<u>N/A</u>	Yes
4.	Is there a Chain of Custody (COC) or other representative documents, letters, or shipping memos?	<u>Yes</u>	No
5.	Is the COC complete? Relinquished: Yes <u>X</u> No <u>X</u> Analyses Requested: Yes <u>X</u> No <u>X</u>	N/A	<u>Yes</u>
6.	Is the COC in agreement with the samples received? No. of Samples: Yes <u>X</u> No <u>X</u> Sample ID's: Yes <u>X</u> No <u>X</u> Matrix: Yes <u>X</u> No <u>X</u> No. of Containers: Yes <u>X</u> No <u>X</u>	Yes	No
7.	Are all aqueous samples requiring chemical preservation preserved correctly (excluding volatile organics)? Are all aqueous non-preserved samples at the correct pH?	<u>N/A</u>	Yes
8.	Is there enough sample? If so, are they in the proper containers?	<u>Yes</u>	No
9.	Are all samples within holding times for the requested analyses?	<u>Yes</u>	No
10.	Were the sample(s) shipped on ice?	N/A	<u>Yes</u>
11.	Were all sample containers received intact? (not broken or leaking, etc.)	<u>Yes</u>	No
12.	Are samples requiring no headspace, headspace free? (volatiles, reactive cyanide/sulfide) Size of bubble < green pea > green pea	<u>N/A</u>	Yes
13.	Are airbills present and removable?	<u>Yes</u>	No
14.	Shall Paragon dispose of samples?	<u>Yes</u>	No
15.	Were the cooler temperatures $\leq 6^{\circ}\text{C}$?	N/A	<u>Yes</u>

Cooler #'s

Temperature

client

40

$^{\circ}\text{C}$

PM Reviewed/Date:

df 5/26/99

A NO RESPONSE TO ANY QUESTION (EXCEPT # 1&13) REQUIRES THE COMPLETION OF PAGE 2 OF THE FORM

CONDITION OF SAMPLE UPON RECEIPT FORM

CLIENT: EPFS

PROJECT MANAGER: Fazio

WORKORDER NO: 9905166

INITIALS: mc

DATE: 5-25-99

SAMPLE RECEIPT DISCREPANCY REPORT

- ☐ Custody seals on outside of shipping container broken.
- ☐ Custody seals on sample containers were broken.
- ☐ No Chain of Custody present.
- ☒ Number of samples on the COC do not match the number of samples received.
- ☒ Aqueous samples not preserved correctly.
- ☐ Samples received at inappropriate temperature.
- ☐ Insufficient sample to perform requested analyses.
- ☐ Extraction or analytical holding times expired in transit.
- ☐ Broken bottles.
- ☐ No analyses requested.
- ☐ Incorrect sample type received.
- ☐ Other

Describe discrepancy: o

Trip blank was not labeled on COC.
now labeled 9905166 #04

Left John Lambdin voice mail 5/26/99 1:50 pm. That the
TB is NOT logged in.

Was the client contacted? Yes _____ No _____

If yes, Date/Time: _____

Name of Person Contacted: _____

PM Signature/Date: _____

A NO RESPONSE TO ANY QUESTION (EXCEPT # 1&13) REQUIRES THE COMPLETION OF
PAGE 2 OF THE FORM

PLEASE FOLD THIS SHIPPING DOCUMENT IN HALF AND PLACE IT IN A WAYBILL POUCH AFFIXED TO YOUR SHIPMENT SO THAT THE BAR-CODE PORTION OF THE LABEL CAN BE READ AND SCANNED.
***WARNING: USE ONLY THE PRINTED ORIGINAL LABEL FOR SHIPPING. USING A PHOTOCOPY OF THIS LABEL FOR SHIPPING PURPOSES IS FRAUDULENT AND COULD RESULT IN ADDITIONAL BILLING CHARGES, ALONG WITH THE CANCELLATION OF YOUR FEDEX ACCOUNT NUMBER.

FROM: John Lambdin (505)599-2144
El Paso Field Services
770 West Navajo
Farmington, NM 87401

SHIPPER'S FEDEX ACCOUNT NUMBER



FedEx
Federal Express

TO: Sample Control (800)443-1511
Paragon Analytics, Inc.
225 Commerce Drive

SHIP DATE: 24MAY99
MAN-WGT: 35 LBS

Fort Collins, CO 80524-
REF: 006574



DELIVERY ADDRESS BARCODE (FEDEX-EDR)

CAD # 2223546

PRIORITY OVERNIGHT

TUE
AA

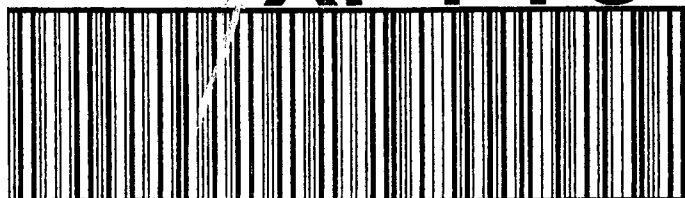
TRK # 7917 4341 6017 FORM 0201

DEN

Deliver By:
25MAY99

80524-CO-US
DROP OFF

XF FTC





Paragon Analytics, Inc.

Aromatic Volatile Organics Case Narrative

El Paso Field Services

Old Blanco Field

Order Number - 9905166

1. This report consists of 4 water samples received by Paragon on 5/25/99.
2. These samples were prepared and analyzed according to SW-846, 3rd Edition procedures. Specifically, the water sample was prepared by heating and purging 5 mls using purge and trap procedures based on Method 5030. The calibration curve was also prepared using the heated purge.
3. The samples were analyzed using a GC with a DB-VRX capillary column and a PID detector according to protocols based on SW-846 Method 8020. All positive results were quantitated using the responses from the initial calibration curve using the internal standard technique. Second column confirmation was performed on all samples with positive results on a DB-624 capillary column.
4. All initial and continuing calibration criteria were within acceptance criteria.
5. The method blank associated with this project was below the reporting limits for all analytes.
6. Laboratory control spike and laboratory control spike duplicate recoveries and RPD were within the acceptance criteria.

7. All matrix spike and matrix spike duplicate recoveries and RPDs were within acceptance criteria with the following exceptions:

Spiked Compound	QC Sample	Direction
BENZENE	MSD	high
TOLUENE	MSD	high
ETHYLBENZENE	MSD	high
M&P-XYLENES	MSD	high
O-XYLENE	MSD	high

The recoveries of these compounds in the laboratory control spike and laboratory control spike duplicate were within control limits, which suggest the outliers in the matrix spikes may have been due to matrix effects. No further action was warranted. Blank spike and blank spike duplicate results have been included.

*Noted
J. Smith
7/14/99*

8. The confirmation run for samples -4 was analyzed beyond the holding time requirements. See a copy of NCR # 2150 included in this package for details.
9. All surrogate recoveries were within acceptance criteria.
10. All internal standard recoveries were within acceptance criteria.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, Paragon Analytics, Inc. certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.

Eddy Hammerquist
Eddy Hammerquist
Senior Organics Chemist

7-12-99
Date

Ma.
Reviewer's Initials

7/12/99
Date

000002

Paragon Analytics, Incorporated

Sample Number(s) Cross-Reference Table

Paragon OrderNum: 9905166

Client Name: El Paso Field Services

Client Project Name: Old Blanco Field ✓

Client Project Number:

Client PO Number:

Client Sample	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
990250	9905166-1		WATER	5/24/99	10:45
990251	9905166-2		WATER	5/24/99	12:25
990252	9905166-3		WATER	5/24/99	12:25
990265 TB	9905166-4		WATER	5/24/99	

Method SW8021
Method Blank

Lab Name: Paragon Analytics, Inc.

Work Order Number: 9905166

Client Name: El Paso Field Services

ClientProject ID: Old Blanco Field

Lab ID: HCG990603-1MB

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 03-Jun-99

Date Analyzed: 03-Jun-99

Prep Batch: HCG990603-1

QCBatchID: HCG990603-1-1

Run ID: HCG990603-1B

Cleanup: NONE

Basis: N/A

Sample Aliquot: 5 ML

Final Volume: 5 ML

Result Units: UG/L

File Name: G0603S03

CASNO	Target Analyte	DF	Result	Reporting Limit	Result Qualifier	EPA Qualifier
71-43-2	BENZENE	1	0.5	0.5	U	
108-88-3	TOLUENE	1	0.5	0.5	U	
100-41-4	ETHYLBENZENE	1	0.5	0.5	U	
136777-61-	M+P-XYLENE	1	1	1	U	
95-47-6	O-XYLENE	1	0.5	0.5	U	

Surrogate Recovery

CASNO	Surrogate Analyte	Result	Flag	Spike Amount	Percent Recovery	Control Limits
13-10-5	2,3,4-TRIFLUOROTOLUENE	102		100	102	85 - 115

Data Package ID: hcg9905166-1

Date Printed: Thursday, July 08, 1999

Paragon Analytics Inc.

