

3R - 236

REPORTS

DATE:

1998



Certified Mail: #Z 211 324 121

March 31, 1999

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

RECEIVED

APR 05 1999

ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

RE: 1998 Pit Project Annual Groundwater Report

Dear Mr. Olson:

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

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

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

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

Sincerely,

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

Scott T. Pope P.G.
Senior Environmental Scientist

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

SAN JUAN BASIN PIT CLOSURES
San Juan Basin, New Mexico

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

December 1998

RECEIVED

APR 05 1999

ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

Prepared For

El Paso Field Services
Farmington, New Mexico

Project 17520
Book 1



PFS GROUNDWATER PITS 1998 CLOSURE REPORT

**SAN JUAN 28-6 #79 (MV)
Meter/Line ID - 72265**

RECEIVED

APR 05 1999

SITE DETAILS

**Legals - Twn: 27N Rng: 6W
NMOCD Hazard Ranking: 40
Operator: BURLINGTON RESOURCES**

**Sec: 11 Unit: M
Land Type: FEDERAL**

**ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION**

PREVIOUS ACTIVITIES

**Site Assessment: Mar-95 Excavation: Mar-95 (240cy) Soil Boring: Jul-95
Re-Excavation: Aug-95 (686cy) Soil Boring: Mar-97 Monitor Well: Mar-97**

The pit was excavated to 12 feet beneath ground surface (bgs) and a composite soil sample was collected from the excavation bottom and four walls. Approximately 240 cubic yards were removed during excavation. The headspace soil reading from the excavation bottom was 306 ppm. Soil analytical results were as follows; benzene - 2.92 mg/kg, total BTEX - 277 mg/kg, TPH (418.1) 1900 mg/kg.

One soil boring was drilled in the center of the former pit and encountered contaminated soils deeper than 12 feet bgs. No samples were collected during this drilling event.

The pit was re-excavated to 19 feet beneath ground surface (bgs) and a composite soil sample was collected from the excavation bottom and four walls. Groundwater was encountered at approximately 19 feet bgs. Approximately 686 cubic yards of impacted soil were removed during re-excavation. The headspace soil reading from the excavation bottom was 340 ppm. Soil analytical results were as follows; benzene - <0.5 mg/kg, total BTEX - < 78.0 mg/kg, TPH (418.1) 3360 mg/kg.

One monitor well was installed in the center of the former pit. Groundwater was encountered at 22 feet bgs and a monitoring well was installed. No soil samples were collected, as groundwater was encountered. Quarterly groundwater monitoring was initiated on 8/14/97 and continued through 8/10/98. Groundwater analytical data are presented in Table 1. Groundwater data prior to 1998 has been previously submitted in the 1997 Annual Report, along with boring logs and monitoring well installation diagrams.

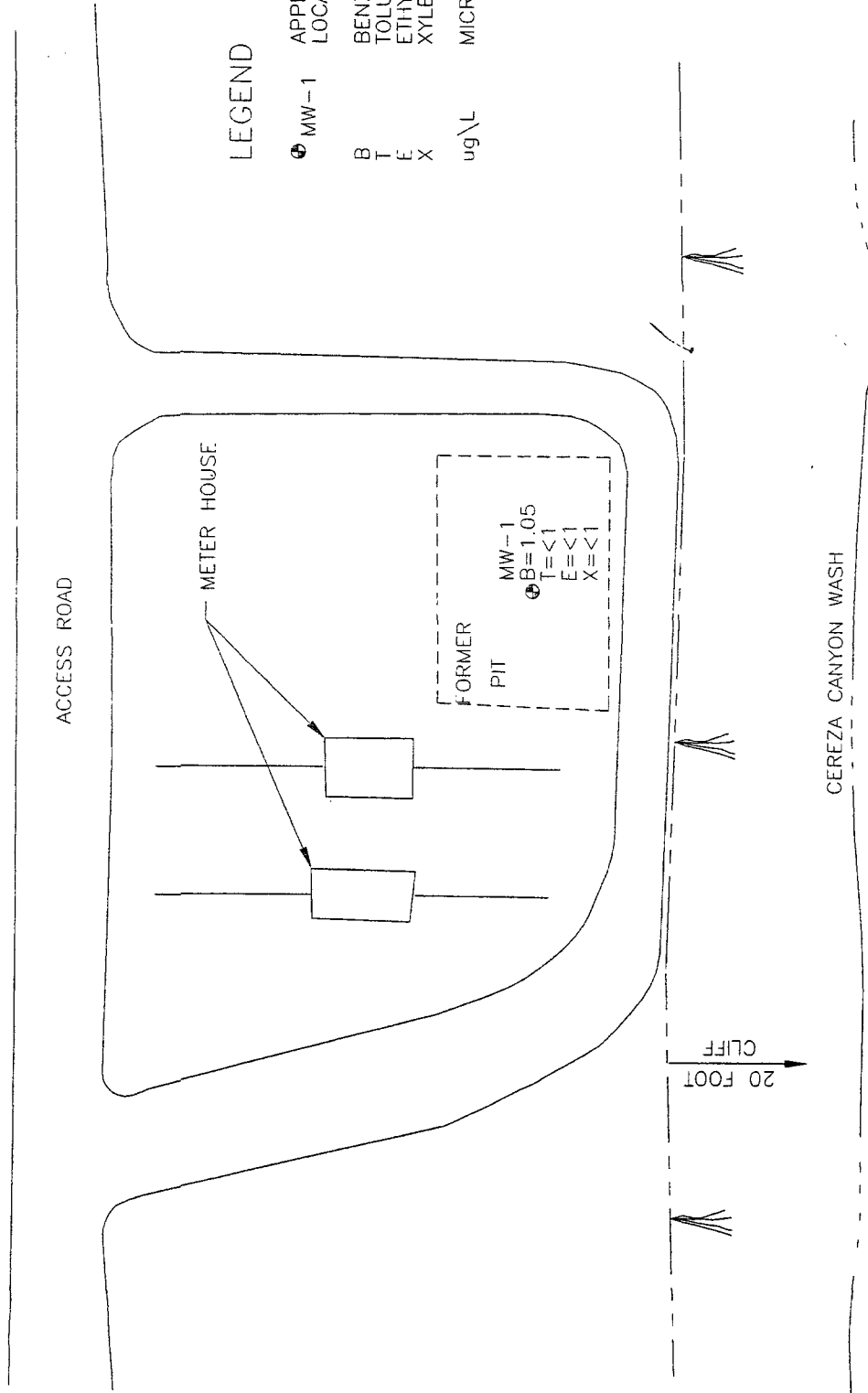
CONCLUSIONS

Initial groundwater analytical data from MW-1 were slightly above New Mexico Groundwater Quality Commission standards for benzene (10 ppb) at 16.2 ppb and the first quarter of quarterly sampling was slightly over standards at 10.2 ppb. Quarterly groundwater samples collected during the last four quarters were all below standards for BTEX compounds.

Based on groundwater samples there appears to be minimal impact to groundwater at this site.

RECOMMENDATIONS

- Following OCD approval for closure, MW-1 will be abandoned following OCD approved abandonment procedures.



