

3R - 231

REPORTS

DATE:

1997



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

February 27, 1998

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

RECEIVED

MAR 02 1998

Environmental Bureau
Oil Conservation Division

Re: 1997 Groundwater Annual Report

Dear Mr. Olson:

In accordance with reporting requirements, El Paso Field Services (EPFS) has enclosed annual updates for 57 groundwater impacted locations that were identified during our pit closure project of 1994/1995.

Of the 57 reports, EPFS hereby requests your approval for closure of 11 of these locations. The 11 reports for which EPFS requests closure, are in 2 separate binders entitled "Request for Closure".

After you have had an opportunity to review these updates, EPFS would like to schedule a meeting with you to discuss issues related to closure criteria for some of the more complex locations that are currently being addressed.

If you have any questions regarding this information, please call me at 505/599-2141. I will contact you within the next quarter to schedule a meeting.

Sincerely,

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

Sandra D. Miller
Environmental Manager

xc: Mr. Bill Liesse, BLM w/o enclosures
Mr. Denny Foust, NMOCD - Aztec w/enclosures; **Certified Mail #Z 295 387 298; #Z 295 387 299**
Ms. Charmaine Tso, Navajo EPA w/enclosures; **Certified Mail #Z 295 387 292**

SAN JUAN BASIN PIT CLOSURES
San Juan Basin, New Mexico

El Paso Field Services Pit Project Groundwater Report
Annual Report

March 1998

Prepared For

El Paso Field Services
Farmington, New Mexico

Project 17520

PHILIP
ENVIRONMENTAL

EPFS GROUNDWATER PITS

1997 ANNUAL GROUNDWATER REPORT

RAMENTA ET AL #1
Meter/Line ID - 75155

SITE DETAILS

Legals - Twn: 27N Rng: 9W Sec: 13 Unit: J
NMOCD Hazard Ranking: 30 Land Type: NAVAJO
Operator: BURLINGTON RESOURCES

PREVIOUS ACTIVITIES

Site Assessment: Jun-96 Excavation: Oct-96 (432 cy) Geoprobe: Feb-97
Soil Boring: May-97 Monitor Well: May-97

1997 ACTIVITIES

Geoprobe - Collected groundwater samples and determined groundwater flow direction from temporary piezometers.

Monitor Well Installation - One groundwater monitor well was installed in the center of the former pit.

Quarterly Groundwater Monitoring - Quarterly groundwater monitoring was initiated on 6/12/97. Groundwater analytical data are presented in Table 1.

CONCLUSIONS

Based on groundwater levels collected from Geoprobe data, the groundwater flow trends to the northwest on this site, as presented in Figure 1.

Groundwater samples collected from MW-1 were over standards for benzene, and total xylenes on the initial quarterly sampling event. Benzene concentrations have dropped below standards since quarterly sampling was initiated. Groundwater samples collected up-gradient and cross-gradient of MW-1 were below standards for BTEX. One groundwater sample collected from PH-2 downgradient of MW-1, was in excess of standards for benzene only at 388 ppb.

RECOMMENDATIONS

- Quarterly sampling will continue at MW-1 until 4 consecutive clean quarters are achieved.
- Following OCD approval for closure, MW-1 will be abandoned following OCD approved abandonment procedures.