Page 1 of 1

000004

Method SW8021
Sample Results

Lab Name: Paragon Analytics, Inc.

Work Order Number: 9905166

Client Name: El Paso Field Services

ClientProject ID: Old Blanco Field

Field ID:	990250
Lab ID:	9905166-1

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 24-May-99

Date Extracted: 03-Jun-99

Date Analyzed: 03-Jun-99

Prep Batch: HCG990603-1

QCBatchID: HCG990603-1-1

Run ID: HCG990603-1B

Cleanup: NONE

Basis: As Received

Sample Aliquot: 5 ML

Final Volume: 5 ML

Result Units: UG/L

File Name: G0603S04

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	Result Qualifier	EPA Qualifier
71-43-2	BENZENE	1	0.5	0.5	U	
108-88-3	TOLUENE	1	0.5	0.5	U	
100-41-4	ETHYLBENZENE	1	35	0.5		
136777-61-	M+P-XYLENE	1	100	1		
95-47-6	O-XYLENE	1	23	0.5		

Surrogate Recovery

CASNO	Surrogate Analyte	Result	Flag	Spike Amount	Percent Recovery	Control Limits
13-10-5	2,3,4-TRIFLUOROTOLUENE	110		100	110	85 - 115

Data Package ID: hcg9905166-1

Method SW8021 Sample Results

Lab Name: Paragon Analytics, Inc.

Work Order Number: 9905166

Client Name: El Paso Field Services

ClientProject ID: Old Blanco Field

Field ID	990251
Lab ID	9905166-2

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 24-May-99

Date Extracted: 03-Jun-99

Date Analyzed: 03-Jun-99

Prep Batch: HCG990603-1

QCBatchID: HCG990603-1-1

Run ID: HCG990603-1B

Cleanup: NONE

Basis: As Received

Sample Aliquot: 5 ML

Final Volume: 5 ML

Result Units: UG/L

File Name: G0603S05

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	Result Qualifier	EPA Qualifier
71-43-2	BENZENE	1	0.5	0.5	U	
108-88-3	TOLUENE	1	0.5	0.5	U	
100-41-4	ETHYLBENZENE	1	0.5	0.5	U	
136777-61-	M+P-XYLENE	1	1	1	U	
95-47-6	O-XYLENE	1	0.5	0.5	U	

Surrogate Recovery

CASNO	Surrogate Analyte	Result	Flag	Spike Amount	Percent Recovery	Control Limits
13-10-5	2,3,4-TRIFLUOROTOLUENE	103		100	103	85 - 115

Data Package ID: hcg9905166-1

Method SW8021 Sample Results

Lab Name: Paragon Analytics, Inc.

Work Order Number: 9905166

Client Name: El Paso Field Services

ClientProject ID: Old Blanco Field

Field ID:	990252
Lab ID:	9905166-3

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 24-May-99

Date Extracted: 03-Jun-99

Date Analyzed: 03-Jun-99

Prep Batch: HCG990603-1

QCBatchID: HCG990603-1-1

Run ID: HCG990603-1B

Cleanup: NONE

Basis: As Received

Sample Aliquot: 5 ML

Final Volume: 5 ML

Result Units: UG/L

File Name: G0603S06

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	Result Qualifier	EPA Qualifier
71-43-2	BENZENE	1	0.5	0.5	U	
108-88-3	TOLUENE	1	0.5	0.5	U	
100-41-4	ETHYLBENZENE	1	0.5	0.5	U	
136777-61-	M+P-XYLENE	1	1	1	U	
95-47-6	O-XYLENE	1	0.5	0.5	U	

Surrogate Recovery

CASNO	Surrogate Analyte	Result	Flag	Spike Amount	Percent Recovery	Control Limits
13-10-5	2,3,4-TRIFLUOROTOLUENE	102		100	102	85 - 115

Data Package ID: hcg9905166-1

Method SW8021
Sample Results

Lab Name: Paragon Analytics, Inc.

Work Order Number: 9905166

Client Name: El Paso Field Services

ClientProject ID: Old Blanco Field

Field ID:	990265 TB
Lab ID:	9905166-4

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 24-May-99
Date Extracted: 03-Jun-99
Date Analyzed: 03-Jun-99

Prep Batch: HCG990603-1
QCBatchID: HCG990603-1-1
Run ID: HCG990603-1B
Cleanup: NONE
Basis: As Received

Sample Aliquot: 5 ML
Final Volume: 5 ML
Result Units: UG/L
File Name: G0603S23

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	Result Qualifier	EPA Qualifier
71-43-2	BENZENE	1	0.5	0.5	U	
108-88-3	TOLUENE	1	0.5	0.5	U	
100-41-4	ETHYLBENZENE	1	0.5	0.5	U	
136777-61-	M+P-XYLENE	1	1	1	U	
95-47-6	O-XYLENE	1	0.5	0.5	U	

Surrogate Recovery

CASNO	Surrogate Analyte	Result	Flag	Spike Amount	Percent Recovery	Control Limits
13-10-5	2,3,4-TRIFLUOROTOLUENE	103		100	103	85 - 115

Data Package ID: hcg9905166-1

Date Printed: Thursday, July 08, 1999

Paragon Analytics Inc.

Page 4 of 4

000008

Method SW8021
Blank Spike And Blank Spike Duplicate

Lab Name: Paragon Analytics, Inc.

Work Order Number: 9905166

Client Name: El Paso Field Services

ClientProject ID: Old Blanco Field

Lab ID: HCG990603-1LCS

Sample Matrix: WATER
 % Moisture: N/A
 Date Collected: N/A
 Date Extracted: 03-Jun-99
 Date Analyzed: 03-Jun-99

Prep Batch: HCG990603-1
 QCBatchID: HCG990603-1-1
 Run ID: HCG990603-1B
 Cleanup: NONE
 Basis: N/A

Sample Aliquot: 5 ML
 Final Volume: 5 ML
 Result Units: UG/L

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
71-43-2	BENZENE	100	103	0.5		103	85 - 115%
108-88-3	TOLUENE	100	103	0.5		103	85 - 115%
100-41-4	ETHYLBENZENE	100	103	0.5		103	85 - 115%
136777-61-	M+P-XYLENE	200	202	1		101	85 - 115%
95-47-6	O-XYLENE	100	101	0.5		101	85 - 115%

Lab ID: HCG990603-1LCSD

CASNO	Target Analyte	Spike Added	LCSD Result	Reporting Limit	LCSD % Rec.	Result Qualifier	RPD	RPD Limits
71-43-2	BENZENE	100	110	0.5	110		7	20
108-88-3	TOLUENE	100	114	0.5	114		10	20
100-41-4	ETHYLBENZENE	100	115	0.5	115		11	20
136777-61-	M+P-XYLENE	200	229	1	114		12	20
95-47-6	O-XYLENE	100	114	0.5	114		13	20

Surrogate Recovery LCS/LCSD

CASNO	Target Analyte	Spike Added	LCS % Rec.	LCS Flag	LCSD % Rec.	LCSD Flag	Control Limits
13-10-5	2,3,4-TRIFLUOROTOLUENE	100	102		100		85 - 115

Data Package ID: hcg9905166-1

Date Printed: Thursday, July 08, 1999

Paragon Analytics Inc.

Page 1 of 1

000009

Method SW8021
Matrix Spike And Matrix Spike Duplicate

Lab Name: Paragon Analytics, Inc.

