

PHILIP

ENVIRONMENTAL

Environmental Services Group
Southern Region

Graham #53 L-10-27N-08W
Meter Code 75212

Pit was excavated to 12 feet beneath ground surface. Headspace soil readings from excavation bottom were 173 parts per million. Soil analytical were as follows; benzene - 7.38 mg/kg, total BTEX - 134 mg/kg, TPH - 1,560 mg/kg.

One soil boring was completed and a monitoring well installed and a soil sample collected at 30 -31.25 feet. Soil boring analytical results were as follows; benzene - <.5 mg/kg, total BTEX - 1 mg/kg, TPH - 65.6 mg/kg. Groundwater was encountered at 28 feet, 4 inches and a monitoring well installed. Initial groundwater analytical were as follows; benzene - 33.4 ug/L, toluene - 17.8 ug/L, ethylbenzene - 2.07 ug/L, xylene - 32.7 ug/l. Second groundwater analytical were as follows; benzene - 1.44 ug/L, toluene - <1 ug/L, ethylbenzene - <1 ug/L, xylene - <3 ug/l.

Denny L. Faust
DEPUTY OIL & GAS INSPECTOR

FEB 06 97

Approved



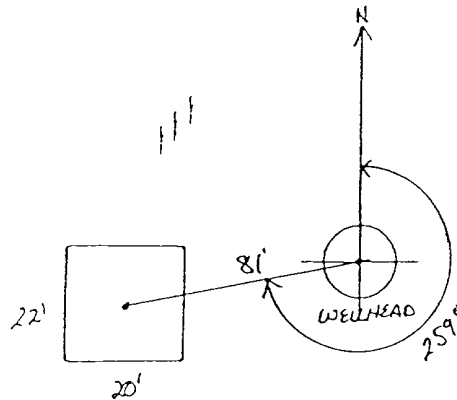
FIELD PIT SITE ASSESSMENT FORM

GENERAL	Meter: <u>75212</u> Location: <u>GRAHAM #S3</u> Operator #: _____ Operator Name: <u>RIG DRILLING</u> P/L District: <u>BAUAPD</u> Coordinates: Letter: <u>L</u> Section <u>10</u> Township: <u>27</u> Range: <u>8</u> Or Latitude _____ Longitude _____ Pit Type: Dehydrator ☒ Location Drip: _____ Line Drip: _____ Other: _____ Site Assessment Date: <u>1-25-95</u> Area: <u>07</u> Run: <u>32</u>									
SITE ASSESSMENT	NMOCD Zone: (From NMOCD Maps)									
	Land Type: <table border="0"> <tr> <td>BLM</td> <td>☒ (1)</td> </tr> <tr> <td>State</td> <td>☐ (2)</td> </tr> <tr> <td>Fee</td> <td>☐ (3)</td> </tr> <tr> <td>Indian</td> <td>_____</td> </tr> </table>			BLM	☒ (1)	State	☐ (2)	Fee	☐ (3)	Indian
BLM	☒ (1)									
State	☐ (2)									
Fee	☐ (3)									
Indian	_____									
MARK	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 <u>CANON LARGO</u> (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: <u>30</u> POINTS										
Remarks : <u>REDLINE & TOPO SHOW LOCATION INSIDE V.Z. ONLY PIT ON LOCATION BELONGS TO SPNG. WILL CLOSE PIT.</u>										

75212

ORIGINAL PIT LOCATION

Original Pit : a) Degrees from North 259° Footage from Wellhead 81'
b) Length : 22' Width : 20' Depth : 2'



Remarks :

PHOTOS- 1402

Completed By:

Paul Thompson

1.25.95

Phase I Excavation

FIELD PIT REMEDIATION/CLOSURE FORM

GENERAL	Meter: <u>75212</u> Location: <u>GRAHAM #53</u> Coordinates: Letter: <u>L</u> Section <u>10</u> Township: <u>27</u> Range: <u>8</u> Or Latitude _____ Longitude _____ Date Started : <u>2-7-95</u> Run: <u>07</u> <u>32</u>
FIELD OBSERVATIONS	Sample Number(s): <u>KP 414</u> Sample Depth: <u>12'</u> Feet Final PID Reading <u>173</u> PID Reading Depth <u>12'</u> Feet Yes No Groundwater Encountered ☐ ☐ Approximate Depth _____ Feet
CLOSURE	Remediation Method : Excavation ☒ Approx. Cubic Yards <u>160 mt. 150 2-10-95</u> Onsite Bioremediation ☐ Backfill Pit Without Excavation ☐ Soil Disposition: Envirotech ☒ ☐ Tierra Other Facility ☐ Name: _____ Pit Closure Date: <u>KP-2-8-95</u> <u>2-7-95</u> <u>2-8-95</u> Pit Closed By: <u>B.E.F</u>
REMARKS	Remarks : <u>Some Line markers. started Remediating to 12'</u> <u>Soil At 12' is dark BLACK with A strange n.c odor.</u> <u>Closed Pit.</u>
	Signature of Specialist: <u>Kelly Padilla</u>



FIELD SERVICES LABORATORY

ANALYTICAL REPORT

PIT CLOSURE PROJECT - Soil Samples Inside the GWV Zone

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	KP414	946656
MTR CODE SITE NAME:	75212	Graham #53
SAMPLE DATE TIME (Hrs):	02/08/95	1250
PROJECT:	Phase I	
DATE OF TPH EXT. ANAL.:	02/10/95	02/10/95
DATE OF BTEX EXT. ANAL.:	02/09/95	02/17/95
TYPE DESCRIPTION:	VC	Black w/some brown clay

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q	M(g)	V(ml)
BENZENE	7.38	MG/KG				
TOLUENE	24.3	MG/KG				
ETHYL BENZENE	9.76	MG/KG				
TOTAL XYLENES	92.1	MG/KG				
TOTAL BTEX	134	MG/KG	0.0377		0.53	20
TPH (418.1)	1560	MG/KG			2.20	28
HEADSPACE PID	173	PPM				
PERCENT SOLIDS	77.3	%				

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

The Surrogate Recovery was at 86.5 % for this sample All QA/QC was acceptable.

Narrative:

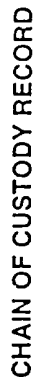
Toluene was reported off a duplicate run due to unacceptable integration of toluene on this analysis.

DF = Dilution Factor Used

Approved By: _____

Date: _____

7/19/96

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

Phase II Soil Boring

07-32 Ballard

RECORD OF SUBSURFACE EXPLORATION

Borehole # BH-1

Well #

Page 1 of 1

Burlington Environmental Inc.

4000 Monroe Road

Farmington, New Mexico 87401

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

Project Name

EPNG PITS

Project Number

14509

Phase

6000.77

Project Location

Graham #53 75012

Elevation

Borehole Location 2400 L-512-727-RP

GWL Depth

Logged By J.F. LaBarbera

Drilled By K. Padilla

Date/Time Started 7/17/95 - 1240

Date/Time Completed - 1530

Well Logged By

J.F. LaBarbera

Personnel On-Site

K. Padilla, F. Rivera, D. Charlie

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			Drilling Conditions & Blow Counts
							BZ	BH	S	
0										
5										
10										
15	1	15-16.5	17	Brown, soft, SILT, LF. fine sand, dry, odor	ML		0	8	1778 576	1250
20	2	20-20.75	9	Brown, med. stiff, CLAY, damp, odor, med. plastic	CL		0	143	1390 29	1300
25	3	25-26	12	Gray, loose, ^{fine} SAND, LF silt, odor, damp	SP		0	164	160 84	1310
30	4	30-31.25	15	Brown, ^{fine} ST, silt, LF SAND, moist, silty odor			2	144	5714 2.5	1320
35										
40										

Comments:

(came up to)
 water encountered at 28.33'. Sample bagged & used. Sample
 JFL 10 sent for BTEX/TPH analysis. 4" monitoring well set
 at 38' (20')
 40'

Geologist Signature

John LaBarbera



FIELD SERVICES LABORATORY

ANALYTICAL REPORT

PIT CLOSURE PROJECT - Soil Samples Inside the GWV Zone

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	JFL10	947009
MTR CODE SITE NAME:	75212	Graham #53
SAMPLE DATE TIME (Hrs):	07/17/95	1320
PROJECT:	Phase II Drilling	
DATE OF TPH EXT. ANAL.:	07/18/95	07/18/95
DATE OF BTEX EXT. ANAL.:	07/19/95	07/20/95
TYPE DESCRIPTION:	VG	Brown wet clay