LEGEND

⊕ MW-1 APPROXIMATE MONITORING WELL LOCATION AND NUMBER

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

MW-1
 B=1.05
 T=<1
 E=<1
 X=<1

NOT TO SCALE

TITLE:		PROJECT NO.: 17520	
SAN JUAN 28-6 #79 PM		EPFS GW PITS	
METER 72265			
8/10/98			
DWN:	DES:		
TMM	CC		
CHKD:	APPD:		
CC			
DATE:	REV:		
3/23/99	0		



FIGURE 1

FIELD PIT SITE ASSESSMENT FORM

GENERAL

Meter: 72265 Location: San Juan 28-6 # 79 MV
 Operator #: 1987 Operator Name: Meridian P/L District: Bloomfield
 Coordinates: Letter: M Section 11 Township: 27 Range: 06
 Or Latitude _____ Longitude _____
 Pit Type: Dehydrator ☒ Location Drip: ☒ Line Drip: _____ Other: _____
 Site Assessment Date: 3/10/95 Area: 10 Run: 52

SITE ASSESSMENT

NMOCD Zone:

(From NMQCD
Maps)

Inside
Outside

☒ (1)
☐ (2)

Land Type:

BLM ☒ (1)
State ☐ (2)
Fee ☐ (3)
Indian _____

Depth to Groundwater

Less Than 50 Feet (20 points) ☒ (1)
 50 Ft to 99 Ft (10 points) ☐ (2)
 Greater Than 100 Ft (0 points) ☐ (3)

Wellhead Protection Area :

Is it less than 1000 ft from wells, springs, or other sources of fresh water extraction? , or ; Is it less than 200 ft from a private domestic water source? ☐ (1) YES (20 points) ☒ (2) NO (0 points)

Horizontal Distance to Surface Water Body

Less Than 200 Ft (20 points) ☒ (1)
 200 Ft to 1000 Ft (10 points) ☐ (2)
 Greater Than 1000 Ft (0 points) ☐ (3)

Name of Surface Water Body Cerza Canyon Wash

(Surface Water Body : Perennial Rivers, Major Wash, Streams, Creeks, Irrigation Canals, Ditches, Lakes, Ponds)

Distance to Nearest Ephemeral Stream ☐ (1) < 100' (Navajo Pits Only)
☐ (2) > 100'

TOTAL HAZARD RANKING SCORE: 40 POINTS

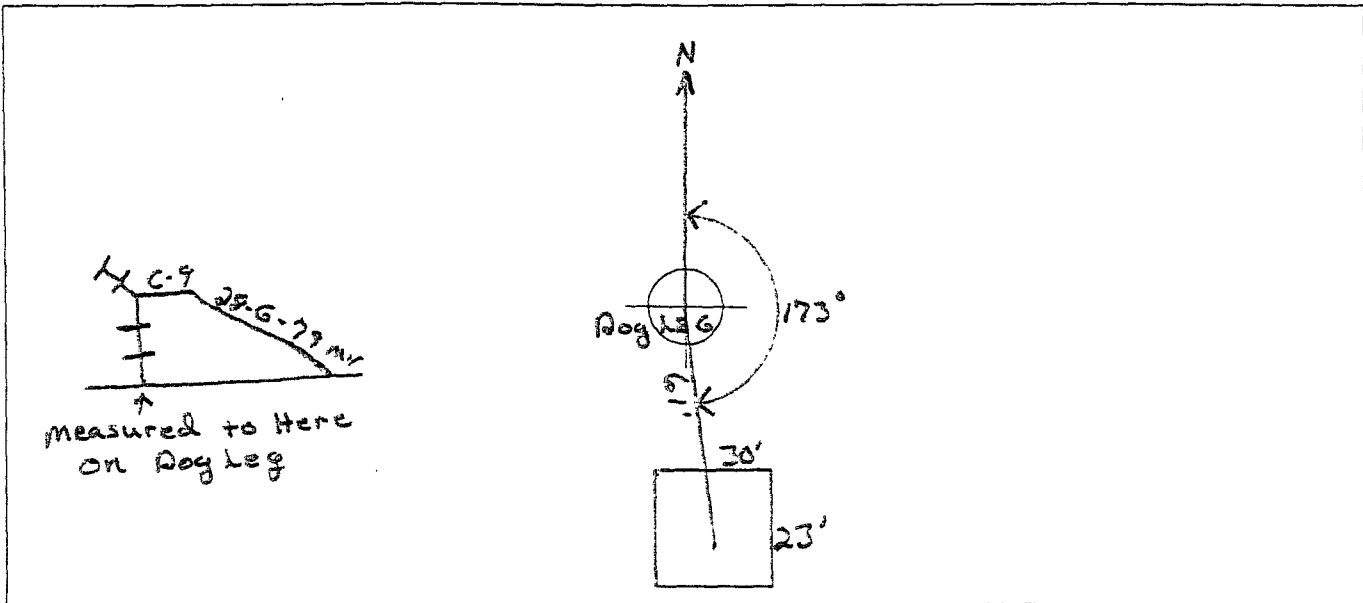
REMARK

Remarks : Red line shows Inside Topo shows Inside VZ
1 pit on loc. Old Rehy, also loc. Drip pit. belongs to EPNG
Will close pit

Dig + Haul

ORIGINAL PIT LOCATION

Original Pit : a) Degrees from North 173° Footage from ^{Dog Leg} Wellhead 61'
 b) Length : 30' Width : 23' Depth : 3'



Remarks :

Photos: 10:27

Could not locate Well Head, measured to Dog Leg
 C-9 28-G-79-MV

Completed By:

James J. Penrose
 Signature

3/10/95
 Date

PHASE I EXCAVATION

FIELD PIT REMEDIATION/CLOSURE FORM

GENERAL	Meter: <u>72265</u> Location: <u>San Juan 28-6 #79 MV</u> Coordinates: Letter: <u>M</u> Section <u>11</u> Township: <u>27</u> Range: <u>06</u> Or Latitude _____ Longitude _____ Date Started : <u>3/29/95</u> Run: <u>10</u> <u>52</u>
FIELD OBSERVATIONS	Sample Number(s): <u>KD 399</u> Sample Depth: <u>12'</u> Feet Final PID Reading <u>625 ppm</u> PID Reading Depth: <u>12'</u> Feet Yes No Groundwater Encountered ☐ ☒ Approximate Depth _____ Feet
CLOSURE	Remediation Method : Excavation ☒ Approx. Cubic Yards <u>240</u> Onsite Bioremediation ☐ Backfill Pit Without Excavation ☐ Soil Disposition: Envirotech ☐ ☒ Tierra Other Facility ☐ Name: _____ Pit Closure Date: <u>3/29/95</u> Pit Closed By: <u>BEI</u>
REMARKS	Remarks : <u>EXCAVATED pit to 12', TOOK pid Sample,</u> <u>closed pit.</u> Signature of Specialist: <u>[Signature]</u>



FIELD SERVICES LABORATORY

ANALYTICAL REPORT

PIT CLOSURE PROJECT - Soil Samples Inside the GWV Zone

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	KD 399	946765
MTR CODE SITE NAME:	WCK 3/1/95 72265	N/A
SAMPLE DATE TIME (Hrs):	3-29-95	1425
SAMPLED BY:	N/A	
DATE OF TPH EXT. ANAL.:	4/4/95	4/4/95
DATE OF BTEX EXT. ANAL.:	4/4/95	4/5/95
TYPE DESCRIPTION:	SL	Dark brown sand & clay

REMARKS:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q	M(g)	V(ml)
BENZENE	2.92	MG/KG	0.78125		2.56	20
TOLUENE	66.3	MG/KG				
ETHYL BENZENE	7.49	MG/KG				
TOTAL XYLENES	200	MG/KG				
TOTAL BTEX	277	MG/KG				
TPH (418.1)	1900	MG/KG			2.07	28
HEADSPACE PID	625	PPM				
PERCENT SOLIDS	86.1	%				

-- TPH is by EPA Method 418.1 and BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 97.9 % for this sample All QA/QC was acceptable.