LEGEND

⊙ PZ-1 APPROXIMATE PIEZOMETER LOCATION AND NUMBER

● PH-1 APPROXIMATE PROBEHOLE LOCATION AND NUMBER

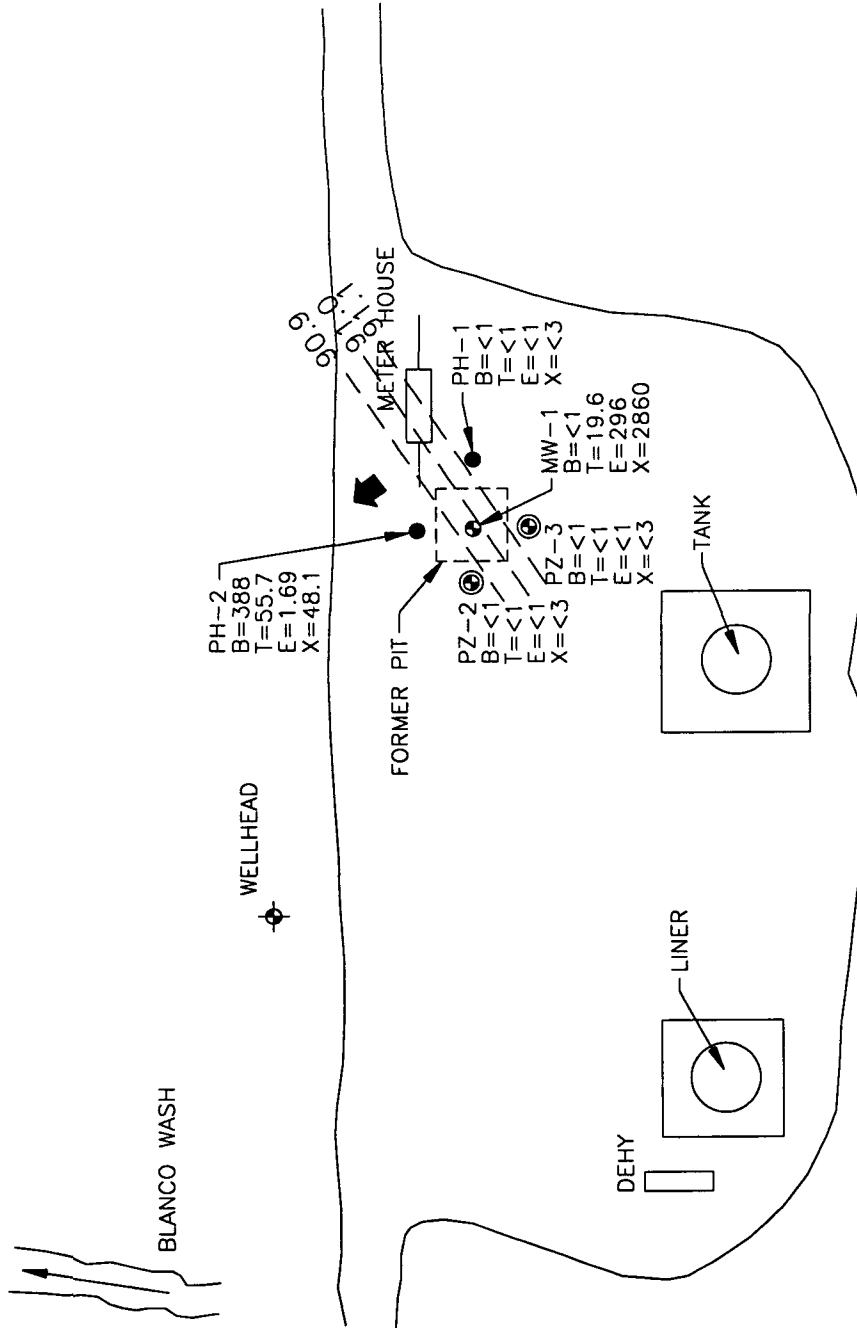
⊙ MW-1 APPROXIMATE MONITORING WELL LOCATION AND NUMBER

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

ug\L MICROGRAMS PER LITER

— 91.1 — GROUNDWATER POTENTIOMETRIC SURFACE

➔ APPROXIMATE GROUNDWATER GRADIENT



NOT TO SCALE

TABLE 1

Sample #	Meter/ Line #	Site Name	Sample Date	MW #	Project	Benzene (PPB)	Toluene (PPB)	Ethyl Benzene (PPB)	Total Xylenes (PPB)	Total BTEX
970484	75155	Ramenta ET AL #1	5/22/97	1	Phase II Drilling - Initial	= 85.1	= 408	= 420	= 4370	= 5283
970559	75155	Ramenta ET AL #1	6/12/97	1	Sample 4 - 1st Qtr	= 42.3	= 283	= 423	= 4240	= 4990
971005	75155	Ramenta ET AL #1	9/19/97	1	Sample 4 - 2nd Qtr	= 6.09	= 27.6	= 359	= 3800	= 4193
971273	75155	Ramenta ET AL #1	12/5/97	1	Sample 4 - 3rd Qtr	< 1	= 19.6	= 296	= 2860	= 3176

RECORD OF SUBSURFACE EXPLORATION

PHILIP ENVIRONMENTAL SERVICES INC.

4000 Monroe Road

Farmington, New Mexico 87401

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

Borehole # BH-1

Well # MW-1

Page 1 of

Project Name EPFS GW PITS

Project Number 17520 Phase 6001

Project Location Rementa ETAL #1 75155

Elevation

Borehole Location T27-R9-S13-Ltr J

GWL Depth

Logged By CM CHANCE

Drilled By K Padilla

Date/Time Started 5/6/97-0850

Date/Time Completed 5/6/97-0910

Well Logged By CM CHANCE

Personnel On-Site D CHARLEY

Contractors On-Site

Client Personnel On-Site

Drilling Method 1/4 ID HSA

Air Monitoring Method PID

Depth (Feet)	Sample Number	Sample Interval	Sample Type & Recovery (inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: PPM			Drilling Conditions & Blow Counts
							BZ	BH	S	
0				BACKFILL TO 12'						GW @ 6.4'
5										
10										
15				Gry saturated SAND, F-med, tr coarse, tr clay						
20				TOB 18'						
25										
30										
35										
40										

Comments:

No sample collected BackFill to 12'. GW @ 6.4' BGS

Geologist Signature

Cam Chance

MONITORING WELL INSTALLATION RECORD

Philip Environmental Services, Inc.

4000 Monroe Rd.

Farmington, NM 87401

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

Borehole # BH-1

Well # MW-1

Page 1 of 1

Project Name EPFS GW

Project Number 17520

Phase 6002

Site Location Remata ETAL #1 25/55

On-Site Geologist CM CHANCE

Personnel On-Site D CHARLEY

Contractors On-Site

Client Personnel On-Site

Elevation

Well Location T27S13 R9 LTRJ

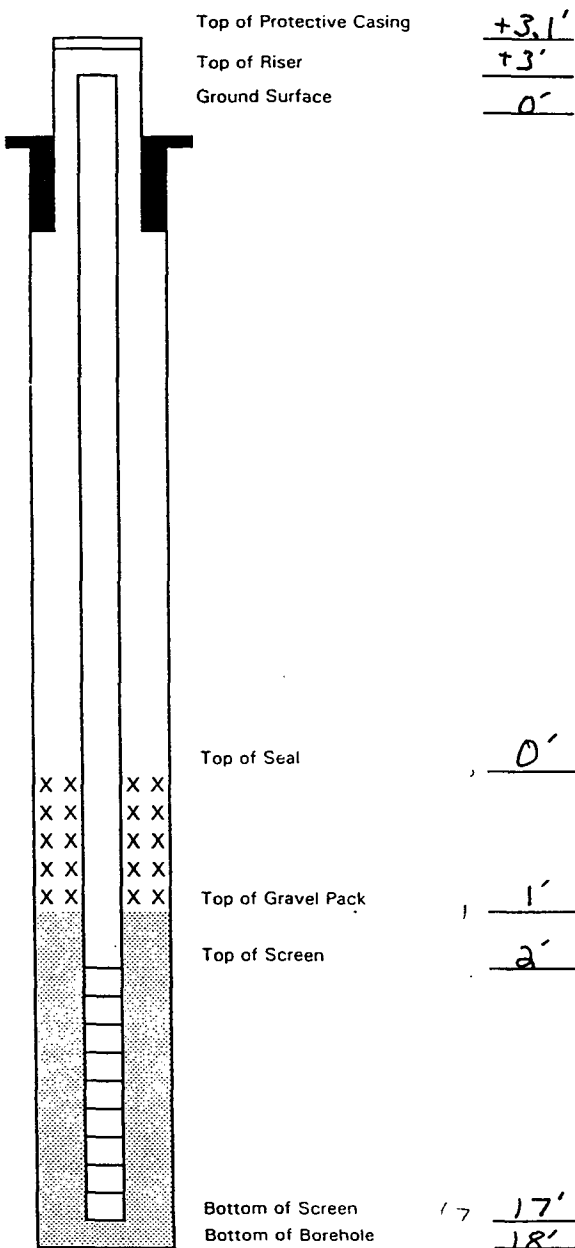
GWL Depth 6.4' BGS

Installed By K Padilla

Date/Time Started 5/6/97-0910

Date/Time Completed 5/6/97-1000

Depths in Reference to Ground Surface				
Item	Material	Depth (feet)		
Top of Protective Casing	8" steel well vault	+3.1'	Top of Protective Casing	
Bottom of Protective Casing		2.9'	Top of Riser	
Top of Permanent Borehole Casing		N/A	Ground Surface	
Bottom of Permanent Borehole Casing		N/A		
Top of Concrete		N/A		
Bottom of Concrete		N/A		
Top of Grout	Type I/II Portland cement	N/A		
Bottom of Grout	Powder Bentonite	N/A		
Top of Well Riser	4" SCH 40 PVC	+3'		
Bottom of Well Riser	FLUSH THREAD	2'		
Top of Well Screen	4" SCH 40 PVC	2'		
Bottom of Well Screen	0.01 SLOT FLUSH THREAD	17'		
Top of Peltonite Seal	ENVIROPLUG	0'		
Bottom of Peltonite Seal		1'		
Top of Gravel Pack	10-20 SILICA SAND	1'		
Bottom of Gravel Pack		17'		
Top of Natural Cave-In		17'		
Bottom of Natural Cave-In		18'		
Top of Groundwater		6.4'		
Total Depth of Borehole		18'		