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q	M(g)	V(ml)
BENZENE	<0.025	MG/KG	1			
TOLUENE	0.077	MG/KG	1			
ETHYL BENZENE	<0.025	MG/KG	1			
TOTAL XYLENES	0.076	MG/KG	1			
TOTAL BTEX	0.153	MG/KG				
TPH (418.1)	65.6	MG/KG			1.99	28
HEADSPACE PID	5714	PPM				
PERCENT SOLIDS	80.7	%				

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

The Surrogate Recovery was at 95 % for this sample All QA/QC was acceptable.

Narrative:

performed analyses.

DF = Dilution Factor Used

Approved By:

Date:

7/18/95



MONITORING WELL INSTALLATION RECORD

Philip Environmental Services Corp.
4000 Morroc Road
Farmington, New Mexico 87401
(506) 326-2262 FAX (506) 326-2388

Borehole # BH1
Well # mw1
Page 1 of 1

Project Name EPRI Pz Closure

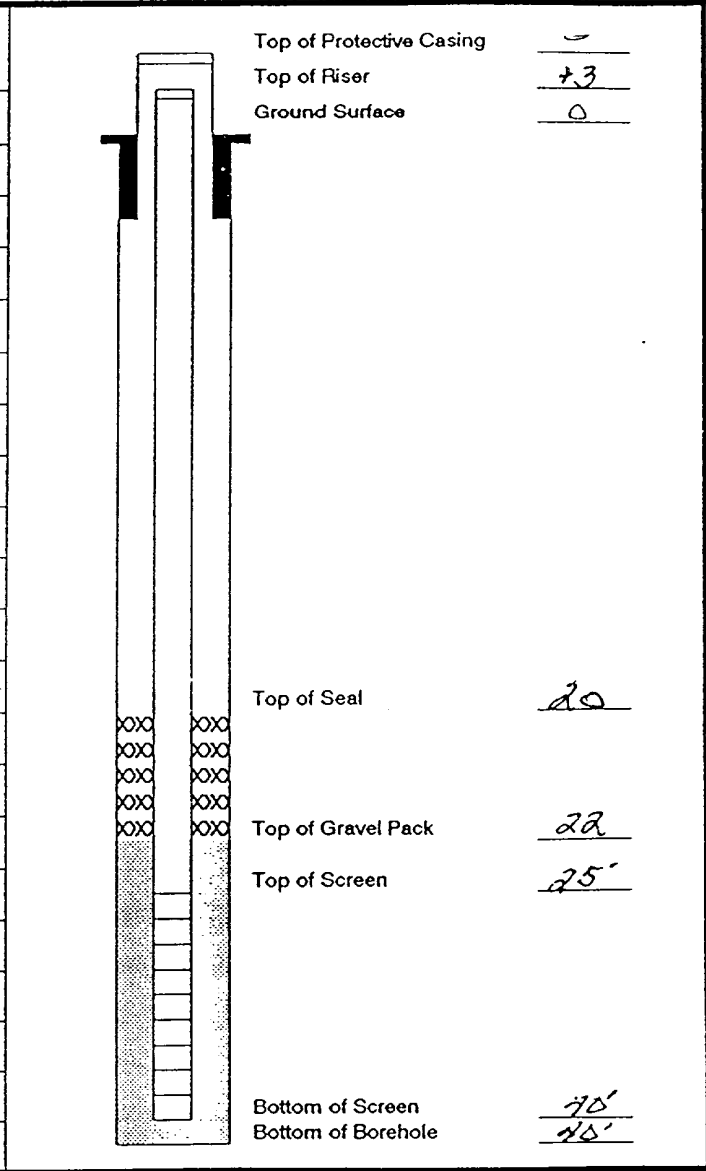
Project Number 14509 Phase Good, 77
Project Location Graham #53 75212

On-Site Geologist John LaBarbara
Personnel On-Site K Padilla, E. Rivera, D. Chen
Contractors On-Site _____
Client Personnel On-Site _____