I ve:

DF = Dilution Factor Used

Date:

4/18/95



Page _____ of _____

505-599-2144

EPA 8020 NATURAL GAS - FIELD SERVICES

QUALITY CONTROL REPORT

EPA METHOD 8020 - BTEX

Samples: 946757A, 946765A, 946766A, and 946767A

QA/QC for 4/5/95 Sample Set

LABORATORY CALIBRATION CHECKS, LABORATORY CONTROL SAMPLES:

SAMPLE NUMBER	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	XR	ACCEPTABLE	
ICV LA-42927 15 PPB					RANGE	YES NO
Benzene	Standard	15.0	15.7	105	75 - 125 %	X
Toluene	Standard	15.0	17.3	115	75 - 125 %	X
Ethyl benzene	Standard	15.0	16.9	113	75 - 125 %	X
Total Xylenes	Standard	45.0	53.9	120	75 - 125 %	X
SAMPLE NUMBER	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	XR	ACCEPTABLE	
ICV LA-42927 200 PPB					RANGE	YES NO
Benzene	Standard	200	171	85.5	75 - 125 %	X
Toluene	Standard	200	165	82.5	75 - 125 %	X
Ethyl benzene	Standard	200	162	81.0	75 - 125 %	X
m & p - Xylene	Standard	400	325	81.3	75 - 125 %	X
o - Xylene	Standard	200	160	80.0	75 - 125 %	X
SAMPLE NUMBER	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	XR	ACCEPTABLE	
LCS DB-00050 25 PPB					RANGE	YES NO
Benzene	Standard	25.0	19.8	79.2	39 - 150	X
Toluene	Standard	25.0	22.6	90.4	46 - 148	X
Ethyl benzene	Standard	25.0	22.0	88.0	32 - 160	X
Total Xylenes	Standard	75.0	69.0	92.0	Not Given	X
SAMPLE NUMBER	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	XR	ACCEPTABLE	
CCV LA-42927 25 PPB					RANGE	YES NO
Benzene	Standard	25.0	18.9	76	75 - 125 %	X
Toluene	Standard	25.0	20.3	81	75 - 125 %	X
Ethyl benzene	Standard	25.0	20.5	82	75 - 125 %	X
Total Xylenes	Standard	75.0	65.9	88	75 - 125 %	X

Narrative: Acceptable.

LABORATORY DUPLICATES:

SAMPLE NUMBER 946765 EXTRACT	TYPE (Analysis, Portion, or Sample)	SAMPLE RESULT PPM (mg/Kg)	DUPLICATE RESULT PPM (mg/Kg)	RPD	ACCEPTABLE	
					YES	NO
Benzene	2nd Portion	2.9	<2.02	200	+/- 35 %	X
Toluene	2nd Portion	66.3	55.1	18	+/- 35 %	X
Ethyl benzene	2nd Portion	7.49	5.76	26	+/- 35 %	X
Total Xylenes	2nd Portion	200	164	20	+/- 35 %	X

Narrative: Acceptable. Benzene results differ possibly due to sample non-homogeneity and results near DL.

SAMPLE NUMBER EXTRACT	TYPE (Analysis, Portion, or Sample)	SAMPLE RESULT PPM (mg/Kg)	DUPLICATE RESULT PPM (mg/Kg)	RPD	ACCEPTABLE	
					YES	NO
Benzene	2nd Analysis	N/A	N/A	0	+/- 35 %	X
Toluene	2nd Analysis	N/A	N/A	0	+/- 35 %	X
Ethyl benzene	2nd Analysis	N/A	N/A	0	+/- 35 %	X
Total Xylenes	2nd Analysis	N/A	N/A	0	+/- 35 %	X

Narrative: Acceptable.

LABORATORY SPIKES:

SAMPLE NUMBER EXTRACT - 2nd Analysis	SPIKE ADDED PPB	SAMPLE RESULT PPB	SPIKE SAMPLE RESULT PPB	%R	ACCEPTABLE	
					YES	NO
Benzene	40.0	N/A	N/A	0	75 - 125 %	X
Toluene	40.0	N/A	N/A	0	75 - 125 %	X
Ethyl benzene	40.0	N/A	N/A	0	75 - 125 %	X
Total Xylenes	120.0	N/A	N/A	0	75 - 125 %	X

Narrative: Acceptable.

SAMPLE NUMBER 946757 EXTRACT - 2nd Portion	SPIKE ADDED PPB	SAMPLE RESULT PPB	SPIKE SAMPLE RESULT PPB	%R	ACCEPTABLE	
					YES	NO
Benzene	40.0	<2.50	31.3	78	75 - 125 %	X
Toluene	40.0	82.30	108.0	64	75 - 125 %	X
Ethyl benzene	40.0	13.5	40.1	67	75 - 125 %	X
Total Xylenes	120.0	171.0	249	65	75 - 125 %	X

Narrative: Unacceptable. Possibly due to sample not being homogenous.

ADDITIONAL ANALYTICAL BLANKS:

SAMPLE ID PURGE & TRAP BLANK	SOURCE	PPB	STATUS
Benzene	Boiled Water	<2.5	ACCEPTABLE
Toluene	Boiled Water	<2.5	ACCEPTABLE
Ethyl benzene	Boiled Water	<2.5	ACCEPTABLE
Total Xylenes	Boiled Water	<2.5	ACCEPTABLE

Narrative: Acceptable

SAMPLE ID SOIL VIAL BLANK	SOURCE	PPB	STATUS
Benzene	Vial + Boiled Water	N/A	ACCEPTABLE
Toluene	Vial + Boiled Water	N/A	ACCEPTABLE
Ethyl benzene	Vial + Boiled Water	N/A	ACCEPTABLE
Total Xylenes	Vial + Boiled Water	N/A	ACCEPTABLE

Narrative: Acceptable.

SAMPLE ID EXTRACTION BLANK	SOURCE	PPB (In 200 ul shot)	STATUS
Benzene	Methanol	<2.5	ACCEPTABLE
Toluene	Methanol	<2.5	ACCEPTABLE
Ethyl benzene	Methanol	<2.5	ACCEPTABLE
Total Xylenes	Methanol	<7.5	ACCEPTABLE

Narrative: Acceptable.

SAMPLE ID Carryover contamination checks	SOURCE	NARRATIVE	STATUS
N/A	Vial + Boiled Water	N/A	ACCEPTABLE
N/A	Vial + Boiled Water	N/A	ACCEPTABLE
N/A	Vial + Boiled Water	N/A	ACCEPTABLE
N/A	Vial + Boiled Water	N/A	ACCEPTABLE

Narrative: Acceptable.

REAGENT BLANKS:

SAMPLE ID BOILED WATER CHECK	SOURCE 3/16/95	PPB	STATUS
Benzene	Boiled Water	<2.5	ACCEPTABLE
Toluene	Boiled Water	<2.5	ACCEPTABLE
Ethyl benzene	Boiled Water	<2.5	ACCEPTABLE
Total Xylenes	Boiled Water	<7.5	ACCEPTABLE

Narrative: Acceptable

SAMPLE ID METHANOL CHECK	SOURCE 3/16/95	PPB	STATUS
Benzene	MeOH/Boiled Water	<2.5	ACCEPTABLE
Toluene	MeOH/Boiled Water	<2.5	ACCEPTABLE
Ethyl benzene	MeOH/Boiled Water	<2.5	ACCEPTABLE
Total Xylenes	MeOH/Boiled Water	<7.5	ACCEPTABLE

Narrative: Acceptable

Approved By: John Saville

Date: 7-Apr-95

Date of Analysis: April 4, 1995

7 Pit Samples

LABORATORY CONTROL SAMPLES: CALIBRATION CHECKS

SAMPLE ID	SOURCE	TRUE VALUE (PPM)	FOUND (MG/KG)	%R	ACCEPTABLE RANGE 75-125 %R YES NO
INITIAL CALIBRATION VERIF.	HORIBA	200	208	104	X
"B" Heavy Oil (Lot M3G9616)		300	353	118	X

Narrative: Acceptable.

LABORATORY DUPLICATES:

SAMPLE NUMBER	TYPE	SAMPLE RESULT (S)MG/KG	DUPLICATE RESULT (D)MG/KG	RPD	ACCEPTABLE RANGE + / - 35% YES NO
946768	2nd Extract	844	837	0.83	X

Narrative: Acceptable.

LABORATORY SPIKES:

SAMPLE NUMBER	SPIKE ADDED (SA)MG/KG	SAMPLE RESULT (S)MG/KG	SPIKE SAMPLE RESULT (SR)MG/KG	%R	ACCEPTABLE RANGE 75-125 %R YES NO
946768	3040	844	3980	103	X

Narrative: Acceptable.