Comments: Seal hydrated w/ 5gal potable water. Locking well cap & padlock placed on well

CM Chance

GEOPROBE

SITE ACTIVITIES

21-Feb-97

Meter/Line #: 75155

Location/Line #: Rementa ET AL #1

MW#:

Depth to GW:

Depth to Product:

Product Thickness:

Date: 2/19/97

Activity: Geoprobe

Comments: Installed PZ1 in center of pit. Entire site not spotted. Called operator and they said they would spot site tomorrow.

SITE ACTIVITIES

21-Feb-97

Meter/Line #: 75155

Location/Line #: Rementa ET AL #1

MW#:

Depth to GW:

Depth to Product:

Product Thickness:

Date: 2/20/97

Activity: Geoprobe.

Comments: Site has been spotted. Install 2 piezos and 2 probeholes.



FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	CMC304	970133
MTR CODE SITE NAME:	75155	Ramenta #1
SAMPLE DATE TIME (Hrs):	2/21/97	930
PROJECT:	Geoprobe	
DATE OF BTEX EXT. ANAL.:	2/21/97	2/21/97
TYPE DESCRIPTION:	PZ1	Water

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	335	PPB	25	D		
TOLUENE	1250	PPB	25	D		
ETHYL BENZENE	256	PPB	25	D		
TOTAL XYLENES	4000	PPB	25	D		
TOTAL BTEX	5840	PPB				

—BTEX is by EPA Method 8020 —

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

DF = Dilution Factor Used

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

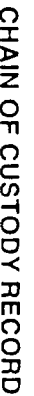
Narrative:

Approved By:

John Sordun

Date:

2-27-97



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



FIELD SERVICES LABORATORY
ANALYTICAL REPORT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	CMC305	970138
MTR CODE SITE NAME:	75155	Ramenta #1
SAMPLE DATE TIME (Hrs):	2/20/97	1045
PROJECT:	Geoprobe	
DATE OF BTEX EXT. ANAL.:	2/24/97	2/24/97
TYPE DESCRIPTION:	PZ2	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	< 1	PPB	10	D		
TOLUENE	< 1	PPB	10	D		
ETHYL BENZENE	< 1	PPB	10	D		
TOTAL XYLENES	< 3	PPB	10	D		
TOTAL BTEX	< 6	PPB				

—BTEX is by EPA Method 8020 —

The Surrogate Recovery was at 86.1 % for this sample All QA/QC was acceptable.

DF = Dilution Factor Used

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

Narrative:

Sample contained less than 5 mL of water.

Approved By: John L. Allen

Date: 3-4-97



FIELD SERVICES LABORATORY
ANALYTICAL REPORT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	CMC306	970139
MTR CODE SITE NAME:	75155	Ramenta #1
SAMPLE DATE TIME (Hrs):	2/20/97	1100
PROJECT:	Geoprobe	
DATE OF BTEX EXT. ANAL.:	2/24/97	2/24/97
TYPE DESCRIPTION:	PZ3	Water

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	< 1	PPB	10	D		
TOLUENE	< 1	PPB	10	D		
ETHYL BENZENE	< 1	PPB	10	D		
TOTAL XYLENES	< 3	PPB	10	D		
TOTAL BTEX	< 6	PPB				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 85.8 % for this sample All QA/QC was acceptable.

DF = Dilution Factor Used

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

Narrative:

Sample contained less than 5 mL of water.

Approved By:

John Larch

Date:

3-4-97



FIELD SERVICES LABORATORY
ANALYTICAL REPORT

SAMPLE IDENTIFICATION

SAMPLE NUMBER:	Field ID CMC307	Lab ID 970140
MTR CODE SITE NAME:	75155	Ramenta #1
SAMPLE DATE TIME (Hrs):	2/20/97	1130
PROJECT:	Geoprobe	
DATE OF BTEX EXT. ANAL.:	2/24/97	2/24/97
TYPE DESCRIPTION:	PH1	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	< 1	PPB	5	D		
TOLUENE	< 1	PPB	5	D		
ETHYL BENZENE	< 1	PPB	5	D		
TOTAL XYLENES	< 3	PPB	5	D		
TOTAL BTEX	< 6	PPB				

—BTEX is by EPA Method 8020 —

The Surrogate Recovery was at 85.8 % for this sample All QA/QC was acceptable.

DF = Dilution Factor Used

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

Narrative:

Sample contained less than 5 mL of water.

Approved By: John L. Luch

Date: 3-4-97



FIELD SERVICES LABORATORY
ANALYTICAL REPORT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	CMC308	970141
MTR CODE SITE NAME:	75155	Ramenta #1
SAMPLE DATE TIME (Hrs):	2/20/97	1205
PROJECT:	Geoprobe	
DATE OF BTEX EXT. ANAL.:	2/24/97	2/24/97
TYPE DESCRIPTION:	PH2	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	388	PPB	2	D,D1		
TOLUENE	55.7	PPB	2	D		
ETHYL BENZENE	1.69	PPB	2	D		
TOTAL XYLENES	48.1	PPB	2	D		
TOTAL BTEX	493	PPB				

—BTEX is by EPA Method 8020 —

The Surrogate Recovery was at 92.5 % 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.