Elevation _____
Well Location Letter L-Sia-T27-R8
GWL Depth 28.33'
Installed By K Padilla

Date/Time Started 7/17/95 - 1345
Date/Time Completed - 1830

Depths in Reference to Ground Surface		
Item	Material	Depth
Top of Protective Casing	—	
Bottom of Protective Casing	—	
Top of Permanent Borehole Casing	—	
Bottom of Permanent Borehole Casing	—	
Top of Concrete	—	
Bottom of Concrete	—	
Top of Grout	Portland	-5
Bottom of Grout	10 x 94# Portland	-20
Top of Well Riser	4" PVC	+3
Bottom of Well Riser	4" PVC	-25
Top of Well Screen	4" PVC 0.010"	-25
Bottom of Well Screen	4" PVC 0.010"	-40
Top of Peltonite Seal		-30
Bottom of Peltonite Seal	2.5 x 50# Hds Plug	-22
Top of Gravel Pack	10-20 silica	-22
Bottom of Gravel Pack	50# x 28 10-20 silica	-40
Top of Natural Cave-In	—	
Bottom of Natural Cave-In	—	
Top of Groundwater	HL Data	
Total Depth of Borehole		-40



Comments: _____

Geologist Signature

John LaBarbara



Water Sampling Data

Location No. MW-1Serial No. WSD-Group List Number Sample Type: ☒ Groundwater ☐ Surface Water ☐ Other Date 08-08-05Project Name EPN 9 PJS Project No. 14509Project Manager CORY CHANCE Phase/Task No. 6003-22Site Name GRAHAM 53 (75212)

Sampling Specifications

Requested Sampling

Depth Interval (feet) TOP 3'

Requested Wait Following

Development/Purging (hours) NONE

Initial Measurements

Time Elapsed From Final Development/Purging (hours) 20Initial Water Depth (feet) 29.65Nonaqueous 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)	
SEE WELL DEVELOPMENT AND PURGING DATA SHEET												

Sample Containers

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

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	
BTEX	2	A	40		X	H	X		JAL 02 FILTERED
TDS	2	P	250		X	N/A	X		JAL 02 T1245
BTEX D	2	A	40		X	H	X		JAL 03 DUPLICATE T1245
TDS D	1	P	250		X	N/A	X		JAL 03 DUPLICATE T1245

Filter Type Chain-of-Custody Form Number Comments Signature James C. Long Date 08-08-05 Reviewer Date



Well Development and Purging Data

☒ Development
☐ Purging

Well Number MW-1

Serial No. WDPO-

Page 1 of 1

Project Name EPN's TIS

Project Manager CORY CHANCE

Project No. 14509

Client Company EPN's

Phase/Task No. 6003-77

Site Name Graham #53 (75212)

Site Address

Development Criteria

- ☒ 3 to 6 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) 93.48

Initial Depth to Water (feet) 29.65

Height of Water Column in Well (feet) 13.83

Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing		<u>9.02</u>	<u>7.02 x 5</u>
Gravel Pack			
Drilling Fluids			
Total			<u>45.1</u>

Instruments

- Serial No. (if applicable) HYDAC
- ☒ pH Meter
☐ DO Monitor
☒ Conductivity Meter
☒ Temperature Meter
☐ Other

Water Disposal

Discharged & Transported to KUTZ Service
in 3600 gallons

Water Removal Data Start 1030

Date	Time	Development Method	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons)		Temperature (°F)	pH	Conductivity (umhos/cm)	Dissolved Oxygen (mg/L)	Comments
						Increment	Cumulative					
040495	1045	X				5	5	64.7	6.85	2770		BRN
	1106					5	10	63.8	6.78	2400		BRN SILENT
	1115					5	15	64	7.00	2780		BRN SILENT
	1125					5	20	65.7	6.84	2800		BRN SILENT
	1145					5	25	62.9	6.91	2800		BRN SILENT
	1154					5	30	63.0	6.98	2780		BRN SILENT
	1205					5	35	62.5	6.98	2790		BRN SILENT
	1215					5	40	63.4	6.96	2790		BRN SILENT
040495	1225	X				5	45	62.5	6.98	2770		BRN SILENT