Work Order Number: 9905166

Client Name: El Paso Field Services

ClientProject ID: Old Blanco Field

Field ID:	990251
Lab ID:	9905166-2MS

Sample Matrix: WATER
 % Moisture: N/A
 Date Collected: 24-May-99
 Date Extracted: 03-Jun-99
 Date Analyzed: 03-Jun-99

Prep Batch: HCG990603-1
 QCBatchID: HCG990603-1-1
 Run ID: HCG990603-1B
 Cleanup: NONE
 Basis: As Received

Sample Aliquot: 5 ML
 Final Volume: 5 ML
 Result Units: UG/L

CASNO	Target Analyte	Sample Result	Samp Qual	MS Result	MS Qual	Reporting Limit	Spike Added	MS % Rec.	Control Limits
71-43-2	BENZENE	0.5	U	112		0.5	100	112	85 - 115%
108-88-3	TOLUENE	0.5	U	114		0.5	100	114	85 - 115%
100-41-4	ETHYLBENZENE	0.5	U	115		0.5	100	115	85 - 115%
136777-61-	M+P-XYLENE	1	U	226		1	200	113	85 - 115%
95-47-6	O-XYLENE	0.5	U	113		0.5	100	113	85 - 115%

MSD Lab ID: 9905166-2MSD

CASNO	Target Analyte	Spike Added	MSD Result	MSD Qual	Reporting Limit	MSD % Rec.	RPD	RPD Limits
71-43-2	BENZENE	100	119	*	0.5	119	6	20
108-88-3	TOLUENE	100	120	*	0.5	120	5	20
100-41-4	ETHYLBENZENE	100	121	*	0.5	121	5	20
136777-61-	M+P-XYLENE	200	238	*	1	119	5	20
95-47-6	O-XYLENE	100	119	*	0.5	119	5	20

Surrogate Recovery MS/MSD

CASNO	Target Analyte	Spike Added	MS % Rec.	MS Flag	MSD % Rec.	MSD Flag	Control Limits
13-10-5	2,3,4-TRIFLUOROTOLUENE	100	103		103		85 - 115

Data Package ID: hcg9905166-1

CONTROLLED

NCR # 002150

PARAGON ANALYTICS, INC.

NON-CONFORMANCE REPORT

Initiated by: Eddy 2/4/99 Method/QA Procedure BTEX (3021)
Date Initiated 6-24-99 Workorders Affected 9905166 (# 4 only)
Clients El Paso

SECTION I

TYPE OF EVENT:

SPECIFY

1. Spike/Surrogate Criteria Not Met
2. Calibration Criteria Not Met (Type of Equipment)
3. Lab Contamination
☒ 4. Method Requirements Not Met
5. Purchased Materials Do Not Meet Quality Specs
6. Equipment Failure
7. Deviation from QAP, SOP, Method
8. Other (Specify)

Confirmation run of
9905166-4 (a trip blank)
not run in holding time
(delay in final data review)

Client Contacted? (Y/N) N Name:

Date:

Time:

SECTION II

CORRECTIVE ACTION TAKEN:

1. Submit for Re-Extraction (Re-work)
2. Recalibrate (Re-work)
3. Re-analyze (Re-work)
4. Return to Vendor/Reject
5. Service call/return for repair
6. Retrain
☒ 7. Document in Narrative
8. Other, describe

Approved by: Debbi 6/29/99

SECTION III

REQUEST FOR REWORK IN SAMPLE PREP OR DIGESTION

Initial date prepared, Page #
Date for Rework, Page #
Submitted by
Received by
Outcome of Re-analysis

Approved by:

DISPOSITION

Use as is ☒

Reject ☐

Repair ☐

Document in narrative ; reporting conf. data

SIGNATURES

Approved By Debbi 6/29/99 Date 6/29/99 (Project Mgr)
Verification of Disposition Eric Bayless Date 7/1/99 (Dept Supv)
QA Dept Approval Debra Schert Date 7-1-99 (QA Mgr)

COPIES: Project Manager Operations Manager Department Supervisor FORM 313FC4.rtm (11-20-98)

000011



Paragon Analytics, Inc.

PAHs by HPLC Case Narrative

El Paso Field Services

Old Blanco Field

Order Number - 9905166

1. This report consists of 2 water samples received by Paragon on 5/25/99.
2. These samples were extracted and analyzed according to SW-846, 3rd Edition procedures. Specifically, the water samples were extracted using continuous liquid-liquid extractors, based on Method 3520.
3. The extracts were then analyzed using HPLC with UV and fluorescence detectors with a reverse phase C18 column according to protocols based on Method 8310. All compounds are analyzed using UV at 254 nm. Confirmation is performed for positive results using the fluorescence detector or confirmed by UV at 280 nm for those compounds that do not respond to the fluorescence detector. The quantitation of each analyte is usually taken from the detector that exhibits the fewest interferences. For compounds that only respond to UV, the result is taken from the wavelength that exhibits fewer interferences. These quantitations minimize the chances of reporting elevated results based on interferences.
4. All initial and continuing calibration criteria were within acceptance criteria.
5. The method blank associated with this project was below the reporting limits for all analytes.
6. All laboratory control spike and laboratory control spike duplicate recoveries and RPDs were within the acceptance criteria.
7. Matrix spikes and matrix spike duplicates could not be performed because of insufficient sample. A laboratory control spike and laboratory control spike duplicate were performed instead.

8. All samples were extracted and analyzed within the established holding times.
9. All surrogate recoveries were within acceptance criteria.
10. Sample 1 was analyzed at a higher dilution in order to bring target analytes within the calibration range of the instrument. The reporting limits have been adjusted accordingly.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, Paragon Analytics, Inc. certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.

Preston Mathiesen
Preston Mathiesen
HPLC Analyst

6/22/99
Date

SM
Reviewer's Initials

6-28-99
Date

Paragon Analytics, Inc.
Data Qualifier Flags
Chromatography and Mass Spectrometry

- U or ND:** This flag indicates that the compound was analyzed for but not detected.
- J:** This flag indicates an estimated value. This flag is used as follows : (1) when estimating a concentration for tentatively identified compounds (TICs) where a 1:1 response is assumed; (2) when the mass spectral and retention time data indicate the presence of a compound that meets the volatile and semivolatile GC/MS identification criteria, and the result is less than the reporting limit (RL) but greater than the method detection limit (MDL); and (3) when the retention time data indicate the presence of a compound that meets the GC identification criteria, and the result is less than the RL but greater than the MDL.
- B:** This flag is used when the analyte is detected in the associated method blank as well as in the sample. It indicates probable blank contamination and warns the data user. This flag shall be used for a tentatively identified compound (TIC) as well as for a positively identified target compound.
- E:** This flag identifies compounds whose concentration exceeds the upper level of the calibration range.

POLYNUCLEAR AROMATIC HYDROCARBONS

Method 8310

Sample ID

Reagent Blank

Lab Name: Paragon Analytics, Inc.

Client Name: El Paso Field Services

Client Project ID: Old Blanco Field

Lab Sample ID: WMB1, 5/27/99

Date Collected: N/A

Date Extracted: 5/27/99

Date Analyzed: 6/02/99

Sample Matrix: Water

Cleanup: N/A

Sample Volume: 1000 mL

Final Volume: 1 mL

Dilution Factor: 1

Analyte	Conc (ug/L)	Reporting Limit (ug/L)
Naphthalene	ND	0.50
Acenaphthylene	ND	1.0
1-Methylnaphthalene	ND	1.0
2-Methylnaphthalene	ND	1.0
Acenaphthene	ND	1.0
Fluorene	ND	0.10
Phenanthrene	ND	0.050
Anthracene	ND	0.10
Fluoranthrene	ND	0.10
Pyrene	ND	0.050
Benzo(a)anthracene	ND	0.050
Chrysene	ND	0.050
Benzo(b)fluoranthrene	ND	0.10
Benzo(k)fluoranthrene	ND	0.050
Benzo(a)pyrene	ND	0.10
Dibenzo(a,h)anthracene	ND	0.10
Benzo(g,h,i)perylene	ND	0.10
Indeno(1,2,3-c,d)pyrene	ND	0.10

SURROGATE RECOVERY

Analyte	% Recovery	% Rec Limits
2-Chloroanthracene	87	35 - 119

ND = Not Detected at or above client requested reporting limit.

000004

POLYNUCLEAR AROMATIC HYDROCARBONS

Method 8310

Sample ID

990250

Lab Name: Paragon Analytics, Inc.