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

Narrative:

Approved By: John L. Loh

Date: 3-4-97



Page _____ of _____

White - Testing Laboratory Canary - FPNGLab Pink - Field Computer

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

P21
Borehole # P21
Well # _____
Page _____ of _____

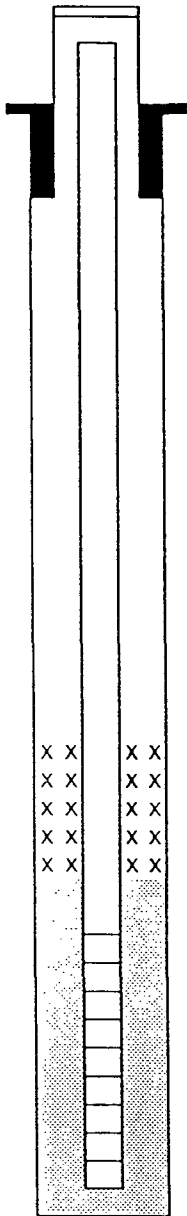
Project Name EPFS GW PITS
Project Number 17520 Phase 6004
Site Location Remonta ETAL #1 75155

Elevation _____
Well Location Center of Pit
GWL Depth ~~10.25 BGS~~ 7.75 BGS
Installed By K Padilla

On-Site Geologist CM Chance
 Personnel On-Site CMaez
 Contractors On-Site _____
 Client Personnel On-Site _____

Date/Time Started 0845/2/19/97
Date/Time Completed _____

Depths in Reference to Ground Surface		
Item	Material	Depth (feet)
Top of Protective Casing		
Bottom of Protective Casing		
Top of Permanent Borehole Casing		N/A
Bottom of Permanent Borehole Casing		N/A
Top of Concrete		
Bottom of Concrete		
Top of Grout		
Bottom of Grout		
Top of Well Riser		
Bottom of Well Riser		
Top of Well Screen		
Bottom of Well Screen		
Top of Peltonite Seal		
Bottom of Peltonite Seal		
Top of Gravel Pack		
Bottom of Gravel Pack		
Top of Natural Cave-In		
Bottom of Natural Cave-In		
Top of Groundwater		
Total Depth of Borehole		



Top of Protective Casing _____

Top of Riser _____

Ground Surface _____

Top of Seal _____

Top of Gravel Pack _____

Top of Screen 7'

Bottom of Screen 12'

Bottom of Borehole _____

Comments: 5' screen 5' riser 2.5' riser

MONITORING WELL INSTALLATION RECORD

Philip Environmental Services, Inc.

4000 Monroe Rd.

Farmington, NM 87401

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

Borehole # P22
Well # _____
Page ____ of ____

Project Name EPFS GW PITS
Project Number 175AD Phase 6004
Site Location Reminta #1 75LS

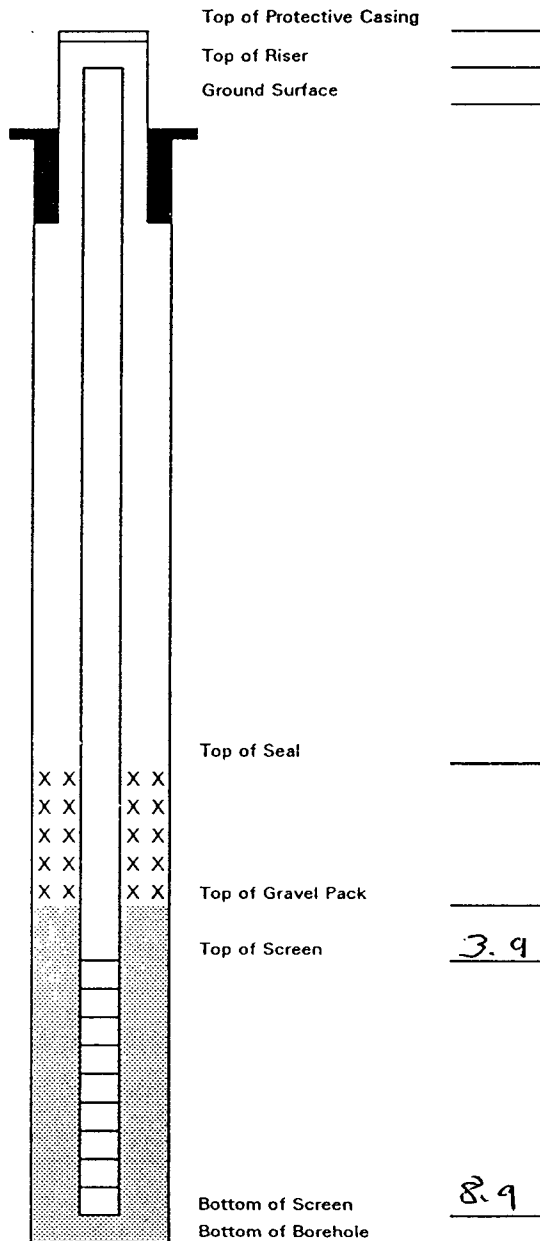
Elevation _____
Well Location W. of Pit (P21)
GWL Depth 7.7 BGS
Installed By K. Padilla

On-Site Geologist CM Chance
Personnel On-Site CMace
Contractors On-Site _____
Client Personnel On-Site _____

Date/Time Started 2/20/97
Date/Time Completed _____

Depths in Reference to Ground Surface

Item	Material	Depth (feet)
Top of Protective Casing		
Bottom of Protective Casing		
Top of Permanent Borehole Casing		N/A
Bottom of Permanent Borehole Casing		N/A
Top of Concrete		
Bottom of Concrete		
Top of Grout		
Bottom of Grout		
Top of Well Riser		
Bottom of Well Riser		
Top of Well Screen		
Bottom of Well Screen		
Top of Peltonite Seal		
Bottom of Peltonite Seal		
Top of Gravel Pack		
Bottom of Gravel Pack		
Top of Natural Cave-In		
Bottom of Natural Cave-In		
Top of Groundwater		
Total Depth of Borehole		



Comments: 1-5' screen 1-5' riser

MONITORING WELL INSTALLATION RECORD

Philip Environmental Services, Inc.