REFERENCE SOIL (Laboratory Control Sample):

SAMPLE ID	SOURCE	KNOWN VALUE (MG/KG)	SAMPLE RESULT FOUND (MG/KG)	MFG SPECIFIED RANGE	ACCEPTABLE YES NO
ERA TPH STANDARD #1 LOT # 91026	ENVIRONMENTAL RESOURCE ASS.	1340	1470	804 - 1680	X
ERA TPH STANDARD #2 w/int LOT # 91026	ENVIRONMENTAL RESOURCE ASS.	2590	3140	1550 - 3240	X

Narrative: Acceptable.

LABORATORY REAGENT BLANK:

SAMPLE ID	SOURCE	TPH LEVEL (MG/KG)	STATUS
Freon Solvent	EPNG Lab	<10.0	ACCEPTABLE
Reagent Blank	EPNG Lab	<10.0	ACCEPTABLE

Narrative: Acceptable.

Approved By: *John Satch*

Date: 6-Apr-95

Extracted: 04/04/95

PHASE II SOIL BORING

RECORD OF SUBSURFACE EXPLOATION

Phase II Drill

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

Philip Environmental Services Corp.

4000 Monroe Road

Farmington, New Mexico 87401

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

Project Name EPNG Pits
Project Number 14509 Phase 80T6000
Project Location San Juan 28-6 #79 MW, 72265

Elevation _____
Borehole Location 127, R6, S. 11, M
GWL Depth _____
Logged By S. Kelly
Drilled By K. Padilla
Date/Time Started 7/12/95, 1300
Date/Time Completed 7/12/95, 1415

Well Logged By S. Kelly
Personnel On-Site K. Padilla, F. Rivera, P. Charley
Contractors On-Site _____
Client Personnel On-Site _____

Drilling Method 4 1/4" ID HSA
Air Monitoring Method CGI, 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: NDU 5/15 BZ BH S			Drilling Conditions & Blow Counts
0				Backfill to 12'						
5										
10										
15	1	15-16.5	1.5'	silty SAND, gray, fine to med sand, loose damp.		16'			79	1320.
20	2	20-22	1.3'	silty CLAY, dark brown, non plastic, soft, damp.		17'			57	Hit water at approx. 20'
25				SAND, dk. grey, fine to med sand, loose, wet.						1330. no heads space taken, due to wet sample water level at 19'3"
30				BoH-22						
35										
40										

Comments:

No sample taken or well installed due to appearance of contamination at shallow water table. Further source remediation is possible.

Geologist Signature

Sarah Kelly

PHASE III EXCAVATION

GENERAL

Date Started : 8-14-95 Area: 10 Run: 52

LD OBSERVATIONS

Final Dimensions: Length 33 Width 31 Depth 19

CLOSURE

Other Facility ☐ (2) Name: _____

Pit Closure Date: 08-18-95 Pit Closed By: Philip Enr

ARKS

Remarks : Due to 19' ground water was only a small trickle, not enough to push a sample. Could not dig deeper, due to cave off's. Back-filled pit Phase III

Signature of Specialist: James F. Guroe

ant to



FIELD SERVICES LABORATORY
ANALYTICAL REPORT

PIT CLOSURE PROJECT - Soil Samples Inside the GWV Zone

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	JP49	947235
MTR CODE SITE NAME:	72265	San Juan 28-6 #79MV
SAMPLE DATE TIME (Hrs):	08-15-95	10:00
PROJECT:	Phase III	
DATE OF TPH EXT. ANAL.:	8/17/95	8/17/95
DATE OF BTEX EXT. ANAL.:	8/18/95	8/18/95
TYPE DESCRIPTION:	VC	Dark brown sand & clay

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q	M(g)	V(ml)
BENZENE	< .5	MG/KG		F		
TOLUENE	2.9	MG/KG				
ETHYL BENZENE	3.5	MG/KG				
TOTAL XYLENES	71.6	MG/KG				
TOTAL BTEX	78.0	MG/KG				
TPH (418.1)	3360	MG/KG			21.99 2.03	28
HEADSPACE PID	340	PPM				
PERCENT SOLIDS	84.5	%				

-- TPH is by EPA Method 418.1 and BTEX is by EPA Method 8020 --

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

Native:

Benzene Taken from FID.

DF = Dilution Factor Used

Approved By:

JP

Date:

8/24/95



CHAIN OF CUSTODY RECORD

Page _____ of _____

[illegible]

White - Testing Laboratory	Canary - EPNG Lab	Pink - Field Sampler
1	1	1
2	2	2
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94	94	94
95	95	95
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97	97	97
98	98	98
99	99	99
100	100	100

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

QUALITY CONTROL REPORT
TPH by Modified 418.1 by Infrared

Date of Analysis: August 17, 1995

21 Samples

LABORATORY CONTROL SAMPLES: CALIBRATION CHECKS

SAMPLE ID	SOURCE	TRUE VALUE (PPM)	FOUND (MG/KG)	%R	ACCEPTABLE RANGE 75-125 %R YES NO
INITIAL CALIBRATION VERIF. "B" Heavy Oil (Lot MOR9480)	HORIBA	200	201	101	X

Narrative: Acceptable.

LABORATORY DUPLICATES:

SAMPLE NUMBER	TYPE	SAMPLE RESULT (S)MG/KG	DUPLICATE RESULT (D)MG/KG	RPD	ACCEPTABLE RANGE + / - 35% YES NO
947235	2nd Extract	559	543	2.9	X
950858	2nd Extract	218	229	4.9	X

Narrative : Acceptable.

LABORATORY SPIKES:

SAMPLE NUMBER	SPIKE ADDED (SA)MG/KG	SAMPLE RESULT (S)MG/KG	SPIKE SAMPLE RESULT (SR)MG/KG	%R	ACCEPTABLE RANGE 75-125 %R YES NO
947235	2390	559	3360	117	X
950858	2600	218	3120	112	X

Narrative: Acceptable.

REFERENCE SOIL (Laboratory Control Sample):

SAMPLE ID	SOURCE	KNOWN VALUE (MG/KG)	SAMPLE RESULT FOUND (MG/KG)	MFG SPECIFIED RANGE	ACCEPTABLE YES NO
ERA TPH STANDARD #1 LOT # 91026	ENVIRONMENTAL RESOURCE ASS.	1340	1500	804 - 1680	X
ERA TPH STANDARD #2 w/int LOT # 91026	ENVIRONMENTAL RESOURCE ASS.	2590	3090	1550 - 3240	X

Narrative: Acceptable.

LABORATORY REAGENT BLANK:

SAMPLE ID	SOURCE	TPH LEVEL (MG/KG)	STATUS
Freon Solvent	EPNG Lab	<10.0	ACCEPTABLE
Reagent Blank	EPNG Lab	<10.0	ACCEPTABLE

Narrative: Acceptable.

Approved By: 

Date: 18-Aug-95

Extracted: 8/17/95

EL PASO NATURAL GAS - FIELD SERVICES LAB

QUALITY CONTROL REPORT

EPA METHOD 8020 - BTEX

Samples: 950858 thru 950860, 947175, 947229, and 947235 thru 947249

QA/QC for 8/18/95 Sample Set

LABORATORY CALIBRATION CHECKS, LABORATORY CONTROL SAMPLES:

SAMPLE NUMBER	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE	
					YES	NO
ICV LA-41626 50 PPB					RANGE	
Benzene	Standard	50.0	43.0	86.0	75 - 125 %	X
Toluene	Standard	50.0	48.8	97.6	75 - 125 %	X
Ethyl benzene	Standard	50.0	48.4	96.8	75 - 125 %	X
m & p - Xylene	Standard	100	99	98.7	75 - 125 %	X
o - Xylene	Standard	50.0	48.8	97.6	75 - 125 %	X
LCS DB-00050 25 PPB					RANGE	
Benzene	Standard	25.0	23.0	92.0	39 - 150	X
Toluene	Standard	25.0	26.4	105.6	46 - 148	X
Ethyl benzene	Standard	25.0	25.8	103.2	32 - 160	X
m & p - Xylene	Standard	50.0	54.5	109.0	Not Given	X
o - Xylene	Standard	25.0	26.1	104.4	Not Given	X
CCV1 LA-41626 50 PPB					RANGE	
Benzene	Standard	50.0	39.8	79.6	75 - 125 %	X
Toluene	Standard	50.0	43.0	86.0	75 - 125 %	X
Ethyl benzene	Standard	50.0	44.6	89.2	75 - 125 %	X
m & p - Xylene	Standard	100	91	91.0	75 - 125 %	X
o - Xylene	Standard	50.0	44.9	89.8	75 - 125 %	X
CCV2 LA-41626 50 PPB					RANGE	
Benzene	Standard	50.0	39.1	78.2	75 - 125 %	X
Toluene	Standard	50.0	39.0	78.0	75 - 125 %	X
Ethyl benzene	Standard	50.0	43.9	87.8	75 - 125 %	X
m & p - Xylene	Standard	100	89	88.9	75 - 125 %	X
o - Xylene	Standard	50.0	44.2	88.4	75 - 125 %	X
CCV3 LA-41626 50 PPB					RANGE	
Benzene	Standard	50.0	42.8	85.6	75 - 125 %	X
Toluene	Standard	50.0	41.6	83.2	75 - 125 %	X
Ethyl benzene	Standard	50.0	43.0	86.0	75 - 125 %	X
m & p - Xylene	Standard	100	87	86.9	75 - 125 %	X
o - Xylene	Standard	50.0	43.5	87.0	75 - 125 %	X

Narrative: Acceptable.

LABORATORY DUPLICATES:

SAMPLE NUMBER	TYPE (Analysis, Portion, or Sample)	SAMPLE RESULT PPM (mg/Kg)	DUPLICATE RESULT PPM (mg/Kg)	RPD	ACCEPTABLE	
					YES	NO
950858					RANGE	
Benzene	Extraction Dup	0.00	0.00	0	+/- 35 %	X
Toluene	Extraction Dup	0.0	0.0	0	+/- 35 %	X
Ethyl benzene	Extraction Dup	0.00	0.00	0	+/- 35 %	X
m & p - Xylene	Extraction Dup	0.00	0.00	0	+/- 35 %	X
o - Xylene	Extraction Dup	0.0	0.0	0	+/- 35 %	X

Narrative: Acceptable.

LABORATORY DUPLICATES:

SAMPLE NUMBER	TYPE (Analysis, Portion, or Sample)	SAMPLE RESULT PPM (mg/Kg)	DUPLICATE RESULT PPM (mg/Kg)	RPD	ACCEPTABLE	
					YES	NO
947244					RANGE	
Benzene	Extraction Dup	0.00	0.00	0	+/- 35 %	X
Toluene	Extraction Dup	0.0	0.0	0	+/- 35 %	X
Ethyl benzene	Extraction Dup	0.00	0.00	0	+/- 35 %	X
m & p - Xylene	Extraction Dup	0.00	0.00	0	+/- 35 %	X
o - Xylene	Extraction Dup	0.0	0.0	0	+/- 35 %	X

Narrative: Acceptable.

LABORATORY DUPLICATES:

SAMPLE NUMBER	TYPE (Analysis, Portion, or Sample)	SAMPLE RESULT PPM (mg/Kg)	DUPLICATE RESULT PPM (mg/Kg)	RPD	ACCEPTABLE	
					YES	NO
950858					RANGE	
Benzene	Matrix Duplicate	0.00	0.00	0	+/- 35 %	X
Toluene	Matrix Duplicate	0.0	0.0	0	+/- 35 %	X
Ethyl benzene	Matrix Duplicate	0.00	0.00	0	+/- 35 %	X
m & p - Xylene	Matrix Duplicate	0.00	0.00	0	+/- 35 %	X
o - Xylene	Matrix Duplicate	0.0	0.0	0	+/- 35 %	X

Narrative: Acceptable.

LABORATORY DUPLICATES:

SAMPLE NUMBER	TYPE (Analysis, Portion, or Sample)	SAMPLE RESULT PPM (mg/Kg)	DUPLICATE RESULT PPM (mg/Kg)	RPD	ACCEPTABLE	
					YES	NO
947244					RANGE	
Benzene	Matrix Duplicate	0.00	0.00	0	+/- 35 %	X
Toluene	Matrix Duplicate	0.0	0.0	0	+/- 35 %	X
Ethyl benzene	Matrix Duplicate	0.00	0.00	0	+/- 35 %	X
m & p - Xylene	Matrix Duplicate	0.00	0.00	0	+/- 35 %	X
o - Xylene	Matrix Duplicate	0.0	0.0	0	+/- 35 %	X

Narrative: Acceptable.

LABORATORY SPIKES:

SAMPLE NUMBER	SPIKE ADDED PPB	SAMPLE RESULT PPB	SPIKE SAMPLE RESULT PPB	%R	ACCEPTABLE	
					YES	NO
950858	50.00				RANGE	
Benzene	50.0	0.0	39.6	79	75 - 125 %	X
Toluene	50.0	0.0	40.3	81	75 - 125 %	X
Ethyl benzene	50.0	0.0	45.1	90	75 - 125 %	X
m & p - Xylene	100.0	0.0	92.4	92	75 - 125 %	X
o - Xylene	50.0	0.0	45.3	91	75 - 125 %	X

0818S QC.XLS

Narrative: Acceptable.

LABORATORY SPIKES:

SAMPLE NUMBER	SPIKE ADDED PPB	SAMPLE RESULT PPB	SPIKE SAMPLE RESULT PPB	%R	ACCEPTABLE	
					YES	NO
947244	50.00				RANGE	
Benzene	50.0	0.0	46.1	92	75 - 125 %	X
Toluene	50.0	0.0	42.6	85	75 - 125 %	X
Ethyl benzene	50.0	0.0	43.8	88	75 - 125 %	X
m & p - Xylene	100.0	0.0	88.5	89	75 - 125 %	X
o - Xylene	50.0	0.0	44.1	88	75 - 125 %	X

Narrative: Acceptable.

ADDITIONAL ANALYTICAL BLANKS:

SAMPLE ID AUTO BLANK/BOILED WATER	SOURCE	PPB	STATUS
Benzene	Boiled Water	<2.5	ACCEPTABLE
Toluene	Boiled Water	<2.5	ACCEPTABLE
Ethyl benzene	Boiled Water	<2.5	ACCEPTABLE
Total Xylenes	Boiled Water	<7.5	ACCEPTABLE

Narrative: Acceptable

SAMPLE ID SOIL VIAL BLANK	SOURCE	PPB	STATUS
Benzene	Vial + Boiled Water	<2.5	ACCEPTABLE
Toluene	Vial + Boiled Water	<2.5	ACCEPTABLE
Ethyl benzene	Vial + Boiled Water	<2.5	ACCEPTABLE
Total Xylenes	Vial + Boiled Water	<7.5	ACCEPTABLE

Narrative: Acceptable.

SAMPLE ID EXTRACTION BLANK	SOURCE Lot # H18318	PPB (In 100 uL shot)	STATUS
Benzene	Methanol	<2.5	ACCEPTABLE
Toluene	Methanol	<2.5	ACCEPTABLE
Ethyl benzene	Methanol	<2.5	ACCEPTABLE
Total Xylenes	Methanol	<7.5	ACCEPTABLE

Narrative: Acceptable.

SAMPLE ID Carryover contamination checks	SOURCE	NARRATIVE (No Checks Performed)	STATUS
0/0	Vial + Boiled Water	NA	ACCEPTABLE
0/0	Vial + Boiled Water	NA	ACCEPTABLE
0/0	Vial + Boiled Water	NA	ACCEPTABLE
0/0	Vial + Boiled Water	NA	ACCEPTABLE

Narrative: Acceptable.