Client Name: El Paso Field Services

Client Project ID: Old Blanco Field

Lab Sample ID: 9905166-1

Date Collected: 5/24/99

Date Extracted: 5/27/99

Date Analyzed: 6/02/99

Sample Matrix: Water

Cleanup: N/A

Sample Volume: 1060 mL

Final Volume: 1 mL

Dilution Factor: 10

Analyte	Conc (ug/L)	Reporting Limit (ug/L)
Naphthalene	22	4.7
Acenaphthylene	ND	9.4
1-Methylnaphthalene	7.2 J	9.4
2-Methylnaphthalene	8.1 J	9.4
Acenaphthene	ND	9.4
Fluorene	ND	0.94
Phenanthrene	0.48	0.47
Anthracene	ND	0.94
Fluoranthrene	ND	0.94
Pyrene	ND	0.47
Benzo(a)anthracene	ND	0.47
Chrysene	ND	0.47
Benzo(b)fluoranthrene	ND	0.94
Benzo(k)fluoranthrene	ND	0.47
Benzo(a)pyrene	ND	0.94
Dibenzo(a,h)anthracene	ND	0.94
Benzo(g,h,i)perylene	ND	0.94
Indeno(1,2,3-c,d)pyrene	ND	0.94

SURROGATE RECOVERY

Analyte	% Recovery	% Rec Limits
2-Chloroanthracene	46	35 - 119

ND = Not Detected at or above client requested reporting limit.

J = Estimated value. Below reporting limits.

000005

POLYNUCLEAR AROMATIC HYDROCARBONS

Method 8310

Sample ID

990251

Lab Name: Paragon Analytics, Inc.

Client Name: El Paso Field Services

Client Project ID: Old Blanco Field

Lab Sample ID: 9905166-2

Date Collected: 5/24/99

Date Extracted: 5/27/99

Date Analyzed: 6/02/99

Sample Matrix: Water

Cleanup: N/A

Sample Volume: 1060 mL

Final Volume: 1 mL

Dilution Factor: 1

Analyte	Conc (ug/L)	Reporting Limit (ug/L)
Naphthalene	ND	0.47
Acenaphthylene	ND	0.94
1-Methylnaphthalene	ND	0.94
2-Methylnaphthalene	ND	0.94
Acenaphthene	ND	0.94
Fluorene	ND	0.094
Phenanthrene	ND	0.047
Anthracene	ND	0.094
Fluoranthrene	ND	0.094
Pyrene	ND	0.047
Benzo(a)anthracene	ND	0.047
Chrysene	ND	0.047
Benzo(b)fluoranthrene	ND	0.094
Benzo(k)fluoranthrene	ND	0.047
Benzo(a)pyrene	ND	0.094
Dibenzo(a,h)anthracene	ND	0.094
Benzo(g,h,i)perylene	ND	0.094
Indeno(1,2,3-c,d)pyrene	ND	0.094

SURROGATE RECOVERY

Analyte	% Recovery	% Rec Limits
2-Chloroanthracene	81	35 - 119

ND = Not Detected at or above client requested reporting limit.

000000

POLYNUCLEAR AROMATIC HYDROCARBONS LABORATORY CONTROL SPIKE

Method 8310

Lab Name: Paragon Analytics, Inc.
 Client Name: El Paso Field Services
 Client Project ID: Old Blanco Field

Sample ID

Blank Spike

Lab Sample ID: WLCS1, 5/27/99

Date Extracted: 5/27/99

Date Analyzed: 6/02/99

Sample Matrix: Water
 Cleanup: N/A

Sample Volume: 1,000 mL

Final Volume: 1 mL

Analyte	Spike Added (ug/L)	LCS Concentration (ug/L)	LCS Percent Recovery	QC Limits % Rec
Acenaphthylene	10.0	7.31	73	36 - 93
Phenanthrene	1.00	0.833	83	45 - 107
Pyrene	1.00	0.797	80	40 - 104
Benzo(k)fluoranthene	0.250	0.223	89	61 - 126
Dibenzo(a,h)anthracene	1.00	0.785	79	55 - 113

Lab Sample ID: WCLSD1, 5/27/99

Analyte	Spike Added (ug/L)	LCSD Concentration (ug/L)	LCSD Percent Recovery	RPD	QC Limits RPD
Acenaphthylene	10.0	6.96	70	5	20
Phenanthrene	1.00	0.782	78	6	20
Pyrene	1.00	0.742	74	7	20
Benzo(k)fluoranthene	0.250	0.209	83	7	20
Dibenzo(a,h)anthracene	1.00	0.743	74	6	20

SURROGATE RECOVERY BS/BS

Analyte	% Recovery LCS	% Recovery LCSD	% Rec Limits
2-Chloroanthracene	90	82	35 -119

000007



PARAGON ANALYTICS, INC.

Nitrate/Nitrite AS N

225 Commerce Drive ♦ Fort Collins, CO 80524 ♦ (800) 443-1511 ♦ (970) 490-1511 ♦ FAX (970) 490-1522

June 16, 1999

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



RE: Paragon Workorder: 99-05-184
Client Project Name: Old Blanco Field
Client Project Number: None Submitted

Dear Mr. Lambdin:

Three water samples were received from El Paso Field Services on May 27, 1999. The samples were scheduled for Inorganics 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,

Debbie Fazio

Paragon Analytics, Inc.
Debbie Fazio
Project Manager

DF/rm
Enclosure: Report

Sample ID #'s

990250 - mw - 3

990251 - mw - 4

990252 - mw - 4 Field Dib

*Reviewed + Accepted
J. Fazio 6/17/99*

Paragon Analytics, Incorporated

Sample Number(s) Cross-Reference Table

Paragon OrderNum: 9905184

Client Name: El Paso Field Services

Client Project Name: Old Blanco Field

Client Project Number:

Client PO Number:

Client Sample	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
990250	9905184-1		WATER	5/24/99	10:45
990251	9905184-2		WATER	5/24/99	12:25
990252	9905184-3		WATER	5/24/99	12:25



PARAGON ANALYTICALS, INC.
225 Commerce Drive Ft. Collins, CO 80524

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

CHAIN OF CUSTODY

DATE 5-26-98 Page 1 of 1

*ACCESSION NUMBER (LAB ID) 09005184

ANALYSIS REQUESTED

REPORT TO: JAHAL CAMPBELL

COMPANY: EL PASO FIELD SERVICES

ADDRESS: 814 PERRY AVENUE
FARMINGTON NM 87401

SAMPLER: Donnie Bird

505-599-3249 505-599-3261

PHONE NO.

FAX NO.

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

NITRATE AS NO3-N

Number of Containers

PROJECT INFORMATION

PROJECT NUMBER:

PROJECT NAME: OLD BLANCO FIELD PIANO MUDS

P.O. NUMBER:

TAT: STANDARD

RUSH DUE

SAMPLE DISPOSAL:

HAZ WASTE \$5.00 ea

RETURN

SAMPLE RECEIPT

TOTAL NO. OF CONTAINERS

CHAIN OF CUSTODY SIGNATURE

SEALS INTEGRITY - PENDING

REGD. GROSS CONT. COUNTRY

HAZ CHEM \$15.00 ea

RECEIVED BY:

Sign.

Time

Date

Company

RECEIVED BY:

Paragon Analytics, Inc. - Fort Collins, Colorado

CONDITION OF SAMPLE UPON RECEIPT FORM

CLIENT: EL PASO FS. PROJECT MANAGER: _____

WORKORDER NO: 9905184 INITIALS: mc DATE: 5.27.99

1.	Does this project require any special handling in addition to standard PAI procedures? PRESCREEN REQUIRED (Rad, DOE, etc.)	Yes	<u>No</u>
2.	Are custody seals on the cooler intact? If so, how many <u>1</u>	N/A	<u>Yes</u> No
3.	Are custody seals on sample containers intact?	N/A	<u>Yes</u> No
4.	Is there a Chain of Custody (COC) or other representative documents, letters, or shipping memos?		<u>Yes</u> No
5.	Is the COC complete? Relinquished: Yes <u>X</u> No Analyses Requested: Yes <u>X</u> No	N/A	<u>Yes</u> No
6.	Is the COC in agreement with the samples received? No. of Samples: Yes <u>X</u> No Sample ID's: Yes <u>X</u> No Matrix: Yes <u>X</u> No No. of Containers: Yes <u>X</u> No		<u>Yes</u> No
7.	Are all aqueous samples requiring chemical preservation preserved correctly (excluding volatile organics)? Are all aqueous non-preserved samples at the correct pH?	N/A	<u>Yes</u> No <u>Yes</u> No
8.	Is there enough sample? If so, are they in the proper containers?		<u>Yes</u> No
9.	Are all samples within holding times for the requested analyses?		<u>Yes</u> No
10.	Were the sample(s) shipped on ice?	N/A	<u>Yes</u> No
11.	Were all sample containers received intact? (not broken or leaking, etc.)		<u>Yes</u> No
12.	Are samples requiring no headspace, headspace free? (volatiles, reactive cyanide/sulfide) Size of bubble < green pea > green pea	N/A	<u>Yes</u> No
13.	Are airbills present and removable?		<u>Yes</u> No
14.	Shall Paragon dispose of samples?		<u>Yes</u> No
15.	Were the cooler temperatures $\leq 6^{\circ}\text{C}$?	N/A	<u>Yes</u> No