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

Comments

Developer's Signature(s) James A. Long

Date 08-08-95

Reviewer

Date



CHAIN OF CUSTODY RECORD

of

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



FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT - Water

SAMPLE IDENTIFICATION

SAMPLE NUMBER:	947184
FIELD ID:	JAL02
MTR CODE:	75212
SAMPLE DATE:	8/8/95
SAMPLE TYPE:	Monitor Well
SITE NAME:	Graham #53
PROJECT:	Phase II MW
DATE OF BTEX ANALYSIS:	11-Aug-95

FIELD COMMENTS: 3 Containers

EPA Method 8020 (BTEX) RESULTS

PARAMETER	RESULT	QUALIFIER	WQCC LIMIT PPB
TDS - TOTAL DISSOLVED SOLIDS (PPM)	3108		None
BENZENE (PPB)	33.4		10
TOLUENE (PPB)	17.8		740
ETHYL BENZENE (PPB)	2.1		750
TOTAL XYLENES (PPB)	32.7		620
SURROGATE % RECOVERY	90	Allowed Range 80 to 120 %	

NOTES:

No bubbles in VOA's.

Approved By: _____

John L. Ladd

8/18/95



MEMORANDUM

To: John Lambdin
From: Dennis Bird
Date: May 8, 1996
Place: Laboratory Services

Subject: Huerfano Pipeline Pit Monitor Wells

On Friday, April 19, 1996, I went to Huerfano Pipeline and sampled the following pit monitor wells. The following analytical parameters are to be performed on these groundwater samples: BTXE, 8 RCRA Metals, General Chemistry to include Nitrate as NO₃. The samples were assigned the laboratory numbers 960375 to 960376. The Field Service Laboratory will be performing all of the analysis.

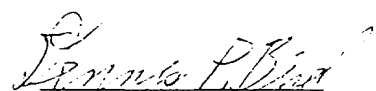
The following information was collected on each well.

Well Name	Monitor Well#	Pipe ID	Static Level	Total Depth	Gallons Bailed
960375 Graham #53	MW-1	4"	29.09'	43.48'	30.0
960376 2C-22 #1 Line Drip	MW-1	4'	31.24'	42.21'	25.0

mc# 75212

All bailing and sampling was done with disposable, one time use equipment and bottles. All samples were preserved on ice immediately after collection. The static level and total depth was measured from the top of the pipe.

Should you have any question or comments, please let me know.


Dennis P. Bird

cc: Nancy Prince
Sandra Miller



EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY ANALYTICAL REPORT

SAMPLE IDENTIFICATION

SAMPLE NUMBER:	960375
METER CODE:	75212
SITE NAME:	Huerfano Pipeline
SAMPLE SITE:	Graham #53 MW-1
SAMPLE DATE:	04/19/96
SAMPLE TIME (Hrs):	1158
SAMPLED BY:	D. Bird
DATE OF BTEX ANALYSIS:	04/22/96
SAMPLE TYPE:	Water

REMARKS:

EPA Method 8020 (BTEX) RESULTS

PARAMETER	RESULT PPB	QUALIFIER	WQCC LIMIT PPB
BENZENE	1.44		10
TOLUENE	<1.0		740
ETHYL BENZENE	<1.0		750
TOTAL XYLENES	<3.0		620
SURROGATE % RECOVERY	94.5	Allowed Range 80 to 120 %	

NOTES:

EPFS

EL PASO FIELD SERVICES

Field Services Laboratory Analytical Report

SAMPLE IDENTIFICATION

EPNG LAB ID:	960375
DATE SAMPLED:	04/19/96
TIME SAMPLED (Hrs):	1158
SAMPLED BY:	D. Bird
MATRIX:	Water
SAMPLE SITE NAME:	Huerfano Pipeline
SAMPLE POINT:	Graham #53 MW-1
METER CODE:	75212

FIELD REMARKS:

GENERAL CHEMISTRY WATER ANALYSIS RESULTS

PARAMETER	RESULT	UNITS	DATE ANALYZED
pH	7.5	Units	04/23/96
Alkalinity as CO ₃	0.0	PPM	04/23/96
Alkalinity as HCO ₃	300	PPM	04/23/96
Calcium as Ca	471	PPM	04/23/96
Magnesium as Mg	32	PPM	04/23/96
Total Hardness as CaCO ₃	1,308	PPM	04/23/96
Chloride as Cl	13	PPM	04/20/96
Sulfate as SO ₄	1,838	PPM	04/20/96
Fluoride as F	1.6	PPM	04/23/96
Nitrate as NO ₃ -N	<0.6	PPM	04/20/96
Potassium as K	0.6	PPM	04/23/96
Sodium as Na	380	PPM	04/23/96
Total Dissolved Solids	3,040	PPM	04/25/96
Conductivity	3,130	umhos/cm	04/23/96
Anion/Cation %	1.1%	%, < 5.0 Accepted	04/26/96

Lab Remarks:

1

1 1 10

1 1

EPFS

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY ANALYTICAL REPORT

SAMPLE IDENTIFICATION

SAMPLE NUMBER:	960375
LOCATION:	Huerfano Pipeline
SAMPLE SITE:	Graham #53 MW-1
METER CODE:	75212
SAMPLE DATE:	04/19/96
SAMPLE TIME (Hrs):	1158
SAMPLED BY:	D. Bird

REMARKS: Sample had high sediment content.

RESULTS

PARAMETER	TOTAL RESULT (mg/L)	N. M. WQCC LIMIT (mg/L)
ARSENIC	<0.025	0.100
BARIUM	0.92	1.00
CADMIUM	<0.0005	0.010
CHROMIUM	0.027	0.050
LEAD	0.010 *	0.050
MERCURY	<0.00024	0.002
SELENIUM	<0.005	0.050
SILVER	0.0012	0.050

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

* Spike recovery for this analyte was below acceptance criteria due to matrix interferences.

This sample was redigested and reanalyzed to confirm poor spike recovery on chromium and lead.

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 7080A, Barium (Atomic Absorption, Direct Aspiration), Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept., 1994.
 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.

EPFS

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY ANALYTICAL REPORT

SAMPLE IDENTIFICATION

SAMPLE NUMBER:	960375
LOCATION:	Huerfano Pipeline
SAMPLE SITE:	Graham #53 MW-1
METER CODE:	75212
SAMPLE DATE:	04/19/96
SAMPLE TIME (Hrs):	1158
SAMPLED BY:	D. Bird

REMARKS: Sample had high sediment content.

RESULTS

PARAMETER	TOTAL RESULT (mg/L)	N. M. WQCC LIMIT (mg/L)
ARSENIC	<0.025	0.100
BARIIUM	1.20	1.00
CADMIUM	<0.0005	0.010
CHROMIUM	0.029 **	0.050
LEAD	0.012 * **	0.050
MERCURY	<0.002	0.002
SELENIUM	<0.005	0.050
SILVER	<0.0004	0.050

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

* This analyte was detected in the associated Method Blank at a concentration of 0.011 mg/L.

** Spike recoveries for these analytes were below acceptance criteria due to matrix interferences.

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.
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- 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.
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- Method 7761, Silver (Atomic Absorption, Furnace Technique), Test Methods for Evaluating Solid Waste, SW-846, USEPA, July, 1992.

D. Bird

EPFS

EL PASO FIELD SERVICES

QUALITY CONTROL REPORT

Sample ID: 960320 to 960323, 960325 to 960327, 960330 to 960334,
960340 to 960343, 960350 to 960353, 960355 to 960356,
960370 to 960373, and 960375 to 960378, 960380 & 960386

Date Reported: 05/10/96

TOTAL METALS

LABORATORY CONTROL SAMPLE

Analyte	Found Value (µg/L)	Known Value (µg/L)	% Recovery
Arsenic	26.2	27.0	97%
Barium	309	315	98%
Cadmium	3.06	2.90	106%
Chromium	7.09	6.70	106%
Lead	35.9	39.5	91%
Mercury	1.79	1.75	102%
Selenium	36.7	31.0	118%
Silver	3.16	3.06	103%

LABORATORY CONTROL SAMPLE (2nd run)

Analyte	Found Value (µg/L)	Known Value (µg/L)	% Recovery
Arsenic	NA	NA	NA
Barium	NA	NA	NA
Cadmium	2.76	2.90	95%
Chromium	7.34	6.70	110%
Lead	35.9	39.5	91%
Mercury	1.71	1.75	98%
Selenium	NA	NA	NA
Silver	NA	NA	NA

NA: Not Applicable. A second run was not required.