4000 Monroe Rd.

Farmington, NM 87401

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

Borehole # P23

Well # _____

Page 1 of 1

Project Name EPFS GW PITS

Project Number 17520 Phase 0004

Site Location Remenda #1 75155

Elevation _____

Well Location S of P21

GWL Depth 5.4' B.G.S

Installed By R. Padilla

On-Site Geologist CM Chance

Personnel On-Site C. Martinez

Contractors On-Site _____

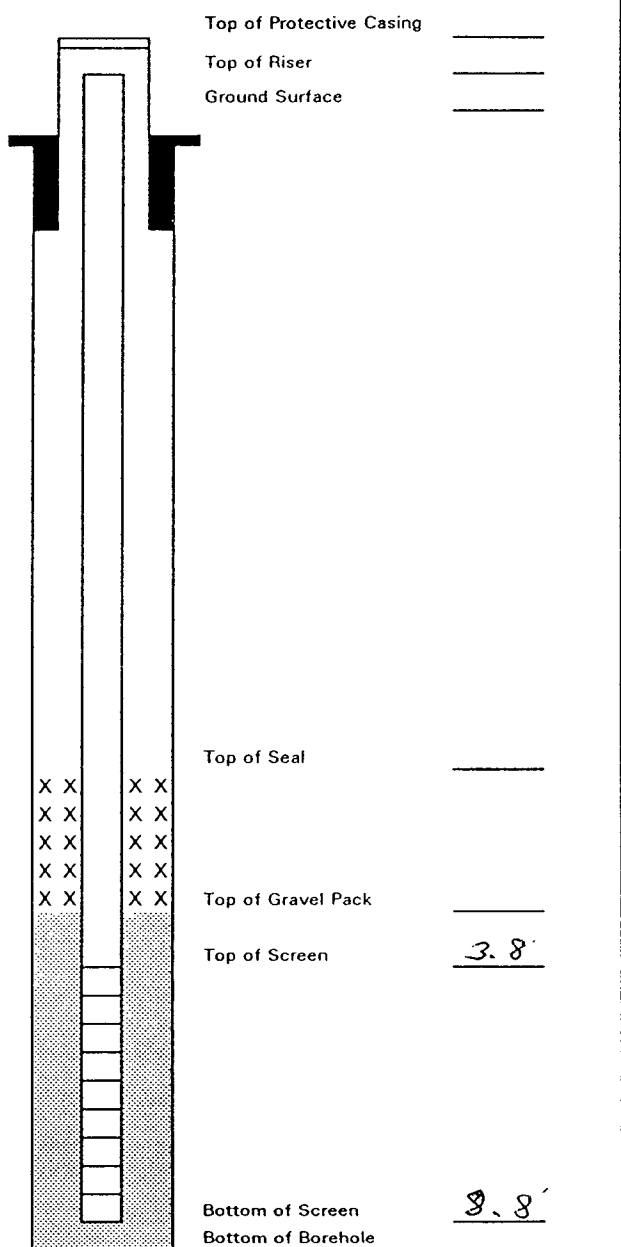
Client Personnel On-Site _____

Date/Time Started 2/20/97

Date/Time Completed 2/20/97

Depths in Reference to Ground Surface

Item	Material	Depth (feet)
Top of Protective Casing		
Bottom of Protective Casing		
Top of Permanent Borehole Casing		N/A
Bottom of Permanent Borehole Casing		N/A
Top of Concrete		
Bottom of Concrete		
Top of Grout		
Bottom of Grout		
Top of Well Riser		
Bottom of Well Riser		
Top of Well Screen		
Bottom of Well Screen		
Top of Peltonite Seal		
Bottom of Peltonite Seal		
Top of Gravel Pack		
Bottom of Gravel Pack		
Top of Natural Cave-In		
Bottom of Natural Cave-in		
Top of Groundwater		
Total Depth of Borehole		



Comments: 1-5' screen, 1-5' riser

**1997 GROUNDWATER
ANALYTICAL**

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



EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY

ANALYTICAL REPORT

PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	RT4	970484
MTR CODE SITE NAME:	75155	Ramenta ET AL #1
SAMPLE DATE TIME (Hrs):	5/22/97	1035
PROJECT:	Phase II Drilling - Initial	
DATE OF BTEX EXT. ANAL.:	5/23/97	5/23/97
TYPE DESCRIPTION:	Monitor Well	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	85.1	PPB	10	D		
TOLUENE	408	PPB	10	D		
ETHYL BENZENE	420	PPB	10	D		
TOTAL XYLENES	4370	PPB	10	D		
TOTAL BTEX	5280	PPB				

The Surrogate Recovery was at 93.1 % for this sample All QA/QC was acceptable.

DF = Dilution Factor Used

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

Narrative: _____

Approved By: _____

Date: _____

5/23/97



QUALITY CONTROL REPORT
EPA METHOD 8020 - BTEX

Samples: 970464, 970466-970468, 970473-970476, 970478, 970484, 970486

QA/QC for 05/23/97 Sample S

LABORATORY CALIBRATION CHECKS / LABORATORY CONTROL SAMPLES:

SAMPLE NUMBER	TYPE	EXPECTED RESULT	ANALYTICAL RESULT	%R	ACCEPTABLE	
ICV LA-52589		PPB	PPB		YES	NO
50 PPB					RANGE	
Benzene	Standard	50.0	51.8	104	75 - 125 %	X
Toluene	Standard	50.0	51.9	104	75 - 125 %	X
Ethylbenzene	Standard	50.0	52.1	104	75 - 125 %	X
m & p - Xylene	Standard	100	105	105	75 - 125 %	X
o - Xylene	Standard	50.0	51.9	104	75 - 125 %	X
SAMPLE NUMBER	TYPE	EXPECTED RESULT	ANALYTICAL RESULT	%R	ACCEPTABLE	
LCS LA-45476		PPB	PPB		YES	NO
25 PPB					RANGE	
Benzene	Standard	25.0	26.0	104	39 - 150	X
Toluene	Standard	25.0	25.3	101	46 - 148	X
Ethylbenzene	Standard	25.0	25.8	103	32 - 160	X
m & p - Xylene	Standard	50.0	51.8	104	Not Given	X
o - Xylene	Standard	25.0	25.8	103	Not Given	X
SAMPLE NUMBER	TYPE	EXPECTED RESULT	ANALYTICAL RESULT	%R	ACCEPTABLE	
CCV LA-52589		PPB	PPB		YES	NO
50 PPB					RANGE	
Benzene	Standard	50.0	51.6	103	75 - 125 %	X
Toluene	Standard	50.0	51.2	102	75 - 125 %	X
Ethylbenzene	Standard	50.0	51.6	103	75 - 125 %	X
m & p - Xylene	Standard	100	104	104	75 - 125 %	X
o - Xylene	Standard	50.0	51.4	103	75 - 125 %	X
SAMPLE NUMBER	TYPE	EXPECTED RESULT	ANALYTICAL RESULT	%R	ACCEPTABLE	
CCV LA-52589		PPB	PPB		YES	NO
50 PPB					RANGE	
Benzene	Standard	50.0	51.2	102	75 - 125 %	X
Toluene	Standard	50.0	50.7	101	75 - 125 %	X
Ethylbenzene	Standard	50.0	51.0	102	75 - 125 %	X
m & p - Xylene	Standard	100	103	103	75 - 125 %	X
o - Xylene	Standard	50.0	50.8	102	75 - 125 %	X

Narrative: Acceptable.