Cooler #'s client _____
Temperature 3° 4° _____ °C

PM Reviewed/Date: Pj 5/27/99

A NO RESPONSE TO ANY QUESTION (EXCEPT # 1&13) REQUIRES THE COMPLETION OF PAGE 2 OF THE FORM

PLEASE FOLD THIS SHIPPING DOCUMENT IN HALF AND PLACE IT IN A WAYBILL POUCH AFFIXED TO YOUR SHIPMENT SO THAT THE BAR-CODE PORTION OF THE LABEL CAN BE READ AND SCANNED.
***WARNING: USE ONLY THE PRINTED ORIGINAL LABEL FOR SHIPPING. USING A PHOTOCOPY OF THIS LABEL FOR SHIPPING PURPOSES IS FRAUDULENT AND COULD RESULT IN ADDITIONAL BILLING CHARGES, ALONG WITH THE CANCELLATION OF YOUR FEDEX ACCOUNT NUMBER.

FROM: John Lambdin (505)599-2144
El Paso Field Services
770 West Navajo
Farmington, NM 87401

SHIPPER'S FEDEX ACCOUNT NUMBER



FedEx
Federal Express

TO: Sample Control (800)443-1511
Paragon Analytics, Inc.
225 Commerce Drive

SHIP DATE: 26MAY99
MAN-WGT: 54 LBS

Fort Collins, CO 80524-
REF: 006574



DELIVERY ADDRESS BARCODE (FEDEX-EDR)

CAD # 2223546

PRIORITY OVERNIGHT

THU
AA

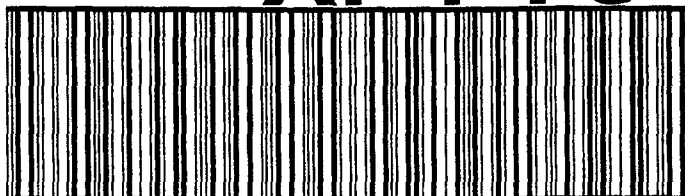
TRK # 7902 5382 3525 FORM 0201

DEN

Deliver By:
27MAY99

80524-CO-US
DROP OFF

XF FTC





Paragon Analytics, Inc.

INORGANICS CASE NARRATIVE

El Paso Field Services

Old Blanco Field

Order Number - 9905184

1. This report consists of data for three water samples.
2. The samples were received cool and intact on 05/27/99.
3. The samples had been correctly preserved for the requested analysis.
4. The samples were prepared for analysis based on Methods for the Chemical Analysis of Waters and Wastes (MCAWW), May 1994 procedures.
5. The samples were analyzed following MCAWW procedures for the following method:

<u>Analyte</u>	<u>Method</u>	<u>SOP #</u>
Nitrate/Nitrite as N	353.3	833 Rev 0

6. All standards and solutions were used within their recommended shelf life.
7. The samples were prepared and analyzed within the established hold time for this analysis.

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

8. General quality control procedures.
 - The initial calibration verification (ICV) and initial calibration blank (ICB) are reported in place of the laboratory control sample (LCS) and method blank for this test as this test does not require a preparation step.
 - All initial and continuing calibration blanks associated with this batch were below the reporting limit for the requested analyte.
 - All initial and continuing calibration verifications associated with this batch were within the acceptance criteria for the requested analyte. This indicates a valid calibration and stable instrument conditions.



9. Matrix specific quality control procedures.

PAI sample ID 9906019-1 was designated as the quality control sample for this batch.

- A matrix spike (MS) and matrix spike duplicate (MSD) were prepared and analyzed with this batch. All guidance criteria for precision and accuracy were met.

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

Nachul Perce
Reporter's Name

6/9/99
Date

B
Reviewer's Initials

6-9-99
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: 9905184

Client Name: El Paso Field Services

Client Project Name: Old Blanco Field

Client Project Number:

Client PO Number:

Client Sample	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
990250	9905184-1		WATER	5/24/99	10:45
990251	9905184-2		WATER	5/24/99	12:25
990252	9905184-3		WATER	5/24/99	12:25

Inorganic Data Reporting Qualifiers

The following qualifiers are used by the laboratory when reporting results of inorganic analyses.

- C (Concentration) qualifier -- If the analyte was analyzed for but not detected a "U" is entered.
- Q qualifier -- Specified entries and their meanings are as follows:
 - N - Spiked sample recovery not within control limits.
 - * - Duplicate analysis (relative percent difference) not within control limits.
 - B - The method blank for the analysis contained the analyte of interest above the reporting limit.

Nitrate/Nitrite as N

Method EPA353.3

Sample Results

Lab Name: Paragon Analytics, Inc.

Client Name: El Paso Field Services

Client Project ID: Old Blanco Field

Work Order Number: 9905184

Reporting Basis: As Received

Final Volume: 3 ML

Matrix: WATER

Result Units: MG/L

Client Sample ID	Lab ID	Date Collected	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	Detection Limit	Flag	Sample Aliquot
990250	9905184-1	5/24/99	6/7/99	6/8/99	N/A	500	67	25		3 ML
990251	9905184-2	5/24/99	6/7/99	6/8/99	N/A	1	0.18	0.05		3 ML
990252	9905184-3	5/24/99	6/7/99	6/8/99	N/A	1	0.05	0.05	U	3 ML

Comments:

1. ND or U = Not Detected at or above the client requested detection limit.

Data Package ID: NN9905184-1

000005

Nitrate/Nitrite as N

Method EPA353.3

Matrix Spike And Matrix Spike Duplicate

Lab Name: Paragon Analytics, Inc.

Work Order Number: 9905184

Client Name: El Paso Field Services

ClientProject ID: Old Blanco Field

Field ID: SHARED QC

LabID: 9906019-1MS

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 02-Jun-99

Date Extracted: 07-Jun-99

Date Analyzed: 08-Jun-99

Prep Batch: NN990607-1

QCBatchID: NN990607-1-1

Run ID: NN990608-1A

Cleanup: NONE

Basis: As Received

Sample Aliquot: 3 ML

Final Volume: 3 ML

Result Units: MG/L

Spike Added	Sample Result	Samp Qual	Reporting Limit	MS Result	MS % Rec.	MS Qualifier	Control Limits
250	120		25	355	96		75 - 125%

MSD Lab ID: 9906019-1MSD

Spike Added	MSD Result	MSD Qual	Reporting Limit	MSD % Rec.	RPD	RPD Limits
250	357		25	96	1	20

Data Package ID: NN9905184-1

Nitrate/Nitrite as N

Method EPA353.3

Calibration Verifications

Lab Name: Paragon Analytics, Inc.

Work Order Number: 9905184

Client Name: El Paso Field Services

ClientProject ID: Old Blanco Field

Date Analyzed: 08-Jun-99

Run ID: NN990608-1A

Result Units: MG/L

Lab ID	Verification Type	Spike Added	Result	Reporting Limit	Result Qualifier	% Rec.	Control Limits
ICV	Initial Calibration	0.5	0.531	0.05	N/A	106	90 - 110

Data Package ID: NN9905184-1

Date Printed: Wednesday, June 09, 1999

Paragon Analytics Inc.

Page 1 of 1

000007

Nitrate/Nitrite as N

Method EPA353.3

Calibration Blanks

Lab Name: Paragon Analytics, Inc.

Work Order Number: 9905184

Client Name: El Paso Field Services

ClientProject ID: Old Blanco Field

Date Analyzed: 08-Jun-99

Run ID: NN990608-1A

Result Units: MG/L

Lab ID	Verification Type	Date Analyzed	Result	Detection Limit	Flag
ICB	Initial Calibration	6/8/99	0.05	0.05	U

Data Package ID: NN9905184-1

Date Printed: Wednesday, June 09, 1999

Paragon Analytics Inc.

Page 1 of 1

000008

September 1, 1999

ANALYTICAL REPORT

**Blanco Field Yard
Monitor Well Results (MW-3 and 4)
Lab Sample #'s 990349 to 990351
Sampled 8/5/99
Sampled by Dennis Bird**

REMARKS:

These samples represent the 3rd Quarter 1999 compliance samples for this location. This is also the 4th clean quarter for BTEX.