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N/A. Not Applicable.

EPFS

EL PASO FIELD SERVICES

QUALITY CONTROL REPORT

TOTAL METALS, SPIKE ANALYSIS

SAMPLE ID: 960321

Analyte	Original Sample Result (µg/L)	Spike Sample Result (µg/L)	Spike Added	Recovery Percent
Arsenic	ND	47.4	45.5	104%
Barium	236	1098	959	92%
Cadmium	ND	8.12	9.59	85%
Chromium	1.65	51.9	45.5	108%
Lead	ND	37.3	45.5	82%
Mercury	ND	1.94	2.00	97%
Selenium	ND	9.64	9.60	100%
Silver	ND	43.0	45.5	95%

SAMPLE ID: 960343

Analyte	Original Sample Result (µg/L)	Spike Sample Result (µg/L)	Spike Added	Recovery Percent
Arsenic	ND	53.7	45.5	118%
Barium	166	1102	959	99%
Cadmium	ND	9.33	9.60	96%
Chromium	1.14	39.8	45.5	85%
Lead	ND	40.0	45.5	88%
Mercury	ND	1.92	2.00	96%
Selenium	ND	10.3	9.60	108%
Silver	ND	36.0	45.5	79%

SAMPLE ID: 960375

Analyte	Original Sample Result (µg/L)	Spike Sample Result (µg/L)	Spike Added	Recovery Percent
Arsenic	8.5	55.3	45.5	105%
Barium	1036	1889	959	99%
Cadmium	0.42	11.1	9.60	112%
Chromium	29.1	59.5	45.5	73%
Lead	10.9	38.1	45.5	62%
Mercury	ND	2.03	2.00	101%
Selenium	ND	9.47	9.60	99%
Silver	ND	39.1	45.5	86%

NOTE: Spike recoveries for Cr and Pb for Sample 960375 are below acceptance criteria due to matrix interference.

D. L. Lodi

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EL PASO FIELD SERVICES

QUALITY CONTROL REPORT

TOTAL METALS, METHOD BLANK ANALYSIS

04/24/96 METHOD BLANK

Analyte	Found Value (µg/L)	Detection Level (µg/L)
Arsenic	ND	25
Barium	ND	500
Cadmium	ND	0.5
Chromium	ND	1
Lead	ND	4
Mercury	ND	0.24 *
Selenium	ND	5
Silver	ND	0.4

04/25/96 METHOD BLANK

Analyte	Found Value (µg/L)	Detection Level (µg/L)
Arsenic	ND	25
Barium	ND	500
Cadmium	ND	0.5
Chromium	ND	1
Lead	11	4
Mercury	ND	0.24 *
Selenium	ND	5
Silver	ND	0.4

ND: Not Detected at stated detection level.

NA: Not Applicable.

NOTE: All detection levels except Hg are 5X MDL.

Hg detection level is based on a Practical Quantitation Level (PQL) of 10X MDL.

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EL PASO FIELD SERVICES

QUALITY CONTROL REPORT

Sample ID: 960332, 960375, 960446, 960465 and 960466

Date Reported: 06/10/96

TOTAL METALS

LABORATORY CONTROL SAMPLE

Analyte	Found Value (µg/L)	Known Value (µg/L)	% Recovery
Arsenic	25.1	27.0	93%
Barium	338	315	107%
Cadmium	2.99	2.90	103%
Chromium	6.14	6.70	92%
Lead	36.1	39.5	91%
Mercury	1.66	1.75	95%
Selenium	32.3	31.0	104%
Silver	3.25	3.06	106%

LABORATORY CONTROL SAMPLE (2nd run)

Analyte	Found Value (µg/L)	Known Value (µg/L)	% Recovery
Arsenic	27.0	27.0	100%
Barium	NA	315	NA
Cadmium	2.72	2.90	94%
Chromium	6.48	6.70	97%
Lead	NA	39.0	NA
Mercury	NA	1.75	NA
Selenium	30.4	31.0	98%
Silver	NA	3.06	NA

NA: Not Applicable. A second run was not required.