EL PASO FIELD SERVICES LAB
QUALITY CONTROL REPORT
EPA METHOD 8020 - BTEX

Samples: 970464, 970466-970468, 970473-970476, 970478, 970484, 970486

LABORATORY DUPLICATES:

SAMPLE ID	TYPE	SAMPLE RESULT PPB	DUPLICATE RESULT PPB	RPD	ACCEPTABLE	
					YES	NO
970464					RANGE	
Benzene	Matrix Duplicate	<1	<1	0.00	+/- 20 %	X
Toluene	Matrix Duplicate	<1	<1	0.00	+/- 20 %	X
Ethylbenzene	Matrix Duplicate	<1	<1	0.00	+/- 20 %	X
m & p - Xylene	Matrix Duplicate	6.52	6.45	1.08	+/- 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 970464					RANGE	
Benzene	50	<1	53.2	106	75 - 125 %	X
Toluene	50	<1	51.4	103	75 - 125 %	X
Ethylbenzene	50	<1	52.8	106	75 - 125 %	X
m & p - Xylene	100	6.52	111	104	75 - 125 %	X
o - Xylene	50	<1	52.5	105	75 - 125 %	X

Narrative: Acceptable

ADDITIONAL ANALYTICAL BLANKS:

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

Narrative: Acceptable.

SOIL VIAL BLANK	SOURCE Lot MB1461	PPB (Analyzed with this set)	STATUS
Benzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Toluene	Vial + Boiled Water	<1.0	ACCEPTABLE
Ethylbenzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Total Xylenes	Vial + Boiled Water	<3.0	ACCEPTABLE

Narrative: Acceptable.

CONTAMINATION CARRYOVER CHECK	SOURCE	PPB (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.



FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	RT4	970484
MTR CODE SITE NAME:	75155	Ramenta ET AL #1
SAMPLE DATE TIME (Hrs):	5/22/97	1035
PROJECT:	Phase II Drilling - Initial	
DATE OF BTEX EXT. ANAL.:	5/23/97	5/23/97
TYPE DESCRIPTION:	Monitor Well	Water

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	85.1	PPB	10	D		
TOLUENE	408	PPB	10	D		
ETHYL BENZENE	420	PPB	10	D		
TOTAL XYLENES	4370	PPB	10	D		
TOTAL BTEX	5280	PPB				

The Surrogate Recovery was at 93.1 % for this sample All QA/QC was acceptable.

DF = Dilution Factor Used

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

Narrative:

Approved By:

Date:

5/23/97



EL PASO FIELD SERVICES

QUALITY CONTROL REPORT EPA METHOD 8020 - BTEX

Samples: 970464, 970466-970468, 970473-970476, 970478, 970484, 970486

QA/QC for 05/23/97 Sample S

LABORATORY CALIBRATION CHECKS / LABORATORY CONTROL SAMPLES:

SAMPLE NUMBER ICV LA-52589 50 PPB	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE	
					YES	NO
					RANGE	
Benzene	Standard	50.0	51.8	104	75 - 125 %	X
Toluene	Standard	50.0	51.9	104	75 - 125 %	X
Ethylbenzene	Standard	50.0	52.1	104	75 - 125 %	X
m & p - Xylene	Standard	100	105	105	75 - 125 %	X
o - Xylene	Standard	50.0	51.9	104	75 - 125 %	X
SAMPLE NUMBER LCS LA-45476 25 PPB	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE	
					YES	NO
					RANGE	
Benzene	Standard	25.0	26.0	104	39 - 150	X
Toluene	Standard	25.0	25.3	101	46 - 148	X
Ethylbenzene	Standard	25.0	25.8	103	32 - 160	X
m & p - Xylene	Standard	50.0	51.8	104	Not Given	X
o - Xylene	Standard	25.0	25.8	103	Not Given	X
SAMPLE NUMBER CCV LA-52589 50 PPB	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE	
					YES	NO
					RANGE	
Benzene	Standard	50.0	51.6	103	75 - 125 %	X
Toluene	Standard	50.0	51.2	102	75 - 125 %	X
Ethylbenzene	Standard	50.0	51.6	103	75 - 125 %	X
m & p - Xylene	Standard	100	104	104	75 - 125 %	X
o - Xylene	Standard	50.0	51.4	103	75 - 125 %	X
SAMPLE NUMBER CCV LA-52589 50 PPB	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE	
					YES	NO
					RANGE	
Benzene	Standard	50.0	51.2	102	75 - 125 %	X
Toluene	Standard	50.0	50.7	101	75 - 125 %	X
Ethylbenzene	Standard	50.0	51.0	102	75 - 125 %	X
m & p - Xylene	Standard	100	103	103	75 - 125 %	X
o - Xylene	Standard	50.0	50.8	102	75 - 125 %	X

Narrative: Acceptable.

**EL PASO FIELD SERVICES LAB
QUALITY CONTROL REPORT
EPA METHOD 8020 - BTEX**

Samples: 970464, 970466-970468, 970473-970476, 970478, 970484, 970486

LABORATORY DUPLICATES:

SAMPLE ID	TYPE	SAMPLE RESULT PPB	DUPLICATE RESULT PPB	RPD	ACCEPTABLE	
					YES	NO
970464					RANGE	
Benzene	Matrix Duplicate	<1	<1	0.00	+/- 20 %	X
Toluene	Matrix Duplicate	<1	<1	0.00	+/- 20 %	X
Ethylbenzene	Matrix Duplicate	<1	<1	0.00	+/- 20 %	X
m & p - Xylene	Matrix Duplicate	6.52	6.45	1.08	+/- 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 970464					RANGE	
Benzene	50	<1	53.2	106	75 - 125 %	X
Toluene	50	<1	51.4	103	75 - 125 %	X
Ethylbenzene	50	<1	52.8	106	75 - 125 %	X
m & p - Xylene	100	6.52	111	104	75 - 125 %	X
o - Xylene	50	<1	52.5	105	75 - 125 %	X

Narrative: Acceptable

ADDITIONAL ANALYTICAL BLANKS:

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

Narrative: Acceptable.