Distribution: Scott Pope
Cecil Irby, Philip Services
Historic Excel Database
Results File

El Paso Field Services Company
Blanco Field Office
Groundwater Monitoring Well Results - 1999 Summary

First Quarter - February 1999

Sample ID#	990044	990045	990046
Well ID #	MW-3	MW-4	MW-4
			Duplicate
Benzene	<1.0	4.42	6.26
Ethylbenzene	131	7.78	7.57
Toluene	3.95	<1.0	<1.0
Total Xylenes	534	<3.0	<3.0
Nitrate as NO ₃ -N	29.5	2.1	2.0
ORC - 12/18/96	OUT	OUT	
ORC has not been replaced. They were removed in May of 1998.			

Second Quarter - May 1999

Sample ID#	990250	990251	990252
Well ID #	MW-3	MW-4	MW-4
			Duplicate
Benzene	<0.5	<0.5	<0.5
Ethylbenzene	35	<0.5	<0.5
Toluene	<0.5	<0.5	<0.5
Total Xylenes	123	<1.5	<1.5
Total Naphthalenes	37.3	<2.35	Not Run
Benzo(a)pyrene	<0.94	<0.094	Not Run
Nitrate as NO ₃ -N	67	0.18	<0.05
ORC - 12/18/96	OUT	OUT	
ORC has not been replaced. They were removed in May of 1998.			

Third Quarter - August 1999

Sample ID#	990349	990350	990351
Well ID #	MW-3	MW-4	MW-4
			Duplicate
Benzene	<1.0	<1.0	<1.0
Ethylbenzene	72.0	<1.0	<1.0
Toluene	2.66	<1.0	<1.0
Total Xylenes	304	<3.0	<3.0
Nitrate as NO ₃ -N	63	0.12	0.11
ORC - 12/18/96	OUT	OUT	
ORC has not been replaced. They were removed in May of 1998.			



FIELD SERVICES LABORATORY
ANALYTICAL REPORT
OLD BLANCO FIELD YARD

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	990349
MTR CODE SITE NAME:	N/A	Old Blanco Field Yard
SAMPLE DATE TIME (Hrs):	08/05/1999	1030
PROJECT:	Monitor Well	
DATE OF BTEX EXT. ANAL.:	N/A	08/10/1999
TYPE DESCRIPTION:	MW-3	Water

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	<1	PPB				
TOLUENE	2.66	PPB				
ETHYL BENZENE	72.0	PPB				
TOTAL XYLENES	304	PPB				
TOTAL BTEX	379	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

Narrative:

Approved By:

John Lumbden

Date:

9-1-99



EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY ANALYTICAL REPORT OLD BLANCO FIELD YARD

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	990350
MTR CODE SITE NAME:	N/A	Old Blanco Field Yard
SAMPLE DATE TIME (Hrs):	08/05/1999	1121
PROJECT:	Monitor Well	
DATE OF BTEX EXT. ANAL.:	N/A	08/10/1999
TYPE DESCRIPTION:	MW-4	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	<1	PPB				
TOLUENE	<1.0	PPB				
ETHYL BENZENE	<1.0	PPB				
TOTAL XYLENES	<3.0	PPB				
TOTAL BTEX	<6.0	PPB				

—BTEX is by EPA Method 8020 —

The Surrogate Recovery was at 98.6 % for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative: _____

Approved By: _____

Date: _____

9-1-99



EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY ANALYTICAL REPORT OLD BLANCO FIELD YARD

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	990351
MTR CODE SITE NAME:	N/A	Old Blanco Field Yard
SAMPLE DATE TIME (Hrs):	08/05/1999	1121
PROJECT:	Monitor Well	
DATE OF BTEX EXT. ANAL:	N/A	08/10/1999
TYPE DESCRIPTION:	MW-4 Field Duplicate	Water

Field Remarks: Field Duplicate

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	<1.0	PPB				
TOLUENE	<1.0	PPB				
ETHYL BENZENE	<1.0	PPB				
TOTAL XYLENES	<3.0	PPB				
TOTAL BTEX	<6.0	PPB				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 98.4 % for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative:

Approved By: John L. Linder

Date: 9-1-99



QUALITY CONTROL REPORT

EPA METHOD 8020 - BTEX

Samples: 990334 to 990340 and 990349 to 990354

QA/QC for 08/10/99 Sample Set

LABORATORY CALIBRATION CHECKS / LABORATORY CONTROL SAMPLES:

SAMPLE NUMBER	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE	
					YES	NO
ICV LA-67475 50 PPB					RANGE	
Benzene	Standard	50.0	46.5	93.0	75 - 125 %	X
Toluene	Standard	50.0	47.5	94.9	75 - 125 %	X
Ethylbenzene	Standard	50.0	47.1	94.1	75 - 125 %	X
m & p - Xylene	Standard	100	95.8	95.8	75 - 125 %	X
o - Xylene	Standard	50.0	47.8	95.6	75 - 125 %	X
LCS LA-53560 25 PPB					RANGE	
Benzene	Standard	25.0	21.3	85	39 - 150	X
Toluene	Standard	25.0	22.5	90	46 - 148	X
Ethylbenzene	Standard	25.0	23.0	92	32 - 160	X
m & p - Xylene	Standard	50.0	46.3	93	Not Given	X
o - Xylene	Standard	25.0	23.0	92	Not Given	X

Narrative: Acceptable.

LABORATORY DUPLICATES:

SAMPLE ID	TYPE	SAMPLE RESULT PPB	DUPLICATE RESULT PPB	RPD	ACCEPTABLE	
					YES	NO
990349					RANGE	
Benzene	Matrix Duplicate	<1.0	<2.5	NA	+/- 20 %	X
Toluene	Matrix Duplicate	2.66	<2.5	NA	+/- 20 %	X
Ethylbenzene	Matrix Duplicate	72.0	63.5	12.45	+/- 20 %	X
m & p - Xylene	Matrix Duplicate	249	224.4	10.37	+/- 20 %	X
o - Xylene	Matrix Duplicate	55.0	49.3	10.84	+/- 20 %	X

Narrative: Dilution Error on Benzene and Toluene. Acceptable.

LABORATORY SPIKES:

SAMPLE ID	SPIKE ADDED PPB	SAMPLE
--------------	-----------------------	--------

SAMPLE ID	TYPE	SAMPLE RESULT PPB	DUPLICATE RESULT PPB	RPD	ACCEPTABLE	
					YES	NO
990334					RANGE	
Benzene	Matrix Duplicate	<1.0	<1.0	NA	+/- 20 %	X
Toluene	Matrix Duplicate	<1.0	<1.0	NA	+/- 20 %	X
Ethylbenzene	Matrix Duplicate	<1.0	<1.0	0.00	+/- 20 %	X
m & p - Xylene	Matrix Duplicate	<2.0	<2.0	0.00	+/- 20 %	X
o - Xylene	Matrix Duplicate	<1.0	<1.0	0.00	+/- 20 %	X

Narrative: Acceptable.

LABORATORY SPIKES:

SAMPLE ID	SPIKE ADDED PPB	SAMPLE RESULT PPB	SPIKE SAMPLE RESULT PPB	%R	ACCEPTABLE	
					YES	NO
2nd Analysis 990334					RANGE	
Benzene	25	<1.0	22.1	88	75 - 125 %	X
Toluene	25	<1.0	22.4	89	75 - 125 %	X
Ethylbenzene	25	<1.0	21.7	87	75 - 125 %	X
m & p - Xylene	50	<2.0	45.1	90	75 - 125 %	X
o - Xylene	25	<1.0	22.5	90	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 (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	ACCEPT

December 3, 1999

ANALYTICAL REPORT

**Blanco Field Yard
Monitor Well Results (All six MW's)
Lab Sample #'s 990447 to 990453
Sampled 11/11/1999
Sampled by Dennis Bird**

REMARKS:

These samples represent the 4th Quarter 1999 compliance samples for this location. This is also the 5th clean quarter for BTEX. This site should be submitted for closure

Distribution: Scott Pope
Cecil Irby, Philip Services
Historic Excel Database
Results File

El Paso Field Services Company
Blanco Field Office
Groundwater Monitoring Well Results - 1999 Summary