SAMPLE ID METHANOL CHECK	SOURCE Lot # H18318	PPB	STATUS
Benzene	MeOH/Boiled Water	<2.5	ACCEPTABLE
Toluene	MeOH/Boiled Water	<2.5	ACCEPTABLE
Ethyl benzene	MeOH/Boiled Water	<2.5	ACCEPTABLE
Total Xylenes	MeOH/Boiled Water	<7.5	ACCEPTABLE

Narrative: Acceptable

All QC data for benzene is taken from FID.

Data Qualifiers F Applied.

Approved By:



Date: 24-Aug-95

PHASE IV SOIL BORING

RECORD OF SUBSURFACE EXPLORATION

PHILIP ENVIRONMENTAL SERVICES INC.

4000 Monroe Road

Farmington, New Mexico 87401

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

Borehole # BH- 2
Well # 1
Page 1 of 1

Project Name EPFS GW PITS
Project Number 17520 Phase 6002.77
Project Location SAN JUAN 28-6 UNIT #79MV- 72265

Elevation _____
Borehole Location T27R 6-S 11-Ltr M
GWL Depth 22' BGS
Logged By D. CESARK
Drilled By ALBERTO K. PADILLA
Date/Time Started 3/13/97 - 0830
Date/Time Completed " - 0900

Well Logged By D. CESARK
Personnel On-Site D. CHARLEY, C. MAIZ
Contractors On-Site _____
Client Personnel On-Site _____
Drilling Method 4 1/4" ID HSA
Air Monitoring Method PID, CGI

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 BZ BH S			Drilling Conditions & Blow Counts
0				BACKFILL						
5				TO						
10				19'						
15										
20				GWC 22'						
25										
30				TD=32'						
35										
40										

Comments:

INSTALLED BH-2 ~10' EAST OF BH-1. ENCOUNTERED GW @ 22' BGS. OVER-DRILLED 10' & COMPLETED MW-1 @ 32' BGS. NO SAMPLES COLLECTED. PLEASE REFER TO SITE SKETCH & WELL COMP. DIAGRAM.

Geologist Signature

[Signature]

MONITORING WELL INSTALLATION RECORD

Philip Environmental Services, Inc.

4000 Monroe Rd.

Farmington, NM 87401

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

Borehole # 2
Well # 1
Page 1 of 1

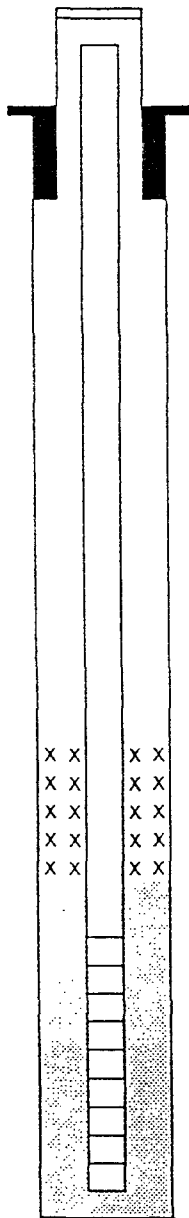
Project Name EPFS GWPITS
Project Number 17520 Phase 6008-77
Site Location SAN JUAN 28-6 #79-72265

Elevation _____
Well Location T 27N-R 6W-S 11-L 1M
GWL Depth 32' BGS
Installed By ~~ARZUAGA~~ K PADILLA

On-Site Geologist D CESARK
Personnel On-Site D CHARLEY, C MAIZ
Contractors On-Site _____
Client Personnel On-Site _____

Date/Time Started 3/13/97-0900
Date/Time Completed " -1030

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	CEMENT	-2
Bottom of Grout	"	-12
Top of Well Riser	SCH 40 PIC	+3'
Bottom of Well Riser	"	-17'
Top of Well Screen	.010 SLOT	-17'
Bottom of Well Screen	"	-32'
Top of Peltonite Seal	ENVIROPLUG	-12'
Bottom of Peltonite Seal	"	-14'
Top of Gravel Pack	10-20 S. SAND	-14'
Bottom of Gravel Pack	"	-32'
Top of Natural Cave-In		N/A
Bottom of Natural Cave-In		N/A
Top of Groundwater		-22'
Total Depth of Borehole		-32'



Top of Protective Casing _____

Top of Riser +3'

Ground Surface -0'-

Top of Seal -12'

Top of Gravel Pack -14'

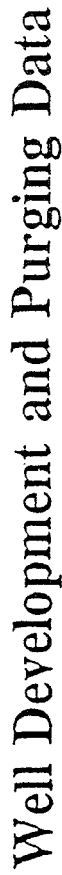
Top of Screen -17'

Bottom of Screen -32'

Bottom of Borehole -32'

Comments: _____

Geologist Signature _____



~~Development~~
~~Purging~~

Well Number MW-1

Page 1 of 1

GW PITS

Project Manager

CHANCE

Project No.

EPES

Phase, Task No. 6003.77

SAN JUAN 28-6 #79--72265

Site Address

Water Volume Calculation

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

Initial Depth of Well (feet) 32' ~~X~~ BGS

Initial Depth to Water (feet) 19' BGS

Height of Water Column In Well (feet) 13.2

Methods of Development

Diameter (inches): Well H Gravel Pack

Pump
Bailer

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

☐ Other

Water Disposal

[illegible]

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

Comments 1st Bailer contained some sediment, relatively high vol. of sand/silt purged from well. Bawl was locked + intact prior to sampling event. Well did not bail dry. No evidence of HCS.

Developer's Signature(s)

Date 4/14/97

Reviewer _____ Date _____

Form A0101 Rev. 03/21/84



Water Sampling Data

Location No. MW-1Serial No. WSD-Group List Number Sample Type: ☒ Groundwater ☐ Surface Water ☐ Other Date 4/14/97Project Name EPFS GW PITS Project No. 17520Project Manager C CHANCE Phase Task No. 6003.77Site Name SAN JUAN 28-6#79 - 72265

Sampling Specifications

Requested Sampling

Depth Interval (feet)

Requested Wait Following

Development/Purging (hours)

Initial Measurements

Time Elapsed From Final Development/Purging (hours) Initial Water Depth (feet) Nonaqueous Liquids Present (Describe)

Water Quality/Water Collection

DO = Dissolved Oxygen; Cond. = Conductivity

Date	Time	Sampler Initials	Water Quality Readings				Water Collection Data					Notes (Explain in Comments Below)
			Temp. (°C)	pH	DO (mg/L)	Cond. (µmhos/ cm)	Volume Removed (gallons)	Removal Rate (gal/min)	Pump Intake Depth (feet)	Bail	Final Water Depth (feet)	

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

Sample Containers

Preservatives: H = HCl; N = HNO₃; S = H₂SO₄; A = NaOH; O = Other (Specify); - = None

Analytical Parameter List	Container			Field Filtered		Preserved	Cooled During Collection		Comments
	Number	Type	Volume (mL)	Yes	No		Yes	No	
EPA 8020 BTEX	2	G/VV	40		X	Y	X		SJ 28-6#79 (MW-1)

Type Chain-of-Custody Form Number Comments * PLEASE REFER TO WELL DEVELOPMENT + PURGING DATA FORM.Signature Date 4/14/97Reviewer Date



5-6-97

FIELD SERVICES LABORATORY
ANALYTICAL REPORT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	DRC 37	970295
MTR CODE SITE NAME:	72265	ST 28-6 #79
SAMPLE DATE TIME (Hrs):	4/14/97	1630
PROJECT:	Phase II Drilling - Initial	
DATE OF BTEX EXT. ANAL.:	4/18/97	4/18/97
TYPE DESCRIPTION:	Monitor Well	Water

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	16.1	PPB				
TOLUENE	3.98	PPB				
ETHYL BENZENE	11.2	PPB				
TOTAL XYLENES	112	PPB				
TOTAL BTEX	143	PPB				

The Surrogate Recovery was at 90.0 % for this sample All QA/QC was acceptable.