SOIL VIAL BLANK	SOURCE Lot MB1461	PPB (Analyzed with this set)	STATUS
Benzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Toluene	Vial + Boiled Water	<1.0	ACCEPTABLE
Ethylbenzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Total Xylenes	Vial + Boiled Water	<3.0	ACCEPTABLE

Narrative: Acceptable.

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

Narrative: Acceptable.

Reported By: *mdr*

Approved By: *John Larch*

Date: *6/2/97*

GC Water 052397



A 2010

CHAIN OF CUSTODY RECORD

Project No.	Project Name	Date: 5-13-97				Date: 5-13-97			
Samples: (Signature)	Date	Time	Comp.	GRAB	Sample Number	Type and No. of Sample Containers	Preservation Technique	Requested Analysis	Remarks
<i>[Signature]</i>	5/13/97	1121	X		970559	61	4°C	X	RAMENTA ET AL #40111 MC75155
<i>[Signature]</i>	5/13/97	—	X		—	61	4°C	X	TRIP BLANK
Relinquished by: (Signature) 6/12/97 1712 Received by: (Signature) 6/12/97 1712									
Relinquished by: (Signature) — Received by: (Signature) —									
Relinquished by: (Signature) — Received for Laboratory by: (Signature) 6/13/97 0720									
Carrier Co:						Date Results Reported / by: (Signature)			



EL PASO FIELD SERVICES



6-23-97

FIELD SERVICES LABORATORY ANALYTICAL REPORT PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	970559
MTR CODE SITE NAME:	75155	Ramenta ET AL #1
SAMPLE DATE TIME (Hrs):	6/12/97	1121
PROJECT:	Sample 4 - 1st Quarter	
DATE OF BTEX EXT. ANAL.:	6/13/97	6/13/97
TYPE DESCRIPTION:	Monitor Well	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	42.3	PPB	5	D		
TOLUENE	283	PPB	5	D		
ETHYL BENZENE	423	PPB	5	D		
TOTAL XYLENES	4240	PPB	5	D,D1		
TOTAL BTEX	4990	PPB				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 92.8 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 Latch

Date: _____

6-23-97

970559,6/20/97



7-21-97

FIELD SERVICES LABORATORY
ANALYTICAL REPORT

SAMPLE IDENTIFICATION

SAMPLE NUMBER:	970559
SAMPLE DATE:	06/12/97
SAMPLE TIME (Hrs):	1121
SAMPLED BY:	N/A
MATRIX:	Water
METER CODE:	75155
SAMPLE SITE NAME:	Ramenta ET AL #1
SAMPLE POINT:	MW-1

REMARKS:

RESULTS

PARAMETER	TOTAL RESULT (mg/L)	N. M. WQCC LIMIT (mg/L)
ARSENIC	0.042	0.100
BARIUM	0.25	1.00
CADMIUM	<.0002	0.010
CHROMIUM	0.009	0.050
LEAD	<.002	0.050
MERCURY	<0.0002	0.002
SELENIUM	<.005	0.050
SILVER	<.0005	0.050

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

References:

Method 3015, Microwave Assisted Acid Digestion of Aqueous Samples and Extracts, Test Methods for Evaluating Solid Waste, SW-846, Sept., 1994.
Method 7061A, Arsenic (Atomic Absorption, Gaseous Hydride), Test Methods for Evaluating Solid Waste, SW-846, USEPA, July, 1992.
Method 7081, Barium (Atomic Absorption, Furnace Technique), Test Methods for Evaluating Solid Waste, SW-846, USEPA, July, 1992.
Method 7131, Cadmium (Atomic Absorption, Furnace Technique), Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept., 1986.
Method 7191, Chromium (Atomic Absorption, Furnace Technique), Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept., 1986.
Method 7421, Lead (Atomic Absorption, Furnace Technique), Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept., 1986.
Method 245.5, Mercury (Automated Cold Vapor Technique), Methods for the Determination of Metals in Environmental Samples, EPA 600/4-91/010, USEPA, June, 1991.
Method 7741A, Selenium (Atomic Absorption, Gaseous Hydride), Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept., 1994.
Method 7761, Silver (Atomic Absorption, Furnace Technique), Test Methods for Evaluating Solid Waste, SW-846, USEPA, July, 1992.

Reported By: Indo

Approved By: John L. Latta

Date: 7/7/97



Field Services Laboratory
Analytical Report

6-23-97

SAMPLE IDENTIFICATION

EPFS LAB ID:	970559
DATE SAMPLED:	06/12/97
TIME SAMPLED (Hrs):	1121
SAMPLED BY:	N/A
MATRIX:	Water
METER CODE:	75155
SAMPLE SITE NAME:	Ramenta ET AL #1
SAMPLE POINT:	MW-1

FIELD REMARKS:

GENERAL CHEMISTRY WATER ANALYSIS RESULTS

PARAMETER	RESULT	UNITS	DATE ANALYZED
Laboratory pH	7.8	Units	06/13/97
Alkalinity as CO ₃	0.0	PPM	06/13/97
Alkalinity as HCO ₃	692	PPM	06/13/97
Calcium as Ca	30	PPM	06/13/97
Magnesium as Mg	2	PPM	06/13/97
Total Hardness as CaCO ₃	86	PPM	06/13/97
Chloride as Cl	7	PPM	06/13/97
Sulfate as SO ₄	10	PPM	06/13/97
Fluoride as F	1.1	PPM	06/13/97
Nitrate as NO ₃ -N	<0.1	PPM	06/13/97
Nitrite as NO ₂ -N	<0.1	PPM	06/13/97
Ammonium as NH ₄ ⁺	<0.1	PPM	06/13/97
Phosphate as PO ₄	<0.1	PPM	06/13/97
Potassium as K	1.5	PPM	06/13/97
Sodium as Na	248	PPM	06/13/97
Total Dissolved Solids	724	PPM	06/13/97
Conductivity	1,049	umhos/cm	06/13/97
Anion/Cation %	3.0%	%, < 5.0 Accepted	06/20/97

Lab Remarks:

Reported By: Ende

Approved By: John Linder

Date: 6-23-97



QUALITY CONTROL REPORT

Sample ID: 970559
Date Reported: 07/16/97

LABORATORY CONTROL SAMPLE

Analyte	Found Result (mg/L)	Known Value (mg/L)	% Recovery
Arsenic	0.031	0.032	96.6%
Barium	0.062	0.065	95.7%
Cadmium	0.0025	0.0024	104%
Chromium	0.0049	0.0048	103%
Lead	0.033	0.030	111%
Mercury	0.0043	0.0046	93.2%
Selenium	0.038	0.041	94.3%
Silver	0.0051	0.0043	118%