First Quarter - February 1999

Sample ID#	990044	990045	990046
Well ID #	MW-3	MW-4	MW-4 Duplicate
Benzene	<1.0	4.42	6.26
Ethylbenzene	131	7.78	7.57
Toluene	3.95	<1.0	<1.0
Total Xylenes	534	<3.0	<3.0
Nitrate as NO ₃ -N	29.5	2.1	2.0

Second Quarter - May 1999

Sample ID#	990250	990251	990252
Well ID #	MW-3	MW-4	MW-4 Duplicate
Benzene	<0.5	<0.5	<0.5
Ethylbenzene	35	<0.5	<0.5
Toluene	<0.5	<0.5	<0.5
Total Xylenes	123	<1.5	<1.5
Nitrate as NO ₃ -N	67	0.18	<0.05

Third Quarter - August 1999

Sample ID#	990349	990350	990351
Well ID #	MW-3	MW-4	MW-4 Duplicate
Benzene	<1.0	<1.0	<1.0
Ethylbenzene	72.0	<1.0	<1.0
Toluene	2.66	<1.0	<1.0
Total Xylenes	304	<3.0	<3.0
Nitrate as NO ₃ -N	63	0.12	0.11

Fourth Quarter - November 1999

Sample ID#	990447	990448	990449	990450	990452	990453	990451
Well ID #	MW-1	MW-2R	MW-3	MW-4	MW-5	MW-6	MW-4 Duplicate
Benzene	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	<0.5	<0.5	54	2.5	<0.5	<0.5	3.5
Toluene	<0.5	<0.5	11	<0.5	<0.5	<0.5	<0.5
Total Xylenes	<0.5	<0.5	380	<0.5	<0.5	<0.5	<0.5
Nitrate as NO ₃ -N			5.4	<0.05			<0.05



Well Development and Purging Data

Site Name OLD BLANKO FIELD YARD Well Number MW-1
Meter Code NA

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 _____

- ☐ Development
☒ Purging

Water Volume Calculation

Initial Depth of Well (feet) 12.60
Initial Depth to Water (feet) 4.58
Height of Water Column in Well (feet) 6.02
Diameter (inches): Well 2 Gravel Pack _____

Item	Water Volume in Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing		<u>1.0</u>	<u>3.1</u>
Gravel Pack			
Drilling Fluids			
Total			

Instruments

- ☒ pH Meter
☐ DO Monitor
☒ Conductivity Meter
☒ Temperature Meter
☒ Other DO 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				
11-11-99	1019										6.82	1134		
11-11-99	1022						1.0	1.0			7.05	1146		
11-11-99	1028						2.0	3.0			7.07	1139		
11-11-99	1033													



Well Development and Purging Data

Site Name OLD BUENICO FIELD YARD Well Number MW-3 Meter Code NA

☐ Development
☒ Purging

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) 22.40
Initial Depth to Water (feet) 6.86
Height of Water Column in Well (feet) 13.74
Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing		<u>9.1</u>	<u>273</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				
11-11-99	1105										7.17	1263		
11-11-99	1110						5.0	5.0			7.20	1193		
11-11-99	1120						5.0	10.0			6.99	1246		
11-11-99	1129													



Well Development and Purging Data

Site Name OLD BLANCO FIELD YARD Well Number MW-3 Meter Code NA

☐ Development
☒ Purging

Development Criteria

- ☒ 3 to 5 Casing Volumes of Water Removal
- ☐ 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) 11.90
Initial Depth to Water (feet) 4.11
Height of Water Column in Well (feet) 4.79

Diameter (inches): Well 2 Gravel Pack _____

Item	Water Volume in Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing		<u>0.83</u>	<u>7.5</u>
Gravel Pack			
Drilling Fluids			
Total			

Instruments

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

Water Disposal

KOTZ 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				
11-11-99	1217										6.66	16220		
11-11-99	1222						1.0	1.0			7.04	7880		
11-11-99	1231						2.0	3.0		</				



Well Development and Purging Data

Site Name OLD BUENGO FIELD WARD Well Number MW-4
Meter Code NA

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) 12.30
Initial Depth to Water (feet) 5.31
Height of Water Column in Well (feet) 4.99

Diameter (inches): Well 3 Gravel Pack _____

Item	Water Volume in Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing		<u>0.87</u>	<u>2.6</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)		Temperature °C	pH	Conductivity µmho/cm	Dissolved Oxygen mg/L	Comments
		Pump	Bailer				Increment	Cumulative	Increment	Cumulative					
11-11-99	1312						1.0	1.0			19.5	6.71	1381		
11-11-99	1317						2.0	3.0			20.0	6.85	1326		
11-11-99	1323						2.0	5.0			19.6	6.81	1412		



Well Development and Purging Data

Site Name OLD BLANCO FIELD YARD Well Number MW-5
Meter Code NA

☐ Development
☒ Purging

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) 1980
Initial Depth to Water (feet) 8.91
Height of Water Column in Well (feet) 12.89
Diameter (inches): Well 4 Gravel Pack _____

Item	Water Volume in Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing		<u>7.2</u>	<u>21.6</u>
Gravel Pack			
Drilling Fluids			
Total			

Instruments

- ☒ pH Meter
☐ DO Monitor
☒ Conductivity Meter
☒ Temperature Meter
☒ Other DO 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 μ mho/cm	Dissolved Oxygen mg/L	Comments
		Pump	Bailer				Increment	Cumulative	Increment	Cumulative				
11-11-99	1425										6.98	1577		
11-11-99	1432						5.0	5.0			7.50	5910		
11-11-99	1438						5.0	10.0			7.39	4910		
11-11-99	1445													



Well Development and Purging Data

Site Name OLD BLANCO FIELD YARD Well Number MW-6 Meter Code NA

☐ Development
☒ Purging

Development Criteria

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

Methods of Development

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

Water Volume Calculation

Initial Depth of Well (feet) 203.0
Initial Depth to Water (feet) 8.85
Height of Water Column in Well (feet) 11.35

Diameter (Inches): Well 4 Gravel Pack

Item	Water Volume in Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing		<u>7.4</u>	<u>22.3</u>
Gravel Pack			
Drilling Fluids			
Total			

Instruments

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

Water Disposal

KUT2 SEPARATOR

Water Removal Data

Date	Time	Development Method		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				
11-11-99	1525									7.02	1980		
11-11-99	1532					5.0	5.0			7.21	4200		
11-11-99	1538					5.0	10.0			7.15	3720		
11-11-99	1546												

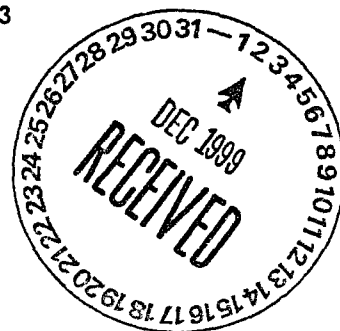
PINNACLE
LABORATORIES

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

Pinnacle Lab ID number
November 30, 1999

911053

EL PASO FIELD SERVICES
770 WEST NAVAJO
FARMINGTON, NM 87401



Project Name BLANCO FIELD YARD
Project Number (none)

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.

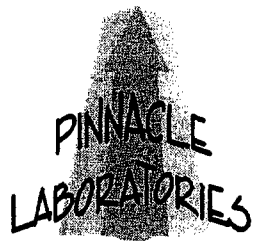
Kimberly D. McNeill
Project Manager

H. Mitchell Rubenstein, Ph. D.
General Manager

MR: jt

Enclosure

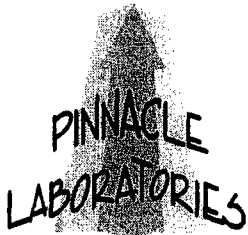
*Reviewed and Approved
J Lambdin 12/3/99*



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	: 911053
PROJECT #	: (none)	DATE RECEIVED	: 11/16/99
PROJECT NAME	: BLANCO FIELD YARD	REPORT DATE	: 11/19/99

PIN			DATE
ID. #	CLIENT DESCRIPTION	MATRIX	COLLECTED
01	990447 - mw-1	AQUEOUS	11/11/99
02	990448 - mw-2	AQUEOUS	11/11/99
03	990449 - mw-3	AQUEOUS	11/11/99
04	990450 - mw-4	AQUEOUS	11/11/99
05	990451 - mw-4 Field Duplicate	AQUEOUS	11/11/99
06	990452 - mw-5	AQUEOUS	11/11/99
07	990453 - mw-6	AQUEOUS	11/11/99
08	TRIP BLANK	AQUEOUS	11/11/99



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 : BLANCO FIELD YARD

PINNACLE I.D.: 911053

SAMPLE		MATRIX	DATE	DATE	DATE	DIL.
ID. #	CLIENT I.D.		SAMPLED	EXTRACTED	ANALYZED	FACTOR
01	990447	AQUEOUS	11/11/99	NA	11/17/99	1
02	990448	AQUEOUS	11/11/99	NA	11/17/99	1
03	990449	AQUEOUS	11/11/99	NA	11/17/99	10
PARAMETER		DET. LIMIT	UNITS	990447	990448	990449
BENZENE		0.5	UG/L	< 0.5	< 0.5	< 1.0(D1)
TOLUENE		0.5	UG/L	< 0.5	< 0.5	11
ETHYLBENZENE		0.5	UG/L	< 0.5	< 0.5	54
TOTAL XYLENES		0.5	UG/L	< 0.5	< 0.5	380

SURROGATE:

BROMOFLUOROBENZENE (%)

SURROGATE LIMITS (80 - 120)

96

103

104

mw-1

mw-2

mw-3

CHEMIST NOTES:

(D1) = ANALYZED AT A 1 X DILUTION BY METHOD 8260.