Mike Linder

L. Linder

EPFS

EL PASO FIELD SERVICES

QUALITY CONTROL REPORT

TOTAL METALS, DUPLICATE ANALYSIS

SAMPLE ID: 960446

Analyte	Original Sample Result (µg/L)	Duplicate Sample Result (µg/L)	% RPD
Arsenic	ND	ND	NA
Barium	ND	ND	NA
Cadmium	ND	ND	NA
Chromium	6.68	6.66	0.3%
Lead	ND	ND	NA
Mercury	0.79	0.75	5.2%
Selenium	ND	ND	NA
Silver	ND	ND	NA

SAMPLE ID: 960473

Analyte	Original Sample Result (µg/L)	Duplicate Sample Result (µg/L)	% RPD
Arsenic	ND	ND	NA
Barium	ND	ND	NA
Cadmium	ND	ND	NA
Chromium	NA	NA	NA
Lead	NA	NA	NA
Mercury	NA	NA	NA
Selenium	ND	ND	NA
Silver	NA	NA	NA

NA: Not Applicable.

ND: Not Detected at Stated Detection Level

Reported By: *lmh*

Approved By:

John L. Lantieri

Date: *6/11/90*

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QUALITY CONTROL REPORT

TOTAL METALS, SPIKE ANALYSIS

SAMPLE ID: 960446

Analyte	Original Sample Result (µg/L)	Spike Sample Result (µg/L)	Spike Added	Recovery Percent
Arsenic	ND	49.7	45.5	109%
Barium	354	1274	959	95%
Cadmium	ND	11.13	9.59	115%
Chromium	6.68	42.4	45.5	80%
Lead	ND	36.1	45.5	80%
Mercury	0.79	2.77	2.00	97%
Selenium	ND	11.2	9.60	117%
Silver	ND	46.4	45.5	102%

SAMPLE ID: 960473

Analyte	Original Sample Result (µg/L)	Spike Sample Result (µg/L)	Spike Added	Recovery Percent
Arsenic	9.95	53.5	45.5	94%
Barium	483	1338	959	90%
Cadmium	ND	11.39	9.60	119%
Chromium	NS	NS	45.5	NA
Lead	NS	NS	45.5	NA
Mercury	NS	NS	2.00	NA
Selenium	ND	13.1	9.60	106%
Silver	NS	NS	45.5	NA

NS: Not Spiked.

SAMPLE ID: 960375

Analyte	Original Sample Result (µg/L)	Spike Sample Result (µg/L)	Spike Added	Recovery Percent
Arsenic	10.7	47.3	45.5	83%
Barium	824	1712	959	95%
Cadmium	ND	11.1	9.60	112%
Chromium	24.5	70.9	45.5	107%
Lead	8.75	26.3	45.5	40%
Mercury	NA	NA	2.00	NA
Selenium	ND	10.2	9.60	106%
Silver	1.05	45.0	45.5	97%

NOTE: Spike recovery for Pb for sample 960375 is below acceptance criteria due to matrix interference.

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EPPFS

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QUALITY CONTROL REPORT

TOTAL METALS, METHOD BLANK ANALYSIS

05/20/96 METHOD BLANK

Analyte	Found Value (µg/L)	Detection Level (µg/L)
Arsenic	ND	25
Barium	ND	500
Cadmium	ND	0.5
Chromium	ND	1
Lead	ND	4
Mercury	ND	0.24 *
Selenium	ND	5
Silver	ND	0.4

05/24/96 METHOD BLANK

Analyte	Found Value (µg/L)	Detection Level (µg/L)
Arsenic	ND	25
Barium	ND	500
Cadmium	ND	0.5
Chromium	NA	1
Lead	NA	4
Mercury	NA	0.24 *
Selenium	ND	5
Silver	NA	0.4

ND: Not Detected at stated detection level.

NA: Not Applicable.

NOTE: All detection levels except Hg are 5X MDL.

Hg detection level is based on a Practical Quantitation Level (PQL) of 10X MDL.

Reported By: *mh*

Approved By:

[Signature]

Date:

6/11/96



Natural , Company

CHAIN OF CUSTODY RECORD

[illegible]