DUPLICATE ANALYSIS (mg/L)

Analyte	Original Sample Result	Duplicate Sample Result	% RPD
Arsenic	ND	ND	NA
Barium	0.181	0.183	1.1%
Cadmium	ND	ND	NA
Chromium	0.0166	0.0153	8.2%
Lead	0.0065	0.0069	6.2%
Mercury	ND	ND	NA
Selenium	ND	ND	NA
Silver	0.0003	0.0004	8.7%

SPIKE ANALYSIS (mg/L)

Analyte	Original Sample Result	Spike Sample Result	Spike Added	Recovery Percent
Arsenic	0.001	0.126	0.100	118%
Barium	0.183	1.253	1.00	107%
Cadmium	ND	0.0103	0.010	103%
Chromium	0.017	0.065	0.050	97.0%
Lead	0.007	0.054	0.050	94.4%
Mercury	ND	0.0018	0.0020	90.0%
Selenium	ND	0.053	0.050	101%
Silver	0.0003	0.0539	0.050	107%

METHOD BLANK

Analyte	Found Result (mg/L)	Detection Level (mg/L)
Arsenic	ND	0.027
Barium	ND	0.019
Cadmium	ND	0.0002
Chromium	ND	0.004
Lead	ND	0.002
Mercury	ND	0.0002
Selenium	ND	0.011
Silver	ND	0.0005

ND: Not Detected at stated detection level.

NA: Not Applicable.

Reported By: mh

Approved By: John Ladd

Date: 7/17/97



Well Development and Purging Data

Site Name RAMONITA ET AL #4

Well Number MW-1

Meter Code 75155

☐ 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

Water Volume Calculation

Initial Depth of Well (feet) 2020
Initial Depth to Water (feet) 2447
Height of Water Column in Well (feet) 11.73

Diameter (Inches): Well 4 Gravel Pack _____

Item	Water Volume in Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing		<u>7.8</u>	<u>133</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)		Temperature °C	pH	Conductivity µmho/cm	Dissolved Oxygen mg/L	Comments
						Increment	Cumulative	Increment	Cumulative					
6-12-97	1022									18.0	6.70	1041		
6-12-97	1028					5.0	5.0			16.0	7.17	1068		
6-12-97	1033					5.0	10.0			15.1	7.27	1072		
6-12-97	1040					5.0	15.0			15.0	7.36	1085		
6-12-97	1045					5.0	20.0			15.0	7.41	1127		
6-12-97	1052					5.0	25.0			15.1	7.48	1144		
6-12-97	1101					5.0	30.0			15.5	7.49	1143	3.5	

Comments _____

Developer's Signature _____

Date 6-12-97

Reviewer _____

Date 6-23-97

A 2086

[illegible]



FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	971005
MTR CODE SITE NAME:	75155	Ramenta ET AL #1
SAMPLE DATE TIME (Hrs):	9/19/97	1122
PROJECT:	Sample 4 2nd Quarter	
DATE OF BTEX EXT. ANAL.:	9/24/97	9/24/97
TYPE DESCRIPTION:	MW-1	Water

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	6.09	PPB	2	D		
TOLUENE	27.6	PPB	2	D		
ETHYL BENZENE	359	PPB	2	D		
TOTAL XYLENES	3800	PPB	10	D		
TOTAL BTEX	4193	PPB				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 98.3 % 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:

Date:

9/29/97

971005BTEXMW,9/29/97



Well Development and Purging Data

Site Name RAMENTA ET AL #1

Well Number MW-1

Meter Code 75155

☐ Development
☒ Purging

Development Criteria

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

Methods of Development

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

Water Volume Calculation

Initial Depth of Well (feet) 20.30
Initial Depth to Water (feet) 8.86
Height of Water Column in Well (feet) 11.34
Diameter (inches) Well 4 Gravel Pack

Item	Water Volume in Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing		<u>7.5</u>	<u>23.5</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 $\mu\text{mho/cm}$	Dissolved Oxygen mg/L	Comments
		Pump	Bailor				Increment	Cumulative	Increment	Cumulative					
9-19-97	1031										21.4	7.09	995		
9-19-97	1036						5.0	5.0			20.2	7.36	996		
9-19-97	1042						5.0	10.0			19.4	7.58	1047		
9-19-97	1050						5.0	15.0			19.4	7.70	1050		
9-19-97	1055						5.0	20.0			18.7	7.70	1130		
9-19-97	1104						5.0	25.0			19.4	7.74	1187	2.5	

Comments

Developer's Signature Kennie Bird

Date 9-19-97

Reviewing

Jim Fells

Date 9/23/97

CHAIN OF CUSTODY RECORD

[illegible]



FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	971273
MTR CODE SITE NAME:	75155	Ramenta et al #1
SAMPLE DATE TIME (Hrs):	12/5/97	1012
PROJECT:	Sample 4 3rd Quarter	
DATE OF BTEX EXT. ANAL.:	12/9/97	12/9/97
TYPE DESCRIPTION:	MW-1	Water

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	<1	PPB	2	D		
TOLUENE	19.6	PPB	2	D		
ETHYL BENZENE	296	PPB	2	D		
TOTAL XYLENES	2860	PPB	10	D		
TOTAL BTEX	3176	PPB				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 91.1 % for this sample All QA/QC was acceptable.

DF = Dilution Factor Used

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

Narrative:

Approved By:

John L. Litch

Date:

12/18/97

971273BTEXMW, 12/18/97

Well Development and Purging Data

Site Name RAMENTA ET AL #1

☐ Development
☒ Purging

Well Number MW-1

Meter Code 75155

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

Water Volume Calculation

Initial Depth of Well (feet) 20.20

Initial Depth to Water (feet) 8.61

Height of Water Column in Well (feet) 11.59

Diameter (inches): Well 4 Gravel Pack _____

Item	Water Volume in Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing		<u>7.7</u>	<u>23.0</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
						Increment	Cumulative	Increment	Cumulative				
12-5-97	0919												
12-5-97	0924					5.0	5.0			7.10	1074		
12-5-97	0931					5.0	10.0			7.40	1092		
12-5-97	0940					5.0	15.0			7.55	1071		
12-5-97	0948					5.0	20.0			7.69	1089		
12-5-97	0957					5.0	25.0			7.72	1142		
										7.84	1119	2.5	

Comments _____

Developer's Signature Dennis Bied

Date 12-5-97

Reviewer _____

John Larch

Date 12/18/97