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 : BLANCO FIELD YARD

PINNACLE I.D.: 911053

SAMPLE		MATRIX	DATE	DATE	DATE	DIL.
ID. #	CLIENT I.D.		SAMPLED	EXTRACTED	ANALYZED	FACTOR
04	990450	AQUEOUS	11/11/99	NA	11/17/99	1
05	990451	AQUEOUS	11/11/99	NA	11/17/99	1
06	990452	AQUEOUS	11/11/99	NA	11/17/99	1

PARAMETER	DET. LIMIT	UNITS	990450	990451	990452
BENZENE	0.5	UG/L	< 0.5	< 0.5	< 0.5
TOLUENE	0.5	UG/L	< 0.5	< 0.5	< 0.5
ETHYLBENZENE	0.5	UG/L	2.5	3.5	< 0.5
TOTAL XYLENES	0.5	UG/L	< 0.5	< 0.5	< 0.5

SURROGATE:

BROMOFLUOROBENZENE (%)

SURROGATE LIMITS (80 - 120)

98

105

93

mw-4

mw-4

mw-5

Field
Duplicate

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 : BLANCO FIELD YARD

PINNACLE I.D.: 911053

PARAMETER	DET. LIMIT	UNITS	990453	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 (%)

102

96

SURROGATE LIMITS (80 - 120)

mw-6

CHEMIST NOTES:

N/A

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

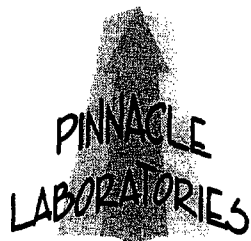


GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

TEST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 911053
BLANK I. D.	: 111799	DATE EXTRACTED	: NA
CLIENT	: EL PASO FIELD SERVICES	DATE ANALYZED	: 11/17/99
PROJECT #	: (none)	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: BLANCO FIELD YARD		

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



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.	: 911053
MSMSD #	: 111799	DATE EXTRACTED	: NA
CLIENT	: EL PASO FIELD SERVICES	DATE ANALYZED	: 11/18/99
PROJECT #	: (none)	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: BLANCO FIELD YARD	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	17.9	90	17.0	85	5	(80 - 120)	20
TOLUENE	<0.5	20.0	19.4	97	18.2	91	6	(80 - 120)	20
ETHYLBENZENE	<0.5	20.0	20.0	100	19.1	96	5	(80 - 120)	20
TOTAL XYLENES	<0.5	60.0	61.6	103	58.6	98	5	(80 - 120)	20

CHEMIST NOTES:
N/A

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

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



Environmental Services Laboratory, Inc. E S L

November 24, 1999
17400 SW Upper Boones Ferry Road • Suite 270 • Portland, OR 97224 • (503) 670-8520

Kim McNeill
Pinnacle Laboratories
2709-D Pan American Fwy NE
Albuquerque, NM 87107
TEL: 505-344-3777
FAX (505) 344-4413

RE: 911053/EPFS/Blanco Field Yard

Order No.: 9911101

Dear Kim McNeill,

Environmental Services Laboratory received 3 samples on 11/17/99 for the analyses presented in the following report.

The Samples were analyzed for the following tests:

Nitrate/Nitrite (Nitrogen)

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative. Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety, without the written approval from the Laboratory.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,



Kimberly Hill
Project Manager



Technical Review

990449 → MW-3

Environmental Services Laboratory

Date: 24-Nov-99

CLIENT: Pinnacle Laboratories
Lab Order: 9911101
Project: 911053/EPFS/Blanco Field Yard
Lab ID: 9911101-01A

Client Sample ID: 911053-03
Tag Number:
Collection Date: 11/11/99
Matrix: AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
NITRATE/NITRITE		NITROGEN				Analyst: nmk
Nitrogen, N+N	5.4	0.50		mg/L	10	11/23/99

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

990450 → MW-4

Environmental Services Laboratory

Date: 24-Nov-99

CLIENT: Pinnacle Laboratories
Lab Order: 9911101
Project: 911053/EPFS/Blanco Field Yard
Lab ID: 9911101-02A

Client Sample ID: 911053-04
Tag Number:
Collection Date: 11/11/99
Matrix: AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
NITRATE/NITRITE		NITROGEN				Analyst: nmk
Nitrogen, N+N	ND	0.050		mg/L	1	11/23/99

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

990451 → MW-4 Field Duplicate

Environmental Services Laboratory

Date: 24-Nov-99

CLIENT: Pinnacle Laboratories
Lab Order: 9911101
Project: 911053/EPFS/Blanco Field Yard
Lab ID: 9911101-03A

Client Sample ID: 911053-05
Tag Number:
Collection Date: 11/11/99
Matrix: AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
NITRATE/NITRITE		NITROGEN				Analyst: nmk
Nitrogen, N+N	ND	0.050		mg/L	1	11/23/99

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Environmental Services Laboratory

Date: 24-Nov-99

CLIENT: Pinnacle Laboratories

Work Order: 9911101

Project: 911053/EPFS/Blanco Field Yard

QC SUMMARY REPORT

Method Blank

Sample ID: MBlank	Batch ID: 01 N+N-11/23	Test Code: Nitrogen	Units: mg/L	Analysis Date: 11/23/99	Prep Date:
Client ID:	9911101	Run ID: HIT MAN_991123A	SeqNo: 29004		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Nitrogen, N+N	ND	0.05			

Qualifiers: ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

Environmental Services Laboratory

Date: 24-Nov-99

CLIENT: Pinnacle Laboratories

Work Order: 9911101

Project: 911053/EPPS/Blanco Field Yard

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS	Batch ID: 01 N+N-11/23	Test Code: Nitrogen	Units: mg/L	Analysis Date 11/23/99	Prep Date:						
Client ID:	9911101	Run ID: HIT MAN_991123A		SeqNo: 29007							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, N+N	.328	0.05	0.3	0	109.3%	85	115	0			
Sample ID: LCSD	Batch ID: 01 N+N-11/23	Test Code: Nitrogen	Units: mg/L	Analysis Date 11/23/99	Prep Date:						
Client ID:	9911101	Run ID: HIT MAN_991123A		SeqNo: 29009							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, N+N	.29	0.05	0.3	0	96.7%	85	115	0			

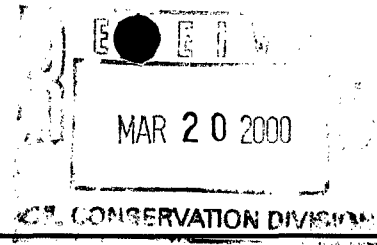
Qualifiers: ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits



Certified Mail: #Z 213 707 665

March 15, 2000

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

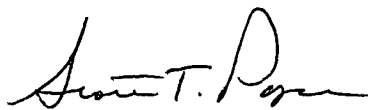
RE: Annual Report for Work Completed in 1999 at the Blanco Pipeline Office

Dear Mr. Olson:

Pursuant to our March 15, 2000 telephone conversation, El Paso Field Services (EPFS) and respective contractor are currently compiling all pertinent site data to request closure at the above mentioned location. EPFS will submit the report requesting final closure at this site by April 15, 2000.

If you have any questions or require any additional information, please contact me at (505) 599-2124.

Sincerely,



Scott T. Pope P.G.
Senior Environmental Scientist

xc: Mr. Denny Foust, NMOCD - Aztec