Narrative:

Approved By:

John L. Liddle

Date:

4/24/97



4/14/16 INITIAL WATER SAMPLING

CHAIN OF CUSTODY RECORD

Page-

of

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

QUARTERLY SAMPLING

Monitor

Sample #	Meter/ Line #	Site Name	Sample Date	Project	S1	Benzene (PPB)	S2	Toluene (PPB)	S3	Ethyl Benzene (PPB)	S4	Total Xylenes (PPB)	S7	Total BTEX PPB
970295 *	72265	San Juan 28-6 #79	04/14/97	Phase II Drilling - Initial	=	16.1	=	3.98	=	11.2	=	11.2	=	143
970861 *	72265	San Juan 28-6 #79	08/14/97	Sample 4 - 1st Quarter	=	10.20	<	1.0	=	5.19	=	11.4	=	27.0
971178 *	72265	San Juan 28-6 #79	11/03/97	Sample 4 - 2nd Quarter	=	6.56	<	1.0	=	4.97	=	5.2	=	17.0
980162	72265	San Juan 28-6 #79	02/19/98	Sample 4 - 3rd Quarter	=	1.42	<	1.0	=	1.08	<	3.0	=	3.0
980352	72265	San Juan 28-6 #79	05/07/98	Sample 4 - 4th Quarter	=	1.11	<	1.0	=	1.45	<	3.0	=	3.0
980550	72265	San Juan 28-6 #79	08/10/98	Sample 4 - 5th Quarter	=	1.05	<	1.0	<	1.00	<	3.0	=	1.0

* Analytical reports provided to NMOCD in prior annual report.



Natural Gas Company

A 2057

CHAIN OF CUSTODY RECORD

Sample 4 - 1st Qtr

Project No.	Project Name	Date: 8-14-97				Type and No. of Sample Containers	Requested Analysis		Remarks		
Samplers: (Signature)		Date	Time	Comp.	GRAB	Sample Number	BTLS GENERAL PRESERVATION TECHNIQUE	PCBA METALS			
Dennis Bird		8/14/97	1339		X	970861	4°C	X	SAN JUAN 286 #79 MW-1 MC 72265		
WATER		8/14/97	1339		X	970862	4°C	X	SAN JUAN 286 #79 MW-1 MC 72265		
WATER		8/14/97	—		X	—	4°C	X	TRIP BLANK		
[The following rows are crossed out with a diagonal line]											
Relinquished by: (Signature)		Date/Time		Received by: (Signature)		Relinquished by: (Signature)		Date/Time		Received by: (Signature)	
Dennis Bird		8/14/97 1635									
Relinquished by: (Signature)		Date/Time		Received by: (Signature)		Relinquished by: (Signature)		Date/Time		Received by: (Signature)	
Relinquished by: (Signature)		Date/Time		Received for Laboratory by: (Signature)		Remarks:		Date/Time		Date Results Reported / by: (Signature)	
				Markus Hopper		11/5/97 0740					
Carrier Co:		Carrier Phone No.									
Air Bill No.:											



EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY

ANALYTICAL REPORT

PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	970861
MTR CODE SITE NAME:	72265	San Juan 28-6 #79 MW-1
SAMPLE DATE TIME (Hrs):	8/14/97	1339
PROJECT:	Sample 4 - 1st Quarter	
DATE OF BTEX EXT. ANAL.:	8/15/97	8/15/97
TYPE DESCRIPTION:	Monitor Well	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	10.2	PPB				
TOLUENE	<1	PPB				
ETHYL BENZENE	5.19	PPB				
TOTAL XYLENES	11.4	PPB				
TOTAL BTEX	27	PPB				

—BTEX is by EPA Method 8020—

The Surrogate Recovery was at 101 % for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative: _____

Approved By: _____

John L. Latch

Date: _____

8/28/97



Field Services Laboratory
Analytical Report

SAMPLE IDENTIFICATION

EPFS LAB ID:	970861
DATE SAMPLED:	08/14/97
TIME SAMPLED (Hrs):	1339
SAMPLED BY:	DB
MATRIX:	Water
METER CODE:	72265
SAMPLE SITE NAME:	San Juan 28-6 #79
SAMPLE POINT:	MW-1

FIELD REMARKS:

GENERAL CHEMISTRY WATER ANALYSIS RESULTS

PARAMETER	RESULT	UNITS	DATE ANALYZED
Laboratory pH	8.36	Units	08/15/97
Alkalinity as CO ₃	4.0	PPM	08/15/97
Alkalinity as HCO ₃	403	PPM	08/15/97
Calcium as Ca	9.3	PPM	08/18/97
Magnesium as Mg	1.21	PPM	08/18/97
Total Hardness as CaCO ₃	28	PPM	08/18/97
Chloride as Cl	7.1	PPM	08/15/97
Sulfate as SO ₄	120	PPM	08/15/97
Fluoride as F	1.50	PPM	08/15/97
Nitrate as NO ₃ -N	<0.1	PPM	08/15/97
Nitrite as NO ₂ -N	<0.1	PPM	08/15/97
Ammonium as NH ₄ ⁺	<0.3	PPM	08/18/97
Phosphate as PO ₄	<0.1	PPM	08/15/97
Potassium as K	<0.3	PPM	08/18/97
Sodium as Na	214	PPM	08/18/97
Total Dissolved Solids	634	PPM	08/15/97
Conductivity	885	umhos/cm	08/15/97
Anion/Cation %	1.8%	%, <5.0 Accepted	08/28/97

Remarks:

Reported By: ev

Approved By: [Signature]

Date: 8/28/97



FIELD SERVICES LABORATORY
ANALYTICAL REPORT

SAMPLE IDENTIFICATION

SAMPLE NUMBER:	970861
SAMPLE DATE:	08/14/97
SAMPLE TIME (Hrs):	1339
SAMPLED BY:	D. Bird
MATRIX:	Water
METER CODE:	72265
SAMPLE SITE NAME:	San Juan 28-6 #79
SAMPLE POINT:	MW-1

REMARKS:

RESULTS

PARAMETER	TOTAL RESULT (mg/L)	N. M. WQCC LIMIT (mg/L)
ARSENIC (As)	0.005	0.100
BARIUM (Ba)	0.08	1.00
CADMIUM (Cd)	<0.0002	0.010
CHROMIUM (Cr)	<0.004	0.050
LEAD (Pb)	<0.003	0.050
MERCURY (Hg)	<0.0002	0.002
SELENIUM (Se)	<0.011	0.050
SILVER (Ag)	<0.0004	0.050

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: CV

Approved By:

Don L. Linder

Date: 9-18-97



QUALITY CONTROL REPORT

Sample ID: 970861 & 970862
Date Reported: 09/05/97

STANDARD REFERENCE MATERIAL

Analyte	Found Result (mg/L)	Known Value (mg/L)	% Recovery
Arsenic	0.031	0.032	94.4%
Barium	0.064	0.065	98.8%
Cadmium	0.0013	0.0012	110%
Chromium	0.008	0.007	103%
Lead	0.044	0.042	105%
Mercury	0.0041	0.0046	89.3%
Selenium	0.040	0.041	98.8%
Silver	0.0062	0.0068	91.2%

DUPLICATE ANALYSIS (mg/L)

Analyte	Original Sample Result	Duplicate Sample Result	% RPD
Arsenic	0.008	0.008	0.8%
Barium	0.106	0.114	7.3%
Cadmium	ND	ND	NA
Chromium	0.004	0.005	4.7%
Lead	ND	ND	NA
Mercury	ND	ND	NA
Selenium	ND	ND	NA
Silver	ND	ND	NA

SPIKE ANALYSIS (mg/L)

Analyte	Original Sample Result	Spike Sample Result	Spike Added	Recovery Percent
Arsenic	0.008	0.118	0.100	107%
Barium	0.106	0.997	1.00	89.1%
Cadmium	ND	0.0105	0.010	99.7%
Chromium	0.004	0.052	0.050	94.9%
Lead	ND	0.054	0.050	102%
Mercury	ND	0.0017	0.0020	89.0%
Selenium	ND	0.054	0.050	105%
Silver	ND	0.0393	0.005	78.4%

METHOD BLANK

Analyte	Found Result (mg/L)	Detection Level (mg/L)
Arsenic	ND	0.004
Barium	ND	0.019
Cadmium	ND	0.0002
Chromium	ND	0.004
Lead	ND	0.003
Mercury	ND	0.00019
Selenium	ND	0.011
Silver	ND	0.0004

ND: Not Detected at stated detection level.

NA: Not Applicable.

Reported By: mh

Approved By: [Signature]

Date: 9-8-97



Well Development and Purging Data

Site Name SAN JUAN 28-6 #79

☐ Development
☒ Purging

Well Number MW-1
Meter Code 72265

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) 3485
Initial Depth to Water (feet) 2337
Height of Water Column in Well (feet) 1148

Diameter (Inches): Well 4 Gravel Pack _____

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

Instruments

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

Water Disposal

KUTZ SEPARATOR

Water Removal Data

Date	Time	Development Method		Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gal)		Product Volume Removed (gallons)		pH	Conductivity $\mu\text{mho/cm}$	Dissolved Oxygen mg/L	Comments
		Pump	Bailer				Increment	Cumulative	Increment	Cumulative				
11-3-97	1130													
11-3-97	1136						5.0	5.0			6.62	962		
11-3-97	1142						5.0	10.0			6.77	995		
11-3-97	1150						5.0	15.0			7.14	977		
11-3-97	1156						5.0	20.0			7.56	1034		
11-3-97	1206						5.0	25.0			7.88	1030		
											8.04	1022	0.5	

Comments _____

Developer's Signature Dennis Bird

Date 11-3-97

Reviewer _____

John Sells

Date 11-12-97

CHAIN OF CUSTODY RECORD

[illegible]



EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY

ANALYTICAL REPORT

PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	971178
MTR CODE SITE NAME:	72265	San Juan 28-6 #79
SAMPLE DATE TIME (Hrs):	11/3/97	1233
PROJECT:	Sample 4 2nd Quarter	
DATE OF BTEX EXT. ANAL.:	11/5/97	11/5/97
TYPE DESCRIPTION:	MW-1	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	6.56	PPB				
TOLUENE	<1	PPB				
ETHYL BENZENE	4.97	PPB				
TOTAL XYLENES	5.20	PPB				
TOTAL BTEX	17	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

Narrative: _____

Approved By: _____

John Lardi

Date: 11-12-97

971178BTEXMW,11/10/97



Well Development and Purging Data

Site Name SAN JUAN 28-6 #79

Well Number MW-1
Meter Code 72265

☐ 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) 348.5
Initial Depth to Water (feet) 23.89
Height of Water Column in Well (feet) 11.16

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>32.1</u>
Gravel Pack			
Drilling Fluids			
Total			

Instruments

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

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					
2-13-98	1344										15.6	7.09	897		
2-13-98	1347						5.0	5.0			13.9	7.19	935		
2-13-98	1355						5.0	10.0			13.3	7.46	923		
2-13-98	1404						5.0	15.0			13.0	7.88	906		
2-13-98	1411						5.0	20.0			12.6	8.01	896		
2-13-98	1419						5.0	25.0			12.6	8.20	936	1.0	

Comments

Developer's Signature Dennis Bied

Date 2-13-98

Reviewer

John Todd

Date

3/2/98

SAMPLE 4 3RD QTR



FREE

National Gas Company

A 2612

CHAIN OF CUSTODY RECORD

[illegible]



FIELD SERVICES LABORATORY

ANALYTICAL REPORT

PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	980162
MTR CODE SITE NAME:	72265	San Juan 28-6 #79
SAMPLE DATE TIME (Hrs):	2/13/98	1428
PROJECT:	Sample 4 3rd Quarter	
DATE OF BTEX EXT. ANAL.:	2/19/98	2/19/98
TYPE DESCRIPTION:	MW-1	Water

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	1.42	PPB				
TOLUENE	<1	PPB				
ETHYL BENZENE	1.08	PPB				
TOTAL XYLENES	<3	PPB				
TOTAL BTEX	3	PPB				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 78.9 % for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative:

Approved By:

John Landa

Date:

3/2/98

980162BTEXMW,2/19/98

Well Development and Purging Data

Site Name SAN JUAN 28-6 #79

☐ Development
☒ Purging

Well Number MW-1
Meter Code 72265

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) 34.85
Initial Depth to Water (feet) 32.86
Height of Water Column in Well (feet) 11.99
Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing		<u>7.9</u>	<u>23.8</u>
Gravel Pack			
Drilling Fluids			
Total			

Instruments

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

Water Disposal

KUTZ SEPARATOR

Water Removal Data

Date	Time	Development Method		Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gal)		Product Volume Removed (gallons)		Temperature °C	pH	Conductivity µmho/cm	Dissolved Oxygen mg/L	Comments
		Pump	Bailer				Increment	Cumulative	Increment	Cumulative					
5-6-98	1337										16.0	7.12	858		
5-6-98	1344						5.0	5.0			15.0	7.20	865		
5-6-98	1351						5.0	10.0			15.0	7.56	875		
5-6-98	1359						5.0	15.0			14.8	7.98	894		
5-6-98	1406						5.0	20.0			15.3	8.13	912		
5-6-98	1413						5.0	25.0			15.0	8.22	912	1.5	

Comments

Developer's Signature Dennis Bied

Date 5-6-98

Reviewer John Swida

Date 5/11/98

CHAIN OF CUSTODY RECORD

[illegible]



EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY ANALYTICAL REPORT PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	980352
MTR CODE SITE NAME:	72265	San Juan 28-6 #79
SAMPLE DATE TIME (Hrs):	5/6/98	1423
PROJECT:	Sample 4 4th Quarter	
DATE OF BTEX EXT. ANAL.:	5/7/98	5/7/98
TYPE DESCRIPTION:	MW-1	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	1.11	PPB				
TOLUENE	< 1	PPB				
ETHYL BENZENE	1.45	PPB				
TOTAL XYLENES	< 3	PPB				
TOTAL BTEX	3	PPB				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 93.7 % for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative: _____

Approved By: John L. Lucha

Date: 5/11/98

980352BTEXMW, 5/8/98

SAMPLE 4 5TH QTR



A 2380

CHAIN OF CUSTODY RECORD

Project No.	Project Name	Requested Analysis				Remarks
Samplers: (Signature) <i>Donnie Bied</i>		Type and No. of Sample Containers	Preservation Technique	Date/Time		
<i>WHITNEY</i>	<i>NO#72065</i>	Date: <i>8-6-78</i>	Sample Number			
<i>WHITNEY</i>	<i>8-6-78 1348</i>	<i>X</i>	<i>950550</i>	<i>6-1 4°C X</i>	<i>5AN JUAN 28-6 #79</i>	
<i>[Large diagonal line across the table]</i>						
Relinquished by: (Signature) <i>Donnie Bied</i> Date/Time <i>8-6-78 1350</i> Received by: (Signature) _____ Date/Time _____						
Relinquished by: (Signature) _____ Date/Time _____ Received by: (Signature) _____ Date/Time _____						
Relinquished by: (Signature) _____ Date/Time _____ Received by: (Signature) _____ Date/Time _____						
Carrier Co: <i>Marlon Napper</i> Date Results Reported / by: (Signature) <i>8/10/98 0720</i>						
Air Bill No.: _____						



FIELD SERVICES LABORATORY

ANALYTICAL REPORT

PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	980550
MTR CODE SITE NAME:	72265	San Juan 28-6 #79
SAMPLE DATE TIME (Hrs):	8/6/98	1348
PROJECT:	Sample 4 5th Quarter	
DATE OF BTEX EXT. ANAL.:	8/10/98	8/10/98
TYPE DESCRIPTION:	MW-1	Water

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	1.05	PPB				
TOLUENE	< 1	PPB				
ETHYL BENZENE	< 1	PPB				
TOTAL XYLENES	< 3	PPB				
TOTAL BTEX	1	PPB				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 88.9 % for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative:

Approved By:

John L. Smith

Date:

8/12/98

980550BTEXMW, 8/